



DProf thesis

**Transforming large organisations; towards a theory of  
management for business agility**

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# Transforming large organisations; towards a theory of management for business agility

Submitted in partial fulfilment of requirements for the Degree of

Doctor of Professional Studies  
(Digital Transformation)

Russell Lewis - M00852144

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## Abstract

Large, established firms, whose hierarchical structures and predict-plan-control management systems are optimised for the industrial era, often struggle to adopt the more collaborative ways of working that provide business agility. Managers are crucial for introducing the socio-technical practices needed, but without the assurance of reliable theory, the risk of failure is greater than any desire for improvement.

Based on my professional experience of many digital transformations, I wanted to understand how managers perceived and overcame the barriers to improving the effectiveness of their organisations. I analysed 27 research conversations with managers at all levels and found that those with agency were able to describe how they managed tensions, whilst others accepted, or were defeated, by organisational tensions. Although the successful approaches that emerged are well-known (create a caring context, explain why, develop eco not ego, walk the talk) the question remains, why the role of the manager does not explicitly include such behaviours?

I show how the literature of organizational ambidexterity actually describes six categories of tension that must be managed and propose appropriate ways for managers to resolve those tensions. I compare those tensions and methods with the empirical evidence from my conversations with managers. I propose a theoretical way for managers to actively improve the effectiveness of their organisations using five principles; Adaptable efficiency, ‘Both/and’ thinking, Manage tensions not people, Love to learn, Be eco-friendly.

The thesis contributes to knowledge in the area of transformation in organisations, in addition to making contributions in the areas of organisational management practice.

## Keywords

Tension, management, transformation, organizational ambidexterity, paradox, business agility, organizational adaptability.

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# Chapter 1 Introduction

When things are digitised, they acquire some weird and wonderful properties. They are subject to different economics, where abundance is the norm rather than scarcity... Digital goods are not like physical ones, and these differences matter (Brynjolfsson and McAfee, 2014, p. 10).

In this chapter, I describe the contexts in which this research takes place. I set-out the reasons that large established organisations are seeking transformational improvement, what those improvements are, and my involvement and reflections on that process.

I invite readers to join my investigation into the evolving role of managers, as established organisations navigate the transition from an industrial age, characterised by the machine metaphor, to today's digital age. With information now generated, published, and consumed in moments, people are globally interconnected and continuously socially aware of each other's experiences. Organisational knowledge once held within leadership teams and filing cabinets now travels electronically, surfacing as WhatsApp messages, opinions on social media, or revelations on websites. Security doors and electronic surveillance that historically protected physical assets from criminals and the actions of the occasional disgruntled employee are powerless against cyber attack, much of which relies on social engineering. The digital age may be characterised by technology causing rapid and disruptive change, but shifting from a machine to a socio-technical metaphor is a challenge for those who manage our organisations. Many challenges apply as much established global firms as they do to smaller firms and public services organisations.

## 1.1 Working definitions

I begin by offering my definitions of terms I shall use frequently. For my reader's convenience I have added a Glossary of terms and acronyms to the end of this thesis.

Definitions are important because the difference between what is said, what is meant, and what is understood by people within an organisation can have serious consequences. When a practitioner speaks of something happening 'in theory', the meaning is 'do not do this'. Even in a local context, the meaning of a word can change quite quickly, an effect known as syntactic drift. Agile terminology has been particularly affected, with the result that carefully prescribed terms with specific meanings have morphed into meaningless labels for legacy practices. When in-person meetings were the norm, people would sometimes talk to each other as they left the room, making sense of the meeting and filling-in each other's gaps in understanding. Although remote working has been positive for inclusivity and cultural diversity it has reduced opportunities for informal clarification, making internal communication potentially even more challenging than it was before the lockdowns of the COVID-19 era.

Therefore, the following definitions are intended to provide clarity and shared understanding whilst working through this document. I offer them as working definitions only and have selected those that are most often questioned in practice. In particular, people understand the terms 'manager' and 'leader' differently, and 'transformation' has several different connotations.

## Chapter 1 Introduction

### Managers

Managers are responsible for things that matter, broadly the organisation's resources and governance. There are managers that are executives, managers that are team leaders, and managers that look after projects, finances, and products. All are managers in this thesis.

Managers perform various functions, including managing and leading. This was observed by Mintzberg (1973) and confirmed 30 years later by Tengblad (2006).

### Leaders

In his critical review of leadership studies, Alvesson (2019) finds influence to be the essence of leadership, noting that people sometimes lead and sometimes follow. Alvesson questions the validity of studying leadership and Banks (2023) states that no 'unified theory of leadership' exists. Banks provides the example of transformational leadership as a concept that is presented as if it were a theory, to illustrate the argument that what the literature describes are 'concepts of leadership'. Wilkinson (2023) has so far identified more 165 'leadership styles' in the literature as part of the leadership styles project for The Oxford Review.<sup>1</sup> As the term suggests, styles are identifiable approaches to the role of leadership that individuals may combine in practice, rather than any theory of effectiveness.

### Transformation

Transformation in this thesis refers to intentional change in the organisation's ways of working, sponsored at executive (or board) level. It differs from top-down structural change programs in their aspiration to change the ways people think and act. In the case of digital transformation, which may include top-down changes such as closing physical stores, as well

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<sup>1</sup> With its tagline of 'Powered by research', The Oxford Review provides its members briefings on the latest people and organisational research.

## Chapter 1 Introduction

as ways of working, the goal is to shift services from physical to digital delivery. In Agile transformation, the aim is improving flexibility and speed to market by adopting Agile ways of working.

### Agile

Agile, with a capital 'A' is a socio-technical movement started by a group of software developers who recognised the need to assert engineering principles for software development. Previously, projects organised in waterfall-like phases took years to deliver, by which time the environment and user's needs had changed. Agile practices have transformed the ways of working in software development.

### Business agility

As the benefits of Agile ways of working became apparent, executives beyond technology wanted to enjoy similar improvements. In particular, faster times to market and more flexibility to change what was being worked-on. These demands created a market for Agile at scale, with a panoply of frameworks, certifications, and services as well as creating further interest in function-specific (eg. Agile HR) and organisation-wide forms of agility.

'Business agility' is supported by the academic rigour of the Business Agility Institute (BAI), whose 'domains of business agility' BAI (2020) were recently found to be consistent with empirical data by (Bronlet, 2023). The BAI defines business agility:

Business Agility is a set of organizational capabilities, behaviors, and ways of working that affords your business the freedom, flexibility, and resilience to achieve its purpose (BAI, 2023).

This definition provokes executive sponsors of transformation to connect their organisation's purpose with the context in which they are managed.

## Chapter 1 Introduction

### Notation and writing conventions

I have set special terms, like ‘digital savvy’ in single quotes. Titles are in single quotes, as they are in the references (bibliography). Literature quotes are in double-quotes when inline and indented when longer than three lines.

Participant’s words are in double-quotes and italics.

### 1.2 Contexts

#### Societal context

The speed at which information travels, enabled by ubiquitous internet communications and computing technologies, has changed our world. Satellites and fibres convey digitised transactions, locations, and conversations at the speed of light. We can buy services, locate assets, and communicate from our homes to almost anywhere in the world. Where acknowledgements and status updates took days, they are now almost instantaneous. Availability and freedom of information are *de facto* norms of the digital age.

Increased transparency has amplified society's injustices including gender, diversity, and environmental issues, both increasing awareness and bringing positive benefits. However, increased transparency means governments, organisations, and individuals now risk trial by social media for their actions, real or perceived. In this respect, we are experiencing a social age, enabled by technology. <sup>2</sup>

Likening the digital age to a second Industrial Revolution, Brynjolfsson and McAfee (2014) see counter-intuitive challenges to our established ways of thinking and managing. For example, recognising that the public can produce better solutions to some problems than experts, and that experts' conditioning can actually prevent them from seeing certain risks. However, although we know that we should not trust what we see online from members of the public, we remain vulnerable. Wikipedia has become the go-to source for quick fact-

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<sup>2</sup> WikiLeaks (<https://wikileaks.org>) enables people to anonymously publish documents obtained from organisations. The Onion (<https://theonion.com>) publishes satirical articles on world publishes satirical articles on international and US news. The Register (<https://theregister.com>) focusses on UK technology, proudly "Biting the hand that feeds IT". Glassdoor (<http://glassdoor.com>) enables employees to publish their reviews of working for their employers.



checking, yet some pages contain practical jokes; sometimes you get accurate information, other times you just laugh.

Social experiments, such as a community-run encyclopaedia (Sanger, 2005), a consulting company (Fowler, 2005a) or an open-source operating system (Linux), seem normal to someone like me. That is because I have worked with tech, and I enjoy the opportunities and freedoms that it affords. Tech freedom has been the pattern for a generation or so, leading to the creation of the tech firms that now dominate industry. Techies often do things that seem like a good idea at the time, for the simple reason that we can. That freedom is now being questioned. Recent international concerns about the ethics and governance of Artificial Intelligence (AI) indicate authorities fear the consequences of control remaining with technologists, see Cossins and Mitchell (2023).

### Organisational contexts

#### Economic (Macro)

Thirty years ago, industrials and banking were the dominant source of wealth generation (Ranking the World, 2019)<sup>3</sup>. Recently, Apple made history by becoming the first company to reach a valuation of \$3 trillion Bloomberg (2022a). With the exception of Saudi Aramco and Berkshire Hathaway, the top ten companies by global market capitalisation are now in the technology sector, or rely on technology to service their sector (ie. Amazon, Tesla, and Alibaba) according to PwC (2021) and Bloomberg (2022b).

Whilst the FAANG firms (Facebook, Apple, Amazon, Netflix, Google) or more recently MAMAA (Meta, Amazon, Microsoft, Apple, Alphabet) dominate their markets, others seem

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<sup>3</sup> The sources on this website are not stated, but the data is consistent with Bloomberg's.

to be struggling. In a talk by Langer and Donofrio (2022), Langer said that, in his experience as a board member and professor, the deficit of technological competence at board level is a significant factor. Furthermore:

MIT has confirmed that companies with a ‘digital savvy board’ are reporting 17% higher profitability, 38% faster revenue growth, 34% higher market cap growth, and 34% higher ROA [return on assets] (Langer and Donofrio, 2022).

My experience working with C-level managers and their reports,<sup>4</sup> is that they work conscientiously to serve their many stakeholders. They are the agents who hold organisations together, keeping everything running and ensuring goods and services reach consumers. There must be reasons why so few of them have developed ‘digital savviness’, but I wonder if the lack of time and attention to developing the skills of managers is a symptom of a fundamental problem with management, generally. If managers are this good individually, and in my experience, they are, perhaps management itself is broken? And if so, did technology disrupt management or was it already past its ‘best before date’?

### Management (Meso)

From his observations of practice, Deming (1984) asserts (in a video presentation) that “[7] deadly diseases of management” have to be recognised and cured, stating “98% [of managers] don’t know what to do, or that there’s even a problem”. Deming (1986) recognised these problems were systemic, estimating people accounted for just 3-4% of the problems that were improvable. Deming’s bluntness alienated people, but similar threads run through the writings of several management theoreticians. In a review of 50 years of systems thinking in management, Jackson (2009) includes himself, Ackoff, Drucker, Beer, Revans, Argyris,

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<sup>4</sup> C-level managers are executives with ‘Chief of...’ in their job title. Eg. Chief Executive Officer or Chief Technology Officer. Managers who report to them are known as C-1 and those who report to them are C-2.

Checkland, and Peters. As systems terminology is ambiguous and there are several different interpretations, Jackson (2019) now describes his area of the field as ‘critical systems thinking’.

Systems thinking, since the mid-20<sup>th</sup> century, recognises organisations as complex systems that must be managed both holistically and specifically. Crucially, theories of complexity that emerged in the 1970s explain why complicated, complex, and complex adaptive systems require different control and decision-making mechanisms (eg. Checkland, 1981; Snowden and Boone, 2007; Stacey, 2011).

In a Harvard Business Review (HBR) article, Freedman (1992) explains that the science of contemporary management must recognise complexity, whereas Taylor’s (1911) ‘scientific management’ is based on the principle that managers knew everything needed to formulate and describe the most efficient solutions. The article, although not particularly impactful by itself, represents an inflection point historically, as it signalled the end of Taylorism in an influential practitioner publication.

The environment and nature of work that changed from industrial to digital made the management models practised in large and established organisations, seem outdated and as though a legacy from a previous era. Work had shifted from mechanical and predictable, to complex and uncertain.

### Agile (micro)

By the late 1990s, fast digital technologies were becoming ubiquitous, according to Brynjolfsson and McAfee (2014) and Ito (2018). Firm’s resource-based strategies and long-term planning methods were struggling to keep up with the pace of change, as shown by Eisenhardt and Brown (1998) and Furr and Eisenhardt (2021).

Technology, and new ways of working with technology, especially in the increasingly important area of software development, emerged (eg. Beck, 1999; Beck *et al.*, 2001; Cockburn, 2002; Schwaber and Beedle, 2002). These ways used iterative and incremental development (IID) controls and fast feedback loops to incrementally develop new software products and became known as the ‘Agile’ methodology. Larman and Basili (2003) state that Agile methods are well-suited to the exploratory nature of developing software, whereas the prevailing ‘waterfall’ approach relied on up-front plans that had little flexibility and ability to respond to information as it emerged during the development process. Comparing Agile and waterfall approaches to large-scale software development, Boehm (2002) warned that Agile methods demand more planning to be carried-out more often, than waterfall. Agile’s adaptability is the result of frequent short-range planning, just as waterfall’s perceived steadfastness comes from the plans laid down at the start of a project. That steadfastness is only realised if the assumptions and knowledge at the start of the project hold true throughout its duration. Thus, Agile methods are best-suited to controlling emergent-value activities (eg. software development) whilst plan-driven methods are *only* suitable for predictable-value activities (eg. mass production). I introduced the distinction between emergent-value and predictable-value activities in a monograph for managers, to help them select appropriate control mechanisms for each Lewis (2022).

The tensions about how to control software development activities arise not only from understanding the difference between Agile and plan-driven approaches, nor from which is best-suited for which situation. Neither is it simply a tension between new ways and old, although inertia does make this a factor (Taylor and Helfat, 2009). The fundamental tension arises from a shift in the organisation of work, which is sometimes explained using a construction metaphor (eg. Fowler, 2005b). In this metaphor, software code is the engineering design that solves the customer’s problem. Code does this in the same way that

engineer's drawings provide the solution for bridging a river or the blueprint for a car's motor. The point was made prosaically by Reeves (1992, p. 2), who reminds us that software is, "So cheap to build it is almost free". It is a near-complete reversal of everything that had been true for centuries, or millennia if you include the slave builders of ancient edifices and monuments, where the cost of design was trivial compared to the cost of production. Now, the cost of designing software is massive compared with the cost of plugging in a computer and pressing Start. As Ito (2018) states, the internet changed everything, and demarks 'post internet' from 'before internet' in much the way Western cultures came to regard *anno domini* as the start of the current era.

Although Agile transformed the way organisations developed and maintained software, nobody explained (or knew) what those changes meant to the traditional ways of governing and controlling organisations. There were very few 'Agile for managers' guides in the literature even when I completed my Masters research in 2017. Although books describing how to lead transformation had started to appear, such as Gruver and Mouser (2015) and Perkin and Abraham (2017), the activities of development teams remained the primary focus. The result for most large organisations has been a hybrid mixture of Agile and non-Agile teams and it has been left to managers to resolve the tensions and problems this caused.

A note on the terminology of Changing and Running the business

Development work, which is mostly an emergent-value activity is essentially about change activities. Operations work is mostly concerned with keeping the existing systems running to deliver value in ways that have been predicted, albeit with minor changes to improve performance. Running the business is also known as business as usual (BAU). Practitioners talk about Change and Run, or projects and BAU, or innovation and operation. The academic generalised terms for these are, 'explore' and 'exploit' after March (1991).

### DevOps (micro)

Whilst Agile practices closed the gap between software developers and users of software, DevOps closed the gap between developers (Dev), who made changes to the production systems, and operations (Ops) support staff, who kept those production systems running. The mechanisms for combining Agile software development and efficient operation where software is automatically and continuously tested, integrated, and deployed, have only recently been described in practitioner literature (eg. Humble and Farley, 2010; Highsmith, 2011; Forsgren *et al.*, 2018). Theory papers, such as Hoda and Noble (2017) and Luz *et al.* (2019) have also emerged only recently.

DevOps not only demonstrates better performance than the traditional separation of software development and operation functions, but advocates, including Kim *et al.* (2016); Forsgren *et al.* (2018); Kim *et al.* (2018) made a better job of communicating its theories and impact than the agilists. DORA, the DevOps Research Assessment firm and now part of Google, has surveyed the state of DevOps since 2014. According to their website, the research team:

Applies behavioral science methodology to uncover the predictive pathways which connect ways of working, via software delivery performance, to organizational goals and individual well-being. (DORA, no date)

Although software delivery performance is their key measure, DORA provides theory and measures for culture, well-being, and non-commercial organisational performance.

The significance of DevOps successfully combining emergent-value and predictable-value activities will become apparent when I have introduced ‘Organisational ambidexterity’.

### Transformational context

In this research, ‘transformation’ describes intentional changes to an organisation’s ways of working and how it is managed. It is sponsored at executive level, or higher (board, or equivalent). It may be strategic, in the sense that the initiative is expected to exploit a perceived opportunity for improvement and will result in better use of existing resources (eg. improving operational efficiency) and becoming better at responding to changes (eg. developing capabilities). The arguments for (eg. digital) transformation have been impressed on managers through consultancy-published reports and practitioner journals, (eg. Westerman *et al.*, 2014; McKinsey & Co, 2016, 2018; Luca and Bazerman, 2020).

Although consultancy firms have described the desired outcomes of transformation, they are careful about criticising prevailing management models or suggesting their modification is needed to achieve those outcomes means. Telling a CEO that they are part of the problem would not be good for business, and doing so would be to admit a problem with the management of most large, established firms, including the consultancies themselves. Yet the transformation that large, existing organisations want to achieve is unlike anything most of them have done before. Transforming an organisation’s ways of working means transforming its ways of thinking, managing, and leading. It depends on the personal transformation of its executives rather than any solution they may hand-down from above, says Michels (2019).

To illustrate the magnitude of the challenge, the Agile Manifesto’s value, “People over processes” Beck *et al.* (2001) reverses traditional management practice, which assumes the organisation’s design is fit for purpose and workers must follow pre-optimised processes. That assumption is based on the machine metaphor, which is neither humanistic nor empirically reliable for knowledge work. Agile’s recognition that effectiveness is increased when knowledge workers self-organise to improve their processes (eg. by Cockburn and

Highsmith, 2001), is counter-intuitive for many managers. They do not know when to encourage self-organisation, or if it is even safe to do so. This challenge must seem near impossible when there are few operating manuals for managers, conflicting expert opinions, and nowhere safe to learn what works and what does not. The Agile movement was for developers by developers, and not managers. This lack of understanding of manager's responsibilities is highlighted by agilists who advise managers to 'fail fast', a dogma that ignores the belief that failure is not an option.

Whilst I empathise with managers, I do not share their worldview. My experience has always been to fail often and learn quickly, because I am a motivated self-learner and fearlessly try whatever I am learning. Only a few of the managers I encounter are motivated to engage with learning to navigate the complex domains for which Agile methods are required. As well as the cognitive effort required, Straub (2013) points to the inconvenience of complexity for managers who choose to maintain the illusion of control. Besides, managers who are experts in the old ways may be reluctant to embrace ways they neither know nor understand.

The 'plan, predict, and control' approach Heffernan (2021) describes of the industrial machine age may treat people like 'cogs in the machine', but it often rewards its employees and shareholders richly. Profits of \$48bn in 2021 as stated in JP Morgan Chase & Co's (2022) accounts gave managers on bonuses a strong financial incentive to preserve, rather than change, their way of working. Given a comfortable situation and a remaining working horizon of twenty years or less, managers have almost no incentive to make changes.

But are managers happy? According to Gallup (2023) most (59%) of the world's workforce are 'quiet quitting' (disengaged) and only 18% are actively engaged. Gallup consider managers the 'linchpin' to improving engagement, as was borne out by Google's manager research, described by Garvin *et al.* (2013).



## Chapter 1 Introduction

My belief that managers are crucial for improving organisations is based on my many years of professional experience. It is an implicit assumption of this thesis.

### Personal context

I have worked in IT for more than thirty years, as software developer, technical trainer, agile coach and mentor, and executive coach. I have led and joined improvement initiatives in organisations with more than 200,000 employees, helping to improve investment banking, payments systems in transport, and many other transactional services.

Apart from school and a few taught modules in my MSc and doctoral studies, I am a self-taught learner. I love learning, then sharing, my knowledge. I am motivated by service to a cause or to individuals. Integrity and fairness are my core values. Although I enjoy being front and centre, I want to be remembered for my contribution to others' success, perhaps being the agent supporting the person in the spotlight.

After briefly managing staff in my own business, I have avoided being a manager and being managed, choosing to be an outsider; management consultant, interim executive, coach, mentor, or contractor. I think this distance has given me a valuable perspective on the role of managers. My views are unusual and frequently disruptive, especially when my neurodivergence means I fail to see conventional boundaries. Questioning the *status quo* and placing myself outside the norm as I have, I have become adaptable and have reinvented myself several times. I am naturally reflective, learning to be methodical about it only since my development on the executive coaching program at Henley Business School, in 2020.

Agile authors generally avoid explicit references to management or leadership roles. Aside from references to the principles of servant-leadership as advocated by Greenleaf (1970) the literature focus is on the performance and work of development teams as a self-organising

## Chapter 1 Introduction

unit. This caused a manager in one of my workshops (in 2015) to ask, “*So what’s the point of managers in Agile?*” This question fuelled my MSc research and remains relevant.

My focus has sharpened to understanding managers’ relationship with the organisational system of which they are a part and helping them find ways to improve that system’s effectiveness. I expect it will involve managers re-defining their roles for the digital age.

## 1.3 Summary

In introducing my thesis, I invited readers to consider the societal, organisational, and transformational contexts in which the research takes place. Large, established organisations in particular, face multiple challenges from the technological and social changes that have occurred during the past two decades. The ways in which firms are managed has not kept pace with those changes, resulting in a stark contrast between machine age industrial operating models and the operation and performance of digitally enabled organisations.

I have described my background, as well as the rationale for focussing on this area of research. I also explained my motivation and vision for carrying out this research – in research terms, its purpose.

How this thesis is structured

In the next chapter, Chapter 2, I present my report of the literature landscape. Then, I discuss the influences that led me to make my research design choices and describe that design in Chapter 3 as well as showing how those choices led to my research objectives. I describe my research activities in Chapter 4, accounting for both my literature and empirical findings. In Chapter 5, I combine my empirical research with the literature and discuss my findings, insights, and reflections. Finally, I present the theory and recommendations that emerge from this work in Chapter 6.

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# Chapter 2 Literature landscape

I have organised this interdisciplinary review of the literature landscape as a series of objectives. They are to:

- Introduce the conceptual framework in which the literature is situated (Section 2.1).
- Critically review organisational ambidexterity from academic literature, to build a theoretical background (Section 2.2).
- Draw from wider literatures to explore organisational tensions and ways of managing them, to improve the theoretical understanding of ambidexterity (Section 2.3).
- Develop an argument for managing tensions as transformational practice for managers at every level (Section 2.4).

The review addresses gaps in theoretical and practitioner literatures about tensions, and how managers can leverage tensions management to make transformation happen in their organisations. It contributes to the tensions management and transformation literature.

After reviewing the ambidexterity literature, I noticed that the tensions in the research were more diverse than those of only *explore-exploit* (exploration versus exploitation). Whilst balancing *explore-exploit* is crucial for long-term survival, managers are responsible for *all* the tensions experienced within their organisations in practice. Yet many studies focus on a different tension, or assume that *explore-exploit* is the root of all organisational tensions.

Additionally, much of the literature was concerned with structural solutions to the (theoretical) problem of achieving ambidexterity. Whereas in practice, managers organise according to their experience of what worked elsewhere and what they feel able to

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implement. Managers must be managing those tensions because ambidextrous performance does occur and Tarba *et al.* (2020) highlight the lack of research explaining the microfoundations of this. Plus, I have observed that managers often encounter structural constraints when trying to overcome barriers to performance and improvement. These observations expose gaps in our understanding of how managers manage multiple tensions, which tensions they notice and why, and what tactics they use to resolve tensions that are barriers to progress. They are what motivated such a broad and extensive literature search. I begin by positioning the concepts of this literature review in context.

## 2.1 Conceptual framework

To help readers navigate a literature chapter that is both interdisciplinary and transdisciplinary, I have provided a visualisation of the contextual boundaries and overlapping literature areas. This section qualifies as a conceptual framework according to Passey's (2020, p. 97) definition, "More flexible and descriptive [than a model], as it usually identifies factors or criteria that relate to each of the features of influence in a particular field". Using Lawrence *et al.*'s (2022) explanations of the terms interdisciplinarity and transdisciplinarity, I investigate each literature in its own terms and in combination (interdisciplinarity) then synthesise a framework of concepts that are of its parts yet perform a function beyond the sum of its parts (transdisciplinarity).

In Figure 1 below, the rectangular boundaries illustrate the *meta* and *meso* contexts of large, established organisations pursuing transformation, as described in the previous chapter. The oval boundaries describe the literature topics that inform my research. At their intersection, the desired outcomes for transformation, ambidexterity, and tensions management are assumed to converge.

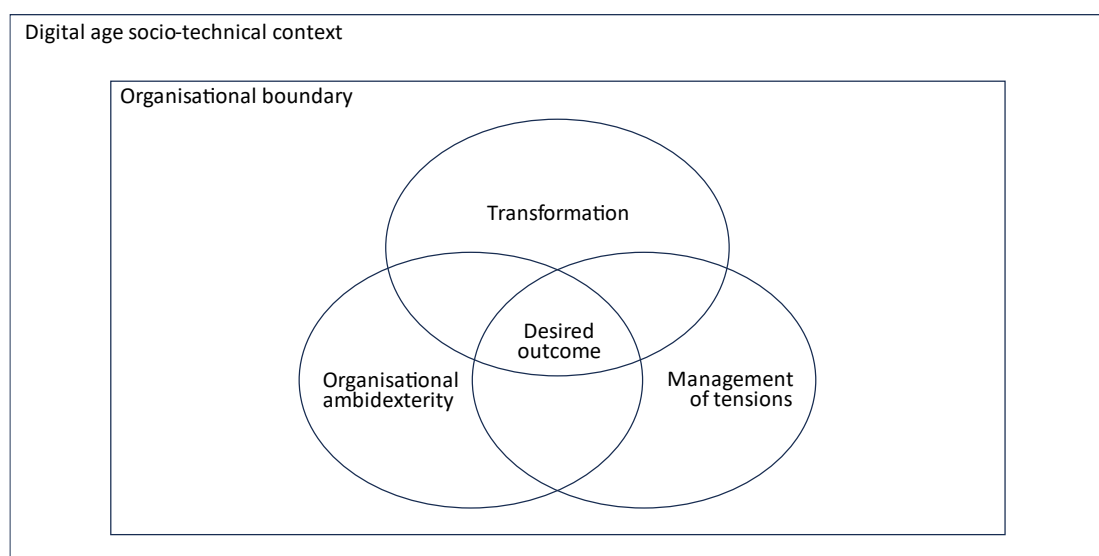


Figure 1 Conceptual framework of literature landscape (Lewis, 2024)

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At the risk of spoiling a later surprise, I suggest that some combination of efficiency and adaptability are the desired, unified outcomes for transformation, ambidexterity, and tensions management. I shall clarify the terms ambidexterity, exploration and exploitation here, as the reader will encounter them frequently throughout this chapter.

The negative connotations of the word ‘exploitation’ led me to speculate that ‘efficiency’ may have been used as a proxy for that term. Whether that is true or not, firms need to be efficient in both innovation and operation, making ‘efficiency’ a poor choice as a single source of tension, an argument I develop in the discussion of the *explore-exploit* tension in section 2.3 Exploration and approaches to managing organisational tensions. As for adaptability, Uhl-Bien and Arena’s (2018) paper associates it with the leadership, flexibility, agility, and ambidexterity, attributes that organisations need in today’s complex and dynamic environments.

Even when only one of efficiency or adaptability are explicitly stated as the goal of a transformation, the other is implied. In the case of Agile transformation, organisation-wide adaptability is a desired future outcome, but not at the expense of operational efficiency. Whereas the goal of digital transformation is movement towards digital delivery of value, which may include cost-saving measures (eg. closing branches and automating manual tasks), whilst improving the firm’s ability to adapt its value proposition.

Although ‘efficient adaptability’ emerged at a much later stage of this research, I believe it will be useful for readers to notice that term’s unfolding development.

### Notation for tensions

Note that I use a hyphenated notation in italics without spaces for tensions. Ie. *sourceA-sourceB*. The hyphen may be read as versus (vs).



## 2.2 Organisational ambidexterity

### Rationale for including organisational ambidexterity

Reading Adler *et al.* (1999), a seminal study of how workers at the NUMMI plant outperformed other plants in the USA, was an ‘ah-ha’ moment for me. I knew the plant’s ambidextrous performance (of flexibility and efficiency) came from Toyota’s highly structured system of management, many of whose practices are considered Agile (eg. Rother, 2010). I was sceptical whether the Toyota Production System (TPS) in practice “Supports workers to pursue exploration and exploitation” as O’Reilly and Tushman (2013, p. 329) suggest and dug deeply into this article and its context. As a professional, helping managers take advantage of Agile’s principles, I wanted to understand how Toyota’s management system had caused NUMMI’s managers to achieve the observed ambidextrous performance. If there was a structured method that produced ambidexterity, I wanted to identify it, then write it up so other managers could use it too.

TPS, and other improvement techniques that were developed for industrial processes after WW2, are known collectively as Lean (sometimes Lean theory or Lean thinking). They developed alongside ‘systems dynamics’, a way of measuring organisations as closed systems, see Jackson (2009). Increasing awareness of complexity and the need for more pluralistic solutions meant ‘soft systems thinking’ and ‘soft skills’ for managers were needed, see (Checkland, 1981; Jackson, 2009). For example, the internet opened-up previously quite closed systems to greater uncertainty and increased complexity. It precipitated a digital revolution that shifted organisations from the machine age of optimised mass production to a digital age of unique output as described by Brynjolfsson and McAfee (2014). In the digital age, every delivery can be tailored to satisfy individual needs – hence, no two people are likely to be served the same Google or Amazon pages. Mary Poppendieck adapted Lean’s

engineering principles for IT in Poppendieck and Poppendieck (2003), David Anderson applied Lean approaches to managing software development in Anderson (2004, 2010), and seventeen software developers wrote the ‘Agile Manifesto’ of values and principles based on methods Beck *et al.* (2001) had been developing in practice. The Agile movement transformed software development practices and processes, and senior managers soon wanted Agile’s advantages for their IT departments. A decade later, it was organisations that wanted to ‘be Agile’ since, according to Highsmith’s (2023) reflection, “Momentum shifted from courageous IT executives to enterprise executives—from CIOs to CEOs” in what Highsmith labels, ‘The digital transformation period’ from 2011 to 2021.<sup>5</sup>

I first encountered the term ambidexterity in Uhl-Bien & Arena’s (2018) literature synthesis. That paper used the leadership lens to explore how ambidexterity, dynamic capabilities, complexity, and networks combine to inform leadership for organisational adaptability. I was curating all those topics, until Dr Alireza Kashan asked whether organisational ambidexterity could be sufficient. It was the first of many insights, and I am grateful for his guidance and support along the journey that followed.

As I explored links between Agile transformation and contextual ambidexterity, I found three Agile practitioners who picked-up on the same connection after reading O’Reilly and Tushman’s (2004) HBR article. In particular, one of the authors of the Agile Manifesto, Highsmith (2013) wondered if ambidexterity could be used as an Agile transformation model. Highsmith recalled the article via personal correspondence, but neither he, nor other practitioners, took it further. This suggests my work forms an original contribution to practitioner literature.

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<sup>5</sup> The quotes are from an extract of his book published by the author on LinkedIn, hence no page numbers.

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### Background to organisational ambidexterity

#### Defining ambidexterity

O'Reilly and Tushman's (2013) review of the past, present, and future of organisational ambidexterity concludes with a reference to March (1991) as their preferred definition:

The fundamental tension at the heart of an enterprise's long-term survival (emphasis ours) was to engage in sufficient exploitation to ensure its current viability and, at the same time, to engage in sufficient exploration to ensure its future success. In our view, organizational ambidexterity is about survival: how [some firms changed, and] why great companies like Polaroid, Kodak, and Smith Corona have failed to make these transitions (O'Reilly and Tushman 2013, p. 333).

Birkinshaw and Gupta's review of ambidexterity within organisations studies provides a broader definition: "A central part of what firms do is manage the tensions that exist between competing objectives; that is, they seek to achieve some form of ambidexterity" (2013, p. 290). Therefore: "Ambidexterity is an organization's capacity to address two organizationally incompatible objectives equally well" (*ibid*, p. 291). However, Raisch and Birkinshaw (2008) assert the breadth and focus of ambidexterity are one of several debates in the literature. Other debates relate to the mechanisms of ambidexterity.

#### Why ambidexterity matters

With only minor exceptions, researchers agree that ambidexterity is positively related to performance, including (Gibson and Birkinshaw, 2004; He and Wong, 2004; Lubatkin *et al.*, 2006). That is, ambidextrous firms are likely to be successful firms. The key question for researchers was how ambidexterity occurs. For me, the more important question was how can managers create the conditions that produce ambidexterity?

According to Simsek (2009, p. 599) the etymology of ambidexterity means “Right on both sides”, which reminds me of the contemporary term, ‘win-win’. It reminds researchers such as Smith and Lewis (2011), of traditional dualities, symbols of opposing forces, constantly shifting against each other; order and chaos, light and dark, *yin* and *yang*. Both are necessary, but too much dominance by either would be catastrophic for long-term survival of the firm as explained by Levinthal and March (1993) and O’Reilly and Tushman (2013), therefore constant movement between these forces is inevitable. That knowledge helps make sense of reality (eg. Lawrence and Lorsch, 1967; Weick, 1995). The shift from order to chaos may even initiate learning according to Owen (2000). Another sense-making perspective is navigating the paradox of ‘both/and’, advocated by Lewis and Smith (2022). This seems especially true in Western management which has traditionally operated on positivist scientific and ‘either/or’ bases and sequential, rather than iterative and incremental, approaches described by Nonaka and Takeuchi (1995). Scrum, an iterative and incremental Agile methodology, was developed from an article by Takeuchi and Nonaka (1986) according to Sutherland (2011). Nonaka and Takeuchi’s (1995) article compares Japanese product development methods (two steps forwards and one step back) with the linear approach of America’s contemporary national planning methods (one direction only, forwards).

### Overview of ambidexterity research

The earliest paper on ambidexterity which scholars, including Birkinshaw and Gupta (2013) and García-Lillo *et al.* (2016) classify as seminal, was Tushman and O’Reilly’s (1996). Amongst other cases, it told how transistors disrupted the thermionic valve industry and quartz replaced mechanical movements for watches. The article’s cautionary tales made the case for revolutionary change within an ongoing process of evolutionary improvement. Its

authors challenged managers to be like Machiavelli, and “Cannibalize their own business at times of industry transitions” (Tushman and O’Reilly, 1996, p. 28). Set against the popularity at the time of Business Process Re-engineering (BPR) by Hammer (1990) and Hammer and Champy (1993), the ‘Innovator’s dilemma’ by Christensen (1997), and Tushman and O’Reilly’s forthcoming book (1997), the article matched the *zeitgeist* and sparked interest in organisational ambidexterity. Once again, highlighting the significance of context.

Ambidexterity as a term was likely coined by Duncan (1976) to explain the ‘dual structures’ he saw in organisations. According to a contemporary review by Pfeffer (1977, p. 681), Duncan’s paper, “Concerns itself with designs for different phases of the innovation process”. The paper appeared as a chapter in the proceedings of one of the first conferences on the emerging topic of ‘organizational design’ (as reviewed by Child, 1977; Pfeffer, 1977). Unsurprisingly, ambidexterity was perceived to be a structural mechanism.

March’s oft cited (1991) paper introduced the notion that organisations used different forms of knowledge for ‘exploration’ and ‘exploitation’ activities. These words were adopted as the fundamental tension of ambidexterity and have become synonymous with ambidexterity.

With hindsight, Duncan (1976) examined ambidexterity through the lens of innovation, March (1991) of learning, and Tushman and O’Reilly (1996) of top management. By 2022, I had found 16 focus areas (lenses) within 189 sources in the literature beyond learning, innovation, and top management. I found papers that looked at: conflict, control, dynamic capabilities, HR, outsourcing, paradox, problem-solving, strategy, and trust, as well as ‘leadership ambidexterity’ and ‘management ambidexterity’. Both Birkinshaw & Gupta (2013) and O’Reilly & Tushman (2013) view ambidexterity’s divergence negatively, calling for tighter focus, as well as better definitions of ambidexterity.

### Antecedents

To understand the contextual factors contributing to ambidexterity, researchers have looked for its antecedents (background conditions). Simsek's (2009) process view of ambidexterity differentiates between antecedents as inputs, the processes and mechanisms that generate ambidexterity, and the outcomes produced. This view raised fundamental questions about how, where, and by whom ambidexterity is achieved Raisch *et al.* (2009).

Lavie *et al.* (2010) finds multiple antecedents under the categories of environment, organisation, and senior management team. Simsek (2009, p. 604) describes the antecedents of "Dual structures, organizational context, and TMT characteristics" to be multi-level (eg. firm, environment, interfirm, etc.) where TMT is top management team (Simsek, 2009). Most empirical research had been conducted at firm and business unit level and this was still true when Birkinshaw and Gupta (2013) reviewed the literature. Since then, the move towards microfoundations has enabled more contextual research based on individual and multi-level perspectives. I discuss microfoundations later in this section.

Raisch *et al.* (2009) state that the level of analysis of study has long been debated in ambidexterity research. Usually firm or business unit level, there are also interorganisational and individual-level studies according to Birkinshaw and Gupta (2013). In their systematic literature review of 41 papers, Lis *et al.* (2018) find three papers they considered to be multilevel. Those were: Wang and Jiang (2009), who examined team-level ambidexterity at Haier; Güttel *et al.* (2015) who analysed individual's learning in Small and Medium sized Enterprises (SMEs); and Fernández-Pérez de la Lastra *et al.* (2017), whose concept of 'ambidextrous human capital' is an individual capability supporting their multilevel theory. Their sources did not include multilevel papers by: Simsek (2009) published in Journal of Management Studies; Jansen *et al.*, (2012) from Strategic Management Journal; or Mom *et*

*al.*'s (2009) examination of how individual managers mediate ambidexterity published in *Organizational Science*.

Cross-functional collaboration within teams has always been important in my field of enterprise technology and Dean's (2021) literature review find the design and composition of the team, as well as its leadership capacity (effective leadership from within), to be team-centric antecedents.

Leadership is considered an antecedent of ambidexterity by (eg. Raisch and Birkinshaw, 2008; Simsek, 2009; Lavie, Stettner and Tushman, 2010). However, there is a subtle difference between a leader who is comfortable pursuing two seemingly opposing goals, which Uhl-Bien and Arena (2018) term 'leadership of ambidexterity', and Lis *et al.*'s (2018) 'leadership ambidexterity' as a mechanism within the process of producing ambidexterity. This difference is more obvious where leadership is seen as the integration mechanism for structurally differentiated activities by (eg. Tushman and O'Reilly, 1996; Benner and Tushman, 2003; Simsek *et al.*, 2009).

### Mechanisms of ambidexterity

Although ambidexterity was originally supposed to be achieved through structural separation, other mechanisms have since been suggested. O'Reilly and Tushman (2013) and Uhl-Bien and Arena (2018) for example, recognise these mechanisms: 'Structural' in which run and change activities are performed by different staff in different units; 'Contextual', in which decisions are made on a situational and case by case basis; 'Sequential' characterised by periods of innovation interrupting operation; and 'Blended' which acknowledges these mechanisms are combined in practice. I describe each, briefly below.

### *Structural*

According to Levinthal and March (1993), functional separation is an inevitable consequence of specialisation, because different functions require knowledge and skills appropriate to their purpose. Thus, no matter if separation is by design or consequence, the output of successful innovation activities must be integrated into regular operations, so the organisation can profit from its investment in exploration.

Long-term separation of innovation activities and operational functions as ‘dual structures’ was likely common when Duncan (1976) introduced the concept of the ambidextrous organisation. Also, Donada *et al.*’s (2021) account of short-term ‘skunkworks’ projects of the 1940s involving selected teams in ‘below the radar’ missions, as well as teams developing large software systems in waterfall stages Royce (1970). In both cases, teams that operated separately had to overcome the inherent obstacle of introducing their knowledge into the main organisation. Thus, structural separation must be complemented and followed by integration to enable ambidexterity. For example, the six business units of Lawrence and Lorsch’s (1967) study of ‘differentiation and integration’ all had teams or departments dedicated to integration.

In ‘The Innovators Dilemma’, Harvard professor Christensen (1997) recommends that innovation should remain separate from the main revenue-earning operations of an existing business, allowing the new entity to create its own culture and customers. He believed this approach reduced the risk of missing-out on disruptive products that could make the core business obsolete. Summarising another Harvard professor’s criticism of Christensen’s findings, Shaughnessy (2014) notes that large companies can focus so intently on their core products that they underestimate the potential of new technologies or markets, but also bury



the talent of their own employees. For evidence, FinTech start-ups are often founded by former employees of large financial firms.

In their review of the then present state of ambidexterity research, O'Reilly and Tushman (2013, p. 328) claim that integration relies on an "Overarching vision", and "Leadership that is capable of managing the tensions associated with multiple organizational alignments". This situation seems to originate from an assertion in the award-winning article by Benner and Tushman (2003) that ambidexterity is the outcome of integration by (senior) leadership atop the structural separation of functional units. O'Reilly and Tushman (2013) describe structural separation (and integration) as 'simultaneous' ambidexterity, in order to differentiate it from sequential mechanisms of ambidexterity.

Structures usually refer to organisations, departments, or business units, for example (Gibson and Birkinshaw, 2004; He and Wong, 2004). However, Eisenhardt *et al.* (2010, p. 1265) broaden that definition to represent any "Constraint on action". Constraints are discussed in the complexity section, below.

### *Contextual*

Contextual ambidexterity is associated with Gibson and Birkinshaw's (2004) investigation into the relationship between context and business unit performance. Their results indicated the importance of encouraging individuals to make their own choices between alignment and adaptability activities, and that performance came from a context that, "Creates the capacity for ambidexterity" Gibson and Birkinshaw (2004, p. 222). They find significant correlation between performance management and social constructs of ambidexterity, and from ambidexterity to business units' performance. In their discussion, Gibson and Birkinshaw (2004) recognise that different units allowed different paths to contextual ambidexterity. The path taken depends on culture, comprising visible artefacts, espoused values, and underlying

assumptions Schein (2009). Such attributes are readily noticeable in start-ups, where growth can be seen to be affected by the contextual combination of founding conditions, strategy, and environment Eisenhardt and Schoonhoven (1990).

Context is what allows simultaneous ambidexterity to occur at team level (eg. Adler *et al.*, 1999), business unit level (Gibson and Birkinshaw, 2004), firm level (Lavie *et al.*, 2010), and between firms through alliances and supplier relationships (Im and Rai, 2008; Zimmermann *et al.*, 2015). Contextual ambidexterity is not only simultaneous and multi-level, it can produce ambidextrous performance as He and Wong (2004) describe as ‘steady state’.

O'Reilly & Tushman (2013) highlight the fact that contextual ambidexterity relies on individual's behaviour and collective agreement, rather than unit-level decisions. They cite Kauppila (2010) pointing-out that contextual ambidexterity provides no mechanism for radical decision-making, and that no ‘enabling processes’ are specified. Whilst true, this is like comparing the self-organisation needed for knowledge work with top-down control; they are mutually exclusive. The former enables agility if managers can learn to trust workers, whilst the latter is enforceable regardless of human factors (see Cockburn and Highsmith, 2001; Denning, 2010). Adler *et al.* (1999) showed how workers and managers could switch between routine and non-routine tasks when supported in context.

Context as an antecedent of ambidexterity was recognised by Adler *et al.* (1999, p. 47) who remind us that structure and process are embedded in, and impacted by, “A broader organizational context of culture and leadership”. Summarising Tushman and O'Reilly (1997), Adler *et al.* (1999) note that: decentralised structure; strong culture and vision; supportive leaders and flexible managers, are the key sources of ambidexterity but find no theory in Tushman and O'Reilly's (1997) book that explains why these elements should

produce ambidextrous results.<sup>6</sup> Similarly, contemporary high-tech firms showed the co-existence of product innovation and efficient production, but there was no theory to explain it (Jelinek and Schoonhoven (1993 as cited by Adler *et al.* 1999). This methodological gap in the literature, persists.

Summarising contextual ambidexterity, Birkinshaw, who wrote the paper with Gupta as researcher, says it, “Allows front-line managers to make day-to-day choices about what to focus on, within the constraints provided by the organizational context” Birkinshaw and Gupta (2013, p. 294).

The impact of Gibson and Birkinshaw’s (2004) paper renewed interest in ambidexterity:

Suddenly, ambidexterity wasn't just a structural construct—it was about the multitude of ways that organizations sought to manage the tensions involved in doing two different things at the same time (Birkinshaw and Gupta, 2013, p. 288).

According to Jansen *et al.* (2009) and Mintzberg (2015) managers function as linking mechanisms, connecting business units and mediating the top-bottom-top tensions of hierarchies (eg. Levinthal and March, 1993; Nonaka and Takeuchi, 1995; Galunic and Eisenhardt, 2001). Managers create context through their behaviour, hence contextual ambidexterity and behavioural ambidexterity are related to ambidextrous management. Therefore, managerial ambidexterity can provide continuous integration of separated activities (eg. Gibson and Birkinshaw, 2004; Mom, van den Bosch and Volberda, 2009; Taylor and Helfat, 2009). Contextual ambidexterity, through managerial behaviour, provides scalability by moving responsibility of integration from top management to local managers.

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<sup>6</sup> Winning through innovation: a practical guide to leading organizational change and renewal by Tushman and O’Reilly (1997) is described by its publisher as examining how “Leadership, culture, and organizational architectures can be both important facilitators of innovation and, not uncommonly, formidable obstacles” available at: <https://hbsp.harvard.edu/product/8210-HBK-ENG>.

### *Sequential*

In their introduction to a special edition on ambidexterity, Raisch *et al.* (2009) identify four debates, including whether to conceptualise ambidexterity as static or dynamic. The dynamic view, cycling through periods of exploration and exploitation, became known as sequential ambidexterity.

Nickerson and Zenger's (2002) theory paper states that the ambidextrous organisations of Duncan's (1976) paper switched between centralised and decentralised models according to whether they required innovation or commercialisation at that phase of their firms' life cycles. Boumgarden *et al.* (2012) use the term 'organizational vacillation' but argue that ambidexterity and vacillation were two distinct approaches to the *exploration-exploitation* paradox.

Whilst a business unit may be structurally aligned to operational efficiency or innovation at any given moment, this may change over time. Organisations naturally experience periods of stability, change, and disruption. Some are internally created, such as when corporate initiatives come and go according to the manager currently in charge Boumgarden *et al.* (2012). Structural changes, such as reorganisations, centralisation, or decentralisation, are common in organisations. A manager participating in Papachroni *et al.*'s (2016) study explained what I what seen as a common reality; at times there is budget available for long-term investment and innovation, until there is a crisis, then everything is cut. Both Boumgarden *et al.* (2012) and Nickerson and Zenger (2002) theorise that frequent change itself may improve overall efficiency. Wischnevsky's (2004) longitudinal study of the survival of fifty large firms in the US banking sector took this further, finding that "Although organizational transformation did not guarantee survival, lack thereof seemed to have carried pernicious consequences" Wischnevsky (2004, p. 374).

Brown and Eisenhardt's (1997) study of firms in the computer industry reveals practices that are semi-structured or sequenced, rather than structured. Evidence of rapid cycles of product development in fast-moving organisations explicitly challenged the 'punctuated equilibrium' theory of organisational evolution proposed by Tushman and Romanelli (1985). Although Brown and Eisenhardt (1997, p. 2) explores "Continuous change in the context of multiple-product innovation", Raisch *et al.* (2009) and O'Reilly and Tushman (2013) cite Brown and Eisenhardt's (1997) study of six firms in the computer industry as examples of sequential ambidexterity.

The original idea of producing ambidexterity as a sequence of structures over time appears to be O'Reilly and Tushman's (2008) paper. The authors reconsidered it in O'Reilly and Tushman (2013), asking if a series of reconfigurations can really be considered ambidexterity. In Birkinshaw & Gupta's (2013) review of ambidexterity research in the same special edition, sequential ambidexterity is notable for its absence.

### *Blended*

Although the debate which Raisch *et al.* (2009) identify was about the mechanism through which ambidexterity is achieved, the reality for larger organisations is necessarily a combination of approaches. According to Gibson and Birkinshaw's (2004) contextual argument, every business unit has the potential for its own approach to ambidexterity. An argument that can be extended to every team and their manager. Ultimately, individuals' ambidexterity at task level provides the finest level of granularity of data, regardless of any presumed mechanism. The microfoundational view can be considered intrinsically 'blended'.

In regulated industries, such as banking and pharmaceuticals, internal barriers are required between operational and developmental roles, and structural separation of units is a convenient way of doing this. Investment banks use 'Chinese walls' to prevent insider trading

and many firms separate technology, operations, and customer-facing units into separate legal and business entities within the group. From my observations, the resulting duplication (and triplication) of management hierarchies amplifies these organisations' bureaucracy, silo behaviours, and increases their need to transform.

A few studies have examined blended mechanisms of ambidexterity, including structural and sequential (eg. Goossen *et al.*, 2012; Sun *et al.*, 2023), structural and contextual (eg. Raisch *et al.*, 2012), and structural, contextual, and sequential (eg. Foss and Kirkegaard, 2020).

Foss and Kirkegaard's (2020) study of a medical appliances organisation suggests that their blended approach was highly flexible. That is, it can be easily optimised to the needs of its context (eg. more or less customer-involvement, internal autonomy, or knowledge-sharing) and minimised the cost of integration or switching from one mode to another (sequentially). However, Foss and Kirkegaard (2020) recognise challenges for managers in matching employee motivation to organisational context, matching their intention to enable exploration with reorganisation directives, and navigating the informal social structures of a less-structured organisation.

Countering flexibility of combination approaches in large organisations, Zimmermann *et al.*'s (2020) microfoundational survey of 88 German SMEs suggests that structural, contextual, or leadership focused approaches work best independently, rather than in combination. The combination of structural and contextual drivers in particular, led to people sensing they were at cross-purposes. A more surprising finding was that firms with highly ambidextrous (individual) leaders were less ambidextrous than firms whose (collective) leaders selected structural or contextual drivers of ambidexterity. This study measures only 'harmonic ambidexterity' (ie. simultaneous and independent ambidexterity, typically contextual) - a term Simsek *et al.* (2009) describe - and makes no claims for structural or sequential forms.

### Perspectives of ambidexterity

Beyond the debates of ambidexterity already mentioned, several perspectives are important, either to the topic or to my research. These are: ambidexterity as paradox; dynamic capabilities; measures of ambidextrous performance; ambidexterity as it relates to managers (as distinct from the leadership antecedent); and the microfoundations of ambidexterity, including the relationship between individual and collective ambidexterity as in Zimmermann *et al.*'s (2020) study, above.

### Ambidexterity as paradox

Paradox theory suggests that separate elements take-on an additional quality when juxtaposed, as do the *yin* and *yang* elements of the Taoist symbol Smith and Lewis (2011). Individually, the *yin* and *yang* dualities seem as clearly differentiated as, night or day, feminine or masculine. Yet *yin* and *yang* must interact and complement each other, for example by balancing fresh, green (*yin*) foods with warming (*yang*) foods (Danko, 2016). Researching Chinese companies, Wang and Jiang (2009) and Sun *et al.* (2023) include the *yin-yang* symbology as an interpretation of how ambidexterity supports the opposing and interrelated elements of exploration and exploitation.

A paradox view of leadership ambidexterity was proposed by Smith and Tushman (2005) who suggest top managers must develop 'paradoxical cognition' to properly unite and integrate differentiated activities. Examining five successful and evidently ambidextrous firms, Andriopoulos and Lewis (2009) identify 'paradoxes of innovation' and the corresponding approaches managers used to create conditions of success. Of these paradoxes, 'strategic intent', emphasis on both profit and breakthrough, are forms of *explore-exploit* tension. However, the paradox of both tight and loose customer coupling ('customer orientation') would seem to be an operating methodology, and activating both discipline and

passion of employees ('personal drivers') sounds like an expression of managerial values or principles.

The explanations of paradox in Smith and Tushman (2005) and Smith and Lewis (2011) make it clear that not all tensions are paradoxical. Paradoxical tensions are persistent and responses support both elements simultaneously. Smith and Lewis (2011) state tensions may be temporary, latent, dilemma, or dialectic (meaning further tensions and solutions emerge through a process of resolution) and all may be paradoxical under certain conditions.

Consistent with this view, Birkinshaw (2022) sees ambidexterity as "A highly flexible concept, applicable to any number of tensions" (via email). Others regard ambidexterity solely through March's (1991) assertion that firms experience tension between managing the need to explore new knowledge and exploit existing knowledge, for example O'Reilly and Tushman (2013).

In ambidexterity literature, the term paradox is commonly used as a synonym for the *explore-exploit* tension. However, Papachroni and Heracleous (2020) argue that individuals perform 'paradoxical practices' without regard to discrete explorative or exploitative goals.

Combining Greek philosophy and microfoundational perspectives, Papachroni and Heracleous's (2020) 'Diogenian approach' of doing rather than talking, makes paradoxes seem less challenging and more generally accessible than others. In their book and practitioner article Lewis and Smith (2022) and Smith and Lewis (2022) respectively, challenge leaders to shift from one mindset to another by practicing 'both/and' instead of 'either/or' thinking.

Considerations of 'shifting mindsets' (a phrase I treat with suspicion) and the development of heuristics over bias, are beyond the limits of the current investigation. However, I note that in complexity and systems thinking approaches, all the actors are seen to be interrelated and



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likely to impact each other in unpredictable and counter-intuitive ways. This knowledge exposes inherent paradoxes, invalidates reductionism, and reveals management to be more complex than some managers believe it to be.

Demonstrating this interdependence to managers was the purpose of the Beer Game (Senge, 2006). The learning point of the exercise was show that although bars and breweries were separate businesses, they were governed systemically by supply and demand, and that local decisions impacted all the businesses in the system. My experience is that this knowledge is not common amongst managers and rarely considered in managerial decision-making. This is relevant to tensions management and transformation in organisations, both of which are discussed in this chapter.

For now, it is sufficient to note that: semi-automatic (heuristic) replies are easier than engaging thinking and cognitive processes. This is likely because: people tend to act in accordance with their strengths rather than engage with the challenge of reflection and personal development to increase personal performance; personal risk-avoidance seems safer than making decisions that increase personal risk; and managers cannot use knowledge or theories they have not yet learned. These correspond with the structural, performance, belonging, and learning tensions that concern managers, identified in Smith and Lewis's (2011) paradox paper.

### Dynamic capabilities

Dynamic capabilities offer a strategic alternative to the traditional resource-based view of the firm in which integration of new capabilities is a crucial part (see Eisenhardt and Martin, 2000; Teece *et al.*, 1997). Associated with the strategy literature, dynamic capabilities offer an operational-dynamic perspective on the same explore-exploit tension as ambidexterity Uhl-Bien and Arena (2018).

Creating a new operational capability can be seen as the desired outcome of ambidexterity and some ambidexterity papers refer to dynamic capabilities (eg. Benner and Tushman, 2003; O'Reilly and Tushman, 2008, 2013; Jansen *et al.*, 2009; O'Reilly *et al.*, 2009). Dynamic capabilities may be related to ambidexterity, but there seem to be tension between researchers. The progenitor of dynamic capabilities states, "Ambidexterity and other related frameworks are tailored versions of dynamic capabilities" Teece (2014, p. 328).

Organisational researchers have long assumed strategic intent to explore and exploit and that this was passed-down the hierarchy as strategy. Dynamic capabilities and ambidexterity are different conceptualisations that share similar organisational outcomes says Dean (2021). But Zimmermann *et al.* (2015) and Zimmermann *et al.* (2018) suggest ambidexterity may originate from operational managers, who then manage expectations upwards, toward senior managers, effectively advising them of the strategies in practice. These are similar to the middle-up-down forces which Nonaka and Takeuchi (1995) theorise act to support organisational learning, as well as the importance of 'Influencing up' within an organisation Goldsmith (2022).

Social contexts link contextual ambidexterity with dynamic capabilities. Managerial choices affect the ways firms manage and use knowledge to adapt their processes and resources dynamically (or not). The model of organisational reconfiguration developed by Easterby-Smith and Prieto (2008) depends on learning through exploration and exploitation per March (1991). Learning informs, and is informed by, both dynamic capabilities and knowledge management. Crucially, knowledge management is effective when it embeds technical elements within the social context of practice, and balancing technical and social "Forms of knowledge depends on managerial choices that will take account of the current business strategy" Easterby-Smith and Prieto (2008, p. 244). However, Easterby-Smith and Prieto

(*ibid*) suggest that “It is mostly when knowledge management motivates and supports people and collective activities that dynamic capabilities can be triggered, and therefore social elements may be more significant than technical ones”. The specific tension of social-technical learning is noticeable in highly regulated environments where training is a necessity for compliance rather than increasing organisational knowledge.

Organising capability-building by the rate of dynamism needed, Eisenhardt and Martin (2000) use the resource-based view of the firm to theorise a difference between the dynamic capabilities that suit moderately dynamic markets, and the capabilities needed in high-velocity markets. The specific tension of moderate-high dynamic pace occurs when an established business is disrupted by technology that moves faster than its governance. The differentiating factor is the speed of change and amount of uncertainty and is illustrated by the criticism I heard that established bankers are run by people who still think of their firms as banks, rather than technology firms in the banking industry. In a complex environment experiencing medium-paced change, the “Evolutionary emphasis is on variation”, whereas in high-velocity markets, including chaotic situations, there is neither the time nor information available so the “Emphasis is on selection” Eisenhardt and Martin (2000, p. 1105). Teece (2004) rejects Eisenhardt and Martin’s (2000) view, stating that they were concerned with what he, Teece (1997) and Teece *et al.* (2007), consider to be ‘ordinary capabilities’ rather than what Prahalad and Hamel (1990) terms ‘core competencies’. The difference in practice would be whether the capability is so ordinary that it could be provided through outsourcing and if it was, whether outsourcing would be strategically appropriate.

Winter (2003) imagines a ‘hierarchy of capabilities’ from ordinary through ‘*Ad hoc* problem-solving’ to higher order (dynamic) capabilities. strategic investment in specialised learning. The example of a higher order dynamic capability was learning that facilitates the “Creation

and modification of dynamic capabilities for the management of acquisitions or alliance” Zollo and Winter (2002 as cited by Winter, 2003, p. 7). To me, this outcome seems more likely to be emergent than the result of a deliberate investment – an emergent-value activity rather than a predictable value activity.

Many of the tensions included within dynamic capabilities are relevant to the ‘Intention-execution tension’ sub-heading, below.

### Measuring performance

When it comes to impact, Birkinshaw and Gupta (2013) state that there are no standard measures of ambidextrous performance. Simsek (2009) identifies one paper that finds no correlation with performance, and two that question the causal relationship between ambidexterity and performance. However, empirical evidence in large organisations and SMEs shows that ambidexterity has a positive impact on performance (eg. Gibson and Birkinshaw, 2004; He and Wong, 2004; Lubatkin *et al.*, 2006). He and Wong’s (2004) study of 206 manufacturing firms reveals a positive correlation between the rate of sales growth (as outcome) and the allocation of attention given to developing new products and markets or improving existing value streams.

Ultimately, firms must exploit the resources they have invested in, whilst also exploring market and technological opportunities. That is how Levinthal and March (1993) argue ambidexterity is necessary to sustain long-term performance. It suggests a philosophical view that longevity is what matters, not merely measurable performance. As my research has progressed, I have come to question the importance of long-term survival and wonder if shorter-lived organisations forming to address a single, clear purpose, are not more valuable. For instance, belonging to an organisation of like-minded people and purposeful work for a year may be more valuable to those people than the 350-year-old bank that provides their

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debit card. Many banks can issue debit cards, but work can be, as Noel Coward may have said, “Much more fun than fun”.

### Ambidexterity and managers

Ambidexterity is a management capability according to (Birkinshaw and Gupta, 2013; Gibson and Birkinshaw, 2004; Adler *et al.*, 1999).

Adler *et al.* (1999) discuss the context created by managers and factors such as training, opportunity, and trust. Yet, until the appearance of contextual ambidexterity in Gibson and Birkinshaw’s (2004) paper, little attention was given to the management of ambidexterity.

Papers that focus on (middle) managers include (Taylor and Helfat, 2009; Mom *et al.*, 2015; Papachroni *et al.*, 2016; Mom *et al.*, 2019). It is apparent from these papers that managers provide the links and coordination that enables exploration, exploitation, and ambidexterity. Mom *et al.*’s (2009) survey of 716 managers predict that managers' ambidexterity increases with decision-making authority and participation in cross-functional interfaces. The researchers suggest ambidextrous managers host contradictions, multitask, and continuously update their knowledge, skills, and expertise (*ibid*). In Mom *et al.*, (2015) the authors were surprised to find that the longer managers remained in a functional area, the lower their ambidexterity became. They speculate that managers moving into new areas have to gain knowledge and/or, that the longer managers remain in a functional post, the more they identify with that function rather than with the organisation.

Ambidexterity as a responsibility of leaders (senior managers) was part of the argument of structural ambidexterity advanced by (O’Reilly and Tushman, 2013; Benner and Tushman, 2003; Tushman and O’Reilly, 1996). The situation in SMEs can be different where Lubatkin *et al.*, (2006) and Cao *et al.* (2010) argue that it is leadership teams that produce

ambidexterity. This aligns with Zimmerman *et al.*'s (2020) findings that the ambidexterity of an individual leader in an SME can overpower other combinations of structural and contextual ambidexterity.

Uhl-Bien and Arena's (2018) summary of ambidexterity in leadership for adaptability is an academic study within a burgeoning literature on leadership. According to the evidence-based management movement, few managers have the time or motivation to engage with academic reading. Instead, managers choose to rely on verbal information rather than written reports and make key decisions with little substantive evidence (see Pfeffer and Sutton, 2006; Rousseau, 2006). Mintzberg (1990) argues that such aural sense-making is a source of advantage. Additionally, it seems reasonable to assume that practitioner journals are read by managers and the content does influence them. Birkinshaw writes regularly for the MIT Sloan Management Review, in language that is accessible and easy to understand, hence the number of references from it and HBR in this review.

Through the practitioner literature, managers have become accustomed to the idea of paradoxes; how navigating them is challenging, or that living in Handy's (1994) age of paradox, is exciting. In this respect, the popularity of the *explore-exploit* paradox of ambidexterity may be a random effect as described by Taleb (2016). Although I have not read all their sources, several researchers, including Smith and Lewis (2011) and Fredberg (2014) reference other paradoxes that seem equally worthwhile: humanistic-economic, McGregor (1960); mechanistic-organic, Burns and Stalker (1961); and differentiation-integration Lawrence and Lorsch (1967).

Fredberg (2014) distils ambidexterity to a choice between reductionism (differentiating units by function) or integration (managing the context). Perhaps this relates to a tendency for managers to simplify the things they manage by reducing variation (see McGrath, 2001). Or

perhaps this conceptualisation of ambidexterity as binary choice reflects decision-making for many senior managers who make ‘either/or’ decisions, fully aware that some combination of ‘either/or/both’ will most likely emerge in due course.

I think a more important factor for managers making such a decision would be understanding where the responsibility for integration lies. If innovation is created separately, then integration processes and managers will be needed, whereas when innovation happens in an operational context, integration falls to operational managers. Smith and Lewis (2011) categorise such decision-making as dilemma, where the pros and cons of alternatives are evaluated, and the problem is resolved. Dilemmas are not long-lived, but paradoxes are.

Taking Birkinshaw’s preferred explanation, from Ghoshal and Bartlett (1994), that firms exist because they believe they can service the future needs of a market, then its managers must realise ambidexterity to bring something to market then derive the benefits after. Long-term sustainability depends on their ability to successfully pursue both explorative and exploitative agenda according to Tushman and O’Reilly (1996) and O’Reilly and Tushman (2004, 2013), which they may do regardless of any conscious recognition of being ambidextrous. This observation, and the notion of deliberate attention to tensions, will become important in my discussion of organisational transformation.

Meanwhile, Birkinshaw and Gupta (2013) state ambidexterity remains an academic concept, rather than an explicit management concern.

### Microfoundations approach

There has been a trend towards the microfoundational perspective in recent ambidexterity studies. Introducing a symposium on the ‘Microfoundations of Ambidexterity’ Fortwengel *et al.*’s (2018) abstract states their ambition that microfoundations will help ambidexterity

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researchers overcome the problem that, “How exactly firms achieve ambidexterity is still not well understood”. In the special edition of ‘Long Range Planning’, the editors state that the ambidexterity literature:

...still tells us relatively little about how organizational ambidexterity may emerge and evolve ... a significant gap remains regarding our understanding about ... the underlying individual and collective actions that are required for balancing exploration and exploitation activities and aligning them with changing internal and external conditions (Tarba et al., 2020, p. 2).

### Microfoundations background

The microfoundational perspective allows researchers to study collective phenomena *in situ* and has been used in various disciplines, including organisational research, to understand the components and interactions that combine to produce aggregate effects (Felin *et al.*, 2012). It may have emerged in the 1960s as economists sought to explain macro-economic effects through micro economic activities, or from philosophical debates about the role of the individual versus the collective (*ibid*). Also known as the ‘paradox of embedded agency’, it refers to the tension between individual agency versus collective determinism (see Battilana *et al.*, 2009; Bruce and von Staden, 2017).

Its advocates argue that microfoundations help researchers understand complex phenomena by exposing the behaviours, knowledge, and decisions of individuals (eg. Cyert and March, 1992); as well as the capabilities (eg. Zollo and Winter, 2002); of the relevant actors (eg. Powell and Colyvas, 2008; Felin *et al.*, 2012). Microfoundations may also help to address the gap between theory and reality by examining the micro-level processes that underlie macro-level patterns and behaviours Battilana *et al.* (2009) thereby increasing the empirical robustness of research. This perspective allows researchers to recognise the influence of



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contextual factors such as culture, norms, and social networks as identified in Fligstein & McAdam's (2012) book 'Theory of Fields' which should allow them to capture the complexities of organizational and social phenomena according to Minkoff (2014).

Felin *et al.* (2012) state that microfoundational research seeks to unpack routines and capabilities, noting that it is rooted in scientific principles of decomposition. An example which exemplifies the behavioural economist's microfoundational approach, and is related to ambidexterity, is the simulation of power and authority versus learning and adaptation in Dosi and Marengo (2015). Reducing the firm to these four variables, the model predicted that, "Higher organizational performance comes together with some balance between decentralized local coordination on the one hand and centralized authority on the other" Dosi and Marengo (2015, p. 557).

### Microfoundational ambidexterity

Researchers who have applied a microfoundations perspective to try to understand how low-level drivers aggregate to higher-level ambidexterity include (Eisenhardt *et al.*, 2010; Tarba *et al.*, 2020; Zimmermann *et al.*, 2020). In Martin *et al.* (2019) researchers theorise that conflict, especially between units of an organisation, has a significant impact on ambidexterity. Papachroni *et al.*'s (2016) manager-focused multi-level research was inherently microfoundational and attempts to describe the ways that managers make sense and deal with ambidextrous tensions.

Martin *et al.* (2019, p. 45) theorise that sequential ambidexterity is "A function of a firm's potential to initiate and manage core conflicts" (eg. conflicts that shift the firm's operating principles), that structural ambidexterity depends on managers' ability to balance peripheral conflicts (eg. by collaboration and negotiation between departments), and contextual ambidexterity arises from individuals' mediation of inner conflict (eg. sensemaking abilities).

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“Recovering the role of the individual” in ambidexterity and considering its application in practice, Papachroni and Heracleous (2020, p. 145) report that the literature offers two cognitive mechanisms, paradox thinking (Lewis, 2000) and expert heuristics (Eisenhardt, Furr and Bingham, 2010). The latter included the task switching seen by Adler *et al.* (1999). Papachroni and Heracleous’ (2020) theory offers a positive and humanistic perspective of individuals as being capable of performing dynamically and practically in complexity. If dealing with ambiguity is a factor of performing within complexity, Wilkinson’s (2006) empirical model predicts that:

‘Technical leaders’ either do not recognise, deny, or avoid uncertainty

‘Cooperative leaders’ feel it so strongly they take immediate steps to reduce it

‘Collaborative leaders’ are comfortable to stay with ambiguity indefinitely

‘Generative leaders’ “Seek out ambiguity to find the advantage” (Wilkinson, 2006, tbl. 1, p. 68-69).

From which I deduce that generative and collaborative leadership modes suggest individual ambidexterity.

In their critical review of organisational ambidexterity from a microfoundations perspective, Tarba *et al.* (2020) classify the research according to units of observation (individual or collective) and outcome (organisation or employee<sup>7</sup>), providing four microfoundational ‘drivers’ of ambidexterity. Where ‘>’ represents ‘towards’, the four are: 1) individual >

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<sup>7</sup> Changed from ‘individual’, which was confusing and may have caused errors in the original published table.

organisation; 2) collective > organisation; 3) collective > employee; 4) individual > employee, as shown in Table 1 below:

	<b>Organisational outcome</b>	<b>Employee outcome</b>
<b>Observed at collective level</b>	2) collective > organisation	3) collective > employee
<b>Observed at individual level</b>	1) individual > organisation	4) individual > employee

*Table 1 Units of observation of ambidexterity based on Tarba et al. (2020)*

Tarba *et al.*'s (2020) rationale for microfoundational research is based on employee ambidexterity. From this position they argue that researchers must go beyond understanding organisational impact (analyses at levels 1 and 2) and understand the individual (level 3) and collective (level 4) drivers of individual ambidexterity to, "Really understand organisational ambidexterity's microfoundations over time" (*ibid*, p. 3).

### Summarising organisational ambidexterity

Ambidexterity research seeks to understand how organisations, "Balance the tension between the need to innovate and the need to produce" (Uhl-Bien and Arena, 2018, p. 98). The terms 'explore' and 'exploit' are from March (1991), whose paper which "Considers the relation between the exploration of new possibilities and the exploitation of old certainties in organizational learning", informed early research (March, 1991, p. 71).

Initially, ambidexterity related to learning and adapting knowledge for innovation or profit and was then more broadly applied to diverse organisational tensions (eg. Lavie *et al.*, 2010; O'Reilly and Tushman, 2013). Later researchers substituted explore and exploit with related tensions, such as: evolutionary and revolutionary (Tushman and O'Reilly, 1996); alignment and adaptability (Gibson and Birkinshaw, 2004); efficiency and flexibility (Eisenhardt, Furr and Bingham, 2010); innovation and efficiency (Papachroni *et al.*, 2016).

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In reviewing the literature, Simsek (2009) notices that some researchers find *explore-exploit* tensions within learning, such as learning versus not learning, and learning new topics versus extending prior knowledge. McGrath (2001) uses variation management to explain how a variance-seeking strategy allowed explorative learning and promoted innovation, whilst mean-seeking strategies supported increasingly efficient local improvement, as do He and Wong (2004).

The paradox literature includes ambidextrous tensions, defining them as persistent, and being resolved simultaneously (see Andriopoulos and Lewis, 2009; Smith and Lewis, 2011).

Moving from managing exploration and exploitation as an ‘either/or’ trade-off, to managing paradox through ‘both/and’ thinking as proposed by Andriopoulos and Lewis (2009) is echoed in the ambidexterity literature (eg. Luger, Raisch and Schimmer, 2013; Papachroni, Heracleous and Paroutis, 2015). Andriopoulos and Lewis (2009) suggest this move represents a conceptual challenge, although ambidexterity may be a much simpler matter of ‘paradoxical practice’ as Papachroni and Heracleous (2020) describe.

### Discussion of the ambidexterity literature

Ambidexterity research creates a tension for this practitioner. The research is both fascinating and frustrating. It describes a phenomenon that occurs from the actions of managers but can neither explain it, nor provide tools to manage it (managing being a key activity for managers). It has a narrow focus which is worrying the complexity-minded systems thinker in me. In this discussion, I provide some examples, recognise some alternatives, and attempt to relate ambidexterity to the role of the manager (as I understand it).

There is little consensus amongst researchers about the mechanisms or processes of ambidexterity. For example, Simsek *et al.*'s (2009) typology cross-references structure and time to theorise four ambidextrous forms at the business unit level: harmonic (contextual);

cyclical (sequential); partitional (structural); and reciprocal (reciprocal). Meanwhile, Luger *et al.* (2018) identify: managers' networks (Rogan and Mors, 2014), incentive systems (McCarthy and Gordon, 2011), and control systems (McGrath, 2001), in addition to the mainstream structures, contexts, and leadership systems.

O'Reilly and Tushman's (2013) statements about leadership (senior managers) providing vision and being capable of managing diverse tensions seem dated. Even in 1997, according to Heifetz and Laurie (1997, p. 13), such an assumption, "Reveals a basic misconception about the way business succeed in addressing adaptive challenges". In their paper, Gibson and Birkinshaw (2004) hypothesise that context, not charismatic leadership or structure, determine whether alignment and adaptability can co-exist effectively. However, the literature on SMEs, for example Lubatkin *et al.* (2006), suggests senior management teams *can* perform the integration function, as could the senior teams that led branches of a Dutch financial services firm in Jansen *et al.* (2008). Personally, I am aware of very few managers of large and siloed organisations that are capable of such excellent skills of vision and leadership. It is noticeably lacking in the organisations I have encountered, where most leaders and managers are average and those who can communicate a vision and manage diverse tension are exceptional.

The fact that a significant proportion of the people from my past that actually took part in my research were exceptional managers, highlights their inclination to understand performance, and help others become top performers.

Reducing the tensions of an organisation down to explorative and exploitative sources seems reductionist and suggests a binary view (dualism) rather than the dualistic (and potentially pluralistic) tensions of paradoxes (Smith and Lewis, 2011). The source is likely March's (1991) notion of competition for limited resources. Competition suggests a zero-sum game in

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which managers fight for precious resources and there are winners and losers. That may be an appropriate analogue for machine-age management systems operating resource-based strategies, but less so for fast-moving technology-based firms for whom strategy and capability-building are dynamic (see Furr and Eisenhardt, 2021; Luger *et al.* 2018; Eisenhardt, Furr and Bingham, 2010; Eisenhardt and Brown, 1998).

A strategy should automatically address the basic tension of ambidexterity, as this example from the UK's Directorate of Joint Warfare demonstrates: "To lead the optimisation of the Joint Force of today whilst adapting it for the challenges of tomorrow..."<sup>8</sup>

Like dynamic capabilities, contextual ambidexterity offers a variation on the theme of strategy that suits fast-changing technology and volatile markets of the digital age. Unlike dynamic capabilities, ambidexterity is beyond the strategy literature.

### The complexity alternative

Structural ambidexterity is a product of machine age organisational design. Optimisation in that metaphor was for complicated problem-solving through predictable-value activities, whereas contextual ambidexterity as a contemporary implementation is able to absorb the complexities of work that is predominately knowledge based. Context-aware management seems more collaborative and human than its 'predict-plan-control' predecessor as Heffernan (2021) characterises it. Contextuality seems compatible with the view of organisations as complex adaptive systems or relational networks with pluralistic needs.

Regardless of whether structures are physical, rule-based, or cultural, constraints affect the behaviour of a complex system, and those effects are unlikely to be predictable, see Juarrero (2022). Unlike line management barriers, complexity provides a nuanced view of constraints;

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<sup>8</sup> This statement is published internally.

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they can be context-sensitive or context-free, enabling or limiting (*ibid*). The separated Run and Change budgets which I encountered in banking firms undergoing transformations provides a helpful example. Originally intended as a what Juarrero (1999) and Snowden and Boone (2007) term an ‘enabling constraint’ to provide better financial control, managers adapted to separate budgets by charging costs to whichever budget had funds at that time. The result was that spending matched the budgets, but the company lost control of how their money was being spent, which is the primary purpose of a budget.

### Ambidexterity and the role of the manager

It is self-evident that structural ambidexterity is a product of managers’ beliefs regarding organisational design. Less obvious is that managers help organisations overcome natural tendencies and inertia and can generate ambidexterity, contextually Birkinshaw and Gupta (2013). Multi-level research by Mom *et al.* (2019) suggests that firm-level ambidexterity is mediated by top-down factors (ability and motivation enhancing practices) of senior managers and bottom-up (opportunity-enhancing practices) of local managers. Therefore, competent managers are organising agents that allow firms to achieve goals through governance and leadership, Battilana *et al.*’s (2017) embedded agency. Those goals may only be visible as part of the bigger picture, such as simultaneously supporting both exploration and exploitation.

Despite Birkinshaw and Gupta’s (2013) assertion that ambidexterity is a management capability, there has been a paucity of management (although not leadership) literature exploring the roles of mid-level managers. Research centred on managers is emerging (eg. Birken and Currie, 2021; Jie Xiong *et al.*, 2021; Sukoco *et al.*, 2021; Rost *et al.*, 2019; Baarlen, 2018; Burgess *et al.*, 2015; Torres *et al.*, 2015; Mom *et al.* 2015). Hopefully it will

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increase as researchers incorporate microfoundational principles in their organisational studies.

There are parallels between managerial contextual ambidexterity and the practice of Agile transformation, where the need for ‘mindset change’ is implied or stated (eg. van Waardenburg and van Vliet, 2013; Dikert *et al.*, 2016; Gandomani and Nafchi, 2016).

Professional experience suggests that helping managers take the smallest possible step towards the intended goal often provides tangible and incremental benefits. I explore Agile transformation in terms of ambidexterity and tensions management in 2.4 How managing tensions supports transformation.



## 2.3 Exploration and approaches to managing organisational tensions

This section describes my second investigation of the literature. I present arguments for six basic tension types which I identified, with my proposed approach for managing each. I describe my methodology in Chapter 4, Research activities.

### Rationale

My objective was to understand which tensions comprised ambidexterity, according to the literature. One paper, in particular, clarified the need for this information. In their introduction to a special edition on the microfoundations of ambidexterity, Tarba *et al.* (2020) identify research gaps in the literature, including:

1. Individual-level studies of organisational ambidexterity's foundations that consider context more explicitly in their propositions.
2. How top executives apply tension-alleviating managerial initiatives or how they tackle the tension-induced contradictory processes in real time.
3. Insight about what it means for individuals to deal with inherent tensions over time and how their surrounding may absorb some of these complex behaviours' negative consequences.
4. Whether leaders can be developed to become ambidextrous.

My literature search of tensions responds to the first of these gaps, my approaches to managing those tensions responds to the second, and methodology for transformation to the fourth.

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My in-person conversations with managers as fieldwork (Chapter 4) responds to another research prompt gap from Tarba *et al.* (2020, p. 6) to “Focus on the microfoundations of ambidexterity across different levels and settings” by understanding how managers at all levels differentiate and integrate tensions in practice.

I make two contributions to the theoretical literature here. First, I present a categorisation of ambidextrous tensions based on literature that I have curated. Second, I propose tactics and associated strategies for managing those tensions. This work extends the findings of Andriopoulos and Lewis (2009) concerning management of tensions of strategic intent, customer orientation, and personal drivers.

### Literature sources

I selected 72 ‘core’ papers, of which nine were reviews of the ambidexterity research literature. I classified as ‘seminal’ the four papers Birkinshaw and Gupta (2013) state cover the definition stage of ambidexterity (Tushman and O’Reilly, 1996; Adler, Goldoftas and Levine, 1999; Gibson and Birkinshaw, 2004; He and Wong, 2004), plus (Raisch and Birkinshaw, 2008; Uhl-Bien and Arena, 2018). Others I classified ‘significant’ because they were popular (eg. Benner and Tushman, 2003; Lubatkin *et al.*, 2006), or highly relevant (eg. Andriopoulos and Lewis, 2009; Jansen *et al.*, 2009). This knowledge base of seminal, significant, and relevant papers informed my review of the literature. See Appendix A: Core collection of ambidexterity papers.

### Findings

The result of my analysis of the specific tensions gathered from the literature yielded six ‘base tensions’. Each base tension represents a cluster of ‘specific tensions’. Specific tensions

are literally, or closely related to, the coded text of the sources. I have included the full list of codes in Appendix B: Tensions coding from the ambidexterity literature.

For each base tension, alongside its description, I have included examples of the specific tensions from the literature, as well as my suggested approach that managers could take to alleviate or manage the tension. See Table 2, below.

<b>Base tension</b>	<b>Description and symptoms</b>	<b>Specific tension examples</b>	<b>Suggested approach</b>
explore-exploit	<p>Incompatible activities that all orgs must do.</p> <p>Affects all functions and disciplines.</p> <p>Originally, dual structure ambidexterity allowed separate learning and management activities.</p>	<p>exploration-exploitation</p> <p>innovation-efficiency</p> <p>short-long term</p> <p>radical-incremental change</p> <p>building-shifting capability</p> <p>sales-service</p> <p>transformational-transactional leadership</p> <p>brand preservation-change</p>	Balance exploration-exploitation
variation-routine	<p>Reducing variety and increasing routine helped increase efficiency in the post-war era (Lean techniques).</p> <p>Managers must understand routine variation to respond appropriately.</p>	<p>routine-nonroutine</p> <p>tight-loose internal coupling</p> <p>goal autonomy-oversight</p> <p>externally-internally aligned culture</p> <p>fresh blood-accumulated wisdom</p> <p>consensus-dissent</p> <p>opportunity-motivation</p>	Manage variation

<p>agility-steadfastness</p>	<p>Increasing uncertainty and complexity makes collaboration essential and rigidity dangerous.</p> <p>Specialisations that made orgs efficient left them vulnerable to exceptional events.</p> <p>Leadership valued more than management.</p>	<p>adaptability-alignment</p> <p>flexibility-efficiency</p> <p>entrepreneurial-administrative</p> <p>cognitive-biased decisions</p> <p>deliberate disruption-preservation</p> <p>tight-loose customer coupling</p> <p>risk seeking-avoiding</p> <p>entrepreneurial-administrative</p>	<p>Leadership at all levels</p>
<p>intention-execution</p>	<p>Predict and control management increasingly unable to overcome systemic barriers including the intention-execution gap.</p> <p>Tech changes are now too fast for managers to keep up.</p> <p>Local decision-making needed, perhaps network organisational models.</p>	<p>planning-execution</p> <p>bottom-up-top-down</p> <p>direct-cascaded communication</p> <p>passion-discipline</p> <p>centralization-decentralization</p> <p>local-distant</p> <p>adapting-obeying</p> <p>social-technical learning</p> <p>moderate-high dynamic pace</p>	<p>Self-organisation - Pull not push</p>
<p>illusion-reality</p>	<p>Self-aware managers admit they can't solve the complexity of conflicting demands and incomplete information.</p> <p>They seek a better way of working.</p>	<p>illusion-reality</p> <p>capacity-demand</p> <p>make exactly what is needed-mass production</p>	<p>Experiment and use evidence-based management</p>

		prototype for design- prototype to correct  problem diagnosis- solution	
exploitation- preservation	Value conflicts (conflicts arising from deeply held values).  Mutual understanding has been efficacious in structuring the problems and finding acceptable solutions.	environmental-commercial values  salmon farming-first nation beliefs	Systems theory of value conflict (Midgley, 2016)

Table 2 Categories of tensions and approaches to managing them (Lewis, 2024)

In reconceptualising these well-known ambidextrous tensions, I recognise I am as an amateur criticising the ‘sacred cows’ that I have only recently encountered. I therefore submit these arguments as lightly held options, rather than resolute beliefs.

The big discovery came through re-examining the term efficiency, as it appears as a tension source in several different tension pairs throughout the literature. I found it can be a dimension of the *explore-exploit*, *variation-routine*, or *agility-steadfastness* base classes and was therefore, a poor choice to be a tension source.

The other significant changes were moving Adler *et al.*’s specific tension of *routine-nonroutine* into the *variation-routine* base tension; moving Gibson and Birkinshaw’s (2004) specific *adaptability-alignment* into the *agility-steadfastness* base; and the specific tensions of *bottom-up-top-down*, *local-distant*, and *strategic-operational* into a base class of *intention-execution* tensions. I developed a new base tension of *illusion-reality* to accommodate various conflicts such as *capacity-demand* that originated in manufacturing and now impact

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IT teams, and I have suggested a cluster of social tensions that arise from value conflicts such as *exploitation-preservation*.

I next discuss each base tension using examples of specific tensions and the management approach, in context. I return to the literature for each, applying Eisenhardt's (1989, 2021) 'enfolding literature' approach to support or disconfirm my findings.

### Explore-exploit tension

Many papers reference March's (1991) 'exploration' and 'exploitation' classified here as *explore-exploit* (note the use of italics and a hyphen for tensions). Others, including Güttel *et al.* (2015, p. 261) abstract *explore-exploit* as a concept then investigated something more specific such as "Short-term efficiency and long-term innovation". Their statement warrants further consideration as it compounds the forces of innovation and efficiency (forces are sources of tension) with the temporal tension, *short-long term*. I found three interpretations of efficiency in the literature and have encountered more in practice.

New product development has historically been associated with long-term innovation, but internal entrepreneurship and the rapid prototyping of the digital age break such temporal rules (see Takeuchi and Nonaka, 1986; Maurya, 2012; Frynas, Mol and Mellahi, 2018).

Nonetheless, innovation as an aspect of exploration, clearly belongs in the *explore-exploit* cluster of tensions, albeit separated from considerations of time. Not so, efficiency, which tends to be a time-bound consideration for organisations; 'time is money' either as direct cost or opportunity cost (lost).

In the ambidexterity literature, efficiency may apply to either business as usual (exploitative) activities or the (explorative) integration activities that follow innovation, both of which must occur in a timely manner. Therefore, *innovation-efficiency* (eg. Papachroni *et al.*, 2016)

became a specific tension of the *explore-exploit* base. However, efficiency also represents forces that oppose change because they disrupt the flow of an optimised process. For example, Adler *et al.*'s *flexibility-efficiency*, which I conceptualised within the *variation-routine* cluster of tensions. Or, as in Güttel *et al.*'s (2015) phrase above, efficiency may be a convenience that serves both interpretations. In their single case study of *innovation-efficiency*, Papachroni *et al.* (2016) identify additional, 'latent tensions' (including: *proactive-reactive* customer care; *structure-freedom* in managing internal demands; and *predictability-uncertainty* in justifying resource allocation and investment). Although they did not explain why they selected 'efficiency', Papachroni *et al.* (2016, p. 11) include this quote from a senior manager, "There's always innovation in efficiency and there is efficiency in innovation" a point that resonates with Ohno's (1988) considerations for improving processes.

The specific tension of *innovation-efficiency* comes from O'Reilly and Tushman (2008, p. 185), whose suggestion, "Efficiency and innovation need not be strategic tradeoffs and highlight the substantive role of senior teams in building dynamic capabilities" indicates the underlying concept is *explore-exploit*. The same applies to efficiency as 'cost performance' in Blome *et al.*'s (2013) research into the impact of 'ambidextrous governance' on innovation and cost performance, and balancing "Disruption and change with the counter side, stability, to enhance efficiency" from Bell and Hofmeyr (2021, p. 1).

Therefore, I found that efficiency may be a specific reference to activities that exploit (or transfer) existing knowledge but are the opposite of innovation. It was used to indicate the preservation of an already optimised process which was the opposite of change, or a general term for avoiding waste in all activities. Taken as the measure of throughput against total cost as Goldratt (1990) and Reinertsen (2009) describe, efficiency is an empirical measure of past

performance, regardless of short- or longer-term timescales. This adds further support to the argument for separating *short-long term* and *radical-incremental change* tensions from *explore-exploit* and *variation-routine* tensions.

The tension between short-term and long-term may be better represented as an ‘ism’, as in Levinthal and March’s (1993) concern over short-sightedness, and Deming’s (1986) criticism of short-termism. Deming used the signals of variation to help managers stabilise and improve performance over time, an effect recognised by He and Wong (2004, p. 481) who observed, “Explorative firms generate larger performance variation by experiencing substantial success as well as failure, while exploitative firms are likely to generate more stable performance”. In other words, stabilising performance happens gradually, over time. In classifying the *short-long term* tension as *explore-exploit*, I adopted O’Reilly and Tushman’s (2013) position that the tension was between viability over the long-term, versus short-termism. I can validate this from practice, as Wisetech identified *quality-delivery* as the source of a core conflict that was limiting performance (Scott, 2021).

Tushman and O’Reilly’s (1996) article considers medium and long terms, but their call to leaders to make changes, “To remain successful over long periods, managers and organizations must be ambidextrous—able to implement both incremental and revolutionary change” reveals a specific tension between *radical-incremental change*, not the frequency of change (Tushman and O’Reilly, 1996, p. 8). The same may apply to Im and Rai (2008, p. 1281), who describe the need to manage “Partners’ activities and resources for short-term goals and adapt partners’ cognitions and actions for long-term viability”, their focus being the inter-organisational capability of management systems to provide contextual ambidexterity.



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The interpretation that exploitation is a short-term phenomenon may have come from March (1991) whose paper opens with, “Adaptation by exploring new possibilities or exploiting old certainties”. March provided this explanation about distances in time:

Compared to returns from exploitation, returns from exploration are systematically less certain, more remote in time, and organizationally more distant from the locus of action and adaptation. What is good in the long run is not always good in the short run (March, 1991, p. 73).

March continues with what must have been a well-known (at the time) systems thinking reminder that the effects of local changes may appear in some other place, at some other time, or in another system:

What is good at a particular historical moment is not always good at another time.  
What is good for one part of an organization is not always good for another part.  
What is good for an organization is not always good for a larger social system of which it is a part (March, 1991, p. 73).

Therefore, I have interpreted the specific tension of *short-long term* as short-termism versus sustained longevity, and not about intervals of time.

Many papers specify *exploration-exploitation* as their specific tension, so *explore-exploit* remained the most populous classification base in my analysis.

Other specific tensions of note within this cluster include: *capability building-shifting* from Luger *et al.* (2018, p. 450), who find “Capability-building processes (to balance exploration and exploitation) with capability-shifting processes (to adapt the exploration–exploitation balance)”; *sales-service* ambidexterity from Agnihotri *et al.* (2017); *transformational-transactional* leadership styles from Zimmermann *et al.* (2020); and *brand preservation-*

*change* from Beverland *et al.* (2015, p. 1) who find marketing ambidexterity in “Balancing the preservation of existing brand identity through consistency with the need to maintain relevance, which requires change and innovation”.

### *How balancing manages the explore-exploit tension*

I have suggested ‘balancing tensions’ as a practical approach that will be most useful to managers. Just as ambidexterity is achieved intuitively, so is balance, and I believe that is what managers do in practice. Managers have a mediating role in balancing the instructions from above with the opportunities and threats from below, as well as balancing the conflicting priorities of different functions through co-ordination. Their role is more complex than the *explore-exploit* duality of ambidexterity suggests. For example, whilst Zimmermann *et al.* (2015) studied the way managers operated interfirm charters, those same managers performed many more managerial activities such as identified by Mintzberg (1973). Thus, managers already experience and must balance, many forces concurrently.

Differentiating and integrating tensions is an academic construct with bases in empirical research, according to Raisch *et al.* (2009). Kurt Lewin’s ‘field theory’ describes how some forces in a system support, and others oppose each other, see Burnes and Cooke (2013). Eli Goldratt developed ‘Theory of Constraints’ thinking methods to help managers expose and ‘evaporate’ the fundamental tensions affecting performance within their organisations (see Stratton and Mann, 2003; Mabin, 2015). Recently, Martin *et al.* (2019) invited empirical research by conceptualising conflict as a microfoundation of ambidexterity. The ‘complex interplay’ of structural and contextual ambidexterity that Raisch *et al.* (2012, p.5) observe results from managers finding (and disrupting) the balance of the “Firm’s exploitative, explorative, and ambidextrous processes”.

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Andriopoulos and Lewis (2009, p. 702) identify that balance may be the most managers can expect to achieve in relation to the fundamental tension between profit and breakthrough innovation, which they call the “Paradox of strategic intent”. This is the only one of the three paradoxes that Andriopoulos and Lewis (2009) describe that I have classified as *explore-exploit*. Their paradox of tight and loose coupling to the client reminds me of the customer-first principles which developed into Agile and design thinking, and which align with the tensions of the *agility-steadfastness* cluster. And their tension between discipline and passion arises from the design and governance of the organisation, which is why I add *passion-discipline* to the *intention-execution* cluster.

Papachroni *et al.*'s (2016) analysis highlight that tensions are interpreted and managed according to managerial context. For example, senior managers spoke of business model and product innovation, whilst operational managers were concerned with process innovation, really “Innovation as a process of continuous improvement” (*ibid*, p, 11). Operational managers regarded *innovation-efficiency* as complementary forces, whilst senior managers viewed them as conflicting or interrelated. Such different worldviews need to be balanced, and nothing more.

### Variation-routine tension

My basis for differentiating *variation-routine* as a base tension that is distinct from *explore-exploit*, is that it affects managers of explorative and exploitative activities equally. This is rooted in what is known as the ‘law of requisite variety’ from Ashby (1956), which McGrath (2001, p. 118) summarises, “Effective adaptation requires sufficient internal variety”.

Examples could include dual structures, diversity initiatives, and mindfulness sessions.

However, a corollary often overlooked, is that all internal variation also has to be absorbed by the organisation. For example, a UK investment bank bought a French investment bank and

executives decided to preserve both sets of computer systems and managers, resulting in a larger bank with duplicate systems, processes, and management hierarchies. The additional variety caused greater internal complexity which had to be absorbed and resulted in a culture of indecision and bureaucracy where even the simplest tasks had become complicated.

Developing new software features and changing the menu in a restaurant so the kitchen produces different dishes, are examples of routine, or ‘common cause’, variation (Wheeler, 2000). Both have processes optimised to produce variety and both require routine management by those directly involved in the work. Such self-organisation is a principle of Beck *et al.*’s (2001) Agile manifesto. Although the output is different every week, all output must conform to the appropriate standards of quality and profitability, therefore the process of production must accommodate all of the variations. These are examples of predictable-value activities which can be managed by local experts (workers) analysing the situation and adjusting the process to absorb variety and keep performance within expected limits (see Deming, 1986; Wheeler, 2000; Seddon, 2005). Managing variation in this way characterises the machine age, from the textile looms in 18<sup>th</sup> century Britain to Bytedance, the ‘software factory’ that produced TikTok, as described by Chen and Ma (2022).

Variation is what Adler *et al.* (1999) studied during two model changeover periods at Toyota, when workers switched from the routine of making parts for one model to making parts for another. Changeover broke the routine and caused ‘exceptional variation’ in performance when zero parts were produced. Managers and workers collaborated to reduce the time taken for changeover, such that changeovers became routine and predictable. Hence, Adler *et al.* (1999, p. 43) find that the plant, achieved “exceptional flexibility/efficiency combination”, showing that flexibility and efficiency were not necessarily a trade-off of the organisation’s design, and that bureaucracy was not necessarily an obstacle to flexibility (TPS is highly

bureaucratic). Crucially, Adler *et al.* (1999, p. 45) introduce the concept of ambidexterity as, “Simultaneously performing both routine and nonroutine tasks”. Therefore, I place the specific tension of *routine-nonroutine* at the top of the *variation-routine* cluster.

Adler *et al.*'s (1999) introductory paragraph suggests the terms flexibility and efficiency originate from Thompson's (1967) 'Paradox of Administration', and their review of the literature extends the concept to include mechanistic/organic designs. Critically examining the specific tensions of *flexibility-efficiency* I realised that efficiency cannot be one side of an ambidextrous tension pair. The opposite of being efficient is being wasteful (whether through ignorance or laziness) which no organisation wants (this became a useful test for tensions). In the words of the manager who developed the TPS, Ohno (1988): “Toyota process emphasises efficiency, but is efficient with respect to adaptation too”.<sup>9</sup>

Theories that address *variation-routine* tensions have been available for more than thirty years yet are not widely known. In my experience, managers trained in Lean, working at Toyota, and those familiar with systems thinking, know the theory of how to develop efficiency in both routine and non-routine activities.

Exceptional performance was achieved at the Toyota plant through contextual and structural means. Contextual factors included: high levels of trust; training; creating opportunities; and job enrichment, whilst the four mechanisms Adler *et al.* (1999) identify are: ‘metaroutines’; involving suppliers and workers in non-routine tasks; creating a changeover team (‘partitioning’); and alternating between routine and non-routine tasks (role switching). Of this list, everything, apart from the (presumably managerial) instruction to partition the team,

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<sup>9</sup> I regret that there is no page number to reference this quote and offer readers a choice of explanation. Either the book is a rare edition that was borrowed from the Deming Alliance's library when I was a member, or that no work of man may be perfect (inspired by the delightful suggestion at: <https://www.geometricdesign.co.uk/perfect.htm>).

was contextual and done in collaboration with managers. Gibson and Birkinshaw (2004) highlight employees making decisions about how to approach routine and non-routine tasks through metaroutines (to ‘systematize’ the creative process) which Simsek *et al.* (2009) consider to be the dominant antecedent by providing a ‘supportive culture’.

However, what is missing from these accounts of Adler *et al.*’s (1999) findings as ambidexterity, is that everything took place in a factory of mass-production, a place that embodied efficiency. The exploration needed to improve non-routine tasks concerned changing pre-formed dies on huge panel pressing machines where the goal was to reduce the time taken for changeover, as described by Shingō and Dillon (1989) and Ohno (1988). Yet Adler *et al.* (1999) selected *flexibility-efficiency* as the ambidextrous tension. Clearly, flexibility represents the changeover activity, which Uhl-Bien and Arena (2018) associate with adaptability and agility. I presume that it was common knowledge at the time that variation disrupts routine and normally reduces efficiency, at least it was apparent to McGrath (2001). Therefore, the management of the tension between variation and routine activities and doing both efficiently, *variation-routine*, is the appropriate base tension for Adler *et al.*’s (1999) *flexibility-efficiency*.

The tensions of *tight-loose internal coupling* and *autonomy-oversight* of employees may also be considered in terms of variation. McGrath (2001) explains how loose (internal) coupling increases variety and therefore opportunity for local discoveries to be made, whilst tighter coupling makes knowledge exchanges easier. This explanation describes the contexts needed for ambidextrous differentiation and integration. For example, the conditions for exploration are improved by increasing goal autonomy over managerial oversight (*goal autonomy-oversight*) according to McGrath (2001) and having an externally focused culture rather than inward alignment according to Raisch *et al.* (2012). Even the amount of ‘fresh blood’

compared to the accumulated wisdom of existing employees of Güttel and Konlechner (2009) impacts variation, as does managers' willingness to recognise contradiction from Smith and Tushman (2005) and navigate the tensions of *consensus-dissent*.

*Opportunity-motivation* is a specific tension in Mom *et al.* (2019) and comes from the ability, motivation, and opportunity framework they used to investigate the effect of HR practices on individual ambidexterity. The more encouragement, opportunity and training provided to individuals, the greater the variation and consequent "Collective capacity to look beyond the short term by generating options that ensure longer-term growth and prosperity" from Mom *et al.* (2019, p. 3030).

### *How managing variation manages the variation-routine tension*

The *variation-routine* tension is best managed by understanding and managing variation itself. I am most familiar with the statistical process control approach, as taught to industrialist by Deming in Japan and described by Wheeler (2000) and Hunter and Bellows (2018). There are references to understanding variation throughout the Lean and systems dynamics literatures (eg. Deming, 1986; Goldratt, 1990; Neave, 1990; Senge, 2006).

He and Wong's (2004, p. 492) recognition of the "Need for senior managers to manage explorative and exploitative innovation simultaneously in 'a steady-state perspective,' beside 'a life cycle perspective'" stands-out for its resemblance to Lean's principles of continuous quality improvement. This description of Lean is from the UK's medical practitioner literature:

Lean is the term used to describe a principle-based continuous quality improvement (CQI) management system based on the Toyota production system (TPS) that has been evolving for over 70 years. Its origins go back much further and are heavily influenced by the work of W Edwards Deming and the scientific method that forms

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the basis of most quality management systems. Lean has two fundamental elements - a systematic approach to process improvement by removing waste in order to maximise value for the end-user of the service and a commitment to respect, challenge and develop the people who work within the service to create a culture of continuous improvement. Lean principles have been applied to a growing number of Healthcare systems throughout the world to improve the quality and cost-effectiveness of services for patients and a number of laboratories from all the pathology disciplines have used Lean to shorten turnaround times, improve quality (reduce errors) and improve productivity (Clark et al., 2013, p. 638).

Although this a long quote, it anticipates some later findings of this project as well as highlighting the tensions between process improvement and people development, and customer outcomes versus productivity.

### Agility-steadfastness tension

Whilst academic literature, such as Simsek *et al.* (2009) engage with the means through which ambidexterity was achieved and how its outputs, practitioners must satisfy organisations' demands for adaptability, whilst upholding reputations for stability and conservatism that qualifies them to manage the assets of large institutional clients or protect a nation's citizens.

The first chapter of McChrystal *et al.* (2015) describes how an agile militia defeated a mighty army constrained by the 'command and control' approach of its senior management. Steadfastness matters to large financial services organisations, as it does to the governments whose bonds they broker, companies whose shares they bring to the market, and individuals whose pensions are under their management. Although these forces have traditionally been



included within the basic *explore-exploit* tension, I argue that the pace of change and uncertainties of the digital age require re-conceptualisation of *agility-steadfastness* as a separate base tension. As paradoxical dualities, agility combines with steadfastness to produce systemic resilience, in the same way that a skyscraper's structure is designed to withstand natural forces by flexing.

The demand for agility is evidenced by practitioner literatures on Agile transformation (eg. Appelbaum *et al.*, 2017a; McKinsey & Co, 2018; Barroca *et al.* 2019), and digital transformation (eg. Reis *et al.*, 2018; Vial, 2019; Schneider and Kokshagina, 2021). These are considered in section 2.4 How managing tensions supports transformation.

Agile's origins in software development mean that some people associate Agile only with IT, as does Uhl-Bien (2021b), and organisation-wide programs of Agile transformation have led to speculation that it is just another management fad as defined by Naslund and Kale (2020). The literature on digital transformation is better served by researchers than that of Agile transformation and, whilst they are strategically different, both aim to change the way organisations deliver value to their customers and stakeholders. As for outcomes, Agile delivery and digital delivery methods are inexpensive and flexible, allowing services to be created and adapted quickly and cheaply. Organisations, and those within them, increasingly need to be "Flexible, agile and adaptive in response to changes associated with a volatile and often unpredictable world" from Uhl-Bien and Arena (2018, p. 89).

The specific tension identified by Gibson and Birkinshaw (2004) was *adaptability-alignment*. Compared with structural, leadership, or sequential mechanisms of ambidexterity, I believe that intentionally managing the context is the quickest, easiest, and thus most Agile way of experimenting with the tensions of ambidexterity. That ambidextrous outcomes were

achieved by aligning around adaptability highlights the natural affinity between contextual ambidexterity and Agile:

Successful business units were able to simultaneously develop these capacities by aligning themselves around adaptability. Importantly, the systems that they used to do this were often quite simple—indeed, they often involved less formality, rather than more (Gibson and Birkinshaw, 2004, p. 221).

As with Uhl-Bien and Arena's (2018) synthesis of leadership for adaptability, Gibson and Birkinshaw's (2004) reconceptualisation of ambidexterity builds on concepts from complexity and paradox theory (eg. Stacey, 1995; Brown and Eisenhardt, 1997). Whether applying 'enabling constraints' Juarrero (1999) or 'managing paradoxes' Lewis (2000) managers create the conditions for work and the organisation (a complex system) adapts to those conditions. In Gibson and Birkinshaw's (2004, p. 222) example, "It is not enough to simply create a supportive context. It is when this supportive context creates the capacity for ambidexterity that performance gains are realized", the intentional creation of the capacity for ambidexterity is a constraint, in the same way that setting ambidextrous goals and targets act as constraints. Also, that leaders enabled adaptability by creating 'adaptive space' where they engaged conflicting (ambidextrous) tensions and advanced new ideas by connecting diverse agents, see Uhl-Bien and Arena (2018).

My choice of 'agility' over adaptability or flexibility reflects the Agile methods of the digital age and the abstract nature of much of its work. I concede that 'adaptability' is better supported in the literature.

But what of agility's opposing force, steadfastness? It has been my experience that the inertia that resist change are steadfast; resolute and unyielding in the face of opposition.

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Steadfastness has the desired positives of being trustworthy and reliable, whilst capturing the stubborn protectiveness of governance that exists in some large organisations. Refusal to change governance is not a rejection of exploration, but a reasonable refusal to compromise the certainty of day-to-day performance.

Managing risk is significant for transformation because without the safety of positively adaptive spaces as researchers such as Edmondson (1999); Boyatzis (2006); and Uhl-Bien (2021a) describe, managers have no place in which to learn how recover when their improvement assumptions fail. Designing, running, and learning from experiments is an organisational capability and experimentation in everyday work is a key mechanism for improving organisational agility.

Eisenhardt *et al.* (2010) find that leaders approach improvement in what seems a cautious manner, ‘drifting toward efficiency’, ‘unbalancing to favor flexibility’, and using ‘prototypes and probes’ to ‘inject flexibility’. Rather than cognition, Eisenhardt *et al.* (2010) suggest heuristics form the microfoundations to ambidexterity, in the form of simple rules and ‘semi-structures’ that leaders follow. Easy to operate, the heuristics were “Single, cognitively sophisticated solutions at the individual and group levels [which] complement and may substitute for maintaining contradictory, dual cognitive agenda” from Eisenhardt *et al.* (2010, p. 1269). This reveals two more specific tensions within *agility-steadfastness*, namely: *heuristic guidelines-formal routines*; and *cognitive-biased decisions*.

Beyond the senior managers of Eisenhardt *et al.*’s (2010) study, organisational agility may result when people at all levels have the ability and opportunity to think critically and develop heuristics. It is surely valuable, sometimes, to escape the human biases that inhibit thoughtful decision-making to “Counter the tendency of organizations to become more structured as they age and grow” as Eisenhardt *et al.* (2010, p. 1270) suggest. It offers an

alternative to the deliberate disruption rather than deliberate preservation, that Tushman and O'Reilly (1996) suggest.

*Tight-loose customer coupling* is one of the three paradoxes Andriopoulos and Lewis (2009) surface, although I could have made the case for its inclusion alongside *tight-loose internal coupling* within the *variation-routine* cluster. However, closeness to customers is how Agile and customer-first methods produce better products and solutions (see Cockburn, 2002; Fischer, Lago and Liu, 2013; Christensen *et al.*, 2016). The specific tension I identified arose because, “Development teams yearn to probe emerging opportunities and experiment continuously” which needed to be offset by maintaining some distance from the customer, from Andriopoulos and Lewis (2009, p. 705). However, Andriopoulos and Lewis's (2009) examination of tensions as paradoxes finds simultaneously tight *and* loose customer coupling, something that sits well with Agile's socio-technical approach.

### *How developing leadership at all levels helps manage the agility-steadfastness tension*

Mindset shift and ‘thinking differently’ as suggested in paradox and Agile literatures are too abstract to be of widespread practical use to managers. Instead, I have suggested the more suitable, entrepreneurial approach of developing leadership at all levels. It came from the specific managerial tension between *entrepreneurial-administrative* identified by Mom *et al.* (2019). Eric Ries showed how this could activate change within GM, and Haier's evolving operating model is increasingly entrepreneurial (see Fischer *et al.*, 2013; Ries, 2017). Uhl-Bien and Arena (2018) position ‘entrepreneurial leadership’, ‘enabling leadership’, and ‘operational leadership’ as the start, middle, and finish of the process of leadership for organisational adaptability. This process view, starting with entrepreneurial and ending with operational implies that ‘enabling leadership’ may be a mechanism of ambidexterity. It is consistent with the integration role of leaders of ambidextrous organisations (eg. Tushman

and O'Reilly, 1996; Benner and Tushman, 2003; Cao, Simsek and Zhang, 2010; Heavey and Simsek, 2017).

The key ingredients, according to Sebastian *et al.* (2017) for the digital transformation of 'big old companies' are strategy, 'operational backbone', and innovation platforms. Operations and innovation represent the ambidextrous tension in this view, and managers at all levels need a clear strategy to be able to make aligned decisions. Actionable strategy, which Rumelt (2012) calls 'good strategy', may help to relieve *risk seeking-avoiding* tensions. According to Levinthal & March (1993):

Successful managers tend to underestimate the risk they have experienced and the risk they currently face, and intentionally risk-averse decision makers may actually be risk seeking in behavior (Levinthal & March, 1993, p. 109).

Again, this suggests a knowledge and capability gap that disincentivises operational managers from running experiments. Not so, the digital-age giants such as Google, for whom site reliability engineering (SRE) is a function quite unlike conventional IT industry practice, see Beyer *et al.* (2016). Instead of designing for resilience and recovering services when they fail, SRE designs with failure in mind, using 'chaos engineering' to proactively test resilience and blame-free post-mortems to learn from information gathered, see Gremlin (2018). SRE resolves tensions of *illusion-reality* empirically, by continual experimentation and continuous measurement.

Arguing for 'Strategy as structured chaos' in high velocity markets, Eisenhardt and Brown (1998, p. 786) note, "The key performance driver is the ability to change, not just in rare and massive transformations, but rather relentlessly over time". Considering environments of high uncertainty, Furr and Eisenhardt (2021) suggest strategy is created dynamically by:

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Learning about uncertainties (strategizing by doing), cognitive structures like mental models that guide action (strategizing by thinking), and shaping processes (strategizing by shaping) to imagine, frame, and structure a new market order (Furr and Eisenhardt, 2011, p. 1927).

This ‘strategy creation’ approach increased adaptability and agility by providing managers more choice than they had with traditional resource-based approaches to strategy.

Although Agile research is still “Seriously lagging behind” Agile practice according to Dikert *et al.* (2016, p. 104), the importance of leadership and management engagement is widely recognised. In my practice, I have found that activating managers at every level to develop leadership in themselves and their reports, countered the tendency to wait for decisions to arrive. Simple things, such as framing decisions as experiments so they are reversible if they fail, enabled action, whilst also increasing transparency and promoting empiricism.

Developing leadership at every level in this way likely originated from Heifetz and Laurie (1997), whose approach to ‘adaptive challenges’ used the collective intelligence of the organisation, challenged norms and traditions, and engaged diversity.

### Intention-execution tension

The specific tensions in the *intention-execution* class are symptoms of the challenge of closing the gap between strategy and operation. Some arose because there are differences between the ways organisations are assumed to work and how they actually work. Several such specific tensions indicate issues of organisational design and can create conflict for managers including *bottom-up-top-down* (eg. Levinthal and March, 1993; Janssen and van der Voort, 2016); *direct-cascaded communication* (Lubatkin *et al.*, 2006); *passion-discipline* (Andriopoulos and Lewis, 2009).

*Centralised-decentralised* tensions are common in globally distributed organisations according to Martin *et al.* (2019), as are *local-distant* tensions. Levinthal and March (1993, p. 98) note that “Depending on an organization's structure, global problems of poor performance are viewed as local problems of cost reduction or as local problems of revenue enhancement”.

Studying how inter-firm agreements (charters) emerge from definition through execution, Zimmermann *et al.* (2015) find the specific tension of *adapting-obeying*. They report that, “Our study highlights the value of frontline managers who are not only alert to new opportunities but also proactive in their pursuit, even when this goes against the will of senior executives” Zimmermann *et al.* (2015, p. 1137). Building on this observation, Dean (2021) asserts that as ambidexterity is a dynamic phenomenon, both dynamic capabilities and ambidexterity are “Interconnected and mutually dependent”, see Dean (2021, p. 2434).

Alignment to shared goals is relevant, as is the organisation’s ability to clearly communicate those goals and its current priorities. Gibson and Birkinshaw (2004) recognise the role of leadership and the need for managerial engagement to create the conditions necessary for adaption to occur:

Contextual ambidexterity is the behavioral capacity to simultaneously demonstrate alignment and adaptability across an entire business unit. Alignment refers to coherence among all the patterns of activities in the business unit; they are working together toward the same goals. Adaptability refers to the capacity to reconfigure activities in the business unit quickly to meet changing demands in the task environment (Gibson and Birkinshaw, 2004, p. 209).

A transdisciplinary, or systems research approach may look for the relationships between strategy and management theory. Leadership and knowledge management are obvious

candidates, but it is strategy's dynamic capabilities that stand-out from within the ambidexterity literature. For example:

Studies on dynamic capabilities describe interrelations between internal and external knowledge processes that play an important role in corporate renewal. (Raisch et al., 2009, p. 686).

O'Reilly and Tushman (2008) position ambidexterity as the core dynamic capability of an organisation as it integrates explorative and exploitative processes. Similarly, Güttel and Konlechner (2019) focus on the way dynamic capabilities' routines and meta-routines allow managers to repeatedly reconfigure working structures.

The number of mainstream books and articles on the subject of bridging the strategy execution gap suggests a real and significant problem for managers. However, that gap is likely a consequence of poor organisational design or inappropriate use of controls, such as McChrystal *et al.*'s (2015) command and control or Heffernan's (2021) notion of plan-predict-control. For example, if the progress of a project has varied far away from its plan, then perhaps the activity was more emergent than assumed and required an empirical (inspect and adapt) control mechanism rather than a plan-driven (predict-plan-control) form.

The presence of a gap signals the existence of a tension (and vice-versa) and is therefore likely to be worth investigating by managers looking for improvement opportunities. The learning in such a case as the previous example could be that project managers need to differentiate appropriately between Agile and waterfall forms of control. In the case of the all too common strategy-execution gap, the challenge is often that expectations are ignorant of the capacity of the system doing the work. Or, to put it plainly, if teams of people were machines, they would be fitted with a gauge like a speedometer to prevent the team becoming too overloaded. Undesirable or unexpected behaviours are therefore a common symptom of



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the *intention-reality* tension, hence Goldratt's warning, "Tell me how you measure me, and I will tell you how I will behave", from Goldratt (1990, p. 26).

### *How self-organisation helps manage the intention-execution tension*

I suspect that many *intention-execution* tensions have become more significant due to the increasingly intangible nature of work. To explain in the crudest terms, it was obvious when a labourer was struggling to carry a load and needed to rest, but the signs of overloaded knowledge workers are easily missed.

Leaders who empower people to self-organise (especially to do knowledge work) may avoid strategy to execution gap problems by changing the fundamental relationships of power and control (eg. Heifetz and Laurie, 1997; Davenport, 2005; Drucker, 2006; Fischer *et al.*, 2013; Laloux and Wilber, 2014). Having established 'zero distance to customers' as a strategy, Haier's 'Rendanheyi' approach means, "Employees should realize their own value through creating value for users", from Haier Research Institute (2022).

Gibson and Birkinshaw find that:

In a contextually ambidextrous unit, the context is dynamic and flexible enough to allow individuals to use their own judgment as to how they divide their time between alignment-oriented and adaptation-oriented activities, and both are valued and rewarded. In short, the systems that are developed at the business-unit level encourage ambidextrous behavior that is both aligned and adaptable (Gibson and Birkinshaw, 2004, p. 211).

Lean's self-organising principle of 'pull not push' is counter-intuitive and remarkable.

Throughput increases when pulled through the process by team members, compared to when work is pushed from outside the team according to Kniberg (2014). Not only does value flow

better this way, but since the team sets its own pace, the workflow is sustainable. ‘Pull not push’ can be seen as dependent on trust, as in trusting someone to complete the tasks they have committed to doing, rather than hovering over, or micro-managing them. It is entirely consistent with the empirical measurements of evidence-based management discussed in the next tension *illusion-reality*, and just as difficult to for people to accept.

### Illusion-reality tension

The tension of *illusion-reality* concerns commonly held assumptions of managers in organisations. Where the assumptions of *intention-execution* are reasonable but thwarted by the organisation’s processes (eg. bureaucracy), the illusions of *illusion-reality* are untested assumptions whose consequences could be avoided by thinking critically before acting.

Many of the illusions that Ohno (1988) identified and were incorporated into Lean theory in the post-WW2 recovery period, are still widely held. The specific tension of *capacity-demand* is significant for many digital age organisations who raise so much demand internally, that technology teams are unable to deliver what is expected. The still-common practice of ‘resource optimisation’, managing knowledge workers as though they were machines, provides the illusion of efficiency because people are busy, whereas limiting the amount of work in progress actually improves throughput (see Ohno, 1988; Goldratt, 1990; Reinertsen, 2009; Kniberg, 2014).

Ohno (1988, p. 35) challenges the assumption that, “Mass production creates the illusion of reducing cost”, countering with the argument that only reducing the amount of what is produced actually reduces cost. The illusion is convenient since it is easier to overproduce than not. Making, “Only what you need, in the quantities you need, when you need it” was a core principle of the TPS and framed its approach to avoiding waste, Ohno (1988, p. xii). In this sense, Ohno’s (1988) approach shifted Toyota’s capability for mass production into a

capability that eliminated waste contextually and continually. There was support for that position in Adler *et al.* (1999), for instance, from the abstract, “NUMMI's success with these four mechanisms depended on several features of the broader organizational context, most notably training, trust, and leadership”.

Further evidence of how TPS managers' thinking, and goal setting approaches underlaid the contextual forces, were found:

Toyota puts a lot of effort into prototyping and pilots, and that reduces the number of engineering changes after they issue production drawings. At GM they use pilots to ‘confirm’ what they think they already know, not to uncover what they don't know (Adler *et al.*, 1999, p. 55).

The specific tension about the purpose of prototypes, above, is fundamentally different to the forces of *explore-exploit*. It is related to the purpose of the practice – why do it and what to expect to achieve from it – a tension of beliefs (*prototype for design-prototype to correct*) rather than of exploration or exploitation. John Seddon recounts a story about American car makers visiting the Toyota plant and noticing that all of Toyota's stages of assembly were the same as theirs with the exception of the final fitting of the doors. The Americans made doors fit by making adjustments with a soft hammer and asked the guide if they had missed this stage. Embarrassed, the guide said that if the doors did not fit correctly, it revealed a problem in design and the process would be improved until they fit correctly, from Seddon (2005).

### *How evidence-based management helps manage the illusion-reality tension*

When asked why people do certain things, the answer is often ‘we've always done it this way’. This was the form of inertia that Ohno encountered in Toyota's factories and which he overcame in socio-technical ways. Specifically, he removed his and the managers' egos from each situation and ran experiments to determine the approach that delivered the best

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performance (Ohno, 1988). Of course, Ohno was a senior manager, trusted by Toyota's owners, working within Japanese legislative and cultural norms Shingō and Dillon (1989), yet he created the context in which the shift, from proving which manager was right and which was wrong, to finding the right way, occurred.

Whilst I include tensions from TPS and Ohno because of the importance of Adler *et al.* (1999) in the ambidexterity literature, my rationale for evidence-based management as the management approach is that solutions often seem to be implemented before problems are properly understood. I think this is a human, rather than a managerial, condition, although Wedell-Wedellsborg (2017, p. 76) find that executives struggle “Not solving problems but figuring out what the problems are”.

Evidence-based management, as used in healthcare, may be a useful approach for managers. It recognises the powerful social forces that affect managers, including their preference for verbal updates from trusted individuals rather than evaluating written research according to Pfeffer and Sutton (2006) and builds on reliable theories of practice, such as Lean and continuous improvement. Writing from a healthcare context, Birken and Currie (2021) describe ways in which middle managers may adapt their role to adopt evidence-based approaches and mediate the tensions between strategy and daily activities.

### Exploitation-preservation

Doing right by others and caring for the future of our planet has become more important than ever during recent years. Communications technology has raised the general level of awareness of our exploitation of the natural resources and peoples of the planet and the urgent need for us to be more responsible in protecting the same.

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Gerald Midgley's (2016) 'Systems theory of value conflict' explores tensions that exist between organisations and peoples (citizens, inhabitants, cultures). The scale of these tensions is national or global and concerns industries rather than single organisations yet are basically *explore-exploit* tensions. However, the values from which they originate are unlike the learnings from exploration and exploitation, and the consequences far more serious than deciding how much exploration to include in next month's exploitation budget. The scale and impact of the forces are in a class of their own hence the tension, *exploitation-preservation*.

The stakes in *exploitation-preservation* decision-making are high. According to Midgley (2016) in rural New Zealand, water is a resource that farmers wanted to exploit, and residents wanted to preserve so specific tensions included: *dry land-wet land farming*; *environmental-commercial values*; *food modifying-clean green farming*. In Canada, Hewitt (2000) found that the government's policies concerning commercial fishing carefully accommodated local indigenous people's ancestral connections with salmon as well as the needs of the fish farming industry, residents, and wildlife. These are pluralistic tensions on a grand scale.

### *How the systems theory of value conflict helps manage the exploitation-preservation tension*

Similar to the soft systems approach developed for organisations by Checkland (1981), strategies for managing value conflicts are based on mutual understanding. For example:

Seeking to widen people's boundaries of the issues that they consider relevant; supporting people in transcending overly narrow value judgements about what is important to them; and attempting to challenge stereotyping and stigmatization by building better mutual understanding (Midgley, 2016, p. 5).

Martin Fowler, co-author of the Agile Manifesto, has written several posts about Thoughtworks, the global consulting firm he worked for, particularly when the firm was sold (to private equity) in 2017. Fowler (2005a) reflected that founder Roy Singham went against

conventional wisdom by building company defined by a social model, not a business model. Following ice cream makers Ben (Cohen) and Jerry (Greenfield) the firm was operationalised using three pillars (trialectic) of “Sustainable business, software excellence, and social responsibility” against which all decisions were made and assessed even though the discussions could be difficult, from Fowler (2011). In other words, deliberate tensions designed to prevent short-termism and dualism, and which allowed the firm to hire people for their abilities, see Fowler (2005a).

This area is beyond my professional experience and, I expect beyond that of most managers, yet every one of us has a stake in the future of the environment we share. We are all stakeholders and neither blame nor inaction are effective strategies.

### Summary and impact of exploring and managing tensions

Birkinshaw and Gupta (2013) and O’Reilly and Tushman (2013) agree that innovation was the original focus of ambidexterity research by Duncan (1976) and that Tushman and O’Reilly’s (1996) article led to growth in breadth and popularity in the 2000s. Researchers have focussed on specific organisational functions or antecedents of ambidexterity, for example: ‘innovation ambidexterity’ (Lin *et al.*, 2013; Ardito *et al.*, 2020); ‘leadership ambidexterity’ (Lis *et al.*, 2018), ‘manager ambidexterity’ (Mom *et al.*, 2019); and ‘contextual ambidexterity’ (Gibson and Birkinshaw, 2004). In other words, much of the research is concerned with the mechanisms that produce ambidexterity and the sources of tensions, rather than on tensions and how to manage them.

Addressing this gap, I found and classified tensions that are significant for managers within the ambidexterity literature, from Ohno’s (1988) Lean management and Midgley’s (2016) systems thinking. Paradox studies, especially Smith and Lewis (2011), were a rich source of

tensions and feature in the ambidexterity literature (eg. Smith and Tushman, 2005; Andriopoulos and Lewis, 2009; Papachroni and Heracleous, 2020).

Comparing the six base tensions with Smith and Lewis' (2011) theoretical categories of organisational paradoxes, I relate:

*Explore-exploit* tensions to the 'Organizing' category of paradoxes;

Variation-routine and intention-execution tensions to 'Performing';

*Agility-steadfastness* tensions relate to the overlap between 'Learning' and 'Organizing' during transformation, moving to 'Organizing' and 'Performing' later;

*Illusion-reality* tensions to 'Learning';

Exploitation-preservation tensions to 'Belonging'.

It is interesting to note March's (1991) conceptualisation of learning as a tension between exploration and exploitation appearing as an enabling construct within a set of paradoxical tensions in the context of improving organisations.

Reviewing this new classification of tensions wearing my practitioner's hat, it is my conjecture that the mostly static tensions of *explore-exploit* were served by resource-based strategies and separate functional units, each with its own knowledge and managerial context. Lean theory and practice helped industrialists manage the tensions of *variation-routine*, until digital age uncertainties made the tensions between *agility-steadfastness* unavoidable. Organising people and processes causes its own problems and *intention-execution* is as much tension as it is the cause of inefficiencies in large organisations. Sometimes easier to resolve using experimentally obtained evidence, is the *illusion-reality* tension. Not so with value conflicts such as *exploitation-preservation*, which may become a focus for firms under public

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scrutiny for social justice and respect for the environment. In my mind, this sequence matches the development of organisations from the machine age to the digital age (which is increasingly relational and socially-aware).

The contribution of this section is the classification of ambidextrous tensions beyond the stricture of *explore-exploit* and the matching of each base tension with a tactic for its management. This is a pragmatic contribution aimed at managers, who can only act on the tensions that exist, or ignore them. In particular, my examination of the word efficiency opens a debate about what is meant when it is used in practice and research. It is a theoretical contribution, as it combines the complexity and ambidexterity views of organisational management, both accepting tensions and exploring ways to produce ambidextrous performance from those tensions. It begins to address the microfoundational gaps Tarba *et al.* (2020) identify in the literature by focusing on the tensions individual managers face in their contexts and associating them with ways of tackling or alleviating them.

Importantly for my fieldwork research and professional practice, it provides a typology for classifying obstacles and challenges to organisational transformation.



## 2.4 How managing tensions supports transformation

In this section I draw on literature, as well as my professional experience, to introduce Agile and digital transformation and describe the tensions of transformational practice. I explore the relationships between ambidexterity and paradox with the potential for managers at every level of hierarchy to improve overall delivery of customer value. Finally, I argue that managing tensions and resources together, and in context, is the transformational shift needed to overcome the negative effects of legacy organisational structures such as functional hierarchies. I return to the Academic transformational literature in Chapter 4, when comparing my constructs with the enfolding literature.

### Rationale

Firms in transformation must move from machine-age models, such as the resource-based theory of the firm which (eg. Taylor, 1911; Farol, 1911, as cited by Smith and Lewis, 2011) advance, to models better suited to the digital age. This requires incumbent managers to change their ways of managing, something which does not spontaneously happen at scale. But how to do so, what theory should they apply? Change frameworks, such as Kotter's '8 Steps' (BusinessBalls, no date) are typically observations of the phases of change, and the 'grey literature' of consulting firms and framework certification bodies is written to attract customers. The primary literature of experience reports and case studies are evidence of what happened in a single context and provide the input to secondary studies which identify factors of failure and success (eg. Dikert *et al.*, 2016; Fitzgerald, 2013; Secchi and Camuffo, 2019). As for theory, it is too soon for evidence-based theories of successful practice to have emerged in a field that is barely twenty years old. However, there is an abundance of experience-based knowledge informing managers of what does not work which have been abstracted into anti-patterns (eg. Smart, 2022; Wolpers, 2024).

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The thesis that emerged during my research recognises tensions as signals of barriers to improvement, which managers can overcome by noticing, identifying, and resolving. The reason that tensions highlight barriers is simple; at least one person will have encountered an obstacle to progress or improvement and the resistance they experience is evidence of a tension. Managers will resolve tensions in their own way, as observed in the 41 business units of Gibson and Birkinshaw's (2004) study and Gallup's 25-year research into what makes managers great (Buckingham and Coffman, 2005). I expect some will take a directive approach and issue their decision to yield or ignore the barrier, whilst others may be more participative, opening an adaptive space for new solutions to emerge. Managing tensions augments manager's existing skills of managing resources and uses their authority to facilitate collaboration or negotiate outcomes.

This section contributes to the literature by exploring the notion that barriers to change are associated with organisational tensions. I suggest that 'managing tensions rather than people' is a useful way to approach transformation because tensions can be objectified. Put simply, a positive resolution to opposing views is more likely when people focus on the tension rather than each other. That is not to say that tensions are easier to understand than people, since it is necessary to engage with individuals and their emotions in order to make sense of each situation. I outline a practical, microfoundational method for activating managers at all levels, as leaders of organisational transformation in Chapter 5.

### Agile and digital transformation context

Transformations reflect executives' fear that their organisations are unable to survive and thrive unless they make significant changes. After about 2010, Agile and digital transformations became increasingly common. A recent survey of 400 senior managers at US companies with 1500 employees or more found:

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87% of respondents actively pursuing digital transformation, with 46% undertaking enterprise-wide efforts and 41% focusing on specific business areas. 13% are still in the no-action or discussion stages (BusinessWire, 2022).

Inevitably, a global digital transformation industry developed, worth \$340m in 2019, \$28bn in 2022, or \$730bn in 2022.<sup>10</sup>

Agile transformations attempt to spread the benefits of Agile's successful transformation of software development practices onto the whole organisation. Agile transformation may refer to IT only, IT-led, or organisation-wide change according to (eg. Dikert, Paasivaara and Lassenius, 2016; Schneider and Kokshagina, 2021; Verhoef *et al.*, 2021; Wessel *et al.*, 2021). Appelbaum *et al.*, (2017, p. 8) describe the transition, "From more static models to truly adaptive, learning organizations". In this sense, agility comes from different ways of thinking which lead to different ways of working. The different thinking is often referred to as the 'Agile mindset' although such a concept cannot really be defined.

Where Agile transformation is predominantly a practice, digital transformation has a theory-based literature which may help leaders envision the change journey.

Digital transformation is technological, organisation-wide, and social, states Reis *et al.* (2018) and may include traditional top-down changes with predictable value outputs, such as a bank closing its branches and moving customers to online self-service. It may involve shifting to a digital customer value proposition (Wessel *et al.*, 2021), creating a better business model (Verhoef *et al.*, 2021), building on organisational agility (Ciampi *et al.*, 2022)

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<sup>10</sup> According to estimates from [marketsandresearch.biz](https://marketsandresearch.biz), [marketgrowthreports.com](https://marketgrowthreports.com), and [grandviewresearch.com](https://grandviewresearch.com) respectively.

or simply, “Bets made by big old companies attempting to cash in on opportunities offered by digital technologies” (Sebastian *et al.*, 2017, p. 197-198).

Ciampi *et al.* (2022) highlight the ‘coevolutionary relationship’ between organisational agility and digital transformation. Both require a shift from machine to digital age ways of working by adopting some Agile practices to augment existing methods and controls. Fuchs and Hess (2018) identify the progress (or not) of these shifts as barriers, citing coordination problems between: teams and business units; between Agile and non-Agile teams; and amongst multiple Agile teams.

Verhoef *et al.* (2021) identify three phases of digital transformation: digitization (digitising analogue information and automating tasks); digitalization (digital distribution and robotics); and digital transformation (product as a service and data-driven business models). They conceptualise the organisational structure changing through these phases, starting with the ‘Standard top-down hierarchy’, adopting ‘Separate, agile units’ in the digitalization phase, then developing ‘Separate flexible forms’ with internal ‘IT and analytical functional areas’.

According to Schneider and Kokshagina (2021, p. 7), digital transformations represent strategic efforts to upgrade “Business models, performance management, the workplace, mindset and skills, and a firm's IT function” with the ambidextrous goal of “Increasing customer experience and operational efficiency”. The same is true of Agile, Lean, DevOps, and other practices that align internal ways of working with external value creation.

Leonardi’s (2020) recommendation was usefully disruptive for managers holding-on to decision-making authority. After leaders have campaigned for change, he says employees should decide whether, and how, to use new tools. Having done so, he predicts employee behaviour will change.

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### Agile transformation in practice

Drawing on data from consulting firms, Denning (2018) claims the intended organisational outcomes of Agile transformation are, “The ability of an organization to renew itself, adapt, change quickly, and succeed in a rapidly changing, ambiguous, turbulent environment” and “The ability to quickly reconfigure strategy, structure, processes, people, and technology toward value-creating and value-protecting opportunities”. Clients of these firms, and members of the Steve Denning Learning Consortium tend to be well-established and large organisations from various industries whose transformations are at global scale.

Deploying Agile coaches is common practice in Agile transformations (see Gandomani and Nafchi, 2016; Stray *et al.* 2020). Although generally found to be effective, Stray *et al.* (2021) found the role and responsibilities of the Agile coach are ambiguous within the managerial hierarchy. Coaches have influence, generally without authority. They embody a paradoxical tension of servant who is a leader, directly supporting employees but also leading them in the ways of agility. Not all Agile coaches draw from experience, some have only theory learning. A head of department once told me she was so fed-up, she didn't want any more ‘Agile police’ around. This resolved the tensions she experienced from having Agile coaches around and revealed a need to learn how to draw on expertise wisely, something an experienced executive coach may have been able to help with. Apart from a practitioner report by Leybourn and Laing (2022) into which I had provided data on the ways firms deployed Agile coaches to match business needs, I found nothing to help managers understand how to use experts such as coaches and consultants to help them transform their organisations.

### Tensions in transformation in professional practice

I have worked with hundreds of managers whose firms were undergoing transformations and all encountered the same challenge. Transforming their area was just one of many ‘side of the

desk' things they would *like* to do, but their focus was on the things they *must* do to keep the business running.

Ensuring BAU is a short-term imperative for all managers, no matter if they are responsible for people (line managers) or things (products, projects, initiatives) and no matter if their function is Change, Run, or both. Failure to maintain BAU as expected is likely to result in those people or things being reassigned to another manager, damage a manager's reputation in that organisation, or end a manager's career in the industry.

The opposite source of this tension comes from transformation itself. In the large organisations I worked for, transformations are often initiated as programs of change, with a multi-million \$/£/ € budget, and an accountable head. This practice follows the tradition of structural separation which allowed innovation to take place apart from operations and faces similar problems integration. However, creating another department in an already siloed organisation tended to increase bureaucracy and draw attention away from creating and maintaining customer value.

Heads of transformation often hired consulting firms who advised them to set-up multiple workstreams to handle such large programs of change. For those employed by the program, transformation activities and the targets that came with them, was their focus. After a few months creating internal websites then producing slide decks to explain how they would solve the problem, transformation staff would engage with the wider organisation. However, their targets and measures were not necessarily aligned with those of the department or teams they were assigned to, and a culture of 'them and us' developed, with business units pushing-back against the demands of the transformation program. How the program responded to this tension revealed much about the developmental state of the organisation.

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In one organisation, the transformation team adopted a cartoon that recognised the problem. It showed a man dragging a cart which had square wheels being followed by someone trying to show him a round wheel. This recognises the tension of short-term delivery versus medium-term improvement and created space for people to explore or ignore the improvements available.

In another firm, the head of transformation's line manager issued the instruction that everyone must change their ways of working to meet a ten-point mandate of measurable activities. This seemed to be a tension of autonomy versus managerial oversight but carried the underlying assumption that the senior manager's solution was best, or at least feasible. This may have been reasonable when managers had a wider perspective of the firm and were probably better educated than workers but not according to recent management science, says Freedman (1992). In fact, many points on this mandate were naïve or inappropriate. For example, making all teams start 'sprinting' on Wednesday and finish two weeks' later meant that key stakeholders were unable to attend the different team's planning and review meetings which is where their attendance was most needed. It disempowered teams that had found a three-week sprint duration worked better for them, and teams who had replaced sprinting with continuous delivery.

As in my example, the tension between managers who had authority but lacked experience of Agile or digital ways of working versus practitioners with knowledge is a barrier to change according to Fuchs and Hess (2018). However, whilst the Agile experts condemned it, one senior manager told me it really helped to clarify what was expected of his department. In that specific context, self-organisation would have to wait for management.

The situation described by Dikert *et al.* in (2016) after reviewing 52 accounts of large-scale Agile transformation is consistent with what I experienced in firms during the period 2015 to

2022. Of the 35 challenges identified, 48% relate to Agile's difficulty to implement (including "Misunderstanding agile concepts" and "Lack of guidance from literature") and 43% to integrating with non-development functions (Dikert *et al.*, 2016, p. 95).

In their review of 19 studies of large-scale Agile transformations Trippensee and Remane (2021) report how transformation programs, such as those described above, are organised. They identified practices including 'creating cross-functional change teams', 'building Agile mindset', 'leveraging leadership', and adapting one of nine available Agile scaling frameworks (SAFe and LeSS being commonest).

My professional experience, Dikert *et al.*'s (2016) findings, and Trippensee and Remane's (2021) tell of common practice, not good practice. I can find no evidence to support scaling Agile other than claims by framework providers. Neither does Smart (2018) who ran the Agile transformation program at Barclays bank, before doing his literature search and going on to form an Agile transformation consulting firm.

### Why managing ambidextrous tensions matters for transformation

The concept of ambidextrous tensions resonates with managers, perhaps because its dualistic structure seems familiar. Perhaps because ambidexterity is both a management competence and a natural position for firms, as Birkinshaw and Gupta (2013) suggest. It is unlike traditional 'either/or' decision-making and contingency approaches to managing tensions, which Smith and Lewis (2011) characterise as inappropriately seeking the best possible solution.

Snowden and Boone (2007) explain that 'best practice' only exists in domains of certainty, where all possibilities are known and can be evaluated, whereas practice emerges in complex domains through experimentation. The transition, from operating exclusively in domains of



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certainty, to developing the ability to recognise complexity and differentiate its operation from methods of certainty, is essential to transformation.

Tensions are both a source of conflict, as Martin *et al.* (2019) suggest, and a stimulus for action Uhl-Bien *et al.* (2007). In both cases, managing a tension can result in change (through emergence or adaptation). Remembering that all forces in the context are valid, the continual renegotiation of tensions is inevitable and is aligned with the ‘adaptive challenge’ described by Heifetz and Laurie (1997, p. 4) who state that solutions are “In the collective intelligence of employees at all levels”.

Smith and Lewis (2011) describe the resulting organisational steady state as ‘dynamic equilibrium’. The result is similar to ‘continuous improvement’ of previous generations, or the argument for efficiency in both routine and non-routine made by Ohno (1988) and Adler *et al.* (1999). I frame this for the dynamic markets of the digital age as ‘efficient adaptability’.

Organisations practiced at managing internal tensions should be able to adapt more effectively and efficiently than those which avoid conflict or tolerate unresolved tensions.

### Reviewing transformation issues through the tensions lens

Dikert *et al.*, (2016) conclude their report on large-scale Agile transformations with open issues (unresolved tensions). They are; how new (Agile) processes should replace or coexist with old processes; how to distinguish between one-size-fits-all and self-organisation; how to balance top-down support for change with bottom-up empowerment.

Using the base tensions identified previously, I categorised these tensions as:

*Explore-exploit* (new processes versus old);

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*Variation-routine* (Centralised vs decentralised control; Top-down vs bottom-up; One-size-fits-all vs self-organisation);

*Agility-steadfastness* (Integration by leadership vs contextual integration; Central program of change vs adaptation and emergence; Autonomy vs managerial control);

*Intention-execution* (Side of the desk vs central focus; Clarifying priorities vs conflicting demands);

*Illusion-reality* (Short term BAU vs medium term improvement; External solution by consultants vs internal discovery; Doing what you are told vs doing what's right).

This mapping exercise can reveal insights and commonalities and I perform it again against the literature, in 5.1 Hypotheses.

From professional practice I expect that the 'sweet spots' for transformation are the *illusion-reality* tensions which are readily resolved by evidence or experimentation, and *agility-steadfastness* tensions resolved by managers learning how to trust those who report to them.

The others may only be resolved as a consequence of other changes. I have observed systemic barriers being brought the problem to the attention of senior management and escalated up through the hierarchy to be solved (dissolved or resolved). This is how organisations are designed to work, except that resolution can take years. I think it takes so long because the changes requested from those doing the work challenge deep-seated beliefs of those responsible for governance. For example, evidence from DevOps shows that releasing software several times a day is safer and more effective than investing in lengthy phases of quality assurance prior to release but is counter-intuitive to many managers because continuous integration techniques appeared only a generation ago and they lack practical

experience of its benefits and operation. The result is that transformational improvement that could easily be adopted, stall until one or more individual barriers retire or move on.

### Summary of tensions in transformation

Agile and digital transformations are practice-led phenomena whose desired outcomes are what Tushman and O'Reilly (1996) describe as revolutionary, rather than evolutionary.

However, Agile and digital transformations may have vague outcomes, ambiguous measures, and lack the support of any evidence-based theories of transformation.

Inertia to change is no reason to stop doing what worked before but disruption provides an opportunity to question traditional practices and test long-standing assumptions. In reality, the change that organisations need is augmentation, not replacement. Managers may extend their usual capabilities to incorporate new ways alongside the old, learning to read the signs for when to switch. Contextual ambidexterity provides the theoretical support for this, and paradox theory helps managers identify tensions which may be worth resolving.

My experience of firms in transition is that management are comfortable with the old models and are still learning the new. They see the choice between models as binary (either/or) but will become most effective when they are able to use both appropriately and simultaneously. The simplest argument is that a) ambidextrous performance is needed to survive and thrive, b) Agile methods are best for explorative activities where value emerges over time, c) plan-then-control methods are good for predictable value activities, and d) some emergent activities are predictable and plans often encounter uncertainty.

But with no blueprint of what they expect employees to do, or what the transformed state would look like, and no working theories of transformation, the risk of change taking too long, is real. Firms must justify their investments to shareholders in terms of tangible results

in a few years or funding will stop, yet transformation change is likely to take 5-10 years.

Transformations must demonstrate short-term gains and reveal signs of long-term benefits.

The ambidextrous approach places equal value on otherwise competing activities, particularly changing (exploring) and maintaining (exploiting) the organisation. Managing tensions using paradox thinking provides the mechanism for managers to achieve ambidextrous performance, at all levels, and on a continually improving basis.

Transformations are an executive response to a perceived existential threat brought on by increasingly dynamic markets and complex social and sophisticated technical contexts (see Westerman, 2016; Jovanovic *et al.*, 2020). The threat arises from the awareness that legacy models of operation put an organisation at a considerable disadvantage in a digital age of rapid innovation and entrepreneurship (see Furr and Eisenhardt, 2021; Appelbaum *et al.*, 2017a). Transformation may represent a self-imposed and largely technical revolution intended to punctuate the status quo of evolutionary improvement as Tushman and Romanelli (1985) and Tushman and O'Reilly (1996) describe. It may also represent efforts to correct social injustices of legacy practices that have been exposed by the communications technologies of the digital age as suggested by Ito (2018). It characterises the shift from ego to eco that Scharmer and Yukelson (2015) and Olivier *et al.* (2021) describe, and the management practices better suited to knowledge work of Buckingham (2005); Davenport (2005); or Appelo (2011). Set in the wider societal context of transparency and accountability (including diversity, equality, and inclusivity, intolerance of inappropriate and unethical behaviour), Scharmer (2010) suggests the prevailing *zeitgeist* is rightly fascinated with the subtle dimensions of consciousness and 'lived experience'. However, financial profit remains the critical measure of business performance according to Goldratt (1990).

## Chapter 2 Literature landscape

Transformation is unlike reorganisation (or reform) in that the target state is emergent, not a specification. The desired outcome is a transformed organisation that is adaptable, agile, and ambidextrous enough to succeed in the digital age. Adaptability (or agility) is considered important to organisational survival, as the pace of change, and extent of uncertainty, continues to increase (see Uhl-Bien and Arena, 2018; Appelbaum *et al.*, 2017a; Andriopoulos and Lewis, 2009; Brown and Eisenhardt, 1997). But not at the expense of ambidextrous operation.

Gibson & Birkinshaw's (2004) findings on contextual ambidexterity as mediator are relevant to organisations seeking to increase performance through the agency of its managers, as are those of Adler *et al.*'s (1999) about Toyota's management system. Too much attention to efficiency is a threat to long-term survival and must be balanced by learning and innovation (see March, 1991; Levinthal and March, 1993; Senge, 2006; Forsgren, Humble and Kim, 2018).

Managers can lead the change from a culture of 'either/or' thinking, to one of 'both/and' as Smith and Lewis (2011, 2022) suggest, and model behaviour using paradoxical practices of Papachroni and Heracleous (2020).

## 2.5 Summary

My extensive review of the literature landscape explores critical theories and approaches relevant to organisational ambidexterity, tensions, and transformation.

### Ambidexterity

The ‘Organisational ambidexterity’ section (2.2) lays the theoretical groundwork for understanding ambidexterity and frames it as an essential capability for organisational adaptability and survival in complex, dynamic environments. It critically reviews the concept of balancing the exploration of new opportunities with the exploitation of existing capabilities. This research topic is influenced by March (1991), whose seminal paper identified exploration and exploitation as central tensions for long-term organisational survival. Although Birkinshaw and Gupta (2013) regard ambidexterity as an academic conceptualisation, it is a strategy that allows firms to both innovate and optimise current processes. Key studies, including those by Tushman and O’Reilly (1996) and Gibson and Birkinshaw (2004), highlight how ambidextrous organisations are better positioned to adapt to environmental changes.

While early literature and researchers focused on structural ambidexterity, where organisations separate R&D from Operational activities, other works, such as Adler *et al.*, (1999), Gibson and Birkinshaw (2004) and Güttel and Konlechner (2009), explore contextual mechanisms for ambidexterity. Others, such as Martin *et al.* (2019), Tarba *et al.* (2020), and Papachroni and Heracleous (2020), considered the microfoundations of ambidexterity, including the actions of individual managers. Additionally, Uhl-Bien and Arena (2018) examine the emerging role of leadership as an enabler of organisational adaptability by synthesising ambidexterity, complexity and network theories. These views highlight the evolving view of ambidexterity as more than just a strategy or top-management function,

supporting my view that middle managers play a key role in balancing organisational tensions.

### Tensions

Section 2.3, 'Exploration and approaches to managing organisational tensions' explores the broader concept of organisational tensions beyond *explore-exploit*, identifying that six base tensions: *explore-exploit*, *variation-routine*, *agility-steadfastness*, *intention-execution*, *illusion-reality*, and *exploitation-preservation* within the literature. These tensions represent clusters of challenges that managers face in practice and are derived from 67 individual, specific tensions and categories in the literature. By way of initial validation, I successfully compare the base tensions that I found to Smith and Lewis's (2011) categorisation of paradoxical tensions (ie. organising, performing, learning, and belonging).

Sources such as Adler *et al.* (1999) and O'Reilly and Tushman (2013), emphasise the importance of managerial decision-making in resolving these tensions. Therefore, I introduce a proposed management approach for each base tension. For instance, managers are encouraged to adopt a balanced approach to exploration and exploitation, manage variation through careful oversight of routine processes, and promote leadership at all levels to address the tension between agility and steadfastness, suggesting that leadership and context are key to managing organizational complexity.

This section contributes to the literature by expanding the theoretical understanding of ambidextrous tensions in organisations and offers practical approaches that managers can apply to resolve them. It presents tension management as a critical factor in organisational performance and adaptability.

### Transformation

Managing tensions as a transformational practice (Section 2.4) presents the argument that managing organisational tensions is not merely a theoretical exercise but a transformational practice that managers should be using to direct change and improve performance. It draws on broader literature to argue that effective tension management is essential for organisational transformation, as it allows managers to address contradictions that act as barriers to progress.

The section positions tension management as a dynamic process that requires managers to continuously adapt strategies and tactics based on the shifting needs of their staff and organisational context. Using examples from Agile transformation and ambidextrous leadership, I highlight how managers can implement flexible, context-specific approaches to resolve tensions and lead their organizations through periods of change. The insights provided from sources such as Tarba et al. (2020) and Uhl-Bien and Arena (2018) illustrate how managing tensions at all levels—from leadership to individual managers—contribute to broader organisational transformation.

This section emphasises the idea that tensions, when managed properly, can become a source of innovation and adaptability, enabling managers to improve their organisations incrementally and sustainably. It advocates for a shift in thinking, where tension management is viewed as a core managerial skill necessary for leading transformative initiatives and overcoming structural constraints. By recognising and resolving tensions, managers are better equipped to foster a culture of continuous improvement and adaptability.

For practitioners and managers, identifying tensions and managing them ambidextrously has emerged as a potential improvement focus. Identifying and classifying tensions collaboratively by discussing, characterising, monitoring, and developing ambidextrous



solutions invites managers to create the adaptive spaces described by (eg. Heifetz and Laurie, 1997; Uhl-Bien, Marion and McKelvey, 2007; Uhl-Bien and Arena, 2018). This also serves important corporate social agendas of increasing diversity and inclusivity.

### Conclusion

In conclusion, this literature landscape chapter contributes to the theoretical and practitioner understanding of how managers, at all levels, can leverage tension management to achieve transformational ambitions for their organisations. This addresses a gap in the literature by moving beyond traditional structural and theoretical solutions and exploring nuanced, micro-level actions that managers take to navigate and resolve tensions that are barriers to organisational progress.

Although transformation and ambidexterity are opposites in one sense (academic construct versus organisational initiative, intellectual rigour versus profit motives), the intersection provides exciting opportunities for organisational research and managing organisations. It lays the foundation for a new approach to Agile or digital transformation, using the theory and benefits of contextual ambidexterity, mediated by the practices of tensions management.

The next chapter describes the empirical research I designed to help me discover which tensions are important to managers, and the ways in which they managed them.

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# Chapter 3 Research influences and design

This chapter describes the factors that helped me to step-back, reflect, and adopt a scholarly-informed, methodological approach to research.

One of many benefits of working with a transdisciplinary anthropologist as my Director of Studies is what I learnt about myself. Through the discussions with my Director of Studies, Professor Kate Maguire, I learned how much I rely on intuition and serendipity. For example, it became apparent that I had expected participants to magically materialise when I needed them, and that I simply trusted that insights would develop from whatever I placed under my magnifying lens. This insight caused me to recognise that I would need an approach that allowed for serendipity but did not depend on it.

In Section 3.1, I begin by stating my purpose, generally, and my aims for this research. I explore my position as an emerging researcher and professional practitioner. I declare my ethical position and intended practice, describe what is feasible, and how I have been influenced by the literature. Finally, I consider the wider context of world and national events during the years in which I conducted this research.

Section 3.2 outlines my requirements for a research design (developed from the influences stated previously). I present the reasons and rationale for selecting Eisenhardt's (1989) method of theory building from multiple case studies (Section 3.3) before describing my plan for research using this method. I close with the research objectives and desired outcomes that emerged from this process or research design in Section 3.4.

## 3.1 Influences on research design

### Purpose, aims and professional approach

My purpose, for some years now, has been to transform workplace effectiveness by working with managers to re-define their role for the digital age. This statement reflects my approach of co-creation through collaboration, as well as hinting at the potential value of introducing a fresh perspective as demonstrated by ‘effectiveness’ over the more common, ‘efficiency’.

As I progressed through the stages of this project, I realised I facilitate this process in professional contexts by ‘shifting the conditions’ for managers by:

- Reframing - inviting people to see a bigger picture than their current focus;
- Offering new lenses - magnifying factors previously overlooked or taken for granted.

Although helping managers to improve their and their organisation’s effectiveness is an uncertain journey through complexity, its purpose is to reach an agreed destination, usually by overcoming barriers or taking an alternative route. The methods I use tend to be a mixture of coaching, mentoring, teaching, and leading as identified by Spayd and Adkins (2011) and Day and Blakey (2012). When working within an organisation (as a contractor), I was able to notice, magnify, or reframe behaviours that could improve performance and conversations in corridors were normal interventions. As a fully external advisor, I had only the information presented to me in session to work with, pre-filtered as it were. The difference between these two modes of working raises interesting questions about how managers perceive their environment and what agency they perceive they have to improve it.

Consequently, the aim of this research is to understand how managers overcome the barriers to improving the overall effectiveness of their organisations.

### Positionality

#### Who am I?

I am a practitioner and emerging researcher. A ‘techie’ who values systems engineering with its positivistic empiricism and a caring constructivist who uses coaching to help others make sense of complex problems with uncertain outcomes. Not only am I comfortable working in-between such binary positions, but I appreciate them, as one may savour the contrast of bitter against a sweet taste, or poignancy of a child holding the hand of their ancient relative.

However, I do not experience life as tensions that pull me in different directions. Rather, I value the dynamism that tensions create. The musical ‘change from major to minor’ is what catches my attention, with its reminder that although each key is fine, the transition is even more interesting. The change from movement to stillness in meditation and the development of new knowledge where there was ignorance, are moments I appreciate in life.

Initiating change can be a challenge, so can making too many changes. I know, from bouts of depression, how difficult it is to get-up from the sofa when all you want to do is sleep through the day and the night. I know that when I change direction too often, it creates uncertainty and unsettles those around me. I can be happy maintaining a multi-perspective view but find communicating what I perceive, quite a challenge. I notice that what people understand from what I say, and what they do with that information, can be very different from my intention. I recognise that reductionism can alleviate the communication problem, and also that it causes me some discomfort, as leaving-out facts feels like a form of deception.

Whilst I value pragmatism over dogmatism and idealism, I am uncomfortable with the reductionism implied by some academics when using pragmatism as a label for pigeon-holing researchers. I suspect that is a convenient heuristic for academics, it being easier to categorise

and select a pre-defined response than to invest in thinking about each piece of writing as unique. It is therefore pragmatic for academics to classify me as a pragmatist.

Social media provides an easy way to experiment, and I am a fearless (or foolish) experimenter. I posted a paragraph from this thesis on LinkedIn and asked if people thought it worth publishing (Lewis, 2023). Amongst the encouraging comments, one person said no, because it did not follow ‘journalistic principles’. This reminder to write for one’s audience does not excuse the reductionism of practitioner writing nor the obscurity of academic writing. Indeed, I knew I should make it more accessible to a wider readership and provide a clear call to action when I posted it but was not willing to invest the time in crafting it accordingly (why not, is an interesting question). What I discovered was that I was quite happy for someone else to rewrite my output in my name (because a ghost-writer offered to write my next book for me). In practice, I neither re-wrote my piece nor hired a ghost-writer, which is a demonstration of how improvement does not happen when left to individuals’ resources of will-power and self-management. There are far more important or enjoyable things to do with one’s time. Apparently, I use experimentation to gather evidence and take me on a journey whose destination is unknown.

How do I operate?

I am curious and opportunistic, quick to try new knowledge and methods. I have come to rely on serendipity, with the result that I am agile, but get lost down a lot of rabbit-holes. Here is another tension, for which this project has increased my awareness; we all balance our determination to reach the next destination, with the pleasure of enjoying the journey.

The managers I serve have little choice but to be pragmatic in planning and decision-making. For example, it can be impossible to properly implement Scrum (the Agile method introduced in Chapter 2) in large organisations because teams rarely do the type of work that Scrum was

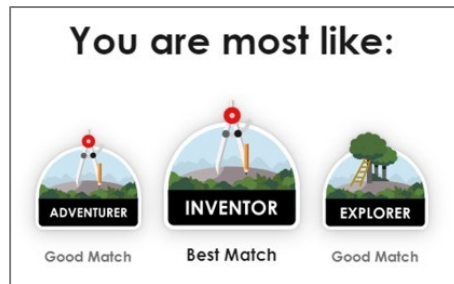
### Chapter 3 Research influences and design

designed to support, yet managers compromise the method to succeed in the task they have been given. I did something very similar with Eisenhardt's method, which I explain in Chapter 4, Research activities. Managers returning from conferences or courses with great ideas may find it too hard to convince peers and superiors to support their changes. Thus, pragmatism is, as Morgan (2007) argues, a 'guiding approach' rather than a methodology.

I am grounded by my observation that managers are inherently sensible and dedicated to their work, hence I see my work as *activating* managers as leaders of improvement. Activating the embedded agency of middle management, to use the language of Battilana *et al.* (2017).

Unlike the usual consulting approach of advising or providing solutions, I recognise managers as the experts of their domain, at least, of their organisational context, and tend to 'ask not tell'. This aligns with the self-actualising and humanistic (Rogerian) ideologies, see (Rogers, 1961; Rogers *et al.*, 2015).

According to the personality traits assessment tool 'PrinciplesYou', see Figure 2 below. I am most like the Inventor archetype and a 'good match' for the Adventurer and Explorer archetypes, from Prios LLC (2023). However, I am also highly empathetic when I am in an 'active listening' or coaching space. I see the paradoxes within the explorer and adventurer archetypes that may relate to my coach and researcher roles. Coaches are *both* curious *and* follow a structured process defined within a clearly defined ethical framework; practitioner researchers have to be *both* adaptable *and* stay upright in what Levinthal (1997) describes as a constantly shifting landscape.



Inventors have high curiosity and creativity, which often leads them to develop new products and ideas.

Inventors typically possess a creative and original thinking style, a high degree of comfort with the unknown, and an attraction to the mysterious world that they don't fully understand yet. They're comfortable living in a chaotic and disorganized environment, and prefer trying things out, seeing how they work, and changing things on the fly as firsthand experience dictates. They don't care too much about what other people think about their tendency to shift focus because they're generally comfortable being who they are and love the mental excitement that new ideas stimulate within them.

Other distinguishing characteristics include a preference for cutting their own path and doing their own thing. They adjust easily to changes in circumstances and prefer to work without much guidance or direction from others. They generally catch on quickly to complex and abstract concepts.

They dig deep into the inner workings of their latest projects and are willing to roll up their sleeves and experiment with new ideas and ways of doing things. Their tendency to lose interest in more practical or routine aspects of the process may translate into spending too much time exploring possibilities versus bringing decisions to closure, and/or a tendency to miss important deadlines and target dates for completion.

Figure 2 Inventor archetype from *Principles You*

### Reflective

I consider myself not only reflective, but what Schon (1983) terms as 'reflective-*in-action*'.

That is, not only standing back and reflecting on past events, but using tacit knowledge to reflect in the present as it unfolds, updating my responses based on emerging information.

Similarly, Klein (1998) found that experts in the field do not evaluate all possible scenarios to try to select the best but use their experience (intuition and heuristics) to decide the next course of action. Klein's subjects were able to save time (and lives) operating this way because they had the tacit knowledge from years of practice in firefighting and combat situations (*ibid*).

I am aware that I am constantly exploring new landscapes and acquiring knowledge faster than I can process into written form. For example, I am writing this section whilst also completing an executive report of the (technical) firm I audited last week. Apart from



managing the switch between academic and business writing, I noticed that my executive summary included ten references, seven of which were papers on ambidexterity from practitioner journals. Indeed, the summary opened with distinction that the firm faced challenges in both maintaining business as usual systems and developing new products.

This demonstrates something I already knew about myself, that I perform well whilst in the spotlight and under pressure; that is Schon's (1983) 'reflection-in-action'. An example would be when I have run leadership development programs to help managers learn the tools of coaching and have intentionally made myself vulnerable by creating and stepping into the coaching space with everyone watching and listening.

Designing and delivering training has taught me the value of metaphor in building onto people's existing knowledge. I learned to use metaphors to relate unfamiliar ideas and concepts to real life issues. Hence, when I am working well, I am like a musician, laying down a groove so it becomes familiar whilst fearlessly improvising new ideas and melodies. To explore that musician metaphor further, I notice that I encourage the audience to engage using performative devices. For example, using 'call and response' (give me a thumbs up if you want to see me demonstrate this live) or 'tension and release' (I'm going to reveal the answer to this question later). Presenting ideas is a form of performance and such devices may help performers and audiences transcend to another state of awareness. Musically that may be uplifted, tranquil, or melancholy and for managers I hope that they are inspired to try new ways of improving their organisations.

All of the positionality I have described suggested I would be looking for a research design that would allow me to incorporate qualitative (interpreted) and quantitative (measurable) factors, be action-oriented, grounded, and open to emergent outcomes.

### Ethics

I work within complexity and have a fluid approach to my profession, and this informed my choice of how to approach my practitioner research. Therefore, I needed to attend to the ethical implications of this approach. For example, as I intended to access organisations through gatekeepers, obtaining their consent needed to be planned, as well as individual's consent to participate. Also, I needed to pay attention to the boundaries between my research for this project and my professional activities.

Such a fluid approach as mine is potentially hard to manage, and this needed to be taken into consideration when applying for the university ethics approval. I ensured that I was as explicit as possible about my design and plans. Once I had obtained approval from the University's Ethics committee, I continued to update the ethics system with any relevant developments which the system allows one to do. I take very seriously the fact I am in a position of trust and hold myself accountable to professional ethical standards of practitioner and researcher. I am aware of the nuances that the ethics approval system cannot exhaustively cover and am also informed by my personal integrity as my guiding light.

### Practical considerations

Data would be provided voluntarily by adults, so the ethical considerations were mostly about confidentiality, consent, and my position as both inside and outside researcher. Inevitably, I would carry-out this research amongst past, present, and potential clients and would need to be careful to clarify my ethical position, boundaries, and responsibilities in my roles as university researcher and professional Agile coach or consultant. I would take care to ensure stakeholders understand that participation grants the university and me rights to the information for my doctoral research, as well as potentially benefiting their organisation and

## Chapter 3 Research influences and design

managerial colleagues. Participants would be asked for written consent for me to use their data for my research, both before and during data collection.

Since I wanted to recruit from all levels of management and all parts of the organisation I would first approach and gain the support of a senior sponsor who would be likely to select or recommend people to speak with me. This has the advantage of representative diversity of interviewees but also introduces that person's bias. I intended to get introductions from others and would extend invitations within the organisation myself, if possible. Based on my previous experiences of insider organisational research I intended to ask for volunteers to conduct the research collaboratively with me. Eisenhardt (1989) describes several advantages of having 'multiple investigators', not least the different aspects of data they notice and the diversity of thought they bring to analysis.

### Feasibility

I anticipated no issues with time or funding. My main feasibility issue was how to be pragmatic, not least getting access to the kinds of participants I want to engage with.

One access problem that emerged during my literature search was not having direct access to the Academy of Management's journals through the university's subscriptions. Although I had access to more information than I could possibly absorb, there were references to articles in I would have liked to read in the Academy of Management Journal and it has some of the highest quality rankings according to Harzing (2022).

### Audiences

I was aware that my target audience would influence my research design. In addition to myself as an audience member, my primary audience in terms of a doctoral award would be

those academy members assessing this research as evidence of it being worthy of a doctoral award.

As a serious contribution towards practice, managers are an important audience for me. However, since organisations are complex adaptive systems, and change can be led by anyone, regardless of rank or job title, my intended audiences would also include all stakeholders of organisations in any stage of transformation. Employees consume management as a service, and their experience is as important as their customer's experience of the products or services which they receive.

The audience I imagined in the process of designing this research would be readers of practitioner journals such as HBR and MIT Sloan Management Review. Sometimes, I write, and did so when writing up this research, as if I am speaking with a manager I have worked with previously in mind, one I knew was interested in a particular topic and wanted information of practical value to them.

Finally, there is an audience of improvement experts. I intended to use my peer networks (Agile practitioners) and members of professional organisations (such as executive coaches, The Deming Alliance, and Systems Complexity in Organisations) to test the ideas I was developing, as well as the wider network of people involved in organisational improvement on LinkedIn, to help me articulate concepts and findings of the research process. My caution was that we experts usually only agree up to a point, whereupon our individual specialist knowledge narrows our perspective and reveals our differences. Whilst there is value in challenging experts' beliefs, the lack of consensus amongst Agile experts in particular, can make people doubt the validity of the approach. I discuss the inertia that resists change later.

## Chapter 3 Research influences and design

### Literature influences

The literature review validated my purpose and gave direction to my aims and objectives. I learned from Tarba *et al.* (2020) where microfoundational gaps exist and from Adler *et al.* (1999) and Birkinshaw and Gupta (2013) that ambidexterity is a management concern.

My research design needed to produce evidence that would allow me to address these gaps and appeal to my audiences. What emerged for me in particular, was the potential of shifting from managing people and resources, to managing tensions, as a means of transitioning to a model of management suited to the socio-technical needs of the digital age.

### Contextual issues

The model I used for contextual analysis was suggested by Wilson Fyffe.<sup>11</sup> It assumes that the future depends on social responses:

Social issues prompt adoption of an  
Approach which is aided by  
Technology which results in  
Economic improvements which then require  
Resources which then raise  
Political issues which require  
Legal solutions which vary with  
International conventions and culture, and

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<sup>11</sup> See [https://www.12manage.com/%5C/forum.asp?TB=PEST\\_analysis&S=73](https://www.12manage.com/%5C/forum.asp?TB=PEST_analysis&S=73)

## Chapter 3 Research influences and design

Demographic developments bring about

Environmental change (Wilson Fyffe, no date).

I have already described increasing concerns about social justice, inclusivity, and diversity and this encouraged me to accept a qualitative approach, despite my original desire for mixed methods. Conversations across the globe would be aided by digital technologies for telecoms, including Zoom, for which I already held a professional license, and I knew technology would feature in conversations with technologists. The economic situation following Brexit and COVID-19 meant that some of the people I wanted to speak with would be in-between jobs and those who were in employment would be time-poor. This, and the political instability of the government in the UK at the time would create instability for companies and employees. I anticipated no legal issues since I would be following an approved ethics procedure, neither would there be concerns around international or demographic factors. I did not expect environmental factors to be a significant factor when designing the research and was interested to see they did arise in some conversations.

## 3.2 Research design

### Requirements

Before introducing the design that I chose, which was Eisenhardt's method, I will summarise the discussion of the requirements of the design for my research.

The design would have to support my purpose of transforming workplace effectiveness by working with managers to re-define their roles for the digital age, and my aim of understanding how managers overcome the barriers to improving the overall effectiveness of their organisations. I was going to try to do this through a lens of tensions management.

My intended research subjects and audience would be managers of hierarchical and large organisations, typically operating in highly regulated markets. They would likely be siloed, and actively engaged in organisational improvement activities, such as transformation.

The design should support mixed methods and multiple iterations, so that I could design next actions based on the results of a previous outcome. Few of these actions, or consequences, could be predicted. It would have to support data-gathering and analysis of socio-technical (social and/or technical) phenomena that are always present but often taken for granted. It would have to support contextuality in a way that allows each situation to be understood in depth and then compared with other situations, in order that similarities and differences could be recognised.

Implicitly, the design would have to allow me to sustain my broadly pragmatic position, curiosity, and enthusiasm, as previously described.

Explicitly, the design would need to enable me to:

## Chapter 3 Research influences and design

- Engage with managers at all levels in an environment where they could share their experience, thinking process, actions, and reflections of managing tensions and improving the effectiveness of their organisation;
- Engage with stakeholders generally. I.e. non-managers (contractors and employees without managerial responsibility) as well as managers of projects and other assets;
- Use the analysis of each conversation to inform the next, so that I could build, incrementally, on knowledge gained;
- Allow my observations across cases to develop into testable hypotheses and theories.

### Mixed methods

As Alvesson and Deetz (2000) note, qualitative data meet difficult challenges in organisational research. Despite quantitative data seeming to have extra validity in certain organisations, my research would be qualitative, but not to the exclusion of measurement. For example, I could use costs, headcount, incidents, deliveries, and customer complaints as variables that would allow me to magnify contextual factors to reframe reductionist (cause and effect) thinking with awareness of complexity, or I could use the manager's distance from the top of their organisation (CEO distance) as a variable in the manner of Eisenhardt and Bourgeois (1988).

Editors of the Journal of Mixed Methods, Tashakkori and Creswell (2007) state insights are developed by combining qualitative and quantitative methods, with emphasis on the value of combination. In the same issue, Bryman (2007) highlights the issue of integration of quantitative and qualitative findings and Morgan (2007) expects mixed methods to combine



both inductive and deductive reasoning as steps within an abductive process.<sup>12</sup> This reading confirmed my initial understandings that mixed methods are desirable, having the potential to appeal to a broad audience by connecting numbers with narrative.

The next section presents my choice of the Eisenhardt's method and how it would be used.

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<sup>12</sup> From Merriam-Webster online dictionary, available at: <https://www.merriam-webster.com/grammar/deduction-vs-induction-vs-abduction>: "Deductive reasoning, or deduction, is making an inference based on widely accepted facts or premises. If a beverage is defined as "drinkable through a straw," one could use deduction to determine soup to be a beverage. Inductive reasoning, or induction, is making an inference based on an observation, often of a sample. You can induce that the soup is tasty if you observe all of your friends consuming it. Abductive reasoning, or abduction, is making a probable conclusion from what you know. If you see an abandoned bowl of hot soup on the table, you can use abduction to conclude the owner of the soup is likely returning soon.

All three words are based on Latin *ducere*, meaning "to lead." The prefix *de-* means "from," and deduction derives from generally accepted statements or facts. The prefix *in-* means "to" or "toward," and induction leads you to a generalization. The prefix *ab-* means "away," and you take away the best explanation in abduction."

### 3.3 Eisenhardt method

#### Selection

Acknowledging my proclivity for spontaneity and serendipity, I wanted to be able to reach my intended research objectives and be able to change direction instantly. This is what agility is all about, and it is achieved in Agile methods iteratively and incrementally. Grounded research approaches are said to be iterative and Eisenhardt's (1989, 2021) descriptions suggest incremental too.

I was drawn by the availability, appropriateness, and clarity of the steps of Eisenhardt's method. I believe the 'Process of Building Theory from Case Study Research' described by Eisenhardt (1989) suits my purposes, as it is a way of developing 'empirically valid', 'readily testable', and 'novel theories' in situations where little is already known. It seemed prescriptive enough for me to follow and flexible enough for me to adapt as I made discoveries. Importantly for my audiences, it is an accepted research approach capable of producing studies "Grounded in convincing evidence" (*ibid*, p. 549).

The method is appropriate for when there is insufficient literature for theory-testing research according to Eisenhardt and Graebner (2007). As examples of this lack of literature, Snowden and Boone's (2007) 'Cynefin' and Wardley's (2018) 'Wardley maps' are well-known in the Agile community, but not generally known to managers or academics. Snowden has published academically, is a visiting professor, and Cynefin was published in HBR as a 'Decision-making framework for leaders'. Wardley was a CEO before joining the Leading Edge Forum, a commercial research firm. In contrast, psychological safety in the workplace appeared in the literature at roughly the same time by Edmondson (1999) and has become increasingly important both to managers and as a topic for academic research.

Eisenhardt's (2021) efforts to win the approval of the prevailing objectivist, and predominantly male, academic community of the late nineties resonate with today's demands for diversity and inclusivity in organisations. Contemporary academics may be more accepting of qualitative research and female researchers, but Wickert (2021) says that organisations have yet to 'Walk the talk' of their social responsibility. I care deeply about closing the gaps between managers saying people should be rewarded equally and doing so, and executives saying their firm cares for the environment and the impact of their reluctance to change.

Having analysed, probed, discussed, and immersed myself with it for almost eighteen months, I satisfied myself that Eisenhardt's (1989) 'Process of Building Theory from Case Study Research' was an appropriate means for satisfying my research aim. The fact that several of her papers generated insights in my literature review and that I recognised her approach in several papers, reinforced my belief that the method fit my research. I learned the theory of the method whilst refining my proposal by studying papers, including Eisenhardt (1989, 1991, 2021) as well as Eisenhardt and Graebner (2007).

The mental exercise of applying the steps of the method to my research helped make the activities real for me. The notion of 'doing research' became step-by-step planning in my mind and then on the page, and my research objectives emerged as a result. Before revealing those objectives, I present my rationale for selecting Eisenhardt's (1989) method.

### Rationale

The method Eisenhardt (1989, 2021) describes uses multiple case studies to develop mid-range theories. It blends case study from Yin (2003), grounded theory from Glaser and Strauss (1967) and Strauss (1987 as cited by Eisenhardt 1989), and presentation of qualitative

data from Miles and Huberman (1984 as cited by Eisenhardt, 1989) with Eisenhardt's technique of replication by cross-case analysis.

The method is indicated when there is insufficient literature for theory-testing research Eisenhardt (1989, 2021), and Eisenhardt and Graebner (2007). As I have already highlighted, there is little information available for managers regarding the theory or method for transformational improvement. Where information is available concerning Agile, it is aimed at developers and executive sponsors, leaving mid-level managers to find their own ways through the barriers to adopting it, or not.

I mentioned previously that DevOps had benefitted from the research rigour and communication abilities of its advocates and contrasted that with Agile. DevOps has its seminal works, many published by IT Revolution Press, whilst Agile has its Manifesto and several dozen overlapping and competing methodologies. I also mentioned the importance of psychological safety as part of the environment created by managers in which improvement occurs, or not. In this area, Amy Edmondson communicates so well and authoritatively that I use her videos in leadership workshops, whereas journalist Steve Denning's books and articles in Forbes magazine make him perhaps the best spokesperson for Agile transformation.<sup>13</sup>

In the previous paragraph I admit that I selected examples to amplify in order to make a point. However, there is a fundamental problem in that Agile was intended for use by software developers and no theory has been advanced that explains why it should work throughout an organisation. In fact, I suggest, and will argue, that it cannot do so because it is a method for innovation, not operation. Digital transformation, on the other hand,

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<sup>13</sup> I have used this 3-minute video by Amy Edmondson: <https://youtu.be/KUo1QwVcCv0> and Steve Denning's profile at Forbes is available at: <https://www.forbes.com/sites/stevedenning/>.

encompasses everything (process, person, and asset) that may need to change in order to achieve the desired objective. There is a lack of theory to explain digital transformation, according to Markus and Rowe, whose (2021) editorial was a ‘progress report’ on their call for papers on ‘Theories of digital transformation’. The special edition that eventually emerged as Rowe and Markus (2023) was titled ‘Envisioning digital transformation: Advancing theoretical diversity’ and opened with an explanation of the extraordinary journey that the editors had experienced to deliver four papers in which the diversity of the title accounts for differences in understanding of the terms digital, transformation, and theory.

Personally, I am a novice researcher and needed a method that I could understand and adopt. One that would allow me to bring my prior knowledge into my research and produce something of value to practitioners as well as my examiners. Eisenhardt (2021) states that she only recognised that the method could be used for elaborating after being involved with other scholars using for that purpose, originally believing it to be suitable only for inductive theory-building.

I drew comfort from Easterby-Smith *et al.*'s (2021, p. 99) statements that Eisenhardt's approach to case study, “Has been widely adopted” and “Draws inspiration from both the positivist and constructionist positions” That is certainly good enough for me.

### Benefits and applicability

Case studies can help us understand complex situations, multiple cases provide the means for inductive and abductive theory development. In Eisenhardt's (1989) method, researchers first become familiar within cases, then begin to recognise patterns across cases, also Eisenhardt and Graebner (2007). Those patterns and the constructs which shape them are emergent and researchers must constantly compare what emerges with the data to assure its internal validity Eisenhardt (1989). The key to generalisability is in testing hypotheses against the literature

and replicating the tests on further cases until either saturation is reached or disconfirming evidence is found (*ibid*).

Where Glaser & Strauss (1967 as cited by Eisenhardt, 1989, p. 546), “Focussed on defending building theory from cases...” Eisenhardt’s focus was the method. Eisenhardt (2021) states that ‘constant comparison’ between data and emergent theory is from classical grounded theory, and ‘replication logic’ from Yin’s work with case study, but that ‘cross-case analysis’ is her original contribution.

Comparing data across multiple case studies, I believed, could help my research highlight what Taleb (2016) explains is a fallacy, that emergent activities do not scale linearly.

Managers tend to assume that what worked for one team will work for all teams, hence Agile practices are often introduced as a ‘pilot’ with the intention of ‘rolling out’ to other teams to achieve the desired scale. This is a fallacious assumption.

The combination of multiple cases and multiple iterations provides flexibility and offered me options. For example, I could run an iteration that compared the use of the word ‘control’ as a quasi-experiment between two groups of participants using a research design described by Easterby-Smith *et al.* (2021). For one group, I could shift the conditions by suggesting ways in which an inspect and adapt technique could give them greater control over their teams, whilst for the other, suggest the same technique as a useful Agile practice. By measuring perceived and actual control, such as stability and improvement of output, I could hypothesise that managers are more likely to adopt approaches they believe will increase their control over the system of work, rather than increasing the system’s agility. For the next iteration of data-gathering and analysis, I could start with two groups that were dissimilar in at least one known dimension. However, this is a complex domain, so there is no way of controlling or predicting the responses of either group. Therefore, my methodology had to be

able to support the identification of each group in each iteration as a bounded entity. Cases based on organisational structures, that is teams, functional areas, job titles, position in the hierarchy, provide this and meet the requirement for ‘theoretical sampling’ Eisenhardt (1989). I expected to be able to draw suitably consented cases from my professional experience.

Eisenhardt (1989) claims the method is especially suited to novel research questions that look inside processes to explain a phenomenon by combining qualitative methods with case study and grounded theory-building approaches. I hope to help managers overcome barriers, with their transition between stages of transformation being the phenomenon. The barriers exist for as long as managers maintain them, so if reframing them as tensions activates managers, then I, as researcher, will be there to witness the manager’s change of perception.

### *Alternatives*

I also considered Action Research, Action learning, and Hoda’s Socio-Technical Grounded Theory, see Appendix C: STGT research method. Eisenhardt’s method better matched my needs as an experienced practitioner investigating phenomena beyond software development.

### *Eisenhardt’s method in steps*

The steps and activities from Eisenhardt’s (1989) method are shown in Figure 3 below. I now describe how I intend to apply each to my research in the sub-headings that follow.

Step	Activity	Reason
Getting Started	Definition of research question Possibly a priori constructs	Focuses efforts Provides better grounding of construct measures
Selecting Cases	Neither theory nor hypotheses Specified population  Theoretical, not random, sampling	Retains theoretical flexibility Constrains extraneous variation and sharpens external validity Focuses efforts on theoretically useful cases—i.e., those that replicate or extend theory by filling conceptual categories
Crafting Instruments and Protocols	Multiple data collection methods  Qualitative and quantitative data combined Multiple investigators	Strengthens grounding of theory by triangulation of evidence Synergistic view of evidence Fosters divergent perspectives and strengthens grounding
Entering the Field	Overlap data collection and analysis, including field notes Flexible and opportunistic data collection methods	Speeds analyses and reveals helpful adjustments to data collection Allows investigators to take advantage of emergent themes and unique case features
Analyzing Data	Within-case analysis  Cross-case pattern search using divergent techniques	Gains familiarity with data and preliminary theory generation Forces investigators to look beyond initial impressions and see evidence thru multiple lenses
Shaping Hypotheses	Iterative tabulation of evidence for each construct Replication, not sampling, logic across cases Search evidence for "why" behind relationships	Sharpens construct definition, validity, and measurability Confirms, extends, and sharpens theory  Builds internal validity
Enfolding Literature	Comparison with conflicting literature  Comparison with similar literature	Builds internal validity, raises theoretical level, and sharpens construct definitions Sharpens generalizability, improves construct definition, and raises theoretical level
Reaching Closure	Theoretical saturation when possible	Ends process when marginal improvement becomes small

Figure 3 Steps and activities from Eisenhardt (1989)

### Getting started

Eisenhardt's method requires research questions to be defined at this stage. Given that most managers normally lead improvements in their own areas, I was curious to understand what prevents managers trying to improve their organisation's overall effectiveness. Although not required for a professional doctorate in which I was guided by my purpose and stated aim, I honoured the method and asked:

- RQ1. What opportunities are there for improving organisational effectiveness and what are the real barriers preventing managers from leading improvement?



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- RQ2. Under what circumstances will managers enact leadership and overcome the barriers to organisational improvement?
- RQ3. What do managers not currently know that would allow them to recognise the improvements available?
- RQ4. Would identifying and managing tensions help activate managers to overcome these barriers?

Another activity in this step was identifying potentially important factors as *a priori* constructs. After deciding to focus on tensions management as a way of recognising and overcoming barriers, I listed these *a priori* constructs:

- There is a causal relationship between tensions and barriers, and another between tension resolution and barrier removal;
- Even if overcoming barriers does not improve performance directly or immediately, it may improve the system of work, which will improve performance eventually;
- Barriers exist at multiple levels:
- Personal - eg. motivation, skill, reflexivity, self-awareness, morality;
- Social - eg. self-preservation (including fear of consequences), greed, and competition amongst managers (for resources and promotion);
- Technical - including organisational governance (eg. annual budgeting and individual performance appraisals) and personal lack of skills (eg. Theory of Constraints, limiting work in progress);

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- Socio-technical - the product of a combination of social and technical factors, such as the effects of hierarchy and structure (eg. ‘not my job’).

### Selecting cases

I formed cases according to organisational structures. These were familiar to my audience and made it easier for me to compare and contrast cases. Each case would comprise between 3-30 individual managers drawn from the participating organisations’ population. Some would be self-selecting (volunteers who come forward in response to my invitation) and others would be selected by their line managers (volunteered). All would be given opportunities to decline or withdraw. Any analysis would be shared with the participants and to wider internal audiences with ample opportunities for Q&A.

My Director of Studies helped me with the reminder to clearly differentiate between the activities of this study and any prior research that informs it, hence referencing my ‘Stages of transformation’ as a published work Lewis (2016a) and drawing on insights from the insider research and interventions that I did as a consultant Lewis (2021).

As well as prior cases, theoretical sampling as described in Eisenhardt (2021, p. 149) would allow me to find and select cases for comparison, either “Where the focal phenomenon is likely to occur” or where I know it does not. I recently met Agile coaches that had worked for me, who told me the business agility leadership function I had instigated had now been split into two functional teams. They realised this had created silos and more hierarchy, reasoning that that had occurred because I was not there to ensure collaboration and cohesion. Whilst neither I nor the participants can be objective enough about this case, it highlights the fact that structural changes signal an act of leadership made (or approved) by a manager. I had led socio-technical collaboration, but the manager who took-over had divided the work into sub-

function (silos), professional coaching (social) and Agile coaching (technical). Both are acts of leadership; mine towards collaborative eco-systems Olivier *et al.* (2021), the other to the division of labour that Smith (1776) characterises as the way industrial nations generated their wealth.<sup>14</sup>

A manager I had coached for some years at that same bank had joined Meta and conversations with him gave me a way to contrast managing in a traditional organisation versus its polar opposite. Meta's relationship with learning and the way it values its people was clearly different from organisations needing to transform. As well as these 'polar type' comparisons, Eisenhardt describes 'matched pair' cases. Matched pairs may share common antecedents and environments, differing in managerial personnel but not structure, so differences may relate to the leadership behaviours of each area's managers. A matched pair could be managerial peers who are responsible for different products. Each creating their own micro culture in the context of the same organisational department.

### Crafting instruments

I would gather data through semi-structured interviews and facilitated group sessions and perhaps, structured interviews or surveys.

Organisational details for each participant would be (anonymised) variables; business area, function, management grade, years of service, current role, etc. Notes from structured interviews and facilitated interactions would be coded and categorised, providing a dataset that could be coded and analysed.

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<sup>14</sup> The impact of Adam Smith's (1776) *Wealth of Nations* on the free market was commemorated on the English twenty pound note 2007-2020.

Although I had a draft set of questions for the first interviews, I intended to adjust them to suit the context, guided by my aims, objectives and research questions, recognising this is primarily an inductive process, see Eisenhardt (1989), Eisenhardt and Graebner (2007). I would continue my practice of recording reflective observations and capturing emergent constructs in my research journal. I thus noted how my ideas were changing over time.

Busy managers have little time for reflective investigation, and I needed a way to engage with those who are willing to go beyond predictable responses. I intended to achieve this iteratively, expecting my first interaction to produce responses such as ‘it is not my job’, ‘change happens slowly here’, ‘I cannot change culture’, ‘hierarchy and bureaucracy’.

Although these are explanations (or excuses) for inaction, they are the organisation’s problems as described by its managers. However, my focal phenomenon is understanding how managers can overcome their barriers to action, no matter whether they are psychological, structural, or the product of the interrelation of the individual within their context. Accordingly, I hoped to gather these data by shifting the conditions and facilitating dialogues that would allow participants’ emotions and motivations to surface.

The purpose of the first iteration was therefore to identify managers who were willing to open-up and explore barriers and tensions with me. It was likely that some managers would lose interest after the first interview and others would hear about the research and ask to join in later stages. This potentially addressed the bias introduced by gatekeepers assigning participants for organisational research Easterby-Smith *et al.* (2021) but also would introduce a new data bias of self-selection. I decided to record the way managers responded to invitations to participate as a potential data source.

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The nature of iterative and incremental methods is that only the next iteration is planned in detail. Depending on participants' willingness to engage further, and their preferences for doing so, subsequent iterations could be any combination of:

- Asking similar questions by survey to increase sample size;
- Anonymous questions designed to probe for answers unlikely to emerge from interview, such as, 'How likely are you to question your line manager when asked to do something you believe is wrong or wasteful?'
- Facilitated group sessions that shift the conditions to explore what is really going-on by creating a safe, collaborative space for managers to speak only.

Eisenhardt (1991, p. 620) amplifies the importance of "Precise and measurable constructs" in theory-building research, and so I needed to accurately capture managers' perspectives, recording either collective or individual narratives. I would ask participants to validate what I recorded to ensure they were comfortable with me anonymising and presenting it as representative of them.

Throughout these iterations, I would be guided by my aim to build theories that help explain managers' barriers to leading improvement within their organisations.

### Entering the field

I learned from previously researching managers that access is easiest whilst I am working within such organisations (as a contractor). The authority of senior sponsors (gatekeepers) and their administrative assistants gave me *carte blanche* access in that instance and I hoped to do that again. However, I would need to restate the boundaries between my professional and research activities at every meeting with participants.

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Previously, I had waited too long to analyse data, thinking I did not want to be influenced by emerging findings. I now know this was unjustified as it was a semi-structured interview, and we did not vary the questions. It had prevented me from adjusting data collection methods as Eisenhardt (1989) recommends. No matter the form of collection used this time, there would be no reason to delay coding the results.

Ideally, I wanted to start a case with a manager describing a barrier to improving agility and follow that manager's process until they developed a plan to overcome that barrier. The data would include their and their colleague's words, my observations, field notes and reflective insights.

### Analysing data

Eisenhardt (1989) differentiates between 'within case' and 'cross case' analyses, describing three tactics for 'cross case' analysis (it being a particular contribution of the method). I described the method for cross-case analysis in the preceding section. To this I add Yin's (2003) suggestion that cases can be analysed using the pattern-matching logic of noticing predicted constructs amongst observed data. This also seemed a useful approach for my analysis across cases.

I next describe those steps of my intended 'within case' analysis that are describable, that is grounded theory coding, thematic analysis, and 'descriptive statistics'. Of course, everything depended on what would emerge from the data. I would consider the use of thematic analysis software.

The purpose of 'within case' analysis is to create familiarity with each case, allowing "... the unique patterns of each case to emerge before investigators push to generalize patterns across cases", from Eisenhardt (1989, p. 540). It involves gaining familiarity with each case through

studying and writing it up. Eisenhardt (1989, 2021) describes the use of ‘construct tables’ as a way of evidencing how constructs relate to data when communicating results.

My research into coding methods came from watching several hours of Graham Gibbs’ videos about coding for grounded theory for previous research.<sup>15</sup> Drawing on that experience, and having investigated Hoda’s STGT approach, I felt quite confident about coding and writing ‘within case’ summaries. For this doctoral-level study, I would be following Eisenhardt’s (1989) recommendation and begin coding immediately I acquired data. I intended to reuse a similar coding approach, as it worked well in terms of getting familiar with the data before making analytical leaps. Initially, I would preserve the words and phrases used by interviewees, then capture the emerging themes and categories. Where categories are broad, such as ‘bureaucracy’ and ‘leadership’ I would form a simple taxonomy to narrow them down. I would synthesise these ‘open coded’ categories by ‘axial coding’ as described in an earlier edition of Easterby-Smith *et al.* (2021). I only required a process that would allow me to connect the coded categories of phenomena (data) with emergent constructs (theory) although I noted the option to reduce the axial coding paradigm to “Conditions, actions-interactions, and consequences or outcomes”, from Vollstedt and Rezat (2019, p. 96).

Hoda *et al.* state ‘selective coding’ follows and is a process of narrowing the focus to codes relating to the ‘core category’. I had some texts to consult on thematic analysis, including Braun and Clarke (2021) and Bazeley (2013), for whom coding is an analytical method. Also, induction as analysis as discussed by Robinson (2000).

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<sup>15</sup> Available at: <https://www.youtube.com/user/GrahamRGibbs>.

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As in my previous research, I could use descriptive statistics to support the qualitative results. Although the quantitative element is minor, the parts could combine to produce a mixed methods modality that would have appeal. My experience was that managers responded positively to evidence that supported their opinions and ideas that had popular support. I also witnessed managers pushing-back against measurements that showed poorer relative performance in their area, regardless of whether the metric was previously considered important. Even though findings would be anonymised, I would be careful with inter-area comparisons.

### Shaping hypothesis

Eisenhardt (1989) identifies the steps of hypothesis shaping as 'sharpening constructs' and 'verifying fit' between relationships and case evidence. The tabular presentation of evidence to support constructs was adapted from Miles and Huberman (1984 as cited by Eisenhardt, 2021).

I experimented with a table of data that I invented, an Agile approach that accelerated my learning and brought me closer to understanding the inductive and abductive mechanisms involved. I found the process of tabulating observations very helpful, particularly improving the definition of each dimension by iteratively renaming the table's headings.

As theory-building research is about explaining an observed phenomenon according to Eisenhardt and Graebner (2007), I would want to explain why some groups are using Agile methods at team and systemic levels, whilst others are still learning to be an Agile team. Eisenhardt (1989) states that replication is the way to do this, constantly comparing cases with the emerging hypotheses.



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### Enfolding literature

I hoped to relate aspects of the extant literature with my emergent theories. For example, if case data suggest a relationship between managers exhibiting leadership behaviours of amplifying transparency and psychological safety, and an increase in their, and their direct reports' contribution to business effectiveness, I would be able to develop a hypothesis linking leadership, transparency, safety, and performance over time. This could be (dis)confirmed by reference to theories and cases in the literature. Whilst purely speculative in the context of research design, this illustrates my understanding of the process described in Eisenhardt's (1989) paper.

### Reaching closure

I needed to make the best use of the time I would get with time-poor managers to gather data or find insights that go beyond the expected. Since I could rely on replication with new cases to reach theoretical saturation, I would aim for discoveries that would have the potential to challenge prevailing perceptions. However, I recognise Eisenhardt's (1989) caution that the results could be disappointing and accept this is a likely outcome for me.

### 3.4 Aims and objectives

Having considered how I would apply each of the steps of Eisenhardt's method, my research objectives became quite clear to me. I can now restate my purpose, aims, and state my objectives for this research.

My purpose is to transform workplace effectiveness by working with managers to re-define their role for the digital age. The aim of this research was to understand how managers overcome the barriers to improving the overall effectiveness of their organisations.

My objectives for this research to fulfil my aim, were to:

1. Describe the context in which this research takes place;
2. Critically analyse the organisational literature to position my research and search for theories of; transformation, strategy, management, and leadership;
3. Select an appropriate research design by performing critical and contextual analysis;
4. Convince a senior manager (as gatekeeper) in a large organisation to allow their managers to be actively involved in my study;
5. Apply Eisenhardt's method to iteratively:
  - a) Gather and analyse structured data provided by groups of managers (cases);
  - b) Facilitate a shift of conditions to discover what else managers think or believe about their capability to effect improvement;
  - c) Identify constructs from structured and narrative data, constantly comparing emerging ideas with data and replicating cases for validity;

- d) Sharpen the constructs and shape hypotheses by comparing data with the literature.
6. Record the activities, outputs, observations, and reflections of the above, then write an account of what I did in the form of a doctoral thesis.

### Desired outcomes

Managers' behaviour impacts everything from organisational performance to culture and motivation. Whilst I know that changing the behaviour of managers is unrealistic, somewhere within my pragmatist's being, is an idealist who believes it is possible for managers to shape the systems of work appropriately and for people to be happy in their work. I believe the knowledge of how to achieve this already exists.

The outcome I desired was to be able to show managers that the barriers to improving their own organisations are of their own making, can easily be overcome with the right approach, and that improvement is their responsibility. I break this desired outcome down into parts:

- Develop or extend management theory to help managers recognise they can and should improve the effectiveness of their organisation;
- Describe a business agility leadership method that managers can use to identify and overcome the barriers to improving their organisations in situ;
- Contribute case study evidence to the practitioner literature in support of existing theories commonly used by agilists;
- Contribute to the literature of transdisciplinary practitioner research and raise awareness of its value for organisational improvement professionals.

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For myself, I enjoy acquiring skills as a journey of learning and look forward to recognition of my achievement. A ‘journeyman’ was judged competent for work by a master of that craft, just as masters were deemed masterly by their peers. The journey frame allows me to reflect on how my professional experience as an engineer, software developer, then Agile coach, has shaped my intention to acquire doctoral-level research skills.

### 3.5 Summary

I have described my research design in terms of the method I intended to follow, as well as the influences that led to the rationale for that choice. After bringing those steps to life by detailing the activities and following the flow of data, I described the key objectives of my project. Finally, by stepping back from those objectives, I imagined the outcomes and impact that my work could have on the practitioner and research communities as a result of my creating the conditions for the emergence of greater possibilities.

One impact of reflecting on my exploration of the literature was a sharpening of the focus of my research. It changed from ‘how managers overcome barriers to make improvements’, to ‘how organisational tensions are managed’. Consequently, my research methods needed to discover which tensions managers noticed, why they choose to tackle some and ignore others, and how they went about resolving tensions, overcoming barriers, and making improvements.

Experience told me I would need to explore tensions I had heard from managers previously, such as ‘not my responsibility’ and ‘not worth trying to tackle this issue’, as well as their unspoken fears of uncertainty and failure. In other words, I needed a research approach that would allow me to combine my *a priori* professional experience with the influences described in the previous chapter, whilst satisfying the need for academic rigour at the level of doctoral research.

On reflection, I made the right choice. In terms of my practitioner audience, I find managers generally take a pragmatic approach, so a study “Grounded in convincing evidence” Eisenhardt (1989, p. 532) should be useful to them. Academically, conversations with managers as fieldwork responds to Tarba *et al.*’s (2020, p. 6) research gap to “Focus on the microfoundations of ambidexterity across different levels and settings” by understanding how managers differentiate and integrate tensions in practice.

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In the next chapter, I describe what happened when my planned research design met the real world and what I learned through action, that could not be learned from planning.

# Chapter 4 Research activities

This chapter presents an account of my actual research activities, as distinct from the plans described in the previous chapter. My goal was to document the activities which, if reproduced by others, could lead to similar deductive or inductive conclusions. For the activities from which I made abductive leaps, I describe the context and contributory factors.

I have divided this chapter into two parts. The first describes how I coded the literature for tensions, the second how I gathered and analysed empirical data from participants. My decision to do this reflects the research value I associate with engaging with the literature as a part of the whole. I therefore offer a systemic, wholistic account of my research activities.

In Figure 4 below, I visualised myself at the centre of a landscape of research. The arc above suggests the vastness of extant beliefs, and the literatures below form the ever-expanding literature foundation on which we build. Items in solid borders are supported by consent or publication and are included in this thesis. Those with dashed borders influenced me during data gathering and analysis but are not identified as sources.

For example, several participants spoke of tensions when managing legacy and contemporary software systems, a tension that I had not seen in the ambidexterity literature. However, the more impactful observation, that legacy systems come with legacy thinking and legacy processes, came from a Chief Technical officer (CTO) I met at an event but who never returned the consent form I sent afterwards. His insight changed my appreciation of the complexity of the transformational challenge Dikert *et al.* (2016, p. 95) report as “Coordination challenges in multi-team environment” and Schneider and Kokshagina, (2021, p. 4) as “Changing work and collaboration”.

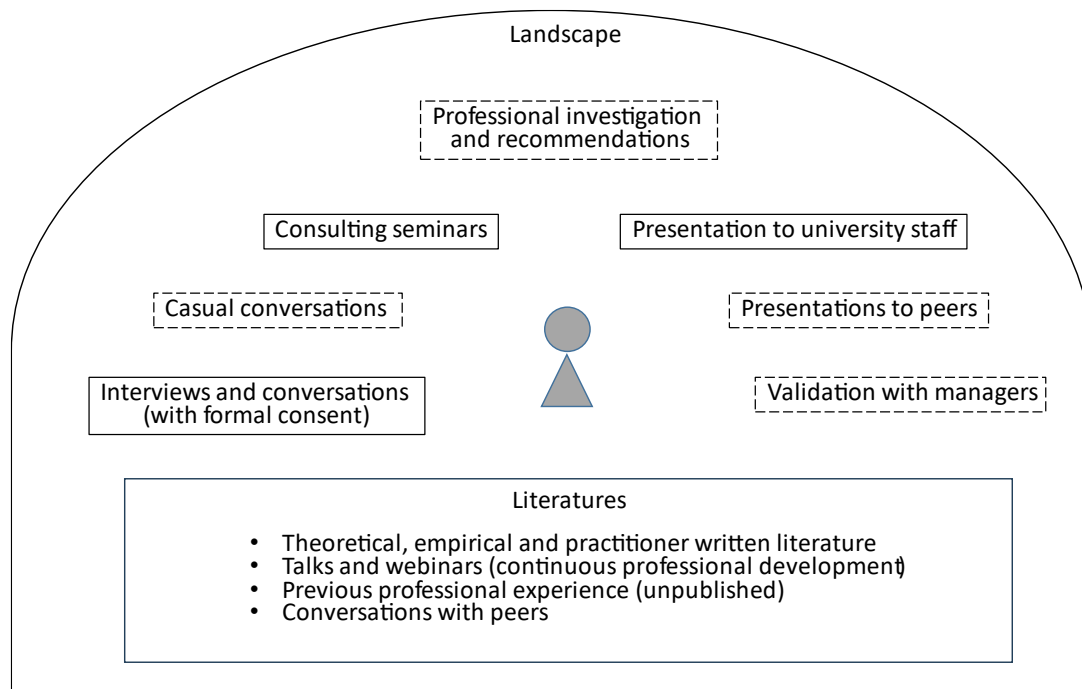


Figure 4 Visual mapping of research activity

Every iteration of this project started with literature, moved clockwise around the figure, then back to literature for what Eisenhardt (1989) describes as validating emergent theory in the ‘enfolding literature’. In reality, I iterated around this cycle many times. I was still coding the literature for tensions when I held a seminar and did a pilot interview. Those sessions flagged tensions I had not noticed in the literature, so I was immediately able to go and look for them. Later, whilst writing this chapter, I realised I had not prepared adequately for the next step of the method and re-analysed all the data to identify and tabulate evidence to support the constructs I had identified.

Eisenhardt’s (1989, 2021) phrases ‘constant comparison’ and comparison with ‘enfolding literature’ came to mind each time I compared my emerging ideas with data and existing literature. These comparisons support internal validity, sharpen definitions and arguments for generalisability, according to Eisenhardt.



## 4.1 Coding the literature for ambidextrous tensions

As the aim of this research is to understand how managers overcome the barriers to improving the overall effectiveness of their organisations, and my literature lens was organisational ambidexterity, I decided to investigate what researchers, and practitioners where possible, meant by ‘ambidextrous tension’.

### Data collection from literature

To understand the tensions that comprised ambidexterity, I coded the abstracts of 72 ‘core’ papers and the abstracts of another 155 papers identified in Scopus. I then coded six ‘seminal’ papers, a selection of significant papers, and a book in entirety; coding 189 sources in total. Although I was systematic in my methods, this was not a systematic review of literature.

My analysis was abductive, so I cannot fully describe the cognitive process but provide the following commentary as indicative of my method. It takes Simsek’s (2009) summary of ambidexterity as a starting point:

An organization’s ability to do two different things at the same time – for example, exploitation and exploration, efficiency and flexibility, or alignment and adaptability (Simsek, 2009, p. 599).

I note that the statement referenced three tensions comprising three pairs of forces: *explore-exploit*, which I know comes from March (1991); *flexibility-efficiency* from Adler *et al.* (1999); *adaptability-alignment* from Gibson and Birkinshaw (2004) and that ‘for example’ suggests other ambidextrous tensions exist. I considered the meaning of each word of each tension pair carefully, analysing its role in its source paper and juxtaposition with its pair, as well as its colloquial and literal meanings. In the case of ‘exploitation’, I wondered if

researchers had chosen to use words like efficiency, alignment, operational, and similar, because they were more reflective of business practices and situations.

Iteration and constant comparison featured a lot. These are characteristic of theory-building approaches as described by Eisenhardt (1989, 2021). My analysis of the literature was iterative, and I sometimes moved tensions from one base cluster to another. I renamed and created base tensions after discussing them with other people and following a pilot interview. I continue to doubt whether I should have included tensions from beyond the ambidexterity literature.

I crossed-checked my list of 72 core papers (see Appendix A) against García-Lillo *et al.* (2016), who used citation analysis to rank papers by popularity, and the 48 papers reviewed by Simsek *et al.* (2009). I was satisfied that the papers missing from my core were not significant but that they appeared in one of my secondary lists (Scopus or Google Scholar), for example Venkatraman *et al.* (2007) and were available for reference as needed.

I used Harzing's 'Publish or Perish' tool to run two searches (on 18 November 2022) on the keyword 'ambidexterity' against the Scopus and Google Scholar sources. The tool ranks its results in order of number of citations (all time and annualised) and is limited to 200 and 1000 results for Scopus and Google Scholar, respectively. I imported both result-sets into Research Rabbit, which collected the abstracts and full lists of authors. For records without DOIs, Research Rabbit used Artificial Intelligence (AI) to suggest matching titles, and prompted me to select the correct source. I then exported both result-sets to Zotero, my primary repository, to de-duplicate and manage as sources. Professor Harzing invited me to share this workflow, which I did by publishing the video, (<https://youtu.be/iqPCR-UY8zo>).

After cleansing, I had three collections in Zotero: Ambidexterity core (72 papers); Scopus (155); Google Scholar (736). I imported the core collection into Microsoft Excel™. I added

columns for the author's tensions and keywords, plus metadata to help me classify and track my analysis of the papers. This spreadsheet is reproduced in Appendix A, Core collection of ambidexterity papers.

As an example of how I coded papers, Güttel *et al.* (2015, p. 261) conceptualise learning and flexibility as dimensions of ambidexterity where “The learning dimension refers to balancing incremental and radical innovations, while the flexibility dimension refers to balancing alignment and adaptability in terms of a firm's organizational design” yielded specific tensions of *incremental-radical innovation* and *alignment-adaptability*, as well as the basic *explore-exploit* tension, mentioned in their introduction.

### The NVivo experiment

Keen to try (to exploit) its ‘autocoding’ AI capability, I imported the core abstracts into NVivo version 20 and began ‘training’ the software.

Working with abstracts, I open-coded tensions as Bryman (2012) describes. I used the syntax of a single hyphen to separate the tensions, for example, *explore-exploit* and *fresh blood-accumulated wisdom*. As the list of tensions grew, I forgot which tension came first, so invented the rule of leading with the more exploratory of the pair. I also developed a rule for hyphenated words, so the tension between short-term and long-term became *long-short term*.

Having coded more than half of the core abstracts to train the AI, I was disappointed that the AI could not continue, even with the dictionary of words and codes it had built. It seemed to struggle with the structure of the abstracts, which had been stored as plain text ‘Memos’ in NVivo, so I continued with manual coding. Of the abstracts held as Memos, I coded 69 core, 116 Scopus, and one Google Scholar abstracts.

## Chapter 4 Research activities

I tried autocoding again on some papers imported as PDF files, but the software proved too unstable to complete even a single pass. I was using a time-limited version as the university-licenced version did not offer the AI functionality. Help from the support desk was intermittent at best and the software took so long to crash and recover that I gave-up on its AI. That meant I would not have the time available to code the entire literature for tensions.

A benefit of using NVivo was managing the list of 67 tensions that I had coded. I had also found 17 topics that researchers had applied to ambidexterity and 11 design approaches to ambidexterity. Although not directly relevant to my research aim, I enjoyed the mental stimulation of coding these extra variables whilst reading papers, especially the lengthy ones.

Prioritising those I had labelled seminal and significant, or stood-out as interesting, I coded twenty papers (nineteen core and one Scopus). But now I was processing each paper for its insight into ambidexterity, not just its examples of tensions. In fact, I found very few new tensions from papers, leading me to conclude that coding abstracts was the best way of trawling for tensions. My supervisor concurred that I had reached Eisenhardt's (1989) theoretical saturation by then.

### Beyond ambidexterity

Processing papers in detail for tensions in the manner described was mentally exhausting and I was worried that I was losing the learnings from previous papers I had researched. So, I resumed my prior practice of writing literature review notes in Obsidian for each paper I read.<sup>16</sup> I had a poor experience previously publishing documents written in Obsidian's native file format (Markdown), as I struggled to find way to convert them to Word or HTML format automatically, so built a research website as a home for my literature notes. As well as

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<sup>16</sup> Obsidian is a personal knowledge management tool based on Markdown files, see [https://en.wikipedia.org/wiki/Obsidian\\_\(software\)](https://en.wikipedia.org/wiki/Obsidian_(software))

sharing my progress in the search for tensions, the website gave me the opportunity to do something I had always intended to do, create an annotated bibliography.<sup>17</sup>

Additional mental relief came from reading a little-known book I had borrowed from the Deming Alliance's library. Taichi Ohno's (1988) 'Workplace management' is not only the origin story of the Toyota Production System, but also a manager's story of leading transformation from within his organisation, complete with insights and challenges. The inertia from managers at all levels against Ohno's new ways of improving production meant that it had to be called the Ohno system, just to protect the firm's reputation when it failed.

I decided to include specific tensions gathered from Ohno (1988) as it was a first-hand source and deeply connected to Adler *et al.*'s (1999) seminal paper on ambidexterity.

### Pilot interview

Following the talk that I gave to an audience of practitioners on ambidextrous tensions, one attendee volunteered to be interviewed. As a freelance program manager, Interviewee 1 was not an ideal candidate, but presented me with a useful learning opportunity. The approach agreed with my supervisor was to present a tension, have the interviewee reframe it into something from their experience, then record that tension and how they managed it, or not. In practice, the interviewee reframed most of the tensions I offered in terms of what was wrong with the way the organisation operated, and how the interviewee overcame those barriers. I was familiar with most of these organisations and recognised the problems. Unable to find agreement with the tension of the ambidexterity literature, I adapted the process to rephrase the scenarios as tensions, then worked on the wording together, to reach agreement.

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<sup>17</sup> See <https://agile-leadership.institute/annotated-bibliography/>.

Table 3 is taken directly from my field notes of this conversation:

<b>ID</b>	<b>Tension</b>	<b>Example / impact</b>	<b>Potential causes</b>
1.1	intention-execution	Budget approved in January only released end May – supplier worked ‘at risk’	Managers getting in their own way / conflicting priorities / one-way communication
1.2	prioritise what's important-don't want to say no	Constant pressure, deliveries late or missed	Managers don't see how info impacts them / too busy / don't read emails
1.3	legacy tech-modern expectation	mainframes can't do what microservices can	
1.4	fear of consequences-trying things out	too scared to lose their jobs to experiment	
1.5	local product development or pilot-stopped by higher ups	innovated with an app "as far as it would go" - it succeeded so got support from above	
1.6	flexibility-efficient?	flex comes when people understand the goal, efficient comes from mapping the value stream	
1.7	global-local?	Noticed this at 1.1	

*Table 3 Data captured in conversation with Interviewee 1*

These field notes portray a practitioner focussed on problems and their consequences, interested in possible contextual causes, but not in abstract tensions. Items ID 1.6 and 1.7

were my attempt to bring tensions back into the conversation, but the interviewee's focus remained on the gap between what managers expected would happen and the practical difficulties of enacting those things. As I know from experience of similar organisations, bureaucracy can slow down the pace of everything in ways that are incredible. I remember people in one firm saying "*You couldn't make this stuff up*" when unexpected complications got in the way of straightforward tasks.

Ironically, the gap between plan and execution was the theme of most of Interviewee 1's stories just as this pilot interview had gone very differently from what I had expected. Whilst reported as a gap at the time, it helped me to recognise the importance of what was to become the *intention-execution* tension for managers of large organisations and to notice it in the literature I was coding. The difference between the tension and the common strategy-execution gap has been discussed in the *intention-execution* tension section of Chapter 2.

### Thematic analysis of literature codes

I knew that the 67 codes (see Figure 5) I had identified using open coding Bryman (2012) was too many, but I was finding it difficult moving to axial coding.

<input checked="" type="radio"/> Tensions	0	0	<input type="radio"/> flexibility-efficienc	15	23
<input type="radio"/> academic-comme	2	3	<input type="radio"/> fresh blood-accu	1	1
<input type="radio"/> adaptability-align	17	21	<input type="radio"/> goal autonomy-o	1	3
<input type="radio"/> adaptability-effici	4	7	<input type="radio"/> hueristic guidelin	1	1
<input type="radio"/> adapting-obeying	2	5	<input type="radio"/> individual-organis	3	3
<input type="radio"/> autonomy-superv	4	4	<input type="radio"/> innovation-efficie	8	9
<input type="radio"/> bottom-up-top-d	14	15	<input type="radio"/> internal-external	5	5
<input type="radio"/> brand preservatio	4	4	<input type="radio"/> local-distant	2	2
<input type="radio"/> broad-deep	4	4	<input type="radio"/> long-short term	12	16
<input type="radio"/> capability buildin	11	14	<input type="radio"/> motivation-skill	1	1
<input type="radio"/> capacity-demand	1	1	<input type="radio"/> opportunity-moti	1	2
<input type="radio"/> centralization-dec	1	1	<input type="radio"/> organic-mechanis	3	3
<input type="radio"/> cognitive-biased	1	1	<input type="radio"/> personal disciplin	4	6
<input type="radio"/> consensus-dissent	2	4	<input type="radio"/> planning-executio	6	6
<input type="radio"/> continuous-disco	2	2	<input type="radio"/> problem diagnosi	1	2
<input type="radio"/> deliberate disrupti	1	1	<input type="radio"/> profit-breakthrou	9	14
<input type="radio"/> direct-cascaded c	2	2	<input type="radio"/> prototype for desi	1	3
<input type="radio"/> downstream-upst	1	1	<input type="radio"/> radical-increment	13	18
<input type="radio"/> effectiveness-bur	1	2	<input type="radio"/> reality-illusion	2	6
<input type="radio"/> entrepreneurial-a	1	1	<input type="radio"/> relational-contrac	4	9
<input type="radio"/> environmental un	1	1	<input type="radio"/> risk seeking-avoid	1	1
<input type="radio"/> experimental-stru	1	1	<input type="radio"/> routine-nonroutin	1	1
<input checked="" type="radio"/> explore-exploit	53	60	<input type="radio"/> sales-service	4	4
<input type="radio"/> flexibility-efficienc	15	23	<input type="radio"/> strategic-operatio	3	4
			<input type="radio"/> thinking-doing	0	0
			<input type="radio"/> tight-loose coupli	6	6
			<input type="radio"/> transformational-t	1	1
			<input type="radio"/> variance-mean se	4	6

Figure 5 Open coded tensions

Gradually, I noticed I was the only one in my research area of the university using grounded theory coding terminology. Catching-up with my Director of Studies was always inspiring, and when I explained my challenge in reducing my codes, I noticed she spoke about dominant and subordinate themes. As it happens, I found myself in a lecture on thematic analysis the following week and made my breakthrough shortly after.

What changed my view was, I think, the combination of struggling, learning, experiencing, and articulating my newly-acquired knowledge, struggles Nonaka and Takeuchi (1995) and



English (2014) describe. It started with the question of whether all ambidexterity belonged under March's (1991) abstraction of *explore-exploit*, as argued by O'Reilly and Tushman (2013) and my supervisor, or if ambidexterity exists as other equally abstract tensions. If organisations can only be ambidextrous in terms of exploration and exploitation of knowledge, activities, strategy, etc., then *explore-exploit* was the base tension of all ambidexterity, yet I believed I had found other base tensions. The point was crucial to analysing the 67 codes I had found into themes. It felt so uncomfortable not to agree with my supervisor, that I only remembered I had an 'ace up my sleeve' in the form of Birkinshaw's (2022) confirmation of wider tensions, including paradoxes. However, I believe the exercise of defending my findings to my supervisor, was as important as the outcome.

I do not know if the process that reduced my 67 tensions down to six 'base tensions' has a name that differentiates or describes it. It certainly involves being fully immersed in the data, looking at codes in a list of tensions, then in a hierarchy, then back in its context, and then alongside other codes. This method involves engaging with the information playfully, moving things around to see if patterns emerge or concepts appear. A less active aspect of the process is sleeping on it. Allowing the resting mind to process what it has played with seems to allow the conscious mind to receive wisdom. For me, insights arrive in the morning before I start working. Like Amazon orders, most insights arrive the day after I have ordered them, but there are no deliveries most days.

Even whilst writing the three explorations of this review, I kept referring back to data I had coded. NVivo was useful in this respect, and I used the application's query function to find instances of specific codes and occurrences of terms (such as finding papers that specifically used 'leadership ambidexterity'). Returning to the source data in this manner is known as

‘constant comparison’ in theory-building methodology described by Eisenhardt (1989) and Easterby-Smith *et al.* (2021) and I relied on it heavily.

What emerged as I organised, described, and fine-tuned base tensions was that they represented journeys of organisational development. Each cluster of tensions was associated with an approach that managers had developed in response to a situation. Clustering was based on my experience of organisations at different levels of maturity and in the context of their Agile transformations. Those journeys developed into the transformation section of Chapter 2. This has the potential to address a huge gap for organisations - that of the role of managers in general.

Meanwhile, I had identified six different classes of ambidextrous tension, beyond *explore-exploit*. This was a contribution that could help other researchers navigate ambidexterity, management, and transformation literatures.

## 4.2 Activities of empirical research

### Conceptual model of research activities

Figure 6 below, is my mapping of the research activities presented in this chapter. In the diagram, thicker lines represent explicit artefacts of Eisenhardt’s (1989, 2021) method.

My starting point was in the ambidexterity literature, top left in the diagram (4.1 Coding the literature for ambidextrous tensions’ above) and everything else being in this section.

The boxes to the left of the ‘Sharpened constructs’ artefact are described in the ‘Data gathering’, ‘Analysis of conversations’, and ‘Emergent themes’ sections. Those to the right represent the steps Eisenhardt (1989) terms ‘Shaping hypotheses and ‘Enfolding literature’ and are described in more detail, and supported by a diagram, in the matching sections.

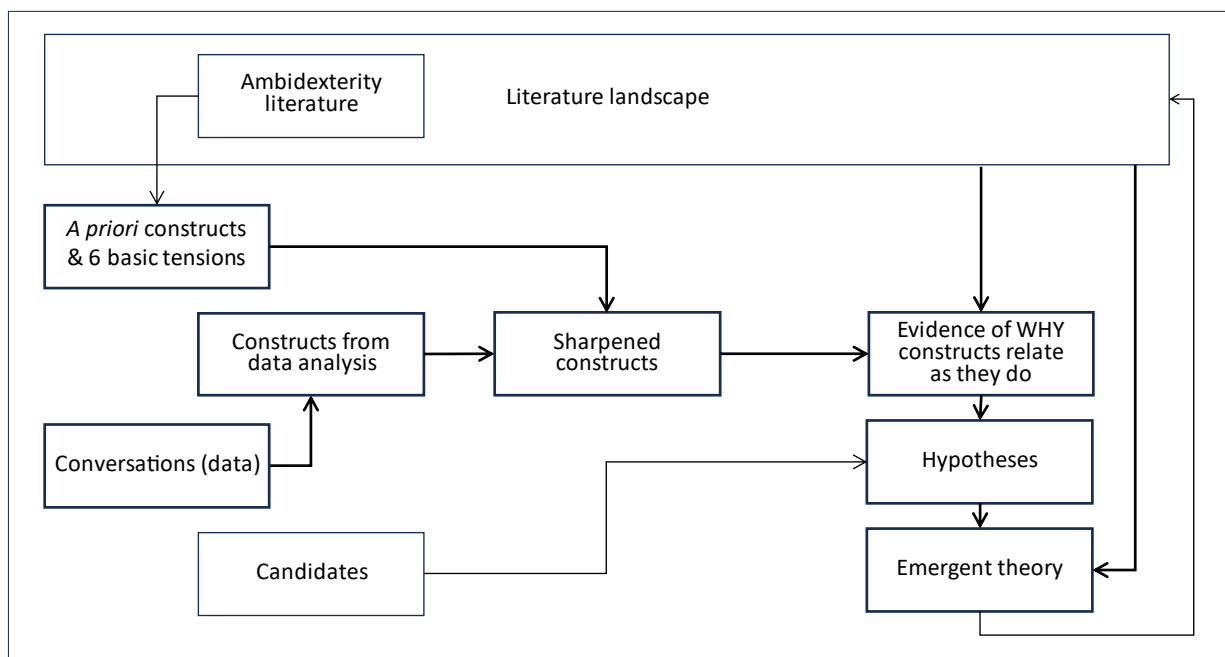


Figure 6 Diagram of my research activities

I found the following realisation helpful, although it came late in my process. The activities leading up to the development of ‘Sharpened constructs’ are largely inductive, whilst those

following are abductive up until the point where theory has begun to form. Emergent theory is then, deductively, with the 'Enfolding literature'.

### Data gathering

My proposal was based on Eisenhardt's (1989, 2021) method of multiple case studies, which I felt I understood sufficiently to implement. I had assumed I would have insider access to a suitable organisation but had no such contracts running or on the horizon. I approached several people as gatekeepers, hoping they would grant me research access to different business units but without success. Those who were keen, but lacked the confidence to issue the consent directly, soon found that nobody internally was prepared to take the risk of making that decision. Without insider access or gatekeepers, I feared I had no case studies and would have to abandon Eisenhardt's method. I was wrong.

I had access to executives, managers, and agile coaches through various networking and professional development activities. I developed the habit of getting people interested in my research, although I was not as successful in convincing them to complete the consent form. Nonetheless, my ability to articulate my interest in this area of research increased as did the quality of the information received, and how I responded to it. My conversations were with diverse managers from various industries, and I realised I could follow Eisenhardt's steps by treating each conversation as though it were a case study in miniature.

My activities varied considerably from my plans for those early steps, which I described in Chapter 3. For instance, instead of working with groups of managers from the same firm in a facilitative capacity over time, my data was gathered in one-to-one or small group conversations with different people. Where I had been worried about the bias from managers selecting people for me, every one of my participants were self-selecting. Neither did I have the opportunity to invite participants to validate what I had understood from our

conversations. According to Yin (1981) participants must validate the information captured by the researcher, which I had heard from other researchers was difficult to achieve in practice. I considered it impractical for most of my participants but recognised its desirability, nonetheless.

However, my improvised method did fit the definitions of case study research of Yin (2003, p. 13) particularly because I, “Deliberately wanted to cover contextual conditions”. My unit of analysis therefore became conversations with participants, rather than cases. My Director of Studies suggested switching to conversations after we considered the pilot interview. This proved to be wholly appropriate, especially in conversations with senior managers with whom I had worked before. It allowed me to introduce examples from our shared past, develop propositions from my knowledge of the domain to get their response, and co-explore tensions and tensions management in ways that questioning could not.

Semi-structured interviews were appropriate for the insider research I had conducted previously. They would be appropriate for PhD research, where the researcher must beware of contaminating the data by leading or influencing the participants. In this case, researching for a professional doctorate, conversation was the more appropriate choice.

I held conversations with people from various industries and levels of management seniority. My selection process was not theoretical, the virtue of which I had been so convinced by Eisenhardt (1989, 2021) but serendipitous. I spoke with anyone and everyone who agreed to a conversation. I stated my interest in speaking to managers of large organisations in transformation yet found value in speaking to people about being managed (eg. Convo 6, Casuals 1 and 3), managing upwards as a senior manager (Convos 15, 21, 25, 26), and managing tensions in general.

Whilst influenced by all of these conversations, I only included as data those with people who provided formal written or explicit verbal consent. Those are recorded in tables below. The tables show the key contextual information for each conversation, industry, role, number of directs, and number of people in their business unit or department. I obtained organisation sizes from public sources on the internet later (Wikipedia or company’s own website).

Table 4 below shows the one-to-one conversations, Table 55 the groups, and Table 66 some casual conversations making for a total of 36 sessions. I considered as casual, conversations where someone shared one or two observations outside of the formal structure of a consented research conversation. Where numbers are blank, they were not relevant, whilst ‘?’ indicates that I thought it relevant in hindsight, but it was not mentioned in the conversation.

<b>Convo Id</b>	<b>Industry / department</b>	<b>Role of person</b>	<b>Reports / Dept size</b>	<b>Org size</b>
1 (Pilot)	Financial services / technology	Contract program manager	0 / 5000+	200k
2	Healthcare / hospital	Private in-patient manager / 52 beds	8 / 4000	1.2m
3	Professional services (consulting)	Executive leading People & Change practice		300k
4	Banking Retail / payments & tax	CTO within a national bank Head of technology		38k 3k
5	Life insurance (US)	QA Director (various roles) SVP Innovation	? / ? ? / ?	4k
6	Food manufacturing	R&D scientist (not a manager)	0 / 150	16k in 2005
7	Banking / executive complaints	Business customer relationship manager		85k
8	IT consulting services	Head of practice	4 / 100 consultants	17k
9	Healthcare / medical devices	Senior systems engineer	24 / ?	115k

10	Energy / gas	Hd commercial strategy retail services (held various roles)		20k
11	Telecomms (SA) National bank (SA)	Digital tx program mngr Transformation lead (flat)	0 / 50 0 / 140	8k 54k
12	Banking Financial services Consulting	Hd Enterprise coach Hd Agile delivery etc.	~10 / ~100	58k 1k 150k
13	Healthcare (US)	Software engineering manager	5 / ?	15k
14	Energy /oil & gas	VP HSEQ, Tech Services	? / ?	2.5k
15	Software	Snr L&D manager		112k
16	Truck manufacturer	Divisional MD (UK)	? / 8k	31k
17	Tech (FAANG)	Cloud solutions manager		124k
18	Healthcare / hospital	Talent manager	3 / 25k	1.2m
19	Insurance / consulting	CEO		44
20	Software	Hd Product development	40	80
21	Banking / innovation	Hd Global ecosystem partnership	? / 40	85k
22	Banking / innovation	Innovation mindset manager	0 / 40	85k
23	Healthcare / hospital	IT security manager	? / 10k	1.2m
24	Automotive / finance	Hd Deposits	? / 40	173k
25	Banking	Hd of payments technology	125/700	16k
26	Financial services / nearshore facility	Hd of region & asset management technology	500 / 4000	230k
27	Manufacturing / industrial design	Team lead & consultant		250k

Table 4 Industry and role of individual participants

<b>ID</b>	<b>Context</b>	<b>Attendees</b>	<b>Reports</b>	
Group 1	IT consulting / Transformation	Managers and Agile coaches of SMEs		
Group 2	Ditto	Ditto		
Group 3	University	Lecturers and postgrads		

*Table 5 Record of seminars and presentations*

<b>ID</b>	<b>Industry</b>	<b>Role</b>	<b>Reports</b>	<b>Org size</b>
Casual 1	Software	VP product evangelism		300
Casual 2	Consulting / maritime	Hd of marketing	0	50
Casual 3	Invest in / country	Leads manager	2	
Casual 4	Invest in / country	Hd of projects		
Casual 5	Insurance (India)	Director (non-exec)	0	4k
Casual 6	Local government	Strategist		180k

*Table 6 Record of casual conversations*

Conversations and groups were scheduled for 45 or 60 minutes, although a few ran to 90 minutes. They took place via Zoom or Google Meet with some being in-person (eg. Convo ID 6). Zoom provided me the means to record, and I have an AI transcription service (Tactiq) connected to my Google meetings, plus I took notes during and after each session. My notes were typed into Excel or hand-written. This allowed me to listen actively to participants, and reflect on each conversation, skills I developed as a coach.

### Analysis of conversations

Conversations took place during May 2023 to January 2024. The pace was mostly relaxed which gave me the privilege of contemplating data after I had gathered it. I recognise the



significance of ‘processing time’ when navigating complexity but cannot explain its mechanism. Instead, I cite the work of those who have written about the phenomena. For example, Uhl-Bien *et al.* (2007) and Uhl-Bien and Arena (2018) note the concepts of ‘space between’ and ‘adaptive space’, whilst Edmondson (1999, p. 353) notes the requirement for a psychologically safe space when learning, because learning is “An ongoing process of reflection and action”. The same concept is found in practitioner literature for managers, in particular, ‘Time to think’ from Kline (1998), ‘The power of Spirit’ by Owen (2000), and ‘Slack’ of DeMarco (2002).

Eisenhardt (1989) describes ‘in-case analysis’, during which researchers gain familiarity with each case, and ‘cross-case analysis’, when comparisons and abstractions are made between cases. Although I was working with conversations, not cases, I became aware that my first in-case analysis activity was contemplation, and that participants who spoke from their experience of present and previous roles were demonstrating ‘cross-case analysis’. For example, before taking permanent roles, the participant in Convo 12 was a management consultant, who noted that, “*Paying for the transformation effort is a common tension across all ten companies I’ve seen*”. In Convo 11, the person compared their experience of leading transformations within hierarchical and flat organisational structures.

My main source for analysis was my notes of conversations, which I seemed to revisit constantly. Listening with the level of concentration that allows recall is a skill I developed as an executive coach. I referred to transcripts and recordings to confirm details, check for accuracy, and for omissions in my notes.

In writing-up conversations from my notes, I developed the convention of italics in speech marks for what was said by participants and maintained regular style without speech marks for my interpretation of what I had heard. Thus, I annotated five minutes of dialogue from

Convo 10 as, for example thus: ‘Incentivising engineers with money can be a source of conflict for them as they like solving problems and helping people’ and mixed a quote and my note for Convo 10 as, ‘“*Can’t break their backs*” to get through this work’.

### Adaptation

The way I steered conversations changed over time, with me describing tensions and asking for further examples in early conversations, then simply inviting managers to identify tensions and describe how they resolved them for the bulk of the conversations. By the time of the last few conversations (Convos 25 - 27), I shared one or two of my emerging hypotheses with participants which led to very rich and rewarding conversations.

In Convo 26, we were considering the emerging hypothesis of managers creating a caring context. I had asked about trust, to which the participant described gathering feedback continually, sensing what people were doing by “*Being present, and fully connected*” (Convo 26) with them and peers. Knowing this was not the usual behaviour of senior managers peers in the industry, I invited her to compare the difference between doing what she had described and waiting for the traffic light (project status) report to arrive at the end of each month. Not only are the two behaviours distant in terms of effort and competency required, but also outcome, which is how the conversation turned to the reliability of information passed upwards.

The above conversation illustrates the iterative nature of this process. Although I was already in one of the last steps of Eisenhardt’s (1989) method, I was still gathering data from participants. In practice, the later conversations were better in many respects than the earlier ones because I had more experience of the process and I had more to bring to conversation. This will be apparent when reviewing the tensions and tactics that emerged. The early conversations yielded tensions, often in a fairly passive ‘nothing I can do about it’ manner

whilst later conversations were more about the ways people managed tensions and improved their organisations. Of course, the seniority of participants was a factor too.

Conversation provided the context for an amount of mutual exploration, which I doubt would have emerged had I interviewed people.

### Empirical tensions and resolving tactics

The results of the conversations, in terms of tensions and tension resolution tactics identified, are shown in Table 7 Tensions and tactics from conversations below. I took the opportunity of mapping these empirically identified tensions to those I had identified as basic ambidextrous tensions in the literature. A complete list is included in Appendix F: Tensions and constructs from analysis of the data.

<b>Id</b>	<b>Tension</b>	<b>Tactic</b>	<b>Basic tension mapping</b>
Convo 1	Local product initiative stopped by higher-ups	Demonstrate success if you want to keep going	<i>Variation-routine / intention-execution</i>
	Bureaucracy getting in the way of getting things done	None – it wont change	<i>Intention-execution</i>
	Legacy tech not meeting modern expectation	None – observed only	<i>Variation-routine</i>
	Fear of consequences prevents experimentation	None – observed only	<i>Agility-steadfastness</i>
	Global policy conflicting with regional needs	None – observed only	<i>Variation-routine</i>
Group 2	Tensions between departments – new features released without informing customer service teams	None – observed only	<i>Intention-execution</i>
	Top-down tension - increase output by 30%	None – observed only	<i>Intention-execution</i>

	without regard to current capacity and no means to increase supporting activities		
Convo 2	Prioritising profit over patient care; Improper use of revenue for publicly funded body	Considered whistle-blowing but quit job and industry instead	<i>Exploitation-preservation?</i>
	HR ineffective against freeloaders; People with big egos keep rising to the top; Not safe to criticise; Constant pressure from the fear of complaints from patients and consultants	Quit to avoid toxicity	<i>Illusion-reality</i>
Convo 3	Was being bullied despite holding a senior position in a well-known, large firm	Quit, wrote a book about it, and discovered ‘the bully within’	<i>Intention-execution</i>
Convo 4	Inappropriate performance comparisons between high compliance and high productivity teams	Tough it out until the quality difference became apparent and non-tech execs understood the reality	<i>Illusion-reality</i>
	Teams overloaded trying to get rid of legacy whilst delivering new features	Educate peers to try to reduce conflicting priorities they cascade and increase awareness that team’s capacity is limited	<i>Intention-execution</i>
	Lack of competence with new tech – eg. moving legacy apps to cloud is ineffective	Educate peers about cloud-based vs cloud-efficient or benefits of cloud-native	<i>Illusion-reality</i>
	Tech voice easily drowned out at board / leadership level – eg. treating code like a pet not like cattle!	Engaged with this - as an ongoing struggle	<i>Illusion-reality</i>

	People thinking they / their teams are better than they really are creates friction when they don't deliver	Let the results speak for themselves	<i>Intention-execution / illusion-reality</i>
Convo 5	Personal aspirations vs company's requirements	Coached people to see what the job really was and look inside – develop their self awareness	<i>Illusion-reality</i>
	Frustration of people not adopting the methodology they were told to adopt	Explained – using model to show invisible forces they were missing (coaching/mentoring?)	<i>Intention-execution</i>
	Build capability not bureaucracy	Enable people, then move on (as a manager)	<i>Agility-steadfastness</i>
Convo 6	Business exec trying to manage large team of scientists	Transparency, open convos and humour - internal newsletter	<i>Intention-execution</i>
	Too much stickiness (in a mechanical process)	Reframe – turn stickiness into an asset and use it	<i>Intention-execution</i>
Convo 7	Target set beyond capacity of colleagues	Transparency - talk about it, and support each other, regardless of rank	<i>Intention-execution</i>
Convo 8	Growth depends on long-term client relationships - PE owners want medium term capital growth - redundancies on the cards and targets cascaded to snr managers	Engaged with this - as an ongoing struggle	<i>Intention-execution</i>
	Building a bench so you have capacity and cost of people not being utilised	Engaged with this - as an ongoing struggle	<i>Intention-execution</i>
	Doing fee-earning client work and practice-building development work	Created a small team to manage practice-building work, encouraged fee earners to contribute	<i>Explore-exploit</i>

	Managing slack vs scheduled vs personal time	Engaged – tries to maximise slack time	<i>Intention-execution</i>
Convo 9	Unreliable, slow delivery and excess tech debt	Adopted Agile - used tension to motivate change	<i>Agility-steadfastness</i>
	Personal values may conflict w/ the firm's handbook	Learnt to empathise but not be too personally involved with the situation	<i>Exploitation-preservation</i>
	Need to preserve team's capacity - our success makes it difficult to say no to taking on more	Manage capacity and demand – as a risk NB - they know their capacity!	<i>Intention-execution</i>
	Really a waterfall-agile tension played out by the firm vs this department	Awareness (no sign of struggle as in Convo 8)	<i>Agility-steadfastness</i>
	Value placed on process over product – believes it is an existential threat	None – observed only	<i>Illusion-reality</i>
Convo 10	Cost-neutral initiative, defects own 30% morale up effectively blocked after a year (leaders lost interest)	None – observed only then turned attention to CPD	<i>Exploitation-preservation?</i>
	Leadership can only cope with evolution, not revolution	Observation / hypothesis only	<i>Illusion-reality</i>
	Engineers being managed on their numbers not quality of work or customer value	None - observed and empathised only	<i>Illusion-reality</i>
	Demand vs responsiveness - we know less about what customers want but lots about output stats (times to complete jobs) - call centre stats but no idea why ppl are calling up	None – observed only although firm paid for this manager to learn to fix exactly this!	<i>Intention-execution</i>

	HR, training, product all growing based on expert's assumption, no customer validation	None – observed only	<i>Illusion-reality</i>
	Practices for reporting to City investors hides problems	None – observed only and noted even the finance people were aware of this problem	<i>Illusion-reality</i>
Convo 11	Leading without authority	Learned on the job	?
	Survival at the top of change function	Failed – upset powerful people and were shut-down	<i>Illusion-reality</i>
	Old KPIs clashed with Agile metrics	None – observed only	<i>Illusion-reality</i>
	Advice of McKinsey's consultants ('stiffs') vs their lab guys ('techies')	Got rid of them (happened in three different firms)	<i>Illusion-reality</i>
	Security people felt threatened by DevOps practices and tools	Found an inside champion to help get changes made below the radar	<i>Intention-execution</i>
Convo 12	Justifying cost of ongoing transformation activities (years)	Show FTE saves, install a new platform, or use pilot to prove ROI of something	<i>Explore-exploit</i>
	Reverting to old ways for short-term survival when going gets tough	None – observed in several firms	<i>Intention-execution</i>
Convo 13	Structural problems – product under sales when it should serve customers	Trying to align product engineering, customer support, sales, with customer success	<i>Intention-execution</i>
	Capability gap between manager and team members – they see me as an alien	None – reflective awareness only	<i>Intention-execution</i>
Convo 14	Health and safety improvements (KPI for oil exploration industry)	Create restorative context, no blame, lots of psych safety work and constant reinforcement.  Stop culture - anyone can stop an activity if there's a risk	<i>Intention-execution</i>

	Balance explore-exploit and short-long term tensions	Organised around ‘must win’ objectives reviewed monthly with CEO. Production reviewed weekly, also with CEO	<i>Explore-exploit</i>
	Cultural and age differences	Have open communications, be inclusive and help people be what they are	<i>Variation-routine</i>
	Regional / satellite voice present in headquarters	‘Beat the plan’ rolling objectives twice a month from production managers in 8 countries – currently CO2 emissions	<i>Intention-execution</i>
	Autonomy	Contracts owned by operational manager, not purchasing (they check the T&Cs)	<i>Intention-execution</i>
	People react to change differently, no one size fits all	Adapt to each team – managers must be in listening mode	<i>Variation-routine</i>
	Fossil fuel exploitation	Vision - put more carbon into the ground than we take	<i>Exploitation-preservation</i>
	Silo behaviours	Knowledge sharing established at exec level – cascades down as normal behaviour  Hire grads for offices, lots of work done during onboarding	<i>Intention-execution</i>
	CPD / learning	We pay for learning - send ppl to conferences but notice many are learning at weekends.  Ppl self-assess using templates, then technical authorities assess internally. Those ppl are assessed externally.	<i>Intention-execution</i>
	Countries introducing electricity for first time expect wealthy West to solve climate problems	We’re helping Indonesia us gas not coal	<i>Exploitation-preservation</i>
Convo 15	Managing upwards	Spent 6 months showing a new manager could trust him	<i>Intention-execution</i>



	Giving autonomy	First had to learn not to be the expert. Second to create context for others to succeed	<i>Intention-execution</i>
	Managers who only do what their manager tells them to do	Challenge them - should I go to your manager and ask if s/he thinks this is a good idea?	<i>Intention-execution</i>
Convo 16	Age discrimination – seen as too young for such a top role	Learned he needed to prove himself	?
	Regional vs global	Network of dealers providing market intelligence and operating their own go to market	<i>Agility-steadfastness / explore-exploit</i>
	Hitting financial targets vs helping humans	<i>“I want to expand the circles of those people I help”</i>	?
	Lots of innovation in EV and hydrogen in sector	Need to invest in all flavours	<i>Explore-exploit</i>
	Increasing complexity in the industry	Faster iterations and increased connectivity	<i>Agility-steadfastness</i>
Convo 17	Sensemaking amongst employees	Hill finding vs hill climbing as internal metaphor	<i>Explore-exploit</i>
	Individual autonomy	Free here to go to conferences and publish as you see fit	<i>Agility-steadfastness</i>
	Problems are socio-technical	Educate ppl about the limit to what tech can do – needs clarity and priority from leaders	<i>Intention-execution</i>
	Limit to what engineers can solve	We have a clear escalation path	<i>Intention-execution</i>
Convo 18	So many opportunities but staff don’t have the time to engage	Built online resources so staff could use when needed - could be unsociable hours	<i>Agility-steadfastness</i>
	Not enough staff with knowledge to help others	Used the apprenticeship levy to train internal coaches	<i>Intention-execution</i>
	Clinical groups have autonomy but inconsistent across org	None – observed only Eg need for bullying and harassment intervention from staff survey could show in one area but not another	<i>Variation-routine</i>

	Work smarter not harder initiatives seem to result in more stuff without actually fixing anything	None – observed only	<i>Intention-execution</i>
	Funding available for patients but not for staff development or support	None – observed only	<i>Intention-execution</i>
	Tried to improve program based on feedback but told to keep going with it as usual	Self-silenced - reflective awareness	<i>Intention-execution</i>
	Loss of connection, energy and information with hybrid working but doesn't want to give it up	None – reflective awareness only	
Panel 1	Evolutionary tech in regulated (UK) but leapfrog in emerging markets	None – observed only	<i>Explore-exploit</i>
Casual 1	Managers don't realise the glass is already full and keep expecting more	None – observation only	<i>Intention-execution</i>
Casual 2	The number of people feeling stress and fatigue is shocking, but not obvious, until you ask	Provides mindfulness at work sessions	<i>Exploitation-preservation / intention-execution</i>
Casual 3	Incentives and KPIs for generating (sales) leads, but aftercare has no equivalent metrics	None – observed only	<i>Intention-execution</i>
Casual 4	Accountability when spending public money leads to bureaucracy	Either go with the slow process or network to get round it	<i>Intention-execution</i>
	Superiors think system is working and don't see need to improve it	None – observed only - can be quite political	<i>Illusion-reality</i>

Casual 5	Seen as a young and naïve woman by fellow board members	None – observed only	<i>Illusion-reality</i>
Convo 19	When to recruit more fee-earning staff	Trust your commercial director’s judgement of the sales pipeline	<i>Intention-execution</i>
	Worker autonomy	Make everyone else part of the solution, not their manager, allow them to adjust and let it settle	<i>Intention-execution</i>
	6-month roadmap for Product vs regulator and competitor disruptions	Explain why plans need to be changed so quickly	<i>Agility-steadfastness</i>
Convo 20	Harmony	Listening to everyone is the secret – talk to anyone not playing nicely	<i>Intention-execution</i>
	Cultural diversity	Only hired Dutch people at first then tested as a disruption – now 150 ppl and are 50% international	<i>Variation-routine</i>
Convo 21	Short tenure at the top leads to short termism	None – observed only	<i>Intention-execution</i>
Convo 22	Positive personal impact of context of working in an innovation department	None – reflective awareness only – happy before, now enthused	<i>Agility-steadfastness</i>
Convo 23	Cyber security (phishing attacks)	None – observed only	?
Convo 24	Tensions arising from other departments	Ignore it – what we do is separate from any other part of the firm	<i>Intention-execution</i>
Convo 25	Silo culture from insourced managers	Bring the people doing the work closer together by breaking down layers of contracts and 3rd party management	<i>Intention-execution</i>
	Funding for BAU	Always ways to hide BAU costs in funding for next lot of regulatory change (in banking)	<i>Intention-execution</i>
	Getting approval / budget to fix things that have no visible return	Savvy managers gloss over to avoid objections	<i>Intention-execution</i>

	Engineers and leaders need different skills	Need to be engineering led not led by engineers	<i>Intention-execution</i>
	Complexity grows from legacy – not at the start	Giving autonomy is really important	<i>Agility-steadfastness</i>
	What to do with old teams doing valuable BAI stuff whilst bringing new ppl and thinking in	None – reflective awareness only	<i>Exploitation-preservation</i>
Casual 6	People quit when their project was cancelled without explanation	None – observed only	<i>Intention-execution</i>
Convo 26	Autonomy for senior people	Don't manage, coach by asking curious, probing questions	<i>Intention-execution</i>
	Problem of managers (especially in leadership positions) who believe they cant change the system	Address by coaching them as long as they are open to it	<i>Intention-execution</i>
	Doing what's right for firm and employees without losing status	<i>"Ppl are generally happy to work for me. I'm not a threat, not an empire-builder. I'm not a threat and there's no huge ego"</i>	<i>Exploitation-preservation</i>
	Including suppliers as part of the system	Make sure sub-contractors feel they belong as part of the region	<i>Exploitation-preservation</i>
	Develop sense of pride and confidence within a nearshore facility	Ask what people in the main firm thought we did well, then developed reputation and regional brand based on those perceived strengths	<i>Illusion-reality</i>
	Psychological safety missing from the top	Managers must create psychological safety at their level	<i>Intention-execution</i>
	Balance between truthful transparency and upwards diplomacy	Sometimes better to say everything's fine to avoid getting a reputation for having unsolvable problems	<i>Intention-execution</i>
	Retaining talent	Look after the person and make sure they feel happy in their job	<i>Exploitation-preservation</i>

Convo 27	There's always, difference and those differences can always lead to conflict	Observed – managing tensions is part of the human condition	?
	Short- medium term gains and keeping existing customers happy	We sometimes decide to say no to customers	<i>Variation-routine</i>
	Tension for product designer could be anywhere from I don't care what it looks like as long as it works, to image is all that matters	Resolve by working with group and individuals. Starting with own expectations to set the standards of quality – a stick in the sand – it may move	<i>Intention-execution</i>
	Need to set standards of quality	Team works to my standard - although I place my stake in the sand, not set in concrete	<i>Agility-steadfastness</i>
	Misplaced / overpromoted people	Make sure there's a system in place so a) you don't put the wrong person in place and b) there's a recognisable process in place to correct if you do	<i>Intention-execution</i>

*Table 7 Tensions and tactics from conversations compared with theoretical tensions*

I now discuss the findings that emerged from this comparison of empirical data with the theoretical tensions I developed in Chapter 2.

#### Discussion of findings

Immediately apparent from this comparison is the difference in people's relationship with tensions. Those who felt they had agency spoke about what they did to improve the situation in their organisation, whilst amongst those who felt they had no agency, two quit their jobs and left the industry. Several fit the description by Gallup (2023) of 'quiet quitting'. This raises the possibility for further research of understanding why the system of management creates managers that lack agency.

One outlier was the scientist who offered “*Triz, as method to explain problems in terms of function*” demonstrated it was possible to resolve tensions in much the same way architects and software designers use catalogues of patterns as generalised solutions to recurring problems. Another outlier was a program manager who worked on a contract basis for large organisations and made money from their dysfunctions. As a contractor, this program manager “*Got things done*” by ignoring the rules and politics that constrained permanent managers. And, although I gathered a lot of tensions, recognising many from my own experience, the program manager had no incentive to resolve any of them. Had I stuck to my plan of interviewing managers, I would have missed these people’s valuable perspectives.

Given such a small sample size I am cautious about descriptive statistics, however a common approach amongst those I spoke with was conceptualisation (eg. Convo 1, 2, 4, 8, 10, 21, 23) without resolution. It would appear that making sense of tensions conceptually was sufficient for many people. That is, studying and rationalising the situation allowed them to accept the status quo without needing to improve (or even attempt to change) it. Since participants were managers, this is a contradiction of Deming and other’s assertions about it being the job of managers to improve the system as stated by Neave (1990) and Joiner *et al.* (1994).

Another common form of sensemaking was reflective self-awareness (eg. Convo 3, 9, 15, 16, 18, 22) where people had thought deeply on their part within the organisation and, in most cases, developed improvement actions from that. I acknowledge their tendency towards self-awareness would lead these people to self-select to participate.

Amongst those who felt they had agency and were attempting to resolve tensions, I noticed (or perhaps was attuned to) the importance of recognising colleagues’ humanity. In the case of the bank of Convo 7, resolving the tension of overloading people’s capacity with too much demand by recognising the value of having conversations with colleagues and customers was

a significant change. Of course, COVID-19 put wellbeing firmly on the corporate agenda but what was important was that this manager used that external stimulus to improve colleagues' wellbeing. The manager of Convo 5 noticed people were struggling with roles that had changed (some had already quit) and took responsibility for helping them to understand their new roles, acting "*like a coach*". In Convo 26, a senior manager used an ego-less coaching approach to help managers succeed, rather than tolerating ineffective management.

The constructs that later emerged from some of these conversations tended towards barriers and reasons that organisations felt the need to transform themselves, constructs that emerged from reflective self-awareness, and constructs that emerged from tactics people offered as ways of resolving tensions. These constructs, organised in separate tables according to this scheme, are included in Appendix F: Tensions and constructs from analysis of the data.

The mapping column suggests something that I, and professional colleagues, had long assumed to be true. Most of the challenges managers face in improving their organisations relate to matching their own capacity with what they take-on (*intention-execution*) and not understanding their own systems (*illusion-reality*) rather than any lack of being Agile. It could be argued that adopting Agile's Lean practices would help in this regard. Relevant to this research is how rarely the *explore-exploit* tension arose.

I noticed how the consultancy firm's persistent tension between capacity and availability of consultants was context-dependant. In Convo 7 hiring new consultants took so long that the work they were hired to do would evaporate and the firm would pay them to sit 'on the bench'.<sup>18</sup> This was clearly a capacity planning problem arising from the fact that the manager was responsible for profit and loss but did not control the hiring budget. Whereas in Convo

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<sup>18</sup> Consultants are 'on the bench' when they are not engaged in fee-earning work for clients.

19, the CEO made that hiring decision in collaboration with the commercial director, and it was described as a commercial decision based on confidence in sales growth. It was no less a tension but less of a frustration because the firms were structured differently. This is a reminder that one of the negative consequences of functional hierarchy is that information does not flow automatically between silos.

Most concerning were the tensions whose sources were mismanagement and misbehaviour.

### Emergent themes

As described in Chapter 3, I had planned to conduct a thematic analysis for the ‘Analysing data’ step. Although I identified high-level themes, I did not continue to sub-themes but identified candidate constructs instead. Nonetheless, these themes do provide further insight into the richness of some of the conversations that took place.

This section explores some of those themes, which surfaced quite naturally. They are relevant for this thesis, as I am participant and audience member, not only sense-maker and author.

My participants were from various industries and represented all grades of manager from all sizes of organisations (self-employed to C-level executive, start-ups to global firms).

### Reflective self-awareness

The participant in Convo 10 had held several roles within the same organisation, moving departments and roles with the intention of learning. Not only had this participant taken the opportunity to learn the Vanguard method (as described by Seddon and O’Donovan, 2023) of systems thinking and practice when Vanguard Consulting were hired by the organisation, but was currently completing studies for an MBA.<sup>19</sup> The participant’s ability to conceptualise in

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<sup>19</sup> The Vanguard method for improving the performance of service organisations was developed and commercialised by John Seddon through his company, Vanguard Consulting.



abstract terms was apparent from the start, as the first tension observed was, “*The organisation is in the decline phase, so managers are stressing old methods: command and control and individual performance management*”. The reference was to ‘The second curve’ Handy (2015). This conversation, with a highly experienced manager, who was both an expert in systems thinking and well-read in management theory, pushed me out of the comfortable zone I had settled into. I enjoyed hearing such an expert opinion but was unsure whether to treat it as a ready-made analysis that had been presented to me because we spoke the same language, or distance myself from the analysis and focus on the *prima facie* data of a manager who was developing himself professionally and had reflected on his firm’s journey. I reasoned that my position as researcher should be the latter with awareness of the former but found myself facing same dilemma after having conversations with people in senior leadership positions (Convos 14, 15, and 16). Should I believe what they told me about how they managed tensions by caring for others, or were they elite participants who knew how to make themselves look good? After all, they held very senior positions, meaning they had already convinced others of their abilities and may be doing the same in our conversation.

### Leadership

The theme of leadership first leapt out to me from Convo 14. The person was clear about what mattered and why (safety) and was able to describe how the system worked to pursue that objective. This was not a siloed perspective, as the conversation included the rather unusual history of the firm. It was a private equity initiative, in which the directors bought a firm they believed they knew how to improve. Five years’ later, having transformed it, they were now in the process of selling it.

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Even during the session, I was acutely aware that I was in the presence of an exceptional leader. I asked the participant if they were aware of their exceptional qualities but received a modest shrug instead of an answer. By way of coincidence and contrast, conversations 15 and 16 were also with people that had obvious leadership qualities. Curiously, when I reminded them that the data would be anonymised, both said they would be happy to be named and I got the impression public recognition was important to them.

Convos 25 and 26 were with senior leaders I had worked with previously, and I felt comfortable that their accounts correlated with my understanding of the context. By this stage, I was able to invite the participants to talk to hypotheses that were quite well supported, which felt like a validation of sorts. I opened Convo 26 with congratulations about the person's (public) achievements and heard how the participant had made a conscious effort to raise her public profile and "*Dial up*" who she was – someone who "*Felt pressure to outperform as a woman and lesbian*". Although we spoke about her, and she noted this fact, hers was an egoless form of self-promotion, one based on service to others, "*I enjoy being a role model*" and "*I'm not an empire-builder and it's not about me*". Convo 25 was similarly not about the participant or his ego, but how to "*Take people along with you – the whole team, top to bottom*".

### Toxicity and mismanagement

Participants in Convos 2 and 3 reflected on roles they had left because of personal ethics and bullying. I empathised (and recognised why they had decided quitting was best for them at the time) but realised that this was not the active change leadership I was looking for. Nonetheless, quitting has an impact on those who remain. For example, the participant in Casual 6 told me that several permanent employees had quit when they learned of the

decision to cancel the project they had been working on. *“Everyone drops into the water”* as the manager in Convo 20 said, lyrically.

The views of Convo 1 (the program manager) were those of an outsider, critical of a system whose managers were getting in each others’ way. I re-examined the question of mismanagement during convos 25 and 26. All participants had experience of similar organisations and were familiar with the problem. They recognised the need for leadership skills. Eg. from Convo 25, *“[They] can be brilliant as engineers, but that doesn’t make them good at politics and dealing with complexity – we need to be engineering-led, not led by engineers”*.

The need to ‘manage up’ arose in both Convos 25 and 26. In 25, *“Engineers will always tell the truth, whereas savvy managers will gloss over to avoid objections”* and the regional head of Convo 26 learned that transparency can *“Go too far if you get [your region] known for an unsolvable problem”*. Another factor mentioned in Convo 26 was the need for managers to protect their teams from *“Toxic individuals, conflicting priorities, or areas of bad management or culture”*.

### Beyond managers

Conversation 6 was with a scientist who was never a manager. Neither was their firm in transformation, although it was transformed in 2000 when it was taken over and all the scientists made redundant. Participant 6 told me about working as one of 150 self-managing scientists that worked for *“An enlightened organisation”*. Now a self-employed developer of ‘ingenious machines’ for the food production industry, this participant shared a model for resolving contradictions, and a document titled ‘40 Tricks from TRIZ’ as a way of reconceptualising tensions and transitions. TRIZ is a creative problem-solving methodology rooted in engineering and I recognised these tricks as abstract patterns that could be applied

to organisational research. One example of a relevant trick from the document is, “Amplifying a harmful factor to such a degree that it is no longer harmful”, which is what managing tensions offers.

Whilst I could happily have explored applications of TRIZ, I used what I had learned to broaden my selection criteria. I reasoned that all workplace perspectives were relevant, regardless of the time elapsed, or the participant’s distance from being a manager. Eg. the participant in Convo 27 was currently working as an ‘individual contributor’, having previously led a team of designers. Convo 8 was with an Agile coach who became head of practice for a consulting firm, and Convo 12 with a head of function whose career before becoming a manager had been as a management consultant.

### Tensions as methodological constructs

Part of my analytical method was preparing presentations of my findings (writing and discussing with my supervisory team being others).

When I presented, I would notice which concepts seemed to resonate with people, the points they challenged, and the questions they asked. For example, I got valuable feedback on my presentation at the ‘Digital Transformation Summit 2023’ which I put in the public domain.<sup>20</sup>

The person felt the message of ambidexterity was particularly relevant to his organisation, which had a maintenance-only policy for the past six years and connected their ban on development with their decline and wanted to share this insight with their newly appointed CEO.

Whilst this was useful validation and evidence of impact, I realised that I was gathering feedback but not conducting methodological research. This realisation caused me to re-

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<sup>20</sup> Available at: <https://www.youtube.com/watch?v=LVNo6xkxiZl>.

examine the method in Eisenhardt's (1989, 2021) papers, as well as those cited as examples. I began to see where my understanding of the method had been superficial and realised that I had neglected to develop what Eisenhardt (1989) terms 'constructs', in the manner needed for the subsequent steps.

Although the tensions I had identified were constructs, Eisenhardt's (1989) theory-building method uses constructs as the foundation for finding (inductively) the relationships amongst those constructs. Those would be expressed as hypotheses, which would lead (abductively) to the development of the arguments which explained why the constructs produced the effects predicted by those hypotheses. Rigour was preserved by 'constant comparison' with the data and comparison with 'enfolding literature'. I found it very helpful to visualise this as a process, see the blocks and arrows of Figure 6 Diagram of my research activities, at the start of this section.

After re-analysing my data as constructs and bettering my understanding of the terminology, I began to feel excited about the results that were emerging. I could feel something reassuring about the rigour of the approach that was quite different to the speculative way in which I had previously developed and advanced ideas.

The full list of constructs that emerged during my further analysis of data gathered from participants are included in Appendix F: Tensions and constructs from analysis of the data.

### Shaping hypotheses

Eisenhardt's (1989) 'shaping hypotheses' step involves 1) sharpening constructs (defining the construct and building evidence for its measures) followed by 2) testing the emergent relationship between constructs based on evidence. Each step seemed significant to me at the

time, which is why I have described my activities in sharpening constructs and relating constructs under separate headings.

To help me navigate the ‘Shaping hypotheses’ step and clarify its terminology, I drew the diagram in Figure 7, below. I think I struggled with my poor understanding (or ambiguity) of the terms constructs, hypotheses, and theories in the context of emergence. In the diagram, arrows represent activities and boxes represent artefacts (inputs and outputs). I published this diagram on LinkedIn as a means of accessing wider wisdom and validation but received no responses.

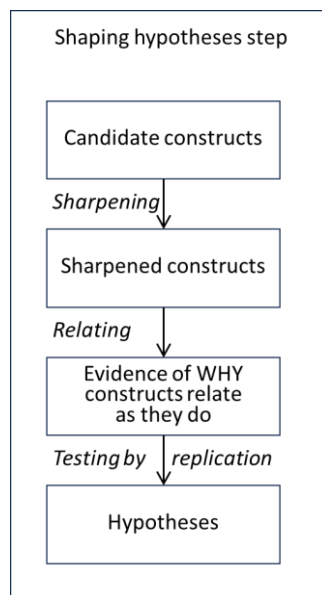


Figure 7 Shaping hypotheses step of Eisenhardt's (1989) method

Constructs are central to Eisenhardt's (1989, 2021) method, ensuring rigour, consistency, and validity. The relationships between constructs, and with the wider literature, are the evidence base for emergent hypotheses and theories.

#### *A priori* constructs

I believe Eisenhardt (1989) includes *a priori* constructs in the ‘Getting started’ step, to help distinguish theoretical constructs from those grounded in empirical data. Having adopted a

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construct-oriented view, I re-examined my journals and tabulated everything that seemed like a construct that emerged before I started empirical data gathering.

The *a priori* constructs I found are included in Appendix E. Of those, Smith & Lewis' (2011, 2022) 'both/and' thinking, and my six basic tensions, were outputs of the literature phase.

### Re-analysing conversations

In this section I describe the process that produced four groups of constructs: candidate constructs, impediments to performance, emergences from reflection, and constructs for resolving tensions.

I will describe my activities in detail, as it was an analysis *redux* in which my reasoning was mainly abductive. As a reminder, I coded my fieldnotes of conversations and presentations, re-listened to sections of recordings, and referred to the transcripts.

### Tabulating constructs

Whilst gaining deep familiarity with each conversation I was rewarded by the richness of material available, as these were conversations, not interviews. Eisenhardt (1989, 2021) describes this as 'in case' analysis. I speculate that re-reading my notes stimulated my memory of each conversation, reminding me of the conversation in context (I remembered media, time, place, preceding and subsequent conversations). Occasionally, I referred to an AI-generated transcript or audio recording for clarification of my notes. In choosing not to examine transcripts and recordings in their entirety, I made a risk-reward decision. I considered the notes taken during the conversation captured the most important points because I confirmed understanding in those conversations. I did, however, draw on recordings and transcripts for confirmation.

Tabulating constructs made it easy for me to notice commonalities and similarities between conversations, which Eisenhardt (1989, 2021) describes as ‘cross case’ analysis. I appreciated the tabular form’s extensibility (in rows and columns) and flexibility (in structure). As I gained experience, so I refined my approach, as is consistent with grounded research (eg. Bryman, 2012; Eisenhardt, 2021). Repeating the process helped me improve at identifying constructs and finding evidence. I learned there was value in adding a row that contained nothing more than an interesting quote, to see if a construct developed. As I gathered more evidence under the same construct, or merged and moved quotes between constructs, I reworded the construct accordingly. It was an iterative and emergent process through ambiguity, subject and abductive, with a multitude of equally correct solutions.

Thinking of my audience, and my research aim, I recognised that some managers would dismiss my process as unscientific. Eisenhardt (2021) describes having a similar concern when presenting her method to a largely positivist academic audience in 1989. On the other hand, manager’s education and positionality in the organisation vary widely and everyone enjoyed having a conversation that was about their problems. I drew comfort from Klein’s (1998) acknowledgement of the difficulty in designing research aimed at understanding how managers work.

As I became better at giving examples of tensions and paradoxes to get conversations going, so participants told me about tensions and enjoyed recognising them in such a refreshing way. When it came to managing those tensions, some participants offered solutions (eg. the senior manager of Convo 4 was confident in their strategies for addressing the eight technical tensions they identified) whilst others had none (eg. the manager of Convo 2 who stepped-away from a senior position in healthcare because they could not reconcile the moral conflict between themselves and their job). Iterative adaptation helped me stay open for serendipity,



such as the manager of Convo 5's statement that the manager's job was to "*Enable people and then leave*". I was able to tabulate all this different information by splitting tables and adjusting column headings.

A benefit of tabulating constructs was the three categories that emerged. The first was that some constructs got in the way of performance, some came from reflection (eg. learning from failure), whilst others indicated methods of resolving tensions. I therefore grouped the constructs according to these categories. The only disadvantage of this arrangement was that it was awkward to match a tension source with its resolution. There were few instances of this, so I was able to add a note to 'See...' the corresponding construct.

Regarding these three groups of constructs (impediments, reflections, tactics for resolving tensions) it may seem tempting to suggest a cycle of continuous evolutionary change through the groups but that was not apparent from the data or anything people said. However, it does seem likely that progress from impediment to reflection to resolution does take place albeit that it happens subtly and slowly.

The second benefit was the realisation that I could abstract some constructs into higher order constructs as candidates for further consideration. These included the emerging themes described previously. Also, I followed Eisenhardt's (2021) suggestion that surprises were worth noting, as they could contribute to literature. At this stage, I simply noted 'candidates' of interest and which needed to be tabulated separately, see F.1 Candidates in Appendix F.

Third, amongst the ways of resolving tensions (see F.4 Constructs for resolving tensions), I found three sub-categorisations which I marked with the symbols †, ‡, and ✖. Those constructs marked † could be considered as within mainstream management theory. In other words, things that competent managers should be expected to do as part of their jobs, regardless of machine model or digital age contexts. A few constructs are marked with ‡,

signifying a structural change that could potentially enable transformation at scale (rather than middle or bottom-up changes which only result in local improvement). Constructs marked ※ are likely to be significant in the digital age, mostly because social factors now have greater impact on performance.

The key (to the constructs in Appendix F.4) is:

† Mainstream role of the manager according to systemic organisational design;

‡ Structural (or policy) factors that could enable transformation at scale;

※ Factors that may have become more significant in the digital age.

### Sharpening constructs

Having gathered and categorised more than one hundred potential constructs from the data gathered during conversations, I refined them by tabulating the definition and measures of each, then checking the evidence within the conversations.

Internal validity of each construct was strengthened by applying each construct to all conversations. For example, after the construct ‘Explain WHY’ had emerged from Convo 20, I reconsidered each conversation looking for evidence that the participant was using, or missing, an explanation of why. After discussing this construct with the manager during Convo 26, I included listening as part of its definition and looked again for evidence that participants recognised the importance of listening whilst explaining something. This process approximates to Eisenhardt’s (1989, 2021) description of replication, testing hypotheses across cases.

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### Constant comparison

Eisenhardt (1989, 2021) stresses the importance for researchers to iterate extensively between emerging constructs and data. In particular, defining constructs, their measures, and boundaries, to ensure the validity of emerging theory Eisenhardt (2021). The process of refining constructs and checking sources helped me identify those constructs which were supported by data and were relevant to my research objectives.

I found myself expanding the principle of ‘constant comparison’ to new literature. Having drafted my literature chapter, my diet of ambidexterity papers reverted to one of books on management and lectures (live and on YouTube). I found myself comparing my emerging ideas against what I was reading, frequently finding support (perhaps this was merely confirmation bias) as well as helping me to clarify ideas. For example, in a talk for doctoral research peers, Stodd (2023) suggests we are living in a Social Age, having already progressed through the digital age. This observation allowed me to shift my tech-centric position to see the technology revolution as precursor to the socially aware times we now experience. It encouraged me to explore a notion that had been in the back of mind, about the importance of questioning growth as the *de facto* purpose of business. Although this was not really a construct, neither did it emerge directly from my data. I wanted to explore it later, so added it to my list of candidates for further consideration (see Appendix F.1 Candidates).

### Tabulated evidence

I used Eisenhardt’s (1989) example of presenting ‘tabulated evidence’ in support of a construct. As I had found when experimenting with simulated data during the proposal stage, results emerged from my actions of playing with data and seeing what happens when I changed the headings of the columns. My previous supervisor had introduced me to Reg Revans’ notion of ‘Action Learning’ and I recognised that I had a proclivity for ‘learning by

doing' that was similarly aligned. Whilst Eisenhardt (1989, 2021) acknowledges the mechanisms of analysis are beyond description, Trist (2001) suggests 'tuning in', 'working-through', and 'designing' as necessary processes of transition. These terms feel right to me.

I find 'doing something' tends to be useful, even if I learn that something did not work.

During conversations 14, 15, and 16, I had a strong sense I was speaking with people that embodied leadership, and noticed I felt inspired by what they had said. In the table I was developing at the time, I had a column for leadership quality and another to score how much I felt I wanted to work for that person. But the construct I was attempting to measure was about managers creating a caring context, not about their charisma as a leader, so I knew these were not appropriate dimensions. I also knew to resist going down the rabbit-hole of leadership studies. Getting the columns wrong had made me realise that I had been speaking to elite interviewees, people who knew how to tell a good leadership story about themselves. What they told me was one data source, whilst what I felt was another (and a topic for reflection). With this realisation, I added the column 'Main qualities conveyed in the conversation' wherein I noted that what struck me most. For example, the feeling I had about Convo 14, was that this was a leader I wanted to work for. I came away from Convo 10 having had a conversation with a manager who understood systems thinking, spoke the language of business studies, and felt like a colleague.

#### *Example construct*

The constructs that I sharpened in this way are included in Appendix F: Tensions and constructs from analysis of the data. The following example illustrates the output as a table of measures and evidence, in the manner of Eisenhardt's (1989, tbl. 3).

Creating a caring context seems to help managers alleviate tensions such as top-down versus bottom-up control, personal versus organisational goals, local versus central decision-making.

Table 8 below shows the evidence that emerged for the construct of ‘Create a caring context’.

The ‘Agency’ column indicates my sense of the person’s ability to create or influence the context.

<b>Convo Id</b>	<b>Rank in org</b>	<b>Main qualities conveyed in convo</b>	<b>Care for others conveyed</b>	<b>Agency</b>	<b>Example</b>
7	Team manager	Reflective, focussed, good communicator	Strong sense of care for customers & colleagues	5/10 Initiated team check-in meetings and peer support	<i>“Can’t break their backs” to get through this work</i>
10	Head of	Long-serving employee who loves learning and sees systemically as though a consultant	Little care conveyed in convo, but he shows care in prof group to which we both belong	Hd of small dept but sees leaders as unable to change	<i>“Org is in decline phase (Handy’s 2015 Second curve) so stressing on old methods: command and control and individual perf management”</i>
14	Dir	Exceptional leader I felt I wanted to work for	Equal focus on safety and wellbeing of ppl, and focus on business objectives	10/10 Has considerable control as Hd Health & Safety, and co-founder	Established that silos are not acceptable and sharing expected – at exec level.
15	Snr mngr	Has learned to be a leader and being a leader is important	Said he wants ppl to produce better results than he can	4/10 enables as head of training	<i>“I’m a care taker – if you don’t take care of them, why should ppl work for you?”</i>
16	Divisional CEO	Spoke about himself (self-aware), clearly a talented leader (young)	People-person (or good story teller)	7/10 Has the authority and knowledge to do what’s right for org locally, but	<i>“Between hitting numbers and closing deals vs helping humans, I want to expand the</i>

				wider org is an ecosystem	<i>circles of those people I help</i>
20	Dir	Obviously really cares as a manager	Aware it is a human system	8/10 Evidenced participatory decision-making, clearly trusted by CTO	<i>“Even ppl who’ve gone left a bit [of themselves] “Everyone drops into the water”</i>
26	Regional Hd	Role model and leader who has her people’s best interests at heart	Listened to what peers said about her region to understand its value first	8/10 controls own region, but it’s a nearshore facility not a business unit	<i>“Ppl are generally happy to work for me. I’m not a threat, not an empire-builder. I’m not a threat and there’s no huge ego”</i>

Table 8 ‘Create a caring context’ construct

Whilst sharpening each construct, I also considered how it might relate to other constructs and any enfolding literature, since those were the next stages of the method. I did this whilst holding the final conversations and writing-up this and my findings chapters, a combination I believe created a rich cognitive environment for abductive analysis. This was an exciting time because the research method was working as I believed it should, although it was exhausting.

### Relating constructs

Equipped with constructs in varying stages of sharpness and a list of candidates for higher-order constructs, I moved to the next stage of theory development. Explaining why and how the constructs are related is the core of theory-building according to Eisenhardt (2021, p. 151), providing “Internal validity and logical coherence of the emergent theory”.

Furthermore, Eisenhardt’s statement (*ibid*), “These arguments can be based on the data, logic, and/or prior research especially from distant literatures like cognitive science and biology”

confirmed I could draw from the broader literatures with which I was already engaging (see ‘Constant comparison’ section above).

This approach is consistent with transdisciplinary research, which seeks to find ways to bridge the silos of disciplinary work towards more unified knowledge perspectives, see Lawrence *et al.* (2022). Although Wickson *et al.* (2006) find no clear definition of transdisciplinarity, they assert it functions as a research tool for collaboratively creating real-world change.

I use the transdisciplinary frame of the manager in the next chapter, to present and argue for the hypotheses that emerged from my analyses. That is, following Eisenhardt’s (1989) method, I explain my (sharpened) constructs and why the phenomena described could result from interactions between those constructs. I draw on literature to support my arguments, in accordance with Eisenhardt (1989, 2021).

### Enfolding literature

Before the ‘Reaching closure’ step, Eisenhardt’s (1989) theory-building method requires comparison with the ‘Enfolding literature’, both conflicting and supporting. Where the previous step used literature to construct arguments, this step uses it comparatively to support the validity and generalisability of the theories proposed.

Without the time or other resources available to search the literature systematically, I ‘cherry picked’ samples for comparison from existing knowledge and sources. In doing so, I recognised that I had blurred the line between drawing on literature to argue for emerging theories and using that same literature to test those theories. Such circularity notwithstanding, I present my literature comparisons in the next chapter.

### Reaching closure

Despite the constraints of time and sources of participants, it was clear to me that I had reached a point where I was hearing similar concepts being repeated in conversations. People were either overwhelmed by the tensions they perceived (eg. felt unable to ‘do more with less’) or considered themselves to be leading the necessary improvement activities. What I wanted to know about these cases was how colleagues in the same business unit and organisation felt about those actions but that would be a recommendation for further study. I had, in fact, reached ‘theoretical saturation’ as described by Eisenhardt (1989, 2021).



### 4.3 Ethical considerations

I complied with the university's ethics process and followed my commitment to the steps and artefacts approved. In preparation for data gathering, I submitted an application and gained approval from the ethics committee then maintained communications with the supervisory team to get advice on when a change may be needed. For instance, I had wondered if I needed to update my Gatekeeper or Invitation to Participate letters (see Appendix D) after I realised that I was going to be speaking with individuals rather than groups from one company as I had originally described. I was also unsure how to include learnings gathered during related seminars which took place whilst I was researching the literature and was never part of the plan. My Director of Studies helped me resolve both of these questions.

#### Gaining consent

I learned to get people interested and committed before asking them to consent to participate. However, signing a consent form is a significant test of commitment and many people lost interest between verbally agreeing and returning a signed form. Despite bringing blank forms and a pen to in-person events and making a point of recording verbal consent when conversations were recorded, I had conversations with people for which I have no evidence of consent. Since these were essentially casual conversations, I noted them as such. I did not draw on them directly as supporting data but recognise their potential influence.

#### Metadata

I maintained personal metadata for each participant, which was kept separately from the notes and recordings of conversations. For each participant I recorded the Convo ID and their contact details (name and email address). Also, their company name, if known.

## Chapter 4 Research activities

Within my conversation notes, I recorded the Convo ID, date and time of the meeting, and the number of direct reports, people in the department, job titles, etc. as provided.

Inspired by the metadata presented in Fuchs and Hess (2018, tbl. 2) I added industry sector (from my experience) and total number of employees (from Wikipedia) information.

### Storage

My electronic notes (in Word and Excel), scans of hand-written notes, recordings and transcripts were stored in the Office 365 (cloud) repository, as required by the university.

These assets were stored in sub-folders identified only as ‘Convo 1’, ‘Convo 2’, etc. and will be permanently deleted after completion of this project.

### Drawing on previous professional experience

A particular challenge when preparing this thesis of professional practice was how to draw from *a priori* knowledge and evidence findings from such a varied career. Superficially, this is a problem of informed consent. Companies that hired me in the past had not entered into a research agreement with me and I therefore did not have their consent to publish information I had gathered from them. However, the ethical problem that concerned me was that the list of companies that hired me, and the dates that I was with them, is a matter of public record that appears on my LinkedIn profile. It would, therefore, be a matter of simple deduction to reason that a ‘global financial institution’ was likely to be HSBC or JP Morgan Chase. My Director of Studies explained that I could directly reference anything that was previously published as well as drawing from my own reflective learnings. That is why, in this thesis, I cite JP Morgan Chase’s profits (from their published accounts) and my presentation at the Agile 2016 practitioner conference, specifically; yet generalise my experience of encountering the *illusion-reality* tension amongst managers, generally.

## Chapter 4 Research activities

### Demonstrating personal ethical stance

During the period of research, I was hired to investigate a firm that would have been an ideal case study. The conversations I had with managers and staff were rich with references to tensions and the firm was enmeshed in conflicts. However, my brief there was commercial, and although I used a research-informed approach, my personal ethical stance prevented me using any data gathered in my research. I did not even think it appropriate to seek their consent to participate in my research at that time, nor since.

I was able to include generalised observations from what I observed. Here was a firm struggling to deliver either operational effectiveness or product development at the quality expected by its customers and staff. Our recommendations for improvement were based on achieving simultaneous ambidexterity, effectively leap-frogging the evolutionary process of improving operations and product development separately, then having to work-out how to bring them together. This form of transformation seemed appropriate for the digital delivery of value, such as software and I included it as a candidate construct.

## 4.4 Summary

This chapter has presented a forensic examination of the data gathering and analyses of theoretical and empirical evidence. It breaks with tradition in describing my literature coding activities. It corrects the assumptions and plans I made in Chapter 3 by describing the activities that resulted in tensions and tactics, constructs, and emergent hypotheses. In describing the ethical considerations of data gathering I concluded the chapter with a practice that came close to matching its expected course.

In the next chapter I develop my findings from these results, by executing the final steps of Eisenhardt's (1989) method.

# Chapter 5 Findings

In this chapter I synthesise my theoretical findings about tensions with empirical findings from managers. My discussion of these findings addresses gaps in the literature introduced in Chapter 2. Using these findings and applying inductive reasoning, I follow Eisenhardt's (1989) method to form constructs and hypotheses (Section 5.1), each of which is then compared with the enfolding literature (Section 5.2). I reflect on the insights that have emerged professionally, practically, methodologically, and personally in Section 5.3. Finally, I assess my performance in meeting the objectives I set for myself, the limitations of this project (Section 5.4) and make recommendations for further research (Section 5.5).

I set out to understand how managers overcome the barriers to improving the overall effectiveness of their organisations. The hypotheses described here are in the form of managerial practices that have the greatest impact on professional practice, according to my participants and the enfolding literature. They indicate individual managerial practices that are likely to be organisationally transformational and are supported with practitioner references and further reading appropriate for that audience.

Although it is difficult to quantify understanding, I invite readers to notice that I have fulfilled my research aim and delivered the arguments and evidence that allow a move towards understanding, towards a theory of the enhanced role of managers in transformation.

Additionally, I have convinced myself of the usefulness of tensions as a lens for examination and a signpost for further, even more fascinating, research.

## 5.1 Hypotheses

The shaping of hypotheses (in this section) and comparison with enfolded literature (Section 6.2) are the next steps of Eisenhardt's (1989) process (see Figure 7).

Based on the sharpened constructs that emerged from my analysis and my aim for this project, I hypothesise that each of the following practices will help managers to resolve organisational tensions and improve the overall effectiveness of their organisations:

1. Create a caring context;
2. Explain WHY;
3. Develop eco not ego;
4. Walk the talk.

In this section I develop arguments for each of these practices (constructs). I first introduce the construct then provide the data evidence from conversations with managers. That is followed by the evidence from literature, with a leaning towards practitioner literature as appropriate for my audience of managers. As recommended by Eisenhardt (1989, 2021), I draw from a wide literature, including my professional experience.

### Practice 1: Create a caring context

This construct comprises elements of safety and care which I consider individually.

#### *Managing safety*

Before COVID-19, I led in-person training courses, often flying to the site of the training room. The brevity, intensity, and investment associated, make training courses and the flights I took to get there, useful analogues for studying organisational performance. Courses and

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flights are the front-line for value delivery of training, where customers and staff come together, and impressions of the experience are formed.

Training is an active intervention, whereas learning happens, just as improvement interventions are deliberate and transformation follows. The purpose of training is to improve the skills of individuals and organisation-wide learning may follow (see Checkland, 1981; Nonaka and Takeuchi, 1995; Snowden, 2023).

As an instructor, I represented the training firm. The context I created in the classroom would either confirm or break attendees' trust in that firm, and the firm used feedback mechanisms to monitor the performance of its instructors and materials. Through CPD, we instructors learned to pay attention to our role as hosts, welcoming and putting attendees at ease as they settled into a new environment amongst strangers. Awareness that 'psychological safety' was a predictor of learning effectiveness has entered into corporate awareness in the quarter of a century since Edmondson (1999) showed it to be an important factor. Not only is a safe context important for learning, but Boyatzis (2006) shows that individual's emotional state was a predictor of their ability to achieve 'intentional change'. Hosts create context, in our case, a context appropriate for learning. Our job as instructors included removing any tensions in context that may interfere with learning and value delivery. In other words, we managed the context.

Airline crews have to attend to passenger's comfort, as well as life and death safety concerns which are governed by national and international regulations. The number and severity of errors made by commercial airline flight crews depends on the quality of the work environment:

Captains of crews with the fewest errors were described as warm, friendly, self confident and coped well with pressure. Captains of [airline flight] crews with the

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most errors were described as arrogant, hostile, boastful, egotistical, dictatorial and passive aggressive Chidester et al. (1991 as cited by Burke, 2006, p. 97).

Whether a safe context is an ethical context depends on how practices are managed, especially by those in positions of authority. Managers and leaders (I use the terms interchangeably) have opposing moral and ethical responsibilities which Copoeru (2012) identifies as the operational efficiency of the organisation (performance) and the well-being of its workforce. If this represents an ambidextrous tension, then the organisation's code of conduct should be the resolution. Having engaged with formal ethics with the university and in professional coaching practice in recent years, I see how ethics policies could help make certain boundaries visible to employees. From Diochon (2012, p. 308), unethical business coaches may "Show too much emotion and overpass the boundaries of the role".

### *Caring for others*

In a recent session facilitated by Maguire (2024), supervisors and supervisees discussed the supervisory relationship, noting that it changes over time and between individuals, adapting to their different strengths, fears, and rates of learning. This can be seen as a caring context, created by the supervisor, not the supervisee (although co-creation may follow). Professional, ethical principles and practices are important in a supervisory relationship, which can last several years and must prevail through an emotionally challenging doctoral journey.

Supervisors cared so much that they reported being anxious for their supervisee's *viva* exams.

In Burke's (2006) review on leadership failure, lack of care for others or excessive arrogance was listed as a cause of failure in nine of the eleven literature sources cited. For example, Kellerman (2006 as cited by Burke, 2006) finds bad leaders to be either incompetent (lacking skill, self-control, adaptability, care for others), or unethical (corrupt, selfish, evil). Leaders



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fail “Because they are unable to understand other people's perspectives” and “Ethical leaders put followers needs before their own ...” from Burke (2006, p. 93).

### Data evidence

Evidence for the ‘Caring for others’ construct included: *“I’m a care taker – if you don’t take care of them, why should people work for you?”* (Convo 15) and *“Between hitting numbers and closing deals vs helping humans, I want to expand the circles of those people I help”* (Convo 16). By Convo 26, I had invited validation of the construct, *“[Creating a caring context] is of paramount importance, it is where I spend most of my time”*. As head of a regional ‘entity’, this participant was responsible for everyone in that country, even if their functional line managers were outside the region, hence, *“My role is looking after the person. They won’t be in that function for ever but must feel happy in the firm”*. The region had a lot of sub-contractors, who *“I made feel part of the region”*.

Reflecting on context over time, the manager of Convo 20 observed that *“Everyone drops into the water”* leaving a bit of themselves even after they had gone. My Director of Studies also spoke of this, using the term ‘ghosts’. Owen (2000) uses the term ‘spirit’, which is symbolically similar to water, to describe how organisations transform and are transformed by its people.

Several managers spoke about protecting people from cascaded tensions and dysfunctions. Eg. *“Leaders create psychological safety at their level – even if it’s missing from the very top”* (Convo 26). Also resolving situations, *“When people aren’t playing nicely, you must talk to them”* (Convo 20) and even learning to be a better manager from the process of resolving disruptive behaviours (Convo 9).

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Diochon's (2012) ethical point about emotional boundaries was something the manager learned through experience in Convo 9.

### Literature evidence

Contextual ambidexterity extends the hypothesis of the caring context construct to include performance benefits. In Adler *et al.* (1999, p. 43), factory managers created a high-performance ambidextrous context "Most notably training, trust, and leadership". Sampling 41 diverse business units, Gibson and Birkinshaw (2004, p. 221) find ambidextrous performance comes from a "Supportive context [which] creates the capacity for ambidexterity". That is, a supportive context with executive support for creating the capacity for ambidexterity is needed, allowing managers to develop their own ways of achieving this. Both studies suggest managers created a context that balanced individual autonomy with organisational goals; allowing people to decide what to do and how to do it, because the outcome had been clearly defined. These literatures describe safe and professional contexts, with no mention of care or lack thereof.

In fact, Gibson and Birkinshaw (2004) find that a supportive context (of stretch, discipline, support, and trust) is not enough to gain performance benefits, and success requires a context that is both supportive and has defined or measurable outcomes. Equally, measures without the appropriate contextual support may produce unintended consequences. As Goldratt (1990, p. 26) states, "Tell me how you measure me and I will tell you how I will behave".

In their framework for organisational adaptability, Uhl-Bien and Arena's (2018) 'adaptive space' connects formal operational exploitation and local entrepreneurial exploration (tensions) from which emerges the new order. Whilst safety may be more important than care in such spaces, the combination may help overcome the inertias that resist change. I offer no explanation of these inertias, but note they too are intangible, widely recognised by managers,

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and a failure factor in transformation studies according to Gandomani and Nafchi (2016). Battilana *et al.*'s (2017) paper, from which I acquired the term, 'embedded agency', examines the paradox of organisational forces that both control what employees are able to do and wants them to explore "Unfamiliar templates of action" upon which improvement depends, from Battilana *et al.* (2017, p. 96).

According to Maciariello and Linkletter (2011, p. 11), "For Drucker, management was a moral force", however, Burke (2006, p. 93) does not hesitate to label as evil those leaders who did "Psychological or physical harm to others". For such people, their purpose was selfish; charismatic enough to gain a leadership position, able to speak convincingly, saying all the right things, without actually believing or doing them themselves. The construct of 'Walk the talk' is needed because such inauthentic people exist.

Although 'Create a caring context' is intangible, my evidence suggests it has value and is worth managing. However, anything that is not incentivised, explicitly part of manager's appraisals, or described in their roles and responsibilities, will be deprioritised under pressure. Mintzberg (1990) recognises that managers' workload was infinitely greater than the time available. Therefore, prioritisation is crucial, and in terms of practices, that means 'Create a caring context' must be combined with 'Explain WHY'.

Context matters, and this project has amplified the importance of mid-level managers creating and maintaining a caring context in the workplace. Having established its importance, I next explore the ways in which a caring context relates to the other practices.

### Practice 2: Explain WHY

Communicating through a large, hierarchy is never easy. I note from practice that communication problems (eg. misunderstandings, assumptions, and half-truths) contribute to

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many of the problems that organisations wish they could avoid. My data highlights cascading down and listening upwards but that does not mean across is not also important.

### *Communicating purpose*

In the popular TedX talk, ‘Start with WHY’, Sinek (2009) explains that WHY motivates people. It is first thing leaders should state when inviting people to follow and is the opposite of the industrial age ideology that employees should do whatever their managers tell them. Rumelt’s (2012) strategy kernel also starts with WHY, in the form of a situational diagnosis, followed by a ‘Guiding policy’ (WHAT) and ‘Coherent actions’ (HOW). Starting with WHY has the potential to be transformational in situations that depend on leaders’ developing and cascading an inspiring vision. Top-down planning does not inspire people to ask questions or raise concerns, neither does it motivate people to engage as agents of change.

It is possible for an organisation to function effectively without defined outcomes but even so there will be an implied or perceived purpose. People join ‘hang outs’ such as the online ‘Shut-up and write’ session I am currently in, because it fulfils their own needs. They join social gatherings of people with similar interests or beliefs because connections are more easily made in that context. In both cases, the organisational entity is insubstantial, it works for the people involved, at the time, with no expectation of longevity. When people organise around an employer, or even volunteer to support a cause, they reconcile their personal beliefs with those of the organisation. These organisations are recognisable entities (often legally so) and need a purpose. Purpose, helps people align their decisions so everyone ‘pulls in the same direction’.<sup>21</sup>

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<sup>21</sup> Describing the purpose of a product in terms of a North Star emerged from the Growth Hacking movement of the early 2010s, according to <https://amplitude.com/books/north-star/why-use-the-north-star-framework>.

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In the context of transformation, perhaps on any journey, a certain amount of faith is needed to follow a leader or stay the course. For example, increasing transparency is a challenge for some traditional institutions, yet doing so enables the self-organisation and local decision-making needed to improve performance. Explaining why certain data are going to be published and how access to that information will help people across the organisation achieve its overall objectives, can help overcome this inertia. It is also important to define measures and performance indicators “That are truly meaningful” and by “Clearly using the data for the agreed-upon purposes”, according to Westerman *et al.* (2019, p. 67). Advice echoed in the title of Doerr’s (2018) book, ‘Measure what Matters’.

Endorsed by one of Google’s founders, Doerr’s (2018) Objectives and Key Results (OKRs) are an increasingly popular way to align and focus effort on what matters up, down, and across the hierarchy. OKRs originated in the 1950s as Drucker’s ‘Management by objectives’ which was criticised by Deming who witnessed managers abusing individual staff members for failing to reach objectives set for them, reports Kelly (2021). With greater awareness of psychological safety, and attention to a caring context, that should not be a consequence of using OKRs.

Explaining WHY and providing transparent reasoning behind decisions, demonstrates respect for, and value of, employees. This may strengthen the caring context and encourage people to seek clarification about priorities and outcomes, or to share their own perspectives. Not all employees are prepared to speak of their tensions and concerns. In its global survey, Gallup (2023) claims 59% of employees globally are ‘quiet quitting’, neither actively engaged nor speaking-up at work.

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### *Voicing beliefs*

Several studies find that ‘employee voice’ behaviours are predictors of individual and organisational performance Wilkinson *et al.* (2020). In the latest review, Morrison (2023) warns that silence can lead to anger and burnout, or signal fear and dysfunction. The predictors of silence are leader behaviour (abusive, narcissistic, knowledge hiding, power distance), context (mixed messages about status and worth, collective beliefs about voice, occupational ideology equating not speaking up with loyalty, avoiding disruption), and individual (emotion, perception of no agency, member of a disadvantaged group).

Employees bring diverse beliefs and customs into the workplace, making mass communication more difficult. Some people read corporate emails, some watch video messages, others need to engage in activity before they take in information. This is apparent in training when the instructor shows a slide, tells attendees what to do in that activity, and asks if everyone understands. As the activity starts, someone will inevitably ask ‘what are we supposed to be doing?’ When I taught classes, I believed it was my job to ensure people understood my explanations and instructions and, if I was unsuccessful, would invite another attendee to explain. My point is that communicating in a complex environment requires diversity and takes a significant investment in time and effort to provide the requisite variety needed.<sup>22</sup>

A key aspect of explaining is listening. I have found that checking other people’s understanding by asking what they have understood helps to surface assumptions and build trust. This can be especially important when delegating tasks or communicating information.

### Data evidence

Evidence for the utility of ‘Explaining WHY’ emerged when I invited managers to describe their ways of resolving tensions. This happened after hearing about a firm that was hoping to

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<sup>22</sup> Ashby’s law of requisite variety was explained in Chapter 2.

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increase productivity by financially incentivising engineers to complete more repairs each day (Convo 10). The participant observed that although engineers and management had common goals, *“Engineers’ satisfaction came from solving technical problems and helping people, not by going fast”*. Finding themselves *“Managed to within an inch of their lives”* to improve performance, engineers completing 36 jobs received a bonus payment but found themselves on a performance improvement plan if they dropped to 34 jobs in a week.

Looking for evidence of ‘Explain WHY’ through all other conversations, I realised that firms avoided transparent explanations when they were struggling, such as managers being told to increase productivity (Convo 10) or achieve more with less (Convo 18).

In contrast, Convo 14’s, *“Vision to be a leading independent E&P company by putting more carbon into the ground than we take out resonates well with staff”* is inspiring and motivating. It is compatible with North Stars, OKRs, and indicates a strategic policy that publicly addresses the *exploitation-preservation* tension.

The lack of care in the environments of Convo 10 (*“Engineers are managed to within an inch of their lives”*) and 18 (*“Maybe it would be better for me if I cared less”*) was apparent, as was the inappropriateness of their measures. The earlier quote from Goldratt (1990, p. 26) concludes, *“If you measure [or direct] me in an illogical way do not complain about illogical behaviour”*. I justify including the way people are directed because both measures and directives are constraints to which complex systems adapt.

Senior managers said it was important to adapt their language to the audience. Not only explaining why a change is needed, but also why people should care (Convo 26) and because *“No one size fits all”* (Convo 14). This reminded me of Buckingham’s (2005) analogy, that great managers are like chess players, matching tasks with people’s strengths, whilst average managers see everyone as though interchangeable chequers pieces.

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Mid-level managers resolved the tensions that often exist between separate entities by Explaining WHY. *“Bringing the people doing the work closer together by breaking down layers of contracts and 3rd party [supplier] management”* is the right thing for us but feels like *“Asking turkeys to vote for Christmas”* to their managers (Convo 25). And the *“Product [department] needs a roadmap to give 6-months’ comfort [for planning] then competitors and new regulations disrupt us [tech] – which we mitigate by telling everyone WHY we have changed direction”* (Convo 20).

Listening was important for Explaining WHY. *“You have to educate, it’s fine not to convince, but you have to listen first”* (Convo 26). And *“People react to change differently so must adapt to each team and managers must be in listening mode”* (Convo 14).

In terms of increasing the organisation’s listening skills, there was evidence of developing coaching as an internal service, *“We’re using the apprentice levy and training own coaches internally”* (Convo 18). Also, the need for coaching as a managerial competency. From Convo 26, *“You don’t need to manage good senior ppl, just ask curious, probing questions - coaching essentially - no more than that”* and the observation that managers (especially in leadership positions) who believe they can’t change the system, *“Just need coaching, but they have to be open to it”*.

### Literature evidence

The speed of change in the digital age has disrupted the way strategy is stated and used, at least in terms of planning for long-, medium-, and short-term time horizons, says Blank (2019).

The plastic nature of software services has resulted in frequent updates and continual addition of features. Product teams describe tasks in ‘user story’ format, which explicitly states WHY



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the work is valuable, WHO it benefits, and WHAT is required (see Davies and Sedley, 2009; Lewis, 2016b). This is very different from functional specification documents of the past which stated requirements and designs without explanation of why. This difference reflects the shift in where designing and doing work is done in the software industry described by Reeves (1992).

Research in dynamic markets by Eisenhardt and Brown (1998) and Furr and Eisenhardt (2021) finds there is not time to communicate and await strategic decisions, and that changes can be frequent and bottom-up, with Gibson and Birkinshaw's (2004) finding that performance comes from the combination of defined outcomes or measures within a supportive context, implies the existence of objectives, if not a strategy.

Theoretical evidence for 'Explain WHY' may be found throughout the leadership and strategy literatures, both of which are beyond the scope of this project. However, Eisenhardt and Martin's (2000) argument for firm's needing to develop dynamic capabilities connects strategy with ambidexterity, and Uhl-Bien and Arena's (2018) leadership for adaptability connects ambidexterity, dynamic capabilities, network, and complexity theories with leadership.

The ability to listen as part of communication is essential for leaders if they are to influence, inspire, or direct people. There is substantial coaching literature that validates listening skills for managers, including, (eg. Parsloe, 1999; Ibarra and Scoular, 2019; McCarthy and Milner, 2019). The leadership development program I developed whilst with a global financial services organisation built on the development of active listening skills and the coaching questions of Stanier (2016), it was highly rated and considered impactful by attendees and their sponsors and direct reports.

### Practice 3: Develop eco not ego

I use ‘eco’ here as shorthand for internal and external ecosystems as well as its populist meaning of concern for the environment.<sup>23</sup>

The construct reflects the ongoing shift from manual to cognitive work, from industrial to social concerns, archetypal masculine to feminine strengths, and, as framed here, from inflating egos to building ecosystems. The phrasing has appeared before, including ‘Theory U: From Ego-system to Eco-system Economies’ by Scharmer and Yukelson (2015).

‘Develop eco not ego’ sits comfortably with ‘Create a caring context’, provided the purpose of the context is understood, hence the need to ‘Explain WHY’. Together, these contexts form the conditions of high-performing systems. A sports team is a good example, since the team’s performance is the product of players, coaches, and managers working systemically for example, Hardingham and Brearley (2010).

Healthy ego strengths, such as confidence and emotional intelligence, help people navigate the challenges of the workplace. Over-developed egos that manifest as arrogance, narcissism, and dishonesty can create ‘toxic’ workplace contexts according to Sull *et al.* (2022), who investigated the link between people saying their workplace was toxic and those who quit their jobs. Ego weaknesses, such as denial, rationalisation, and humour are unconscious defensive reactions or ‘blind spots’ say Kets de Vries and Balazs (2011). Coaches and psychotherapists may help people become aware of these behaviours and resolve them. Self-awareness and intentional self-improvement may lead to personal transformation, and it may be that organisational transformation depends on the transformation of its managers.

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<sup>23</sup> I also recognise that the meaning of ecosystem has expanded to include non-geographical human systems.

## Chapter 5 Findings

The relationship between developing an ecosystem and ‘Explain WHY’ provides an opportunity to address a problem known as local or sub-optimisation. Overall organisational performance depends on the clarification of those processes that act in service, and which must be served. Ackoff (2015) notes, “Improving the performance of the parts of a system taken separately can destroy an organization” adding “This explains why benchmarking has almost always failed”.

In Figure 8 below, there is a good reason for each of the nine notices in view, except that all have become lost in noisy messiness.



Figure 8 Entrance to blood testing room in a hospital

Whilst I waited outside this door for five minutes, I helped several people follow the hand-written instructions which can be seen taped to the ticket machine on the left. The instructions were to take a ticket, then wait in the cafeteria’s seating area on the other side of the corridor

## Chapter 5 Findings

until that ticket number was called. Whilst I can only presume this improved the process of organising patients for the benefits of the two nurses who taking blood samples, I can bear witness to the confusion caused to patients and the frustration of people using the cafeteria amongst patients who wandered around not knowing if they were in the right place, or not.

Systems, such as hospitals, have a purpose. Blood testing exists to serve that larger system and is served by the room where blood samples are taken. A negative consequence of functional hierarchy (silos) is that each department or room can easily lose sight of its role as servant to the greater system and over optimise its own performance.

The Business Ecosystem Alliance is a thought-leadership project co-founded by the Haier Model Institute and Thinkers 50. Haier's organisational model, 'Rendanheyi', features an internal ecosystem that functions like a marketplace, rewarding entrepreneurial innovation and effective operation. In their 2023 conference, a pharmaceutical company executive told of how they brought a product to market by creating an ecosystem of members, rather than issuing contracts to suppliers. A big learning for them was how to produce the desired systemic outcomes without having control of the contributing parties.

The ability to absorb variety (variation) is key to an effective ecosystem, be that working with external partners, embracing cultural diversity, or recognising parts within us that need attention. Principles are likely better enablers than rules for complex environments where variation is normal.

### Data evidence

There was a difference in the conversations between participants who had moved between action and reflection, and those who remained 'in the work'. The former offered observations with explanation, such as, *"People are generally happy to work for me. I'm not a threat, not*

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*an empire-builder. I'm not a threat and there's no huge ego*" (Convo 26), *"People no longer want to be forced to work from an office"* (Convos 8, 20), and *"Penalties for late delivery against contracting company prevented them from developing ppl and being safe to learn"* (Convo 11). The latter offered evidence, but I got the impression the person felt they lacked agency. Similarly, the IT security manager responsible for protecting the organisation from cyber attack said, *"We have 10k staff who are educated but not technical. We can't prevent this [phishing attacks], never"* (Convo 23). Whereas *"Old KPIs don't work with Agile"* (Convo 11), and *"Funding for tech seems to be focused on customers not helping staff"* (Convo 18) suggest outdated knowledge, to which one may wonder why managers allow themselves to become so disconnected from the front-line work that this happens.

Seniority in the organisation undoubtedly affected people's perception, but not exclusively. The person who noticed how working in a different department *"Broadened my mind. I was happy in roles before but now I'm enthused and feel I can do so much more"* in (Convo 22) held one of the lowest grades in the hierarchy. When it came to conversations at the top, I wished I could have spoken with others from the organisation to get a broader perspective. For example, on Convo 14, where I heard that, *"We established at exec level that silos are not acceptable and knowledge sharing expected – this cascades down as normal behaviour"*. Also, to validate the effectiveness of Convo 24, *"I deal with tension by ignoring it – [what we do] is nothing to do with any other part of the business"*, which seemed reasonable, but made me wonder what I could have learned by speaking with peers.

I noticed when participants reflected on the organisation as though they were not of it themselves. For example. *"Leadership can only cope with evolution, not revolution"* (Convo 10) and *"Top-down initiatives have good intentions but don't really translate into reality on the ground"* (Convo 9).

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The use of humour in resolving tensions and managing egos was an interesting surprise. I noticed it between CEO and Commercial director in Convo 19, “*it’s our famous northern sense of humour*” (this was the only conversation with joint participants). Also, “*We managed tension between heads and scientists by running an unofficial and humorous in-house magazine*” (Convo 6).

One firm used an external ecosystem to help resolve *explore-exploit* tensions in the form of a dealership network providing “*High quality market intelligence and feedback on products*” allowing “*each country to make its own go-to market plans*” (Convo 16).

### Literature evidence

According to an archive page at HBS (2004), Finkelstein’s (2003) study of people who presided over almost fifty failed businesses, find they:

Chose not to cope with innovation and change; misread the competition; fulfilled the wrong vision; clung to an inaccurate form of reality; ignored vital information; or had executives who identified too closely with the company Finkelstein (2003 as cited by HBS, 2004).

Burke (2006) amplifies arrogance in the summary:

They had an over optimistic and over-estimated view of how much control they have over events. They thought that they and their organization were successful because of them, Finkelstein (2003 as cited by Burke, 2006, p. 95).

According to Einzig (2020), since humans are not schooled in dealing with uncertainty, we tend to seek heroes, leaders, and authority figures to guide us, noting that the male, objective-driven archetype that brought wealth and prosperity in the industrial age is too rigid, too invincible in situations where collaboration and innovation are required.

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Advancing the need to balance ego, eco, and intuitive intelligences Olivier *et al.* (2021) suggest ‘ego leaders’ are good at using goal-oriented, cause-and-effect thinking to bring focus and direction, whereas eco leaders are better in complex and ambiguous situations. Intuition and ecosystemic concerns were relevant decisions made by commanders fighting fires, but assumptions, rather than ego, caused the fatally bad decisions discussed by Klein (1998).

In a blog for entrepreneurs, McFarlane (2023) suggests that the message of Covey’s (1989) book was that sustained success and happiness came from the ethics of character (humility, fidelity, integrity, courage, and justice) rather than personality traits, such as public image. Covey’s ‘7 Habits’ remains a highly influential book according to its publisher, Simon and Schuster (2020) as does the appetite for books about heroic business leaders. Since 2005 books on Musk, Bezos, Jobs, Nadella, Ecclestone, Buffet, Walton have been lauded by the Financial Times as ‘Business book of the year’ (2024).

Mulally describes a service-first approach at Ford and Boeing in a recorded conversation in, Mulally and Goldsmith (2020), as did Marquet (2015) as commander of the US Navy’s worst performing submarine. The ‘Servant as Leader’ approach was first described in a frequently referenced, but rarely read essay by Greenleaf (1970).<sup>24</sup>

As Carboni *et al.* (2021) find, teams are more networked and collaborative than before, and:

Leaders start with purpose and then draw upon their knowledge of the networked ecosystem to cultivate the external relationships that bring value into the team and pull their teams toward high performance (Carboni *et al.*, 2021, p. 8).

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<sup>24</sup> The concept of ‘servant-leadership’ is frequently taught in Agile courses.

## Chapter 5 Findings

Leadership researcher and executive coach Walsh (2024), defines leadership (via email newsletter) as, “Any moment you can influence another” and includes the notion that leadership is about helping people think or act differently, whether from a formal leadership position or not. This aligns with my notion that leadership at all levels of management is crucial for improvement.

### Practice 4: Walk the talk

‘Walk the talk’ highlights contemporary societal demand for congruence and transparency. While whitewashing, gaslighting, and spreading misinformation may not be new, their exposure and subsequent consequences happen increasingly swiftly. The following recent examples illustrate our alertness to something that is wrong or that demonstrates a conflict with stated values. The subheadings in this section are somewhat light-hearted, representing some of the reasons I have heard managers offer when resisting change.

#### *There’s nothing I can do about it*

The first example represents the way we perceive people in positions of authority, the second illustrates disengagement as one of the ways we respond. Members of the UK government were found to have failed to follow their own rules during the COVID-19 lockdown period as reported in the media (eg. BBC, 2023) and lost the confidence of many supporters. I decided not to submit a proposal to a conference because I felt their fine words were negated by the of £300-400 they were charging for attendance with no online or free alternatives. Specifically, the stated focus of the World Organisation of Systems and Cybernetics 2024 conference website was “Intergenerational collaboration to collectively generate knowledge” and organisers extended an invitation to “Individuals from diverse age groups, including the youth, seniors, and active generations, to actively participate...”, from WOSC (2024).



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### *Don't rock the boat*

Relating 'Walking the talk' to 'Explain WHY' and 'Create a caring context', it is incumbent on leaders to explain why a decision was made and how it aligns with their stated values, then lead the way by modelling the corresponding behaviours. Similarly, unfairness, injustice, or deception are incompatible with 'Creating a caring context'. This obviously applies to managers, who must ensure safety and policy standards are met. But edge cases are tricky. It is easier to ignore minor misdemeanours than confront a colleague, and safer to go along with a popular policy, than to challenge it. Amongst peers, managers may be unwilling to challenge each other's actions and may avoid holding each other to account.

### *My team is completely empowered*

As an Agile coach, I would meet managers before engaging with their teams and note that if staff were as empowered as their managers said, or trusted enough to work autonomously, my job would be improving the system, not transforming it.

I recognise that my integrity bias, valuing honesty above other strengths according to Peterson and Seligman's strengths inventory, VIA (2020), makes me particularly sensitive to congruence.<sup>25</sup> Yet the managers I have met are neither dishonest nor lazy, just human. Self-awareness and self-improvement, or the lack of, are part of the human condition. For instance, my hypocrisy sits uncomfortably as a parent, when I repeat the excuse, 'Do as I say, not as I do'. Everyone has behaviours that would benefit from improvement, but they first need to become aware of them.

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<sup>25</sup> VIA character strengths survey results are delivered using email as a report from <https://viacharacter.org>.

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### *That might work for other departments*

Executives may rationalise moving customers online, making branch workers redundant, or lowering costs, but I know only one manager who was actually prepared to close his department, hand 150 people over to other managers, and give up his status in the hierarchy. Reflecting on it some years later, his action not only produced better performance for the firm, but it helped him develop as a leader who ‘walked the talk’ of change. It highlights the possibility that leaders may need to address changes within themselves for those around them to change.

### *Learning to trust*

Autonomy is not possible without a degree of trust. A director I interviewed in 2016 for my Masters told me, *“You have to learn how to trust your teams”*, then described the process. This quote has stayed with me, as it demonstrates the level of self-awareness a manager needs to be effective.

### *Data evidence*

Validating my emerging constructs, one participant said that trusting experienced (‘senior’) people to do their work did not come from project updates or ‘traffic light’ reports, rather *“From being present and being fully connected to get lots of feedback ... I’d know if something was wrong”* (Convo 26). This in contrast to managers who felt they lacked the time and/or knowledge to connect with such a variety of stakeholders and for whom problems surfaced only when projects were already failing.

I interpreted two stories about top-down – bottom-up tensions as senior management’s failure to ‘Walk the talk’. In Convo 1, *“Local product initiatives or pilots [were] stopped by higher-ups”* may have prevented exploration and improvement but could have been beyond the

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current focus. However, Convo 10's "*We started a cost-neutral initiative, defects were down by 30% and morale up, but only lip service support from above*" suggested ignorance, complacency, or arrogance.

Waste of a different form resulted from a micro-manager's lack of self-awareness in Convo 15, "*It took six months for me to convince a new [micro] manager he could trust me*".

However, unlike engineers, managers cannot be too transparent. As budget-holders, they must manage 'funding risks' (another tension). From Convo 25, "*Nobody wants to pay to maintain tech because there's no visible return – savvy managers know this and have to use change projects to fund BAU*". In banking, it is always likely that more funding will become available, "*To pay for next lot of regulatory change, which allows [managers] to hide stuff*".

My participants were self-selecting, and a high level of self-awareness would be expected.

For example, the "*White male, new to role but very young [for such a senior role]*" of (Convo 16) felt the need to prove himself before people would accept his authority.

Minorities were either much more self-aware, or more open, or had greater cause for reflection. Convo 26, "*I always felt a pressure to outperform as a woman, as a lesbian, etc. As a leader I felt I had no option but to intentionally dial it [DEI] up*". Convo 18, "*Me, as a black woman, in this positive action work, I wanted it to have the greatest chance of success, but it wasn't the right time to challenge [the program I led] and I self-silenced*".

For the nursing manager, the lack of self-awareness from consultants, who "*Would challenge us with 'what did you do to my patient?' ... Created enormous pressure*" (Convo 2).

This observation, "*Managers who believe they have superstars in their teams, or think they are smarter than they are, create friction with those who really are*" (Convo 4) may also

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relate to arrogance, as above. Certainly, overestimating one's team's abilities leads to errors (Casual 1) and overestimating their capacity, leads to stress (Casual 2).

'Walk the talk' applies to structure. If an organisation puts its customers first, that should be reflected in its structure, as it is in Haier's 'RenDanHeY' model, according to Fischer *et al.* (2013). If it is a tech firm, then HR and Finance should support, not control the CIO, "*I'm trying to align product engineering, customer support, sales, with customer success – putting Product team under Sales makes it difficult*" (Convo 13).

I found examples of what good looked like too. I got the impression of an organisation that really valued its (non-operational) staff, "*An enlightened organisation' in which career progression didn't depend on moving into management role*" (Convo 6). I was twice shown Insights© colour energy blocks (Red: just do it, Yellow: yes, count me in, Green: how can I help you? Blue: let me check the details) and told the organisation had benefitted from the Insights© training (Convos 6, 19). Knowing each other's personalities and strengths and weaknesses helped co-workers collaborate.

An example of 'Walk the talk' came from Convo 14 and illustrated how management modelled the culture they intended to create, "*[We] recently brought execs in from leave to address a design problem – ppl may die if we get this wrong*". Another, at team level, also suggested a sense of pride in work well done, or 'craftsmanship' as it was, "*Team works to my standard - although I place my stake in the sand, it's not set in concrete*" (Convo 27).

Literature evidence

### *Principles*

Principles seem to be an effective way for managers to grant autonomy to workers, because they allow people make decisions for themselves. The next examples are organisations which

publicly promote principles as part of their management system. Such openness is an invitation for stakeholders to hold its managers to account for their actions and for managers to live up to the principles they espouse.

One of the participants in this study had been a manager at Amazon and commented that their “*Leadership principles worked quite well*”. Amazon’s principles are built into their recruitment process as interview questions and many examples are online, including Management Consulted (2019). A friend once told me how the ‘Customer obsession’ principle was used to review an action that had a sub-optimal outcome. They had asked a customer services agent to explain how they had used the principles to arrive at their decision, then evaluated that process. In other words, managerial focus was on the process of decision-making, rather than the decision. Improving the person’s ability to use the principles was clearly considered more valuable than judging the person to be flawed and in need of fixing. This is congruent with the development part of Amazon’s sixth principle, ‘Hire and develop the best’ (Amazon, no date).

Principles seem to have worked well for the world’s largest hedge fund, Bridgewater Capital too, says Roush (2023). Its founder wrote ‘Principles’ (Dalio, 2017). Octogenarian Dalio, ‘Walks the talk’, openly sharing his wisdom and principles for life and work via social media.

My final example of the effectiveness of principles is The Agile Manifesto, comprising four values and twelve principles of Beck *et al.* (2001) which I have included in Appendix H: Manifesto for Agile Software Development. I have probably facilitated hundreds of conversations with diverse stakeholders about these and note that people unhesitatingly want what the principles have to offer but often argue about the values. My explanation is that the Manifesto’s values are those of software engineers, rather than what is valuable to finance, or legal, or sales people. The Agile Manifesto values (*ibid*) are contextual; valuing “Individuals

and interactions over processes and tools” makes sense in exploratory situations such as creating (software) products. Whereas the efficiency of operations tends to be improved by adhering to processes and using tools since they reduce variation.

### *Respect*

Comparing it with traditional management, Davenport (2005, p. 191) states “Management in the ‘knowledge economy’ is a different game, with different rules” and provides examples that align with points already raised, including, “From overseeing work to doing work, from organising hierarchies to organising communities, from supporting the bureaucracy to fending it off” (*ibid*). I cite Davenport as a Harvard academic although I recognise the practical approach presented by Joiner *et al.* (1994) may be more useful to managers. With a foreword by Deming, on whose work he draws, Joiner claims managers have only three ways to improve performance. They either a) improve the system, b) distort the system, or c) distort the figures. The recommended and desirable choice (a), involves understanding how to manage the organisation as system, believing in its people and affording them dignity and respect, and improving quality.

Respect for employees, such that they may take pride in their work, was prominent in Deming’s ideology. Voehl (1995) describes how Deming taught managers to remove the barriers to pride of workmanship collaboratively, as part of their role of improving the system. Quality mattered to Deming because anything less caused avoidable waste, whether it be a process, design, product, or meeting. This generic view of waste, and the drive to reduce it, is apparent in the writings of Ohno (1988).<sup>26</sup>

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<sup>26</sup> Deming worked in post-war Japan when Ohno was developing the Toyota Production System to reduce wastes of all forms. Lean practitioners use the Japanese word *muda* to describe seven well-known categories of waste, but the term really indicates a quantity greater than a few.

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Bhargave invites us to consider the shift that occurred in customer choice when Drucker wrote, “The purpose of business is to create and keep a customer” Drucker (1954 as cited by Bhargave, 2021). Whilst still generally advocating for Deming, Joiner *et al.* (1994, p. 11) propose that “Quality is defined by the customer”, an aspect of quality Deming calls the specification of a product or service (Deming, 1986). Products that have to be re-worked at the manufacturer’s expense and bugs in software services that have to be fixed are avoidable wastes because they can be avoided by improving the quality of the manufacturing or design processes. I suggest that a consequence of the resulting focus on the quality of the output is neglect of the quality of the processes and the quality of the worker’s experience. Joiner *et al.* expand the scope of perceived quality to include a “bundle” of customer-facing activities, products, and services (1994, p. 68), which is reflected in the request for customers to provide feedback on interactions so that the agent can know how they are doing. If such feedback is effective, and in my experience it is, then why do firms not introduce similar feedback mechanisms so that employees can tell their managers how to improve their service?

On a more positive note, the benefits of, and need for, greater collaboration is increasingly apparent. Joiner *et al.* (1994, p. 11) state that quality is “No longer the domain of special groups within the organisation”. Thus, a manager who actively improves collaboration and encourages subordinates to think and solve problem for themselves will engender different behaviour than the manager who tells people what to do and how to do it. This was established in an experiment made famous by Kurt Lewin in 1939 which revealed the stark contrast in behaviour between groups of children under autocratic and democratic supervision, from Lewin (1999). As well as revealing the effects of two styles of leadership, the experiment shows that when a person holds a position of authority, such as managers do, people generally follow their actions and instructions.





## 5.2 Enfolding literature

Having presented individual sharpened constructs as practices above, I now consider them collectively. The purpose of this section is to compare the hypothesis that has emerged, with relevant literature. That hypothesis is:

- The practices of ‘Create a caring context’, ‘Explain WHY’, ‘Develop eco not ego’, and ‘Walk the talk’ will help managers to resolve organisational tensions and improve the overall effectiveness of their organisations.

Eisenhardt (1989) states that, although literature comparison is more subjective than hypothesis testing research, comparing constructs and hypotheses with the ‘enfolding literature’ increases the validity of research. Also, that comparison with aligning and conflicting literature can lead to further insights, something that occurred when I explored the last paper in this section, Strode *et al.* (2022).

To further increase validity, I have selected literature developed over the past three-quarters of a century, as that includes the current and previous eras. Finally, I compare this hypothesis with the six basic tensions that I identified from the literature.

### Managerial practitioner literature

I have selected models and frameworks that are easily available to managers as sense-making devices. Passey’s description (2020) of academic conventions seems an appropriate guide for practitioners. In summary, and according to Passey, models simplify reality for specific cases, where conceptual frameworks provide more flexibility, identifying factors that influence major concerns.

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### Role of the manager, 1950s onwards

One of Deming's legacies is the idea of understanding the system in order to improve it. As with the example of an Amazon employee, this approach allows for employees making mistakes because they are human and requires the system to absorb such variations of behaviour. If it does not, the fault is with the system and it is that which must be improved, not the person. This conflicts with Taylorist notions that people should be treated like machines (or cogs).<sup>27</sup>

First published in 1999, and based on Gallup's research, Buckingham and Coffman criticise the ideology that sought to fix people's weaknesses and theorise that great managers were "Willing to individualize" (2005, p. 5). They find core activities that "Disrupt conventional wisdom: Select for talent; Define the right outcomes; Focus on strengths; Find the right fit", from Buckingham and Coffman (2005, pp. 62–63). With the possible exception of 'Define the right outcomes' matching 'Explain WHY', no overlap is apparent.

'Creating a caring context' raises manager's awareness of their responsibilities to the system, reframing systems thinking theory with humanistic caring for individuals. 'Develop ego not ego' extends the systems metaphor to the wider organisation, crucial for overcoming the effects of functional hierarchy and silos.

### Covey's habits of highly effective people

Covey's (1989) '7 Habits of Highly Effective People' are essentially principles. They are:

1. Be proactive

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<sup>27</sup> The principles of Taylor's (1911) 'Scientific Management' were widely adopted in the industrial age and are known as 'Taylorist' or 'Taylorism'.

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2. Begin with the end in mind
3. Put first things first
4. Think win/win
5. Seek first to understand, then be understood
6. Synergize
7. Sharpen the saw (Covey, 1989).

Alignment with my hypothesis is clear, although these habits are timeless and inherently good. Nonetheless, Habit 5 is essentially the mechanism for ‘Explain WHY’ and assumes one has an objective, hence the need for Habit 2. Habit 6 is an outcome of ‘Creating a caring context’, supported by both ‘Eco not ego’ and ‘Walk the talk’. Habit 4 could be a method of paradox thinking, similar to ‘both/and’. Habit 7 has no counterpart; learning did not emerge from my data. Habit 1 connects with the aim of this research, to help managers overcome the barriers to improving the overall effectiveness of their organisations.

### Google’s projects Oxygen and Aristotle

Google’s research into the need for managers, Garvin *et al.* (2013, p. 79), find that employees want a manager that: “Does not micromanage; Balances giving freedom with being available for advice; Makes it clear he or she trusts us; Advocated for team with others outside the team”. The Washington Post states that Project Oxygen, as it was called:

Shocked everyone by concluding that, among the eight most important qualities of Google’s top employees, STEM [scientific] expertise comes in dead last. The seven top characteristics of success at Google are all soft skills (Davidson, 2021).

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The article reported the findings from the contemporary follow-up, Project Aristotle, which looked at how the most technical, innovation teams were managed and finds that psychological safety topped a list similarly dominated by soft skills. Google continues to update and share its findings about managers through its website, re:Work. In 2019, they listed the top ten manager behaviours as:

1. Is a good coach
2. Empowers team and does not micromanage
3. Creates an inclusive team environment, showing concern for success and well-being
4. Is productive and results-oriented
5. Is a good communicator — listens and shares information
6. Supports career development and discusses performance
7. Has a clear vision/strategy for the team
8. Has key technical skills to help advise the team
9. Collaborates across Google
10. Is a strong decision maker (Google, no date).

Not only does Google make its findings public and continue to update its findings, but they also share knowledge and tools to help managers improve. They do the same with technical (DevOps and SRE) information (Google LLC, 2023). Google's managers 'Walk the talk'.

Google's manager behaviours 1, 3, 5, and 6, map to 'Create a caring context'. Their 4, 5, and 7, match 'Explain WHY'. 1, 3, 5, and 9, match 'Eco not ego', note there is no room for ego

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when coaching. Although not within the evidence, 8 could be interpreted in terms of ‘Walk the talk’. 10 did not appear in any of my constructs, although I would argue for systematic decision-making based on evidence rather than strength. I believe behaviour 2 belongs to all the practices of my hypothesis.

Comparing Google’s transparency with ideology of competitive advantage found in the strategy literature such as Barney (1991) and Porter (1998, 2000), highlights the difference between industrial and digital age approaches to management. The tradition of sharing theory was (and remains) normal Lean practice. Perhaps it was important in post-war Japan for industrialists to share ways of improving productivity, or perhaps it was the empirical nature of Lean that led to a culture in which people shared knowledge openly. There are interesting parallels here with the scientific methods of the academic world that may form the basis of further enquiry.

In relation to Davenport’s (2005) statement, Google’s findings suggest the rules of the game have not changed, but that following them properly has consequences now, where historically they could be ignored. In that sense, managing the digital age is a very different game to managing the industrial age. One where failing to ‘Walk the talk’ may result in career-damaging publicity and trial by social media. Although the prospect of ‘mob rule’ is alarming, the UK government “Revealed that social media doesn’t currently pose a serious threat” from Attorney General’s Office (2019).

### Clutterbuck’s PERILL model

Google’s (2013) findings were like introducing oxygen to a fire and Agile coaches helped it spread by showing it to managers as evidence of the value of soft skills and psychological safety at Google. On his website, Professor Clutterbuck says that the research he carried out for Facebook led to the development of a team performance model.

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The PERILL model identifies six key factors that interact to drive or hinder team performance and provides a framework for exposing and understanding those factors within the complex, ever adapting environment they work within. These 6 factors are:

- Purpose & Motivation
- External facing systems and processes
- Relationships
- Internally facing systems and processes
- Learning
- Leadership (Clutterbuck CMI, no date).

PERILL narrows the focus from practices that will help managers transform their organisation, to factors of team performance. Nonetheless, the mapping exercise is straightforward; Purpose to WHY, Systems and process to Eco, Relationships to Context, and Leadership to Walk the talk. As with Covey's (1989) 'Sharpen the saw', 'Learning' did not emerge from my data and remains unmapped.

In Lewis (2016), based on professional experience and empirical evidence, I suggest the role of the manager of teams working with Agile methods should include:

- Leading collaboration - to ensure teams were directly connected with all stakeholders and able to communicate safely with them;
- Ensuring prioritisation - so teams knew exactly what their priorities were and were empowered to say 'no' to all other demands;

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- Developing competence (especially their own) – such that learning became normal for the team and its managers (Lewis, 2016).

These roles complement the behaviours of my hypothesis by identifying practical aspects of ‘Creating a caring context’ and ‘Explain WHY’, as well as adding the missing practice of learning. It is interesting to note how well they align with Smith and Lewis’ (2011) ‘Belonging’, ‘Learning’, ‘Organizing’, and ‘Performing’ categories.

### Transformational practitioner literature

Recall from Chapter 1, that transformation describes changes to an organisation’s ways of working and how it is managed. Executive sponsors of transformational change may initially think that digital or Agile transformation is a top-down decision for others to execute, like installing accounting system or changing the incentive scheme. They may only discover its scope and difficulty through experience. Models and frameworks, such as those from the practitioner literature presented in this section, help people make sense of their context and hopefully, make better-informed decisions. However, they may be most useful as tools of self-awareness, helping stakeholders understand organisation’s current state, understanding what the next step on the improvement journey may look like, and giving them the space they need to adapt and plan accordingly.

### Laloux and Wilber’s organisational evolution

Laloux and Wilber’s model (2014) identifies characteristics of human organisational development as it progresses through:

Impulsive-red (tribal, strength-based)

Conformist-amber (hierarchical organisations)

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Achievement-orange (industrial-age giants)

Pluralistic-green (socially-aware), to

Evolutionary-teal (Laloux and Wilber, 2014).

It was a tool that I used to compare where I sensed stakeholders to be, with where they thought they were, and to create the template for discussing how they might move towards their next developmental goal. I mostly worked in high-achieving global financial institutions mired by conformist hierarchical command and control habits. Sharing the model and my observations, as a coach, helped stakeholders reflect on how their behaviour was holding them back from achieving their ambitions. One noteworthy observation is that all the very senior managers I encountered demonstrated a deep understanding of the numerous challenges facing their organizations. This suggests that if there were any straightforward solutions available, they would have likely been implemented already.

Laloux and Wilber's (2014) theory included the 'breakthroughs' firms must make in order to progress to the next evolutionary level. For example, the shift from Achievement to Pluralistic comes from empowerment, a values-driven culture with an inspirational purpose, and multiple stakeholder perspectives; and the firm's guiding metaphor will have changed from the organisation as machine to the organisation as a family (*ibid*).

As well as its theoretical model, the book described an enlightened form of organisation, identified by the colour, 'teal'. Patagonia and Buurtzorg, as well as Morning Star, Semco, WL Gore, and Zappos were offered as examples. One concern I had was that organisations that described themselves as 'managerless', were actually self-managing. I also noted how much they all depended on a pioneering founder's active leadership. Positively though, Laloux and Wilbur (2014) mention that leaders kept their diaries clear and spent their time



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helping people make their vision a reality. They ‘Walked the talk’ and spent their time ‘Explaining WHY’.

I read teal as ‘whatever emerges next’ and, having read the book, remained interested in hearing about these organisations, albeit mostly about failure (Eg. to make the Buurtzorg model work in the UK, or when Zappos’ board lost confidence in it). However, I remained most interested in Laloux’s mapping of organisational development to Spiral Dynamics.

In ‘Utopia for Corporate Realists’, Vogt (2021) undertook to “Sharpen Laloux’s metaphors for organisational development” offering ‘Market’, ‘Machine’, ‘Community’, and ‘Living’ organisational stages. I have included Vogt’s metaphors in Appendix I.

Corporate Rebels’ de Morree (2017) shared examples from many of the companies that Laloux researched but distanced themselves from teal ideology.

### Corporate Rebels’ habits

In the field of transforming ways of working, ‘Corporate Rebels’ stand out for having now visited 150+ ‘pioneer’ organisations and published what they learned. They discovered eight ‘habits’ (later ‘trends’) having visited 50 organisations, described as:

1. From Profit to Purpose & values
2. From Hierarchical pyramid to Network of teams
3. From Directive leadership to Supportive leadership
4. From Plan & predict to Experiment & adapt
5. From Rules & control to Freedom & trust
6. From Centralized authority to Distributed decision making

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7. From Secrecy to Radical transparency
8. From Job descriptions to Talents & mastery (Minaar, 2017).

Unlike Covey's personal habits, these are collective, systemic trends, and concern organisational factors of structure, governance, and transparency.

Trends 2, 3, 6, and 8 reflect the collaborative nature of knowledge work, the effectiveness of self-organisation, and the avoiding the negative effects that functional hierarchy and silos tend to produce. Trends 1, 4, 5, and 7 are pre-conditions, people who understand the organisation's purpose and values, should be trusted to experiment and adapt, having access to all available relevant information.

Corporate Rebel's research, which is shared freely, provides example practices and case study companies for each trend. For example, Trend 1, exemplified by Patagonia, Buurtzorg amongst other firms:

Have a bold purpose people can rally around

Translate purpose to everyone in the company

Hire for culture: train for skills

Managing Work Over Managing People

Put your money where your mouth is (Corporate Rebels, no date).

'Hire for culture' would be impossible in an organisation whose HR department screened and selected candidates and set the rules for interview. This issue is starting to be recognised as I have seen job adverts that encourage people to apply even if they don't feel confident in matching the skills. Aside from, what is in my opinion, the cringe-making example of people

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who may not feel confident give as, ‘Such as women and minorities’, the application forms that applicants are expected to fill-out remain an effective barrier to many humans, ensuring only a certain type of person will make it through the box-ticking checks that exist to filter-out incomplete applications.

‘Managing work over people’, resonates with my thesis of ‘manage tensions not people’. Both are another way of expressing Deming’s exhortation to improve the system not its people. One of his (many) famous quotes is based on his experience that only 3-4% of improvable problems came from people, Deming (1986).

### Academic transformational literature

As stated in the hypothesis at the start of this chapter, I believe managers must ‘Create a caring context’, ‘Explain WHY’, ‘Develop ego not ego’, and ‘Walk the talk’, if they are to resolve organisational tensions and improve the overall effectiveness of their organisation. True to the aim of this research, this section compares that hypothesis to the literature related to transformational challenges.

Unlike the trends of pioneers discovered by Corporate Rebels, above, the references in this section are based on empirical studies. The first paper, Appelbaum *et al.* (2017) is a literature review of ‘The Challenges of Organizational Agility’. The others follow a research thread sponsored by the Agile Business Consortium, a professional body, “Dedicated to advancing business agility” and whose perspective is of Agile transformation.<sup>28</sup>

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<sup>28</sup> According to the website <https://www.agilebusiness.org/>.

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Organisational transformation - Appelbaum et al., 2017

Appelbaum *et al.* (2017) introduce their review with an organisational tension, balancing “Operational efficiency and strategic agility”. Their report finds agility is affected by:

Agile strategy (strategic commitment to strategy, environment scanning)

Adaptable organizational structures (dual structures, network structures)

Agile leadership (leadership style, leadership dynamics, risk bearing attitudes and decision-making environments, leadership development)

Agile people (employee satisfaction, team striving and agility, sustainability)

(Appelbaum *et al.*, 2017).

These factors are directly controlled by management, raising the question of leaders’ awareness that transformation depends on their active participation in changing organisational structures and management models, not merely telling others to change.

Like Clutterbuck’s (no date) PERILL, these are key factors, but the correlation with my hypothesis is not as clear. For the sake of finding alignment, I would associate 1 and 3 with ‘Explain WHY’, 2 with ‘Eco not ego’, 3 and 4 with ‘Walk the talk’ and 2, 3 and 4 with ‘Create a caring context’.

Further challenging traditional ideas that transformation can be completed through one-off, top-down programs of change, Appelbaum *et al.* (2017, p. 73) conclude their review with a sentiment often expressed by Lean and Agile practitioners, “Becoming and maintaining an agile organization is not easy. It is a journey, perhaps without an end”. However, inaction is likely to be worse. Wischnevsky (2004, p. 361) notices that firms which carried out “Simultaneous major changes in key organizational dimensions” survived, when those which made no attempt to transform, failed.

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Although it seems obvious to say firms must transform or perish, the practicality for executives is sensing when and how often to engage in transformational activities. Tushman and O'Reilly's (1996, p. 28) article looks back at firms that failed to revolutionise and encourages managers to "Cannibalize their own business" by which they mean dismantling existing revenue streams in favour of innovation, before explaining why inertia makes such a suggestion impractical.

Agile challenges in practice - Gregory et al., 2016

At Agile conferences during 2013/14, Gregory *et al.* (2016, p. 19) thematically analysed 190 transformational challenges into themes of, "1. Claims and limitations, 2. Organisation, 3. Sustainability, 4. Culture, 5. Teams, 6. Scale, and 7. Value", ranked by number of challenges reported. These were too generic for this practitioner, and I have reworded the highest-ranking sub-theme from each to generate a list of popular obstacles for Agile transformation:

1. Misconceptions and interpretations about Agile (23 challenges of 46 in this theme)
2. Not enough collaboration between business and IT stakeholders (11 of 44)
3. Organisational culture has controlling, mechanistic beliefs, philosophically at odds with self-organisation (13 of 31)
4. Uncertainty about how to practice new methods (11 of 24)
5. Sustainable process improvement to maintain agility (15 or 23)
6. Scaling large, complex programs across multiple teams (10 of 15)
7. Demonstrating business value of Agile compared to Waterfall (7 or 4)

based on (Gregory *et al.*, 2016, pp. 9-10).

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The question is whether any of the management behaviours (constructs) I identified had the potential to overcome any of these barriers. Challenges 1 and 6 may be overcome through learning, whether by training or experience, perhaps with some ‘Explaining WHY’ that matters. The collaboration challenge of 2 is a good match for ‘Develop ego not ego’ and culture in 3 aligns with ‘Create a caring context’. Challenges 4, 5, and 7 would likely evaporate in the face of demonstration, as provided by seeing others ‘Walk the talk’.

Gregory *et al.* (2016) validated their themes and sub-themes by survey and comparison with a systematic literature review of empirical agile studies Dybå and Dingsøyr (2008 as cited by Gregory *et al.* 2016). They also compared their findings with the ‘Burning research questions from practitioners’ captured by Freudenberg and Sharp (2010). Despite the sixteen-year interval, which is a long time in software development, Gregory *et al.* (2016) recognise many challenges had persisted, although they thought the emphasis had broadened from team to organisation.

Freudenberg and Sharp’s (2010) enquiry occurred when Agile was starting to break-out from IT and into the organisational mainstream. Practitioners wanted researcher’s answers to:

1. Agile and large projects (7)
2. What factors can break self-organization? (6)
3. Do teams really need to always be collocated to collaborate effectively? (6)
4. Architecture and agile—how much design is enough? (6)
5. Hard facts on costs of distribution (in \$, £, € and so on) (5)
6. The correlation between release length and success rate (5)
7. What metrics can we use with minimal side-effects? (5)

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8. Distributed agile and trust—what happens around 8–12 weeks? (4)
9. Statistics and data about how much money/time is saved by agile (4)
10. Sociological studies—what personalities in successful/failed agile teams? (4)  
(Freudenberg and Sharp, 2010, p. 9).

These papers reveal what Agile practitioners wanted from research in terms of overcoming the barriers to helping organisations increase their agility. They do not necessarily reflect what business people want, nor what the transformation industry supplied. However, scaling Agile to address large projects became increasingly important in the early 2010s according to Dolman and Spearman (2014) as did the training and certification associated with such frameworks.

### Defining organisational agility - Walter, 2020

Walter's (2020) systematic literature review of organisational agility yields four categories of agility; drivers, enablers, capabilities, and dimensions. The author argues that organisational agility was a specific 'Dynamic capability' according to Teece *et al.*'s definitions (2016). Additionally, Walter references Katayama and Bennett (1999 as cited by Walter, 2020, p. 363) who assert that Lean and adaptability are "Mutually supporting concepts", further supporting my argument from Chapter 2 that these are paradoxical tensions of *variation-routine* or *steadfastness-agility*.

According to Walter's (2020) conceptualisation, examples of agility drivers are external (eg. competition, social factors, legal changes) or internal (eg. complexity), agility enablers could include workforce flexibility, technology, continuous improvement, and agility capabilities are responsiveness, competency, flexibility, and speed. The paper is useful to academics,

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providing definitions and a conceptual framework based on prior research. It is referenced extensively by Strode *et al.* (2022).

Empirical tensions encountered during change programmes - Strode et al., 2022

In a project sponsored by the professional body and involving its members, Strode *et al.* (2022) compared tensions in:

A district council addressing financial insecurity through culture change;

A university improving customer experience through operational change;

A charity supporting its customers more effectively by radically revising its strategy.

Although none were Agile transformations *per se*, the researchers found, “Each organization had faced an existential threat and recognized the need to be able to react more flexibly to major changes in the external environment” from Strode *et al.* (2022, p. 3577). Their findings are relevant to this project as they are tensions experienced in recent practice, involving participants and researchers with a similarly Agile worldview to mine.

I now compare the theoretical base tensions identified in Chapter 2 with Strode *et al.*'s (2022) empirical tension findings (See Appendix J for the full description of each tension). In Table 9, below, the prefixes are ‘Co’ for council tensions, ‘U’ for university, and ‘Ch’ for charity.



<b>Strode et al.'s (2017) tension</b>	<b>Base tensions from Ch 2</b>
Co1 Transformation versus business as usual (BAU)	<i>explore-exploit, variation-routine</i>
Co2 Distributed authority versus macrolevel goals	<i>agility-steadfastness</i>
Co3 Distributed authority versus regulatory processes	<i>intention-execution</i>
Co4 Required behaviors versus required skills	<i>illusion-reality, exploitation-preservation</i>
U1 Top-down versus bottom-up transformation	<i>intention-execution</i>
U2 Functional silos versus cross-functional cooperation	<i>variation-routine, agility-steadfastness</i>
U3 Maintaining knowledge versus moving to new ways of working	<i>explore-exploit, illusion-reality</i>
U4 One-shot delivery versus incremental refinement	<i>variation-routine, illusion-reality</i>
Ch1 Changing too quickly versus changing too slowly	<i>agility-steadfastness</i>
Ch2 How much to change versus how much to keep stable	<i>agility-steadfastness</i>
Ch3 Change for the short-term versus change for the long-term	<i>agility-steadfastness, intention-execution</i>
Ch4 Change the strategy versus change the structure	<i>intention-execution</i>
Ch5 Involving enthusiastic people to energize change vs involving representatives from the whole organization (enthusiasts versus representatives)	<i>variation-routine</i>

Table 9 Comparison of tensions with Strode et al. (2017)

The comparison above provides empirical support for the theoretical base tensions I developed from the literature. None of the empirical tensions went beyond the base tension categories and several could belong to two tensions.

Further, the comparison revealed a new insight, the prevalence of *agility-steadfastness* occurrences in Charity suggests that resolving that tension may provide the most leverage and be a valuable next step. This approach could help stakeholders navigate the long-term journey

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of transformation by sensing and setting short-term objectives. I explore managing tensions as a method of transformation, in the emerging theory section.

As I had done previously, Strode *et al.* (2022) mapped their findings to Smith and Lewis' (2011) theoretical categories of organisational paradoxes; 'Belonging', 'Learning', 'Organizing', and 'Performing'. Most of their empirical tensions fell into the Learning and Organising categories, but they gained insight from Smith and Lewis' (2011) distinctions between tensions as paradoxes, dilemmas, or dialectics. The result was a set of questions generated from dilemmas (U1, U4, Ch1, Ch2, Ch3, Ch4) and further questions generated from the dialectics and paradoxes. The use of tensions to generate questions for stakeholders is another idea that I discuss when I explore managing tensions as a means of improvement. I challenge Strode *et al.*'s (2022, p. 3580) suggestion to ask leaders questions before starting, based on Ch1, "How long do we need to spend on the transformation?" Or from U1, "How will we manage the transformation activities?" Such questions encourage the type of program planning and management that prevents agility. Transformation is an emergent-value activity, where the desired outcomes are predetermined, but the path to achieving them is only discovered by undertaking the journey.

Digital transformation - Plekhanov *et al.*, 2023

Swiss researcher's review of 537 articles of digital transformation literature frames the organisation within its larger system (ecosystem) and asks how digital technologies change the nature and organisation of the firm through an analysis of its "core activities, its peripheral activities, and its external environment" from Plekhanov *et al.* (2023, p. 821). Their approach, consistent with systems thinking as introduced in Chapter 1 and revisited in Chapter 6, revealed that:

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Firms that have come far in their transformations are more embedded in platform ecosystems with unclear business boundaries. Relatedly, we identify a tension between decentralizing versus centralizing power across organizational layers during a firm's digital transformation and how this dynamic affects corporate strategies and firms' internal and external boundaries. (Plekhanov *et al.*, 2023, p. 821)

Whilst the *centralised-decentralised* tension appears in the ambidexterity literature (eg. Martin *et al.*, 2019; Janssen & Haiko, 2016) it is especially important because of the shifts of power, control, and boundaries that occur during transformation. This happens both between departments internally (Mikalsen, *et al.*, 2020) and amongst organisations (Plekhanov *et al.*, 2023). A precedent for this is described by Adler *et al.* (1999) who observed inter-team collaboration, collaboration between teams and managers, and collaboration with suppliers in pursuit of the ambition to reduce change-over times. Any number of contemporary equivalents exist, since most people enjoy services that are interconnected digitally whilst being owned and operated separately (eg. Google's App store is a digital ecosystem that allows providers to deliver their services using Google's authentication mechanism).

### Paradox theory

Having introduced Smith and Lewis's (2011) paradox theory in Chapter 2, I here compare my findings with the unfolding literature and find support in terms of paradoxical tensions experienced during transformation, categorisation of tensions, and relating tensions with paradox-managing strategies. This improves the validity of my findings, as described by Eisenhardt (1989, 2021) and also strengthens the recommendations I make for managers in the next and final chapter.

Soh *et al.*, (2019; 2023) use the lens of paradox theory to examine the tensions experienced during digital transformations and conceptualise different pathways chosen by managers in

response. A similar finding, by Gregory *et al.* (2015), was that categories of paradoxical challenge of IT transformation were associated with particular responses by managers. In reviewing the transformation literature, and similarly to Plekhanov *et al.*, (2023), Soh *et al.* find different tensions arise from the competing demands at ecosystem, organisational, and program levels. Change programs challenge the well-established norms and structures of an organisation and are themselves a source of tension. For example, “IT program agility vs. IT project stability” from Soh *et al.* (2023, p. 1596), a tension that I would classify as *agility-steadfastness*.

Soh *et al.* highlight something that emerged from my conversations with managers, that tensions are normally unnoticed until a situation occurs that draws attention to the contradiction, in my case, asking managers about tensions and how they resolved them. Another change of conditions that could amplify tensions would be new demands, perhaps from newly encountered stakeholders (eg. a new manager), a change in legislation, or response to an incident that managers seek to avoid recurring. Whilst these are all triggers that could lead managers to engage with tensions, the practice of continuous improvement requires staff at all levels to find opportunities and create improvement – thereby embedding agency into the cultural practices of the organisation.

Putnam *et al.* (2016, p.1) found “five metatheoretical traditions—process-based systems, structuration, critical, postmodern, and relational dialectics” in the literature of organisational paradox and conclude their study with the observation that “need to develop a repertoire of responses” (*ibid.*, p.75) in order to prevent applying inappropriate approaches to situations. This is echoed in the opening chapter of Lewis (2023) in which I remind managers to select the project management control that is appropriate for predictable-value (plan-driven) or emergent-value (agile) activities.

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In their critique of, and agenda for, paradox research, Shad *et al.* (2016) emphasise the importance of the dynamics of paradoxes, rather than the (extant) focus on their categorisation and generalised approaches and outcomes.<sup>29</sup> Clearly, leadership behaviours (at all levels), the relationship between concurrent tensions, and the current context contribute to tensions and manager's response to them. Both Soh *et al.*'s (2023) and Putnam *et al.*'s (2016) papers recognise that paradoxes and tensions exist in dynamic combination. When seen as a complex system, with multiple interrelated and messy situations, systems approaches to understanding such as 'Soft Systems Methodology' developed by Checkland (1981) or the 'Viable Systems Model' as described by Hoverstadt (2020) are likely to be useful.

Microfoundations research takes a different approach than systems methodologies, seeking to understand factors at their finest granularity. Miron-Spektor *et al.*'s paper (2018) investigates individuals' approaches to managing tensions and conjectures that responses are determined according to people's 'paradox mindset'. As with the term 'Agile mindset', which I have heard used to blame or excuse managers who have not experienced successful Agile practices, the detection of an existing set of beliefs is not a theory of change. I recently re-listened to a program by Hammond and Dweck (2015) featuring Carol Dweck, who popularised the term 'fixed mindset', and who expounded her theory that educators and parents could encourage a growth mindset in children by rewarding effort not achievement. In contrast, Battilana *et al.* (2009) recognise that embedded agency is itself a paradox, being the product of multiple layers of organisational conditions ('field characteristics') the person's character and position within the organisation ('social position').

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<sup>29</sup> Shad's co-researchers are Lewis, Raisch & Smith; key names in paradox and ambidexterity.

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Whilst the intersections of paradox and change leadership offer a temptingly rich vein for further investigation of the literature, it is a step too far for this thesis.

### Comparison with tensions

This section brings two strands of my research together, the ambidextrous tensions identified in Chapter 2 and the management behaviours described in the hypothesis above. Readers will recall that I have already mapped the empirical tensions from my conversations with managers to the six basic tensions. Therefore, this step may be seen as further reinforcing the internal validity of my findings and supporting my theoretical arguments.

In Table 10 below, I map the manager behaviour constructs from the hypothesis with the six basic tensions, providing my reasons for each mapping.

<b>Basic tension</b>	<b>Matching constructs</b>	<b>Reasoning</b>
<i>Explore-exploit</i>	Explain WHY	Reasons and objectives for ambidexterity need to be clear in every context and people trusted to act towards those objectives
	Develop ego not ego	Overall effectiveness is the antidote to silo effects
<i>Variation-routine</i>	Create a caring context	Learning to manage variation as well as routine is a challenge to Taylorism and managers need safety and support to make this transition
	Walk the talk	A diverse workforce has more variety than some firms have been able to cope with, despite their rhetoric
<i>Agility-steadfastness</i>	Explain WHY	As for <i>explore-exploit</i>
	Walk the talk	Managers who lack the know-how to support both agility and steadfastness may gain the respect of employees by

		transparently recognising this and learning
<i>Intention-execution</i>	Create a caring context	One way to understand the organisation’s capacity is to be very present in it.
	Develop eco not ego	Viable systems have appropriately designed, functioning feedback mechanisms and the competence to respond to their signals
<i>Illusion-reality</i>	Walk the talk	Learning and improvement depend on self-awareness of limitations and development of competencies, true of managers individually and collectively as organisations
<i>Exploitation-preservation</i>	Create a caring context	It is increasingly obvious that we (individuals and organisations) have to care about each other and our natural resources
	Explain WHY	We have to explain why that matters and keep on explaining it
	Develop eco not ego	Value in the digital age comes from interconnected, open systems frequently with no primary provider – the internet is home to millions of ecosystems
	Walk the talk	Organisationally, it may no longer be enough to leave this to HR and Finance. They are support functions with disproportionate leverage over the ways in which people in large organisations work.

Table 10 Mapping of tensions to managerial behaviours (Lewis, 2024)

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As already noted, learning (Sharpening the saw) is noteworthy for its absence. As a construct it would be relevant to each and every tension, but it did not emerge from the data. I attribute that to the context and topic of the conversations, and I include it in my recommendations for managers in the following chapter.

The omission of learning serves as a cue to review the limitations of this research.



## 5.3 Insights

In this section I describe my scholarly insights on practice and organisational research. I consider what has changed for me personally, for my professional practice, and reflect on my methods of research.

### Insights that illuminate my profession

#### Overcoming inertia

As a result of analysing my conversations with a wide range of participants, I have come to realise that managers exist who are changing the ways organisations work through thoughtful and caring practice. Instead of waiting to be told how to transform their organisations by advisors, these managers are experimenting with ideas and techniques and actively improving their organisations, regardless of size.

My original view of managers had been informed by those I had worked with in large financial services organisations, in my role of agent or catalyst of transformational change. Typically, they would assume that what worked in one place could simply be replicated in another. Copying without critical understanding is undoubtedly dangerous.<sup>30</sup>

Corporate Rebels have been telling stories of firms pioneering new forms of management for a while and The Business Ecosystem Alliance have been highlighting both practical and theoretical developments. Although many managers are interested in these developments, the large firms of my experience preferred to follow similar organisations in their sector, rather than be pioneers, which was perceived as inherently riskier.

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<sup>30</sup> Agile coaches that see organisations superficially conduct Agile activities without engaging in its reflective improvement practices liken it to a cargo cult.

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It became apparent through this research that small acts of leadership, what Battilana *et al.* (2017) call ‘embedded agency’ and Ries (2017) terms ‘entrepreneurial management’, create managers that are experts in whatever they are attempting to improve. In my professional practice I had noticed that managers usually failed to overcome the obstacles they had been asked to remove and assumed it amounted to transformational failure. Reflecting on that observation and following the progress of some of those managers, I realised they had learned over time why those barriers were so detrimental to the performance of the organisation. They had made it their mission to overcome the organisation’s inertia and remove them. Some even felt confident enough now to tell their stories on stage so that other managers and organisations could benefit. It may have taken five years for them to understand and care enough about the problem to act but, having done so, their actions were pioneering and transformational for their firms.

### Managers with agency

In my small sample, only about half of the managers described ways in which they overcame barriers or managed tensions. The others observed, understood, and accepted them but lacked a sense of agency to act. A few were overwhelmed by them. I use the word ‘sense’ deliberately, as the way a person feels about their ability act matters more than any formal authority they may have. Equally, a person who feels they have agency will act as though they have it. This is the ‘embedded agency’ which Battilana *et al.* (2017) found within entrepreneurs.

I agree with Deming’s assertion (1986) that it is incumbent upon managers to improve the system of work. However, without explicit authority or incentive to take improvement actions, and without the knowledge of how to conduct an experimental change, managers prioritise maintaining the status quo. When a critical majority avoid making changes because

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they perceive it as too risky, Levinthal and March (1993) suggest the organisation develops inertia that resist change.

I suggest that shifting their attention to resolving tensions, and not just resources, could provide a way of encouraging managers to understand and improve their organisational systems.

### Tensions management

Whilst comparing my findings with the 20<sup>th</sup> century practitioner literature of Deming, Goldratt, and Drucker, I wonder why managers are still not doing things that are self-evidently right. Each of Covey's (1989) habits are common sense, but why, for instance are managers not diligently 'Sharpening the saw' through continuous learning and self-development? As I learned, the answer is that some managers do. Perhaps they are the 'great managers' described by Buckingham and Coffman (2005) and Google (no date). If so, they are not the majority of managers that keep the world's largest organisations running, they are the extra-ordinary few. The challenge is upgrading the world's ordinary managers.

Through this work I have become increasingly attuned to tensions. I notice that I have started using them to make sense of my world and have started experimentally sharing these insights. I recently invited a group of managers to consider tensions that were blocking improvements at work and consider how people were resolving those tensions.<sup>31</sup> In less than an hour, this new lens revealed insights that were both fresh and actionable. For instance, one pair of participants were concerned with a tension that had developed between certain high-status individuals and operational staff. The tension was well-known, and certainly a talking point amongst the staff, but recognising the tactics for resolving that tension was revealing.

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<sup>31</sup> A session for MBA candidates from Insper University held in London, March 2024.

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Usually, the operational staff conceded in all matters because disagreeing with such large egos was too uncomfortable. The alternative was to discuss the situation and encourage more collaborative behaviour, with the recognition that this would adjust the balance for a while, then the cycle would repeat, and another conversation would be required. Just like the yin-yang symbol, the nature of persistent tension is that the parts are in constant motion against each other. Recognising that there was no permanent resolution, only awareness of when the relationship needs rebalancing, seemed to be an acceptable outcome for the person experiencing this tension. Smith and Lewis call this ‘Dynamic equilibrium’ (2011) and Johnson describe it as ‘Polarity management’ (1993), others simply ‘continuous change’.

Even the exercise of classifying tensions reported by employees according to a set of theoretical groupings and noticing which occur more frequently is a simple and inexpensive way of prioritising improvement work. This insight emerged from comparing Strode *et al.*’s (2022) tension findings with my basic theoretical tensions.

### Transformation

A problem with intentional transformation is that the infrastructure and processes that are needed to support experiential learning are not yet available to employees. Unlike the fire fighters of Klien’s (1998) study, who had worked their way up through the ranks to become team leaders or section chiefs, there is no career path from machine age manager to digital age manager. As Agile practitioners move into executive management positions, they may be able to make policy changes within technology areas but are unlikely to change the thinking in HR, Finance, or Operations. A route other than formal programs of change is needed.

Tensions are plentiful in organisations, providing enough variety for managers to find a tension that really matters to them and enough opportunities for them to learn how to manage

them. Every tension identified and resolved is a single, tangible step in the direction of improvement, an exercise in agency, and an opportunity for learning through action.

The changes needed in management do not reject the old paradigm in favour of a new one but expand managerial capabilities to include an additional paradigm. Managing tensions is such an expansion and one to which managers are well-suited. There are many ways of shifting managers' focus from managing resources (important in the machine model) to managing ambidextrous tensions that could be transformational across all units and functions of an organisation. Perhaps an incentive scheme based on tensions management *and* performance?

### Mindset shift

As mentioned in my review of the transformation literature, I am suspicious of reports that blame the condition of people's minds for project failure. People have good reason to hold fundamentally differing beliefs and no amount of argument is likely to change them.

As an example, PRINCE2 Agile is the UK's project management methodology for Agile projects and its certified practitioners are tested, in detail, on their understanding and compliance with it. In the prescribed text, Cooke (2021, p. 20), asserts, "Work in an organization can generally be divided into two categories: 1) BAU activities; 2) Project activities" see Figure 9, below. The implication is that every PRINCE2 Agile certified project manager's understanding of work is that BAU activities and project activities are separate and should be managed separately. In a large, hierarchical organisation, such as those funded by government, this division of responsibilities must seem like the only possible reality and no argument is likely to convince them otherwise.

### **PRINCE2 Agile is for projects**

It is important to note that all of the PRINCE2 Agile content in this book applies specifically to *project* work, i.e. project delivery, project teams, and project stages. This is based on the understanding that work in an organization can generally be divided into two categories:

1. The *business-as-usual* (BAU) activities that are the ongoing operational tasks for the organization, such as manufacturing, customer support, sales, human resources.
2. The *project* activities that are temporary groupings of staff to deliver specific business outcomes, generally within a fixed time frame and budget.

*Figure 9 PRINCE2 Agile® Practical Implementation Guide (Cooke, 2021)*

Academics may recognise this as an ontological difference, but the term usually encountered in practice is ‘mindset’. A common criticism of managers (in literature and professional practice) is that they lack the ‘Agile mindset’ needed for Agile transformation to occur. My view has been that managers’ minds already function perfectly well but would benefit from extending to include Agile methods and principles. This is another application of the usefulness of ‘both/and’ over ‘either/or’ as a proposition.

‘Either/or’ is further amplified by Agile evangelists’ focus on the unique, individual, emergent-value project-based activities of interest to them, leaving the improvement of predictable-value, BAU activities to others. Those others may be Lean experts or, more likely, functional managers whose priority is operational performance and for whom project work is usually inconvenient and often disruptive.

My Director of Studies took the criticism of mindset one step further, advancing the critical thinking argument that we want managers to exercise their minds, not develop minds that are set. But how to help managers shift from ‘either/or’, through ‘both/and’, to critical thinking?

Bingham and Eisenhardt’s (2011) observations on the use of heuristics in the workplace explains why this shift is unlikely. Thinking, which is an expensive activity for humans, is bound to be replaced by less expensive ‘simple rules’ and eventually, by habits, which

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require no effort at all. Presumably, those habits gather inertia and continue until they are disrupted by events, or someone makes the effort to change them (which is the desired improvement activity of this thesis).

The shockingly simple way of achieving a mindset shift is to replace managers with those that have the desired way of thinking. This happens incrementally when individual managers are replaced. Regardless of any deliberate changes the incoming manager makes, they inevitably behave differently to their predecessor and, like ripples spreading through a pond, that difference is felt throughout the organisational system. My view of change is that it follows awareness, whether that comes from reflective, practice, or theoretical learning.

Ideally, improvement occurs following managers' learning from the experimental changes they make. This supposes they have the necessary data and know-how to benefit from what Argyris terms 'Double-loop learning' (1982). Continuing professional development may help managers gain the competences needed, provided it is available, practical, and they have the desire to learn. Managers' self-development is not confined to gaining technical skills. Increasing self-awareness through reflective process or self-development changes the way people thinks and behave over time. Either way, it seems likely that organisational change follows the personal transformations of its managers.

As a reminder of the significance of our minds, Shankar offers the perspective of the mind being infinitely bigger than the body, turning upside-down the way we normally think we are contained, from *Art of Living* (2011). In the context of a guided meditation, this perspective creates an adaptive space to explore and inhabit. No meditation is transformational, yet its continuing practice has cumulative benefits, as studies by the University of Oxford's Mindfulness Research Centre have found. Similarly, my experience of meditation helped me through the COVID-19 lockdown and subsequent difficulties. I now maintain a near-daily

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mindfulness practice and notice I am more prone to the effects of stress when I do not practice. This tells me that I am better at noticing what my physiological state after four years of practice, and that the practice helps me to manage my stress.

In the context of transforming organisations, it is appropriate to consider change as having psychological, intellectual, social, and technical dimensions. I will explore organisational transformation as a complex, transdisciplinary endeavour in the next chapter.

### Insights that inform my practice

#### Beyond Agile

My relationship with Agile has changed over the years and whilst I tried to research it in my Masters, I notice I shifted away from it whilst writing literature review for this project. I avoid the term in business because it is ambiguous and is sometimes associated with failed transformation attempts, speaking instead of pragmatism and effectiveness. Agile's methods are simple enough but seem counter-intuitive to people familiar with the predict-plan-control ways of machine model operation. Although Agile originated in software development practice, it is based on engineering principles and industrial theory. In Lewis (2022) I explain why it is good for emergent value activities, such as research and development, but a poor choice for predictable value activities. Neither is it sufficient for navigating complexity. According to Snowden (2023), Agile's industrial origin makes it unsuitable for abductive, practitioner research, leaving only Bateson's metaphor and Snowden's own 'exaptation', as abductive methods. To that list I would add 'adaptive spaces', as described previously.

When I first engaged with Uhl-Bien's academic research on adaptive leadership and organisational adaptability I saw it as a proxy for Agile, even asking her if that was reasonable (Uhl-Bien, 2021b). As I researched ambidexterity, I noticed how it paralleled



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Agile's timeline and complemented Agile's practice-based origin story. Finding ways to combine the approaches appealed to me ('both/and'). As I developed new categories of ambidextrous tensions, and abductively matched them with ways to manage those tensions, I realised that managing tensions instead of resources could be a transformational approach for management in general. I could argue the benefits of such a zero-cost improvement, but as long as executives invest in digital and Agile transformation programs, they will sustain a transformation industry that exists to provide them with what they are prepared to pay for.

### Theory versus practice

As a practitioner attempting an academic endeavour, I have been acutely aware of the tensions between academics and practitioners. I characterise the most obvious tension as an intolerance of each other. Academics' reluctance to state a position and tendency to present balanced arguments infuriates business people looking for a straight answer to a question.

Which is, presumably, a form of reductionism and lack of criticality that bothers academics.

I did notice that my practitioner perspective was valued, both by my Director of Studies and supervisor, who pointed out that theory usually follows practice. That was the case with organisational ambidexterity which provided an explanation for why firms separated innovation from operations activities. They reminded me that I was unusual in that I was using practitioner knowledge in an attempt to develop theory.<sup>32</sup>

The *theory-practice* tension raises the question, what theories are managers applying?

Managers that have completed business administration Masters or Doctorates (MBA/DBA) may have been given case studies to learn from on the assumption that those cases were 'best practice'. That approach conforms to the organisational thinking that change can be

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<sup>32</sup> Not that I needed reminding that I was unusual or that my thinking challenged convention, as I feel those tensions normally.

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replicated and was criticised by Deming (1986) for being only theoretical. However, I came to the conclusion that engaging with learning is better than relying on experience alone and that those who are motivated and willing to learn, will do so.

### Exploiting resources

I had included the *exploitation-preservation* tension as an outlier, as regards 2.3 Exploration and approaches to managing organisational tensions. It came from sources concerning relationships between firms and the environment in the farming and fishing industries and had no obvious link to the internal transformation of organisations. However, through my conversations with managers, I began to recognise the wider importance of exploitation of resources in relation to my own practice.

Considerations about the physical environment in the extraction of fossil fuels was a tension source capable of causing ecological anxiety, but I noticed another tension during Convo (14). It was the care shown about the health and safety of workers in oil and gas exploration that caused me to reflect on the relationship between an organisation and its human resources.

It is one thing to empower staff to improve their system of work in anticipation of increased input or output, but another to insist on increases without understanding their capacity. When production relies on machines, each is fitted with an indicator to show the safe working load.

If human foreheads were fitted with a dial that showed when the person was nearing their red-line limit, nobody would expect the people that reported to them to spend more than a few moments in that danger zone. Yet humans are not, and managers throughout the hierarchy do this. No matter that it is from incompetence, ignorance, or exploitation.

Certainly, it bothered Deming since, “Management by numerical goal is an attempt to manage without knowledge of what to do, and in fact is usually management by fear”, from Deming (1986, p. 76).

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Stress is the likely result of expecting increased output from staff (managers at every level and workers) operating near the red line. Surveys of Danish workers from 2016 to 2020 by Bonnesen *et al.* (2022) found that managers transmit stress to their direct reports, and the effect is detectable for a full year after initial transmission. This may be happening at every level of the hierarchy, since the surveys explored the relationship between employees and their direct manager.

The HR function, which used to be called Personnel and is increasingly known as People, or People and Culture, have an organisation-wide remit and authority. The Head of HR usually sits at the top table and HR's initiatives and policies can help or obstruct managers' in their context-developing activities. But HR can be just another silo, hiring to meet each department's needs, organising staff appraisals, and facilitating disciplinary matters.<sup>33</sup>

I always find it uncomfortable when people refer to needing 'more resources' when what they want is more people. As an agent of change, I sometimes nudge people to think about the words they use by asking "do you mean people?" I suspect the term is merely a remnant of the machine model of organisations and recognise that letting-go such legacies is necessary for transformation. Yet on reflection, I wonder if depersonalising work is also a way of avoiding doing that work. For instance, I sat through a 90-minute meeting this morning attended by 31 people, who lamented 'not having enough resources' to write the documentation needed to develop another version of their product, when it was quite obvious that at least half of the people there were more than capable of doing that work. They knew their organisation was financially threatened and could not afford to hire people to do the work. They also must have known that these new products were likely to increase revenues,

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<sup>33</sup> This is why the Agile HR movement is attempting to rewrite the HR playbook. See this description as an example by McMackin and Heffernan (2023): <https://www.hrmagazine.co.uk/content/features/agile-how-hr-is-changing-shape/>.

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yet nobody stepped-up to do the work themselves. These staff did not seem to be being exploited but did seem to suffer a form of institutional helplessness.

Sadly, this story seems to confirm the fear which I have often heard expressed, that ‘if you let people get away with it, they will do nothing’. Now I have a response to that, which is to ‘Create a caring context’ and engage directly with people. It will soon become clear who is engaged and who is taking advantage of the organisation.

### Methodological insights

I intended to highlight what successful digital age managers were doing, then explain that in methodological terms for others to follow. This matches the process of critical management research described by Alvesson and Deetz (2000) as interpretation (of observed phenomena), critique (to understand the forces and tensions), and ‘transformative redefinition’. My approach was based on Eisenhardt’s (1989) method of theory-building from case studies.

### Eisenhardt’s method

I remain enthusiastic about Eisenhardt’s (1989) method although I now recognise that I probably chose the wrong method, for all the right reasons. Hopefully, I articulated those reasons adequately in Chapter 3. In my literature search I cited papers that employed Eisenhardt’s method and used several papers co-authored with Eisenhardt herself. All seemed of admirably high quality, adding to my confidence in my choice. However, without the guidance or mentorship of an Eisenhardt practitioner, I should have been more cautious. But caution is not my way, and I went directly into action by following the descriptions in the available papers, principally Eisenhardt (1989, 2021).

The result was certainly not disastrous, but I could not anticipate which parts of the description would prove difficult for me to follow, or the parts that I would fail to properly

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understand. Neither is a criticism of the author, who made no claim to have written an operator's manual.

In particular, I paid insufficient attention to the importance of constructs in the method. Only when I tried, and failed, to produce hypotheses did I realise I had missed the relationships between sharpened constructs. That was a significant setback, as my constructs until then were simply themes. The consequence was that I had to re-analyse my source data to develop dimensions appropriate for each construct but by then, it was too late to ask specific questions for specific dimensions. The result is that my sharpened constructs are more subjective than they would have been had I made this realisation earlier in the process. In other words, although I was iterative in data gathering and analysis, taking my early iterations all the way through to the later steps of the method and attempting to sharpen those constructs would have revealed the missing dimensions sooner.

I had further problems understanding the final steps of the method, such as how relationships between constructs became hypotheses and how theory emerged from those. I had already investigated what was meant by mid-range theory of the type that grounded research may produce but found myself in something of a crisis of relating this knowledge to the method. Producing the diagram (Figure 4) helped, as did numerous re-readings of the source papers and of my research activities (in Chapter 4). It is rare for me to experience imposter syndrome, but when I finally saw the way through my confusion, I felt I was unprepared and unqualified to express any opinion as though advancing a theory. My reluctance was such that I strongly wanted to stop after having written the worked example of managing tensions as a means of transformation in Chapter 5.

What did get me started on the 'Emergent theory' section of Chapter 6 was revisiting my research aim. Therein lies the real appeal of Eisenhardt's (1989) method for me, which is the

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way each artefact (construct, hypothesis, theory) is validated with the ‘enfolding literature’ and through ‘constant comparison’ with the data. It is this set of links from practitioner data through to emerging theory that could be used to communicate theory back to practitioners. Eisenhardt (2021, p. 151) stresses the importance of this as an academic, “Such arguments are at the heart of theory building because they address the internal validity and logical coherence of the emergent theory”. It falls to researchers writing for practitioner publications to explain the benefits to practitioners in terms they would understand.

Were I to use the method again, I would break-up the ‘Shaping hypotheses’ step (see Figure 3) to clarify there was:

Further analysis to sharpen the constructs;

Consideration of the relationship between constructs to develop hypotheses;

Emergence of explanatory theory to support those hypotheses.

I would also rewrite the ‘Enfolding literature’ step so that it appeared at the end of each of the above proposed steps. This may address one of the challenges for novice researchers who “Are typically less adept than experienced researchers at shifting among levels of abstraction and construct definitions” Eisenhardt (2021, p. 151).

### Title evolution

The history of the titles I used and rejected indicates the evolution of the WHAT and HOW of my research and lately, the ways in which I followed the emerging findings of my research. My purpose remained constant and has been my professional mission for many years; to transform workplace effectiveness by working with managers to re-define their role for the digital age.

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Before ‘Transforming large organisations; towards a theory of management for business agility’ there was ‘Strategic transformation of large organisations; towards a theory of enhancing management through business agility leadership’.

Whilst articulating my findings from analysing conversations, I realised that ‘Strategic transformation ...’ was not a safe description. I had spoken with participants about tensions and how they resolved or managed tensions and, although transformation came up at times and many of the people that I met were making changes they hoped would be transformational, I had no evidence that what they were doing was part of a strategic initiative. Neither did I believe the term ‘strategic transformation’ communicated what I had intended, a catch-all for improvements sponsored at board or executive level.

I became disenchanted with the term ‘business agility leadership’ when I discovered it was in commercial use by a firm selling Agile consulting into the upper levels of hierarchy. I also realised people might read it as yet another variation on leadership, whereas I wanted to highlight the value of managers as leaders of change at all levels of the hierarchy.

As I moved from research plan (Chapter 3) to research activities (Chapter 4) I had to recognise that I was not going to be facilitating managers’ change journeys and would be unable to observe their process. This led to changing my aim, which had been to understand the process by which managers overcame barriers, resulting in the slightly more feasible aim, ‘To understand how managers overcome the barriers to improving the overall effectiveness of their organisation’.

I was happy enough with my Director of Studies’ suggestion of ‘towards a theory’ in the proposal stage. The implications of that phrase only hit me when I noticed how scared I was to write those words as a heading within my findings.

Previously, my titles had been oriented towards practice:

*Transforming large organisations;  
towards a theory of management for business agility*

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- Towards management theory of Business Agility Leadership in the strategic transformation of large organisations (March 2022);
- (Understanding) The barriers to organisation-wide business agility (January 2022);
- Agile coaching for IT management (March 2020).

The term ‘Agile coaching’ had led to all sorts of confusion and uncomfortable misunderstandings at a previous university. In contrast, the transdisciplinary program at Middlesex felt like a natural home, a place in which it was normal to delight in complexity.

### Personal insights

It is difficult to explain to anyone that has not been through the process, why a professional doctorate is such a difficult and lengthy journey. Reflection has allowed me to see where I went wrong and what I could have done differently, but there is nothing I could say to a younger me would simplify the journey. Perhaps that is the nature of experiential learning.

### The issue of illusion-reality

One issue I find hard to reconcile is that *illusion-reality* is not a paradoxical tension but a fact, essentially a conflict of beliefs. Nobody wants their beliefs to be illusory, neither is there a valid defence for believing in illusion over reality. As a corollary, it stands-out from my list of basic tensions in that its resolution should be straight-forward and the consequences of its resolution would undoubtedly be transformational. I may have been emotionally motivated to include the phrase as it has such a powerful ring to it, and I have frequently experienced this same resistance to change. Part of the frustration for professionals is that facts change and sometimes simply need updating, so people’s tenacity can seem unreasonable.



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*Illusion-reality* came directly from Ohno's (1988) account of leading the transformation in Toyota's factories. Ohno san<sup>34</sup> used experimentation to allow managers to see where their assumptions were flawed, ensuring they did not 'lose face' in front of their subordinates, whilst still developing a system of management that would become known as the Toyota Production System (TPS) (*ibid*).

Having socialised the *illusion-reality* tension in the context of transformation since first encountering it, I have collected a number of opinions on the matter. One of my examiners points-out the difference between ignorance as comfortable illusion and uncomfortable knowledge (when illusion encounters reality). Rayner's (2012) title positions 'uncomfortable knowledge' as "the social construction of ignorance" offering denial, dismissal, diversion and displacement as coping strategies. Alvesson and Spicer (2012) posit 'functional stupidity' as an institutional lack of reflexivity and intellectual application, apparently the opposite of Battilana *et al.*'s (2009) 'embedded agency'. Following my presentation on tensions to a conference in Berlin, an ex-executive offered three suggestions for leaders defending illusion over reality: disbelief because they are experts in the illusory way; not wanting to accept a new approach because they did not invent it and will not get credit for doing so; unwillingness to lose power and control associated with sharing information transparently, from Benjamins and Lewis (2024).

### Working with literature

Whilst much ambidexterity theory is concerned with strategy and organisational design, I was interested in its microfoundations. I wanted to understand how managers could produce ambidextrous results, individually and in context. I was less interested in the arguments for

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<sup>34</sup> San is the Japanese honorific used when referring to or addressing a Japanese person, formally.

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structural ambidexterity and began to perceive them as barriers on the way to something more interesting, such as Papachroni and Heracleous' (2020) riff on Greek philosophy.

I was familiar with the two seminal papers in contextual ambidexterity - Adler *et al.*'s (1999) factory study and Gibson and Birkinshaw's (2004) study of 41 business units, both providing evidence that managers created the conditions for ambidextrous performance in context – and keen to continue a practical line of enquiry. I was therefore delighted to have amplified the connection between TPS and contextual ambidexterity through Adler *et al.*'s (1999) account of how ambidextrous performance was achieved at NUMMI, the Toyota run plant in California, USA.

I also noticed that I projected feelings onto some researchers based on how much I enjoyed or agreed with their writing and, with gentle reminders from my ever-patient supervisor, learned to make the conscious effort to maintain a dispassionate and critical stance.

### Positionality

I proposed this project as a consultant who had previously helped managers improve the performance of very large firms. I always did this in collaboration with managers, incrementally and systematically overcoming organisational barriers through co-inquiry and co-creation. I was often told that I offered an additional perspective and provided the safety for dialectic and practical experimentation. There were plenty of barriers, varying from the unintentional disablement of engineering to the misunderstanding of objectives, but the context was organisations transforming themselves in order to ensure their survival. The stakes were high and the consequences of failure terrible. Mine was a dark worldview.

It had been my intention to study theoretically selected cases from the next organisation that hired me, taking advantage of the relative ease of enrolling colleagues in research

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conversations. As it happened, I had no such contract running when I was ready for the empirical research and that opportunity never arose. Instead, I had conversations with people prepared to go out of their way to speak to me. Some were in-between jobs and already in a reflective frame of mind, some wanted to support my research project because they thought it worthwhile, and others wanted to share their own learnings. Crucially, they were participants and not people I had been hired to help. Consequently, my conversations were oriented towards absorbing managers' views of their world, and I was pleased to discover that many of their ways of working, or at least thinking and describing work, were consistent with my own. In shifting my position from consultant to researcher I changed the dynamics of my relationship with managers. Instead of overcoming barriers together (us against them) I was admitted to the manager's worlds, as they perceived them.

One problem with not being able to select other people from the same organisation or department, was that I heard only one version of each story. I could only make a value judgement after each conversation to decide how much of what I heard was likely to be a biased internal perspective and how much was likely to be objectively true. This is where the (candidate) construct of manager's self-awareness came from (see F.3 Constructs which emerge from reflection (including learning from failure)). I note that Corporate Rebels addressed this issue in part by visiting SMEs, rather than relying solely on what CEOs said.

### Personal transition

Having written my dissertation I feel that my professional doubts concerning Agile transformation can be justified. Agile methods are valuable in the right context and when used appropriately but organisations need methods that sustain BAU as well. As for transformation, the scope of transforming an organisation's ways of working must include its ways of managing, by means of addressing the normal tension between illusion and reality. It

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may result from educating managers (training and development), incentivising experimentation (double-loop learning), or some other means.

Although this project has concluded, my learning process feels like it wants to continue. By doing research following Eisenhardt's (1989) method, I have learned where I lost time and focus, as well as where the quality of my inputs and outputs could have been higher. I have learnt from theory and action and feel I now want to apply what I have learned. I seem to be naturally wired for continual improvement.

Overall, I have enjoyed weaving professional and academic constructs together and feel that I have produced outcomes that will benefit both communities.

One observable impact on me, is that I recently applied for a role with one of the country's largest academic organisations. One that, according to employee reviews on Glassdoor is very slow to change, and whose Head of School is determined to improve, seemingly with my help.

## 5.4 Assessment and limitations

The aim of this project has been to understand how managers overcome the barriers to improving the overall effectiveness of their organisations. It serves my purpose of helping to transform workplace effectiveness by working with managers to re-define their role for the digital age. At this point, I assess my performance and review this work's limitations.

Several conclusions have emerged:

- Managers make sense of their environment and manage the context according to their beliefs and sense of agency, which may include organisational improvement or not;
- Managing in the digital age includes wider contextual factors, such that managers must manage social and technical factors, and not resources;
- Tensions are easily recognised in the workplace, suggesting that managers can use tensions to engage widely, understand, and improve organisations;
- Continued and widespread improvement by managers at every level of the organisation may be seen as transformational in retrospect;
- Contextual ambidexterity and paradox theory provide a theoretical basis for managers to manage tensions as a means of organisational improvement;
- Beyond *explore-exploit* as a paradoxical tension of organisational ambidexterity, basic tensions of *variation-routine*, *agility-steadfastness*, *intention-execution*, *illusion-reality*, and *exploitation-preservation* are identifiable.

As highlighted by one of my examiners, these findings are important for organisations of all sizes, not only those that are large or well-established.

### Objectives

Reviewing my stated objectives for this research, I have:

1. Described the context in which this research takes place;
2. Critically analysed the organisational literature to position my research and searched for theories of transformation and contextual ambidexterity, but not strategy, management, or leadership;
3. Selected an appropriate research design by performing critical and contextual analyses;
4. I failed to convince a senior manager of a large organisation to act as gatekeeper and allow their managers to be actively involved in my study. Specifically, senior managers were supportive but either not senior enough to issue the authorisation directly, or unable to gain formal written consent internally;
5. Applied Eisenhardt's method to iteratively:
  - a. Gather and analyse structured data provided by individuals, not groups of managers nor cases;
  - b. Identify constructs from structured and narrative data, constantly comparing emerging ideas with data and, to a limited extent, replicated cases for validity;
  - c. Sharpen the constructs and shape hypotheses by comparing data with the literature.
6. Recorded the activities, outputs, observations, and reflections of the above, then wrote this account of what I did, in the form of a doctoral thesis.

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I did not, as part of Eisenhardt's method, iteratively 'facilitate a shift of conditions to discover what else managers think or believe about their capability to effect improvement' as I had planned. Nor was I able to take advantage of any mixed methods.

### Comparison with what I set out to achieve

Comparing my achievements with the objectives I listed in 3.4 Aims and objectives, I have made a compelling case for helping managers recognise that the barriers to improving their own organisations can be overcome with the right approach, and that improvement is their responsibility. Specifically, I have;

- Strengthened management theory by helping managers recognise they can and should improve the effectiveness of their organisation;
- Described a method (of business agility leadership) that managers can use to identify and overcome the barriers to improving their organisations in situ;
- Contributed empirical (not case study) evidence to the practitioner literature in support of existing theories commonly used by agilists;
- Contributed to the literature of transdisciplinary practitioner research and raised awareness of its value for organisational improvement professionals.

Whether or not I have done enough to convince managers that the barriers are of their own making, remains to be tested. No doubt they understand it as a consequence of management collectively, and perhaps that is sufficient for them to undertake to make improvements as individuals and self-organising groups of managers.

### Limitations to research

As an emerging researcher I recognise that I lacked the benefit of guidance from an experienced Eisenhardt method practitioner. As a self-learner, I learned a lot and feel I now have the knowledge and experience to repeat the research at a higher level of quality. Indeed, I experience the tension of wanting to start again and do it better, versus completing a study that is good enough to fulfil its purpose. I had the opportunity to share this insight when a fellow professional doctorate researcher said he was seriously considering starting over. Donning my figurative mentor's hat, I invited him to consider the opposing force, that perhaps what he had done was already 'good enough'.

The story illustrates something that will be seen as a limitation by uni-disciplinarians and richness by multi-disciplinarians. As well as highlighting a tension, appropriate to my research into managing tensions, I was using the 'reframing' technique from Neuro Linguistic Programming, 'contracting' (by inviting not telling) from coaching, and 'offering' the benefit of my prior experience from mentoring. Although we all have several different hats, and exchange them readily in real life, it is not the accepted way of doing and presenting research. Perhaps my research will be criticised for being 'neither one thing nor another'; neither focussed nor transdisciplinary enough. To which I would counter that:

The research exhibits the duality of my supervisory team. It has elements of pure PhD (starting with a question and following an established methodology) as well as expressions of transdisciplinarity (experience of a complex world in which the researcher is contributor, provocateur, and observer).

Given a total of 36 conversations, my participants came from too wide a variety of industries, experience, and positions to be representative of any group or industry.



## Chapter 5 Findings

The research followed most of the steps of Eisenhardt's (1989) method, to some degree, except that:

My data came from individuals not cases.

Participants were self-selecting, not theoretically selected.

Although I compared constructs within and across conversations (Eisenhardt's 'in case' and 'cross case' comparisons) the opportunity for using replication logic was limited because I had no pool of people or cases from which to select.

Little or no conflicting literature evidence was provided.

Although I never used any quantitative methods to confirm my findings and present a mixed methods study, I believe the transparency and integrity of my documented qualitative research is 'good enough' to be considered a robust and useful contribution at the level of a professional doctorate.

## 5.5 Recommendations for further research

Having now established that managing tensions is a concept worthy of further investigation, the obvious next step for me is to conduct the research as designed, through multiple case studies. That is, speaking with managers and staff that work in the same organisational entity (team, department, division, firm) and comparing findings with people in comparable roles in other organisations (theoretical sampling).

Further research is needed to validate the six tensions I identified and explore the resolution strategies that I proposed in Chapter 2. Similarly, theory-testing research of the recommendations for managers in the chapter which follows.

Battilana *et al.*'s (2017) paper, from which I acquired the term, 'embedded agency', examines the paradox of organisational forces that both control what employees are able to do and describe activities that remain unknown (such as entrepreneurship). A rich area for future study with organisational psychologists and practitioners perhaps, would understand how managers can move into those unfamiliar areas and overcome the inertias that resist change. My findings, based on my comparison of theoretical tensions and empirical findings, raise questions about our systems of management, such as:

Why do our organisations create managers that lack agency, when the design of our organisations assumes otherwise?

What are the differences in tensions and tensions management between flatter and hierarchical organisations, diverse and mono-cultural organisations, digitally savvy firms and those struggling with transformation?

From the themes which emerged from my initial, thematic, analysis of the data, it would be interesting to investigate toxicity and mismanagement, and reflective self-awareness amongst

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managers. The two are related, as in the ‘Shadow side of leadership’ according to Kets de Vries and Balazs (2011).

Finally, exploring the construct of ‘Explain WHY’ led me to ask another question about the implicit purpose of growth and goal of longevity for firms. When Tushman and O’Reilly wrote about ambidexterity in (1996) they declared that long-term survival was the goal of all firms. Growth has long been the success criteria for firms, becoming the *de facto* purpose for many. Or, as Stafford Beer reminded people, the “Purpose of a system is what it does (POSIWID)” not what it fails to do, from David and Komlos (2021). The primacy of shareholder value can lead to short-termism, particularly in America where public companies report quarterly to the markets, leading to a media event that, from Investopedia (2022) likened to “The Wall Street equivalent of a school report card”. If this no longer satisfies stakeholders, how are managers responding to:

Increasing awareness of the responsibility that firms have to all stakeholders, not only shareholders?<sup>35</sup>

Organisational nervousness over social justice, and environmental anxiety, together with increasing demands for transparency, accountability, and inclusivity?

A generation entering the workforce that do not feel obliged to stay in a job and whose motivation, according to Pink (2012) depends on having a purpose in which they believe?

Finally, the firm of Convo 14 was interesting for having completed a two-year period of private equity backed intentional change and could be considered be transformed. I met with

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<sup>35</sup> Companies that are committed to benefiting all stakeholders (workers, communities, customers, and our planet) can certify as a ‘B Corp’, see <https://www.bcorporation.net>.

## Chapter 5 Findings

one of the transformational leaders and would have liked to have been able to speak with other members of staff to gauge how transformational the changes really were, compared the leader's view with what managers saw, and investigate what happened next in terms of continuous improvement or relapse of old habits. Since private equity ownership is increasing (presumably replacing institutional shareholder investors), I wonder:

How the context of private equity ownership, with its sharp focus on medium-term increase in the value of a firm, changes management behaviour?

Is the performance of firms measurably better under the scrutiny and guidance of owners who are effectively expert managers?

## 5.6 Summary

Firms rely on analysis and engineering skills to understand customer's needs and improve user's experience. Digital age work involves both exploring new knowledge, understanding problems then designing solutions, as well as improving the efficiency of operational systems. That means the average person's work has changed from only following an operational process (Run), to now deciding when to follow a pre-defined process and when to find a path to achieve a new outcome (Change).

Managers must help people make Run/Change decisions by clarifying the firm's current priorities, then giving them what they need to do either, or do both. That may be an operations guide, training, equipment, tools, or the space needed to document and optimise those procedures, to learn to use the equipment, or adapt tooling to fit the task. Today's workers often need nothing more than space and time to collaborate, experiment, think, and reflect. Given the right management conditions, most people will excel at *both* improving the way business as usual is run *and* developing new opportunities for valuable change.

Gregory *et al.*'s (2016, p. 1) conclusion is, "Researchers wishing to address practitioner challenges need to treat them in context rather than in isolation and improve knowledge transfer". A recommendation with which it is difficult to disagree but does little to help a manager determine which actions to take next or what to tell those awaiting their guidance. I will make a generalisation, that managers are busy, action-oriented and results driven pragmatists. They may *prefer* to know the theory, but they *need* to know the method.

When Deming was told employees had been set an objective, he was known to ask, "By what means should this be achieved?" In the next chapter I recommend a general approach that managers may adopt to help them improve the effectiveness of their organisations.

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# Chapter 6 Outcomes

I have organised this final chapter so that it answers the all-important ‘So what?’ question first, because that is most important to managers. The emergent theory (Section 6.1) completes Eisenhardt’s (1989) method, and my recommendations (Section 6.2) are in the form of principles for managing. I then attend to the equally important but more critical question of ‘Why this is a doctoral contribution?’ (in Sections 6.3 and 6.4) for those readers who have so generously undertaken the task of assessing my work. I sincerely hope that you have found various forms of nourishment in reading this thesis.

My purpose has been to transform workplace effectiveness by working with managers to re-define their role for the digital age. The aim of this research has been to understand how managers overcome the barriers to improving the overall effectiveness of their organisations.

I have carried-out this investigation, presented, discussed, and reflected on its findings, and now complete Eisenhardt’s (1989) process of theory-building by sharing my emergent theory from the hypotheses developed in the previous chapter. This is followed by my professional recommendations for praxis and concludes with a summary of the contribution this thesis makes to knowledge and practice.

As an experienced professional practitioner, I have confidence that these recommendations and explanations, whilst abductive, have emerged through an established and well-respected methodological process. They reflect a level of internal validity and coherence beyond anything I have produced before. In that sense, this project has served my purpose of helping to transform workplace effectiveness by working with managers to re-define their role for the digital age and has collaterally enhanced my professional practice, scholarship, and direction.

## 6.1 Emergent theory

### Theory definition and scope

So far, I have presented and tested my findings as hypotheses, without any attempt to explain why the phenomena occur. Hypotheses (testable predications of behaviour) may be all that pragmatic managers need to give them the confidence to act to improve the effectiveness of their organisations. Since I followed a theory-building method, whose “Theoretical arguments are developed after the theory is emerging” by Eisenhardt 2021 (p.151), this final step ‘towards a theory’ is an opportunity to increase generalisability and abstraction. It is congruent with my construct to ‘Explain WHY’. It aligns with Deming’s practice of introducing his seminars as ‘learning events’ – “You may have come for a formula ... We’re going to learn why we have to do what we need to do” from Neave (1990, p. 245).

But what is a theory in this context? Via email, Wilkinson (2024) advises that theories have explanatory power, “A theory provides a broad explanation for phenomena based on substantial evidence”. Additionally, theory suggests “The detail of what might be more general, beyond one or a number of contexts” Passey (2020, p. 97).

### Questions to be answered by theory

Inspired by Strode *et al.*’s use of questions (2022), I reframed my hypothesis as a question:

- Why must managers ‘Create a caring context’, ‘Explain WHY’, ‘Develop eco not ego’, and ‘Walk the talk’, if they are to resolve organisational tensions and improve the overall effectiveness of their organisation?

Questions that emerged during the process of writing-up provided insights. For example, wondering why Corporate Rebels’ trends are too radical, and how managers differentiate



between too radical and just transformational enough, led me to conclude that perceived risk of failure was a significant factor. But what about the opposing risk of not acting and becoming obsolete? Rayner (2012) argues that managers resolve this tension by denying, dismissing, avoiding, or displacing ‘uncomfortable knowledge’.

Comparing the constructs from my conversations with managers with practice literature such as Covey (1989) and Clutterbuck’s CMI (no date) revealed ‘learning’ to be missing. This may be attributed to, but not explained by, the Dunning-Kruger effect. Explaining the phenomenon for which Kruger and himself are known, Dunning (2022) says

“Unknowledgeable people lack the very expertise they need to recognise their lack of expertise” and its corollary, that “Experts overestimate the knowledge level of their peers”.

Therefore, when considering the risk of initiating improvements, managers are as likely to over-estimate or under-estimate, as they are of getting the risks about right. Over-estimating may cause too much fear of failure and result in inaction. Under-estimating may also lead to inaction after a few initiatives have failed due to insufficient planning and the manager either loses confidence in themselves or the trust of their colleagues. Experience of consistently getting things right can also lead to problems, unless supported by evidence (such as feedback and measurement) and updated knowledge (learning). In Deming’s words, “Experience teaches nothing unless studied with the aid of theory” from Neave (1990, p. 249).

Learning was one of Smith and Lewis’ (2011) theoretical categories of tension, raising the possibility of a tension lurking between what my participants had discussed and what they actually knew.

Accordingly, my theory should:

## Chapter 6 Outcomes

- Explain why ‘Create a caring context’, ‘Explain WHY’, ‘Develop ego not ego’, and ‘Walk the talk’ help managers identify and resolve tensions;
- Address inertial factors such as risk avoidance, fear of failure, low trust, or over-confidence that act as barriers to action;
- Address manager’s learning and knowledge of tensions, in particular the difference between managing predictable-value and emergent-value activities.

I have, in Chapter 2, already explained WHY managers would:

- Balance explore-exploit activities contextually to achieve ambidextrous performance;
- Manage variation and routine appropriately to maintain efficiency in both;
- Develop leadership at all levels to achieve both agility and steadfastness;
- Empower workers to self-organise to bridge the intention-execution (strategy-execution) gap;
- Overcome problems of illusion over reality using evidence-based management;
- Resolve value conflicts, such as exploitation-preservation, using systematic dialogue.

But I have not yet explained HOW they should do so. As part of my emerging theory, I will therefore propose a method that connects the WHY and HOW. It is in the section titled ‘Managing tensions as a means of improvement’. First, I will address what I now believe the term ‘transformation’ represents in the context of organisational improvement.

### Endless journey of incremental change

Transformational change is the result of continuous movement between action and reflection over time, both personally and collectively. It is most apparent in comparison between present, and previous states. Future states (transformed) are merely speculation, whereas the current state (in-transformation) is the only state to which changes can be made, and some of the consequences of those changes may be monitored.

Actions in the current context affect the organisation's future and remote parts of the organisation in ways that may be unpredictable and difficult to detect. A caring context, one in which continuous organisation-wide improvement is an explicit objective, will have a different future from one that embarks on a 'cost to achieve' program of short-term investment in pursuit of long-term gain.

When an organisation sponsors a change-managed improvement program to transform its ways of working, it is engaging the same metaphor that brought it to the point of needing to be transformed. It ignores the warning so crucial that it is the title of the book, "What got you here, won't get you there" by Goldsmith and Reiter (2008). Imagine, if, instead of a program of change with a budget and targets, employees reflected periodically on how much their organisation had changed over the past few years, judged the changes to have been beneficial or otherwise, and determined how they would like it to evolve over the next few years.

Replacing transformation with continuous improvement and absorbing it into the budgets and plans for Business as Usual alters the organisational metaphor for change. Instead of an expensive, risky investment based on questionable information and run by program managers, improvement would become every manager's responsibility. Rather than 'It's not my job' or 'This ship's so big it takes ages to turn around', managers at every level would

have the agency to run experiments, measure the effects, and decide which changes were worth pursuing.

In advocating for incremental improvement, I follow in Deming's footsteps. Known for continual improvement, Deming placed an obligation on managers to improve the system "By virtue of his [their] authority" from Neave (1990, p. 278). He also advocated for transformation, but it was a transformation of management, and one based on knowledge.

Of course, managerial learning is crucial. Ideally, managers would need to appreciate their department's role in the organisational whole to avoid sub-optimisation and learn how to design experiments. Doing so would require the collaboration of peers, not competition to control the same resources. Learning together leads to a common language, unleashing what Lakoff and Johnson (2011) describe as the power of the metaphor, as well as gaining the advantages of becoming what Senge (2006) terms a learning organisation.

What I have described is the Lean-Agile approach, taking tiny, incremental steps in what is believed to be the right direction, then stepping back to compare progress with the intended outcomes. It is needed because:

Planned episodic change programs, rigid processes and traditional structures, optimized for efficiency rather than agility, are no longer appropriate in a context where competitive advantage is fueled by high-speed innovation, supported by a more entrepreneurial mindset (Appelbaum et al., 2017b, p. 6).

Moreover, DevOps research by Forsgren *et al.* (2018) has proved that lots of small increments of work are safer, faster, and more effective than 'big bang' deliveries. Although it seems counter-intuitive to many, it is an inherently less-risky approach.

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One of my participants observed that leaders in his firm could cope with evolution but not revolution. This is not unreasonable for people entrusted with maintaining a large organisation. They are guardians, not revolutionaries. The way for them to enact change is incrementally, through day-to-day practice. Besides, executives voting for a revolution to overthrow their own management regime is as likely as are turkeys to vote for being eaten at a Thanksgiving feast.

### Managing predictable-value and emergent-value activities

Not only does evolutionary change provide a less risky path than revolution, but it also offers travellers on the journey the opportunity to adopt the latest tools and technologies for their new projects. This opposes Tushman and O'Reilly's (1996) recommendation for revolution over evolution but is a closer reflection of reality. Although the individual practices introduced are simple or merely complicated, the resultant patchwork of practices increases overall complexity. Thus, the overall outcome of several predictable-value activities is only revealed over time (emergence). Within large organisations, teams using Agile methods are surrounded by waterfall practice, which can cause frustration (eg. Convo 9) and coordination problems as observed by Fuchs and Hess (2018). Such problems exist because of the mismatch between hierarchical structures and mixed-mode operation and are easily recognisable as tensions. The tensions theory that emerges from this thesis suggests that managers are well-placed to resolve those tensions. Doing so, both improves performance, and also helps integrate the new (Agile) ways of working with existing (waterfall) ways, thereby improve performance at a higher level of organisation (ie. multiple teams).

Industrial age organisations were designed as monocultures optimised for a 'command and control' approach to managing workers, not as ecosystems of varied practice and models of management. Therefore, a proliferation of tensions between old and new ways of working

should be expected. A program of transformation could provide value to the organisation by developing processes and training to help managers identify and resolve such tensions.

### Creating the conditions for agency

Learning how to reduce the complexity of maintaining legacy and new systems can be transformational in itself. For example, in Convo 25, legacy insourcing arrangements hampered collaboration between permanent and agency staff with the result that people working to a shared goal were held apart by bureaucracy. I predict that if the manager of Convo 25 is able to overcome this legacy barrier, conditions will improve, and people will notice that a) stakeholders are happier and b) the quality of their output is better. I make this prediction on the basis of having worked with this manager before and having seen the same results from a similar intervention. In that case, the changes we made together were transformational in just a few months. Something similar took place in the DevOps intervention I was involved with at a global investment bank in 2017. Essentially, the changes we catalysed were nothing more than collaboration and process improvements that accelerated the delivery of software to users, yet the impact was significant. People could both sense (feel) the difference and measure the impact.

In both of the examples above, changes were made locally, and other departments simply adopted and adapted the practices they had seen working. In other words, transformation by communication of the evidence, rather than transformation by a top-down program of change based on copying what was seen to work elsewhere. This is characterised in Lean as ‘pull not push’, a well-known improvement for improving the flow of work through a series of steps.<sup>36</sup>

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<sup>36</sup> As demonstrated in this video: <https://youtu.be/CostXs2p6r0>.

## Chapter 6 Outcomes

### Managing in complexity

The combination of legacy maintenance and leapfrog progress inevitably increases and amplifies complexity. Each system update, every new procedure, and layer of security are individually important but collectively make systems unpredictable and sluggish, and this applies to human systems too. Complex systems adapt to change which is why it matters where those changes originate. Lean and Agile approaches advocate for self-organisation; those who perform the work should shape (improve) and control (pull not push) the processes of work. This is not a ‘them and us’ division of management and labour or the firm and its suppliers but collaboration towards clearly stated objectives, as Adler *et al.* (1999) found at the NUMMI factory.

The theory that I advance differs from ‘Punctuated equilibrium’ as described by Tushman and Romanelli (1985) whose theory relies on executive leaders ‘balancing’, and Benner and Tushman (2003) who rely on leaders ‘integrating’, the sources of the fundamental *explore-exploit* tension. In terms of complex adaptive systems, interventions made by leaders cause the system to adapt, not change according to those leader’s predictions. The difference is like that between controlling a complicated system (flying an aeroplane) and a complex system (flying through turbulence). Pilots use the plane’s flaps and rudder to compensate for variations in roll and yaw. These interventions are so predictable they have been automated and are known as autopilot systems. When a plane encounters moderate or extreme turbulence, crews can no longer rely on their instruments or controls as they do in normal conditions. For example, Airbus pilots are advised not to fight against the turbulence and not to use the rudder because it may destabilise the aircraft.<sup>37</sup> In other words, the conditions have temporarily changed from highly predictable, to uncertain.

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<sup>37</sup> Advice from: <https://safetyfirst.airbus.com/managing-severe-turbulence/>.

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### Change as an organisational capability

Extrapolating Wischnevsky's (2004) and Appelbaum *et al.*'s (2017) findings about firm's survival depending on their capacity for transformation, teams and departments that adopt new ways of working such as DevOps, Lean, or Agile may be more likely to survive than those who make no efforts to improve. If successful, they will certainly enjoy performance benefits. based on this research, I suggest it is beholden on leaders to make organisation-wide improvement a strategic objective for all managers. This can be achieved by creating the conditions for managers to resolve tensions within their teams, such as an emphasis on measurements of ambidextrous performance coupled to tensions management. This includes including tensions that impinge on their teams, such as those caused by legacy and leapfrog progress. Senior managers should consider devolving authority for the timing and choice of improvements to those managers rather than assuming the superiority of top-down decisions. In a blog post, Gothelf (2023) makes the case for evidence-based, incremental improvement despite it being counter-intuitive to those unaccustomed to incremental and emergent approaches:

Maybe we never spoke to customers before. Today we speak to 2 every quarter.

That's a win. It's not perfect. It's not even close to 'empowered' but our customers get slightly better products because of it (Gothelf, 2023).

There is a sense of forward movement in the observation above that I find quite motivational.

### Managing tensions as a means of improvement

Given ambidextrous improvement as a guiding principle, tensions provide a process for navigating the journey of transformation, leading to 'adaptable efficiency' as an outcome, as shown in Figure 10, below.



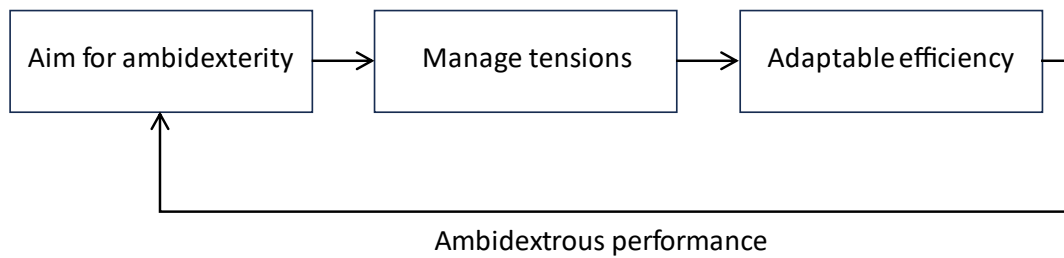


Figure 10 Process steps of managing tensions (Lewis, 2024)

I will use a reflective example to illustrate this.

I first heard about Eisenhardt's method from a lecturer at a previous university who took a caring interest in helping me overcome a conflict that had developed within the supervisory team assigned to me. Interdisciplinary assumptions and misunderstandings, as well as academic-practitioner sensibilities were the likely sources of tension, because the design of my research became a barrier which the team were unable to overcome. The program had been running for thirty years and ran, as the department head described it when I escalated the matter, like a well-oiled machine. That is, the university had an efficient process for delivering a practitioner qualification in the discipline of coaching, yet I wanted to explore my experience of helping managers improve their organisations, in an interdisciplinary manner. Once we recognised our differences, the university accepted that they should not have accepted my research proposal in the first place and refunded my fees.

One reflection of this outcome was that I had 'hired' the wrong university to help me pursue my purpose.<sup>38</sup> Another recognises a deeply unpleasant experience at odds with individual's professional qualifications and the organisation's espoused procedures.

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<sup>38</sup> Clayton Christensen's Jobs To Be Done (JTBD) reframes the relationship between supplier and consumer in terms of the consumer 'hiring' a solution to a problem, see: <https://hbswk.hbs.edu/item/clay-christensen-the-theory-of-jobs-to-be-done>.

Applying the tensions management learnings of this thesis, the story suggests that the underlying tension in my story was *variation-routine*. It reveals:

- An efficient and highly optimised process can accept only a limited range of input variety and attention is needed to ensure that only candidates that will fit the process are admitted;
- Within the process, managers must pay attention to unexpected tensions as they signal the presence of impediments that may compromise performance and could escalate into reputation-damaging conflicts;
- Early detection of unresolvable tensions affords managers the time to develop alternatives to respond to contingencies;
- Creating a caring context may be as valuable than an efficient but inflexible process as those people involved in conflict may be able to either adapt to fit the process or disagree whilst retaining their respect for the organisation.

The story has a happy ending as Professor Maguire's approach at Middlesex University aims for ambidexterity through transdisciplinarity. The staff supported this purpose to create a caring and supportive context in which I could explore my potential and exploit my professional experience. This thesis is evidence of that successful outcome.

### Rationale for senior managers

To use Levinthal's (1997) metaphor of the rugged landscape, if improvement is the distant peak, then resolving the tension that is making the path most difficult to navigate becomes the next task. Doing so is thoroughly practical, as the ups and downs of a rugged landscape means the distant peak is not always visible.

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The reason for focusing on tensions in this conceptualisation is that they signal the presence of an obstacle, either to an objective or to improvement. For example, in a client's company I once needed to complete an online form to obtain permission to launch an internal survey. When I had the results, I was unable to end the survey because that meant editing it and I could not get permission to change the survey; a tension I noticed because I was frustrated by it. By making the process owner aware that it was an operational barrier in a caring and collaborative way, we were able to improve the effectiveness of that system for all future users.

Noticing tensions really is as easy as looking at the environment through a tensions lens and simply tuning-in to the little things (the microfoundations) in the environment. Recognising which tensions are barriers to improvement and worth resolving could be the output of reflective practice or a brief conversation with those people doing the work. Prioritising which tension to resolve can be done intuitively as leaders already know the problems, or Goldratt's 'Current Reality Tree' used as an analytical tool as described by Mabin (2015).

Addressing current tensions is more important than anticipating a predicted future, which may never happen as planned or expected. Expecting the past to be an indicator of the future in dynamic environments can be problematic or misleading. As Hale (2014, p. 32) says, "Looking back at the case studies of the past serves a limited purpose".

Eric Trist, in Emery (1993) recognises that socio-technical and socio-psychological tensions are contextual. Trist literally went to the coalface to see how miners adapted to a new technical practice (see Trist and Bamforth, 1951; Trist, 2010). Reg Revans used 'Action Learning Sets' to create the safety and membership for collaborative learning says Hale (2014). Contemporary practices such as U-Lab's coaching circles described by Jiang (2020) can be seen to combine aspects of Action Learning with elements of 'Create a caring

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context’, ‘Explain WHY’, Develop eco not ego’, and ‘Walk the talk’. U-Lab is based on Scharmer’s ‘social technology’, Theory-U, from the Presencing Institute (2020).

In Chapter 2, I suggested different resolution approaches for each base tension:

- Balancing *explore-exploit* activities contextually to achieve ambidextrous performance;
- Managing variation and routine appropriately to maintain efficiency in both;
- Developing leadership at all levels to achieve both agility and steadfastness;
- Empowering workers (eg. with ‘pull not push’) to bridge the *intention-execution* (strategy-execution) gap;
- Using evidence-based management to prevent problems of *illusion-reality* such as bias, illusion, and assumption;
- Resolving value conflicts, such as *exploitation-preservation*, using systematic dialogue.

The following worked example may help elaborate the approach I have in mind.

### Worked example

Success factors for Agile and DevOps adoptions include creating a context that is safe for people to learn and experiment according to both Dikert *et al.* (2016) and Stray *et al.* (2020).

Managers are creators of such contextual spaces, but learning and experimentation was not necessary for machine model management because agility was not required. When I reviewed the tensions that Strode *et al.* (2022) discovered in the Charity organisation above, *agility-steadfastness* was prevalent:

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Changing too quickly versus changing too slowly;

How much to change versus how much to keep stable;

Change for the short-term versus change for the long-term (Strode *et al.*, p. 3578).

The same tension sources can be found in many organisations, and there are many ways of dealing with them. But they formed a barrier to improvement at the Charity and therefore should be understood and resolved to mitigate the risk of escalating into conflict or overpowering the change initiative.

Having categorised the tension as *agility-steadfastness*, I suggest the next step would be to explore and validate the finding to ensure stakeholders become participants and co-creators of any solution. I imagine a workshop activity based along lines of visual change with too quick and too slow, too much and too little, too short and too long at their extremes. Participants would be invited to consider various change proposals and indicate where their happy places could be along each line. Outliers would be invited to explain why they had selected those positions, with this activity followed by a short discussion. Some people will change their position based on what they have heard and agree to the proposal, others will stand firm. More importantly though, everyone will know each other's concerns and the process can move towards resolving the tension. The solution may be a policy, as happened at Wisetech when the CEO resolved the persistent conflict by deciding quality would take precedence over speed, says Scott (2021). Or it may be a simulation, which was how the mid-route validators came to be positioned in London's rail network (Transport for London, no date). Potentially, the solution may be to amplify the tensions as a positive force, as Thoughtworks did in Fowler (2005a).

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*Agility-steadfastness* tensions are usually paradoxical and ‘both/and’ solutions are likely to be more effective than compromises. Developing leadership at all levels allows people to own and lead what matters to them, potentially resulting in some areas changing much faster than others. Of course, this may activate the *variation-routine* tension amongst managers who seek to keep everything the same or employ one-size-fits-all solutions, which is another tension for stakeholders to practice exploring and resolving. A reminder that tensions are not static but held in a constantly shifting equilibrium.

The way forward is likely to emerge from the combination of reflection and action. It may come as an ‘Ah-ha’ moment whilst discussing a tension, on reflection the next morning, or during follow-up activities such as training. What is important is that a cohort dedicate time and attention to co-enquire and learn from each other in a collaborative effort to resolve the tension.

### Ambidextrous management

The change that lurks beyond transformation programs is the recognition that organisations are not machines but human collectives, complete with human’s faults and fabulousness. The need for managers to shield employees (eg. from toxic individuals, conflicting priorities, or areas of bad management) reveals a problem of industrial age organisational design, that managers know best and seldom make mistakes. The fact that some managers report the need to sometimes shield employees from management’s flaws is proof that managers do make mistakes that are serious enough for peers to protect people from but not so bad they need to be reported to a higher authority.

Managers who create a caring context, both enable and shield employees, concurrently. At times developing people, improving the system, or getting out of the way (Manager as enabler) and at other times protecting them from the hierarchy above them (Manager as

shield). These are opposing forces that managers wield depending on the situation. In other words, managers are well suited to creating ambidexterity in context, they have just never been asked to do so explicitly.

### Transformation as adaptation of a complex system

Big, old firms are complex systems and adapt slowly and somewhat reluctantly, hence complex adaptive systems theories are a useful way to understand them. Firms' response to COVID-19 was remarkable for its speed, and a stark reminder that the instinct to survive is stronger than the inertia that usually resists change. Whilst the pandemic successfully and rapidly transformed organisations, internally sponsored intentional transformations do not.

I have seen many transformation attempts fail because the approach uses plan-based (program management) methods to try to control a complex system undergoing emergent change. Such methods are suitable for predictable-value activities, such as closing offices, but not for emergent-value activities such as changing the way people work. Since organisations are complex adaptive systems, leaders can create the conditions for change by enabling 'adaptive space' as conceptualised by Uhl-Bien *et al.* (2007) and adjusting the constraints within the system as described by Juarrero (1999). Trying to manage a complex system with a mind set for a machine-like system may be a paradigm problem after Kuhn, summarised by Bird (2004) in which it is impossible to recognise anything beyond your own paradigm. One needs to know both the complex adaptive system and plan-driven paradigms in order to select the one with is appropriate, but a person who knows only the plan-driven approach is not aware of the other.

Agilists compound this paradigm problem when they sing Agile's praises so loudly they give the impression that everything must be done using Agile's complex adaptive approach. This is not the case. Agile methods are appropriate for controlling emergent-value activities in

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complex or uncertain domains, yet plan-driven methods are wholly appropriate for controlling predictable-value work that is either complicated (machine-like) or straightforward as I state in Lewis (2022).

Another important distinction between predictable-value and emergent-value activities, is that complicated but predictable activities scale linearly, whereas emergent complex work such as change is non-linear. This difference explains why organisational change is not predictable and cannot be scaled-out through using the ‘copy and paste’ approach of whatever worked there is bound to work everywhere. Despite knowledge of this, it is common practice for consultancy firms to recommend clients sponsor an initial ‘pilot’ project on the assumption that it will demonstrate a successful formula which can be ‘rolled-out’ across the entire organisation. In my experience, pilot projects tend to succeed, perhaps because they enjoy the benefit of regular executive scrutiny and a team of specialist consultants lavishing care upon them and solving problems as they arise.

### Complex not complicated

Change that can be bought-in and managed fits what Heffernan (2021) characterises as the ‘predict-plan-control’ model and Laloux and Wilber (2014) call the ‘predict and control’ paradigm of machine model management. It remains effective for top-down, predictable programs of change such as moving to new offices, moving to a new email system, or opening-up new locations. New, in these examples is variation that requires expert attention to resolve because the knowledge already exists, an approach Snowden and Boone (2007) associate with complicated problems. The paradigm is mechanical, entirely consistent with the positivist, scientific approach to management described by Taylor, Fayol, and Ford say Clutterbuck and Crainer (1990). If a mechanical watch stops working, a watchmaker can



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analyse, repair, and guarantee it will continue to work for another year, with reasonable confidence about that prediction.

Mindset, behaviour, and cultural changes are complex, emerging as people adapt to the new situation and its constraints. “Learning from the future as it emerges” rather than drawing from experience as Scharmer’s (2010) title states. Solutions are not predetermined and may remain unknown until after they have emerged and can be analysed and described retrospectively. Snowden and Boone (2007) describe these as solutions that are knowable only after they have been developed and proved to be effective. Solutions in the complex domain are contextual, hence the value of thinking in terms of the whole system, rather than its individual actors (see Senge, 2006; Meadows and Wright, 2008).

Describing complication and complexity from a leadership perspective, Uhl-Bien and Arena (2018) contrast leaders ‘driving change’ top-down through vision and inspiration against leaders positioning and enabling adaptability. Specifically, being “Adaptive in the face of complex challenges” by:

Designing adaptive organizational structures, enabling networked interactions, nurturing innovation, and providing leadership development that fosters collaboration (e.g., social capital) along with individual performance (e.g., human and intellectual capital) (Uhl-Bien and Arena, 2018, p. 89).

### Towards theory

Having outlined a mechanism for transforming organisational performance by managing tensions, this section moves towards explaining generalised concepts of improving the management of organisations for business agility.

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### Leadership at all levels

Organisations need leadership, not only for direction but also moral guidance and social purpose. Quaker organisations of the past, such as Cadbury's, were governed according to the beliefs and doctrine of that religion. Many more industrial age organisations pursued ambitions of growth to satisfy the expectations of investors and fund managers. It may be no coincidence that as the output of organisations has shifted away from goods, towards intangibles such as information and software services, new forms of leadership have been proposed. These reflect the social needs of our time and include Agile leadership; Coaching leadership; Collaborative leadership; Complexity leadership; Conscious leadership; Democratic leadership; Digital leadership; Distributed leadership; Shared leadership; and Transformational leadership, being a small sample of the 150+ leadership styles identified in literature by Wilkinson (2023).

Unlike digital-age firms that are organised for collaboration around relational networks, many older organisations are so highly structured that adaptation and reconfiguration is slow, expensive, and difficult. Such organisations want agility (adaptability and flexibility) without comprising their existing BAU activities. However, it is a reasonable assumption that senior managers will hold onto the power and status afforded by their position and strive to retain the hierarchies that rewarded them. A compromise position could devolve aspects of leadership through the hierarchy to all managers who, by definition, are trusted officers of the organisation. By convention, managers have authority only in the domain of their job titles. Hence, asking a project manager to improve organisational effectiveness can evoke a reply of 'Not my job'. Ask that manager if they would bet their house or car on the firm's survival if they held to their decision not to improve anything outside their areas and note their reaction changes when the consequences become personal (I tried this). This is a reflection on the negative consequence of functional hierarchy rather than a criticism of managers. With few

exceptions, managers want their organisations to be successful. They recognise that operational failure has negative personal consequences, hence prioritising predictable BAU activities above exploratory actions which are less likely to succeed.

Since they have formal authority over an organisational entity, be it money, people, products, processes, or tools, managers are crucial to the improvement of organisations. Informally, people's experience of work depends on their relationship with their manager, or their manager's abilities. Managers are everywhere, keeping everything together, like 'spokes' in the bicycle wheel analogy that connect the executive hub to the outer rim where employees meet customers. Therefore, it is only managers, and only collectively, that are able to reach the entire organisation. Executives of medium and large firms cannot do this.

However, as Mintzberg (1990) highlights, managers are not naturally reflective and are not normally schooled in the skills of managing or leading. The result is people who try to do their best but often lack the knowledge necessary to be effective. For example, and from my professional experience, managers do not normally know how to match emergent and predictable activities with the appropriate control mechanisms, how to avoid sub-optimisation (improving performance of one department at the expense of the whole organisation), how to differentiate signals from noise when looking at performance figures, how to set and communicate an objective, or how to listen to problems without offering a solution. For these reasons and more, learning, in the form of continuous professional development for managers should be considered essential, not optional. The practice of shortening the duration of training for busy senior managers is at best dangerous and potentially insulting for everyone else. If the training can be condensed effectively, then nobody's time should be wasted unnecessarily, regardless of their rank.

## Chapter 6 Outcomes

### Avoiding the traps of best practice

Perhaps for fear of messing-up, managers often want to follow ‘best practice’ or make the ‘right choice’. Unfortunately, doing so can only occur in predictable and ordered domains where such comparisons are possible. This is obvious when one appreciates that what emerges from disordered (complex) domains is the unique result of a unique context. As Snowden and Boone’s Cynefin model (2007) suggests, practice in complexity is emergent, whereas best and good practices relate to obvious (clear) and complicated situations. Yet even ordered domains contain elements of complexity; nuances in the context, variation in materials, and people behaving in unexpected ways.

The problem with problems is finding the best solution when none exists (Lewis, 2024).

Or, as my Director of Studies commented in response to the truism above, problems without solutions are facts. Sensing the difference between ordered and complex domains, and having the knowledge of how to navigate each, is a key challenge for organisational transformation.

Managing tensions, *as well as* managing resources, allows managers to manoeuvre more safely within complex situations, than managing resources alone. Doing so removes the dual trap of the perceived safety blanket of best practice; not acting because none is available and following what worked in one context with the expectation that it will work in another.

### Tensions are resolvable

A tension is simply the result of opposing forces, they have a source and an effect and are worth resolving, or not. They are special too, in that tensions can represent psychological, commercial, existential, or other sources. They allow diversity and equality issues to be discussed in the same way that investment and profit decisions are made.

## Chapter 6 Outcomes

I therefore propose the following maxim:

If a problem can be represented as a tension, it can be resolved as such (Lewis, 2024).

Referencing Smith and Lewis (2011) as an authoritative theoretical source, there are three types of organisational tension, although all can be paradoxical at times:

Paradox: opposing sources that are interrelated. ‘Both/and’

Dilemma: competing choices perhaps with a best option. ‘Either/or’

Dialectic; opposing sources that are recombined into another source (Smith and Lewis, 2011, p. 387).

Recognising a paradox is advantageous because it informs stakeholders there will be no right or wrong outcome. Instead, a way of navigating the paradox is to be sought. In the case of Wisetech, both timely delivery and quality of products were important but created a persistent conflict between engineers (who advanced the quality agenda) and project managers (who focused on delivery). Recognising this tension as a barrier to performance, a policy decision made by executives that quality was the more important, which resolved the conflict and enabled growth reports Scott (2021). The same argument applies to Amazon’s (no date) principles (eg. “Customer obsession”) and Beck *et al.*’s (2001) Agile Manifesto values (eg. “Responding to change over following a plan”). Resolving a paradox this way requires a language of preference to indicate how people should make decisions. Making such choices creates the conditions necessary for leadership at all levels and enables decision-making whilst value-adding work is being done, rather than waiting for decisions to be handed-down through the hierarchy.

## Chapter 6 Outcomes

Resolving dilemma is familiar territory for managers. Mintzberg's ten roles of the manager, which he developed observing chief executives in the 1970s, may not represent mid-level manager's reality today, but his point in Mintzberg (1990) stands, that the ten roles are not separable. The synthesis that occurs within the manager when making a decision or taking action, is the sum of that person's experiences and sensemaking at that moment.

As the term suggests, dialectic tensions are resolved through dialogue. It may be reflective and take the form of coaching or active listening, or a group session with a facilitator to help participants reach an outcome. In Checkland's (1981) cases, the intended outcome was understanding of the current state, since participants wanted to know what was failing so they could plan the next stage of their organisation's journey. All are forms of systemic intervention in which competence is required to help participants reach an outcome. Agile coaching has been shown to deliver value this way by O'Connor and Duchonova (2014) and Stray *et al.* (2021), as has leadership group coaching according to Kets de Vries (2005).

### Enfolding literature

The landscape in which I find myself positioning my emerging theory is one of sensemaking. I am asking how it fits with systems thinking and transdisciplinarity, both being ways of making sense of complexity that developed in the middle of the 20<sup>th</sup> century. A need perhaps greater in societies that have abandoned religious beliefs in favour of science and humanity, and for whom the realities of war in economically developed countries and environmental degradation seem incompatible.

### Systems thinking

My thesis rests on the precept that the role of managers is to improve the effectiveness of their organisations, not merely the performance of the resource they manage.

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Leading change from the inside was a view commonly held by those management scholars categorised as ‘systems men’ by Clutterbuck and Cramer (1990) including, Deming, Drucker, Mintzberg, and Ohno.<sup>39</sup> Deming was clear that improvement was managers’ responsibility, but his System of Profound Knowledge (SoPK) lacked the knowledge of complex adaptive systems or psychology that developed after his time. This is apparent from the four parts of SoPK, listed by Neave (1990) as:

- A. Appreciation for a system
- B. Some knowledge about variation
- C. Some theory of knowledge, and
- D. Some knowledge of psychology (Neave, 1990, p. 261).

My view is that parts A and B specifically focus on ‘hard’ systems thinking where effects have causes and performance variation can be predicted statistically. It is the same thinking which produced the organisational design of the industrial age and because it is not common knowledge amongst modern managers, much organisational improvement is achievable now simply from its study and application. Part C relates to the importance of learning through theory and practice, whilst Part D contains reminders about motivation and respect for others without the benefit of recent advances in neuropsychology research. Nonetheless, and despite a 40-year time difference, my theory is very much aligned.

Comparing Deming’s 14 points for management with Corporate Rebel’s eight trends, Macrez (2022) finds five key and interrelating ingredients in common between them:

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<sup>39</sup> No women were in that section, although I believe Donella Meadows and Mary Follet deserve inclusion.

## Chapter 6 Outcomes

Dedication to higher purpose

Safe-to-try environment

Supportive leadership and network of teams

Meaningful reward structures

Talents identification, Education and self improvement (Macrez, 2022).

Macrez finds 60-65% overlap between the sub-points identified within each source. This is astonishing given the forty years' that separate Deming's 'Points for the transformation of management' from the trends Corporate Rebel observed when visiting 'pioneering firms'. The question Macrez (2022) asks in the study's title, is "Will it take another forty years?"

Ackoff, who was previously involved with Organisational Research, appreciated the messiness of managing, or 'mess management' as he called it. Ackoff (1981, p. 23) defines a mess to be "A system of problems" and a problem to be a situation that "Can be resolved, solved, or dissolved" (*ibid*, p. 20). Reflecting on a lifetime as a systems thinker and academic, Ackoff revisited the nature of problems, stating:

Problems are [NOT] disciplinary in nature. Effective research is not disciplinary, interdisciplinary, or multidisciplinary; it is transdisciplinary. Systems thinking is holistic; it attempts to derive understanding of parts from the behavior and properties of wholes, rather than derive the behavior and properties of wholes from those of their parts. Disciplines are taken by science to represent different parts of the reality we experience. In effect, science assumes that reality is structured and organized in the same way universities are (Ackoff, 2015).



## Chapter 6 Outcomes

Clearly, the same applies to organisations that continue to operate in functional silos, where messes solved in one department are likely to have an effect in another area and/or at a later time. On which note, the cause and effect thinking of hard systems thinking is not intended to cope with complexity. Downstream effects are likely, but not predictable. Opening a department for transdisciplinary studies may ‘resolve’ the limitation of scientific disciplines but could ‘dissolve’ into a competing organisation. Embedding HR into business units *should* improve HR’s ability to serve the organisation and its customers, or it *could* expose a vulnerability in one area that leads to adverse publicity.

Constant focus on problem-solving leads to complications when operating in complexity. It is like a sticking plaster being applied to a minor wound, when really the heart is in crisis.

Complexity theory, and our understanding of organisations as complex adaptive systems in particular, provide a useful approach to understanding how groups adapt to change over time. The organisation is a complex system that performs within its environment and copes with its context. Every change experienced by its members leads to a response, an adaptation of the system. Therefore, the way to work with a complex system is to monitor the measures that matter, adjust its constraints, and observe what happens. Hypotheses and experiments, monitoring and evaluation, are the tools needed.

### Systemic thinking

In her book, ‘Leading at all levels’, MacArtain-Kerr (2018) draws on Gregory Bateson’s ‘systemic thinking’ to describe an alternative to hierarchical leadership which involves managers and workers solving problems and making decisions collaboratively. This approach embraces the inherent complexity of the workplace and allows people to engage and participate fully with it.

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One of the tensions MacArtain-Kerr discusses is that of psychotherapist's knowing (and offering advice) and intentionally occupying the space of 'not knowing' in order to ensure the client fixes their situation. This translates to the tension of a manager telling a subordinate how to solve a problem or complete a task versus approaching the situation with uncertainty ('not knowing') and collaboratively investigating and co-creating the solution.

### Transdisciplinary praxis

Transdisciplinarity is not problem focused but seeks to recognise situations by looking at complexity as a set of constantly evolving systems. It is more than complexity, since the observer is actively involved as a part of the system, in much the same way that Rovelli (2021) describes the behaviour of quantum particles being changed by the act of the observer observing them. If a problem needs to be addressed, the transdisciplinarian may consider any number of contextual aspects. Which, as an executive coach, reminds me of the way that the problem a client presents at the start of the dialogue is no more than an entry point to a journey of dialogic discovery for both client and coach.

As do cyberneticians and systems thinkers, I notice transdisciplinarity scholars struggle with clear definitions of their subject (eg. Wickson *et al.*, 2006). Experts in most fields see the differences between each other because their knowledge of the subject is so great, which is also my experience amongst Agile coaches. Transdisciplinarity's broad inclusivity makes it particularly difficult to contain with words and I expect experts would reject my simplification that transdisciplinarity is the antithesis of reductionism.

The Wikipedia entry for transdisciplinarity recognises that Piaget introduced the term and Nicolescu formalised it. At the time of writing, the following is displayed:

## Chapter 6 Outcomes

It is the art of combining several sciences in one person. A transdisciplinary is a scientist trained in various academic disciplines. This person merged all his knowledge into one thick wire. That united knowledge wire is used to solve problems that include many problems. The decision of a transdisciplinary executive is the only one that takes into account the total resolution of a problem without leaving any loose thread. [This quote needs a citation] —Pablo Tigani (Wikipedia-transdisciplinarity, no date)

I find this a useful definition because it recognises that our decisions are the synthesis of what we (personally and individually) know and sense.<sup>40</sup> I enjoy the irony of the statement “This quote needs a citation”. And like it all the more because it shows Wikipedia itself as a manifestation of transdisciplinarity. Wikipedia reflects our current knowledge (including errors and fictions). An entry can be changed from one moment to another, and maybe reading this will cause you to update that entry.

In terms of complexity, a key discourse within transdisciplinarity, I recognise Ingold, Morin, Checkland, and Bateson. Also, Weick who, according to Schwandt (2017), challenged the established theories of organisational management by asking if they were actually sensible. To make sense of the complex interactions between different practices and different theories, Weick (1995) used the word ‘sensemaking’.

I imagine that every generation believes it is experiencing unprecedented and increasing complexity and adapts accordingly. Certainly, the workplace has been through several changes since the digital revolution. There are fewer mid-level jobs – the so-called ‘hourglass economy’- and fewer middle managers to absorb the variety of an increasingly diverse

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<sup>40</sup> As did Kant.

workforce creating increasingly-varied products and services. In an ironic reversal which the authors acknowledge, McKinsey & Co. consultants, Schaninger *et al.* (2023) argue for the value and development of middle managers admitting that eliminating them has reduced organisational capacity for adaptation.<sup>41</sup>

In the UK, many part-time staff and self-employed contract workers have been invited to sign new employment contracts that are seen as being disadvantageous to them.<sup>42</sup> Added to which, the legacy of the COVID-19 lockdown has changed not only working patterns and behaviours, but it also allowed people to speak more openly about their emotions in the workplace for the first time. Where an employee may previously have pretended to their manager that everything was fine, my experience is that more employees are now letting line managers know how stressed or unfairly treated they feel at work.

My invitation to managers at all levels, to become leaders of improvement, is consistent with Freedman's (1992) anticipation that an organic managerial science based on complexity theory would replace the mechanistic approach known as Taylorism. Yet despite the value of complexity and systems thinking, not all managers are interested in engaging with reading or theories. This is where metaphor can be helpful.

A participant of my study who studied at The Santa Fe Institute, remembered a lecture by David Krakauer, in which managing multiple tensions was likened to handling pizza dough. The dough stretches in all directions, is affected by being pulled apart and by gravity, yet the

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<sup>41</sup> As predicted by Ashby's law of requisite variety.

<sup>42</sup> Zero hours and casual working contracts changed the relationship between staff and employers as long ago as the late 1990s: <https://hrcentre.uk.brightmine.com/commentary-and-insights/the-changing-nature-of-the-employment-contract/7873/>.

A summary of the impact of the IR35 reforms on the UK's self-employed labour force is given here: <https://www.ipse.co.uk/policy/research/the-self-employed-landscape/taking-stock-assessing-the-impact-of-ir35-reforms.html>.

## Chapter 6 Outcomes

glutens also resist, so the dough pulls back on itself. To novices, it seems impossible to work such a thing into the shape and size of a pizza base, yet in the hands of a master, the dough appears to behave predictably and consistently. So it is with complexity, it is easier to work in it when you have intuitively learned its rules of adaptation and behaviour, than when trying to impose an alien set of rules. Recent practitioner work by Snowden (2022) uses the metaphor of an estuary to map complexity with stakeholders ('Estuarine mapping').

Managers familiar with the perceived order of budgets and plans may find metaphors too abstract, whereas tensions are quite obvious once one starts looking for them. This became apparent during my conversations with managers, who shared plenty of examples. It also emerged from my analyses within and across those conversations, which I tabulated as constructs (see Appendix F: Tensions and constructs from analysis of the data).

### Embedding agency

My theory (and those above) sit comfortably with Mintzberg's (1990) description of what managers really do, work unrelentingly on brief, various, discontinuous activities, process 'soft information' including favouring verbal over written sources, and rely on judgement and intuition.

Further alignment comes from Smith and Lewis' (2011) paper describing how managing ambidextrous tensions creates a sustainable 'dynamic equilibrium' that focuses on:

Enabling learning and creativity,

fostering flexibility and resilience,

unleashing human potential (Smith and Lewis, 2011, p. 394).

## Chapter 6 Outcomes

These three outcomes could be the values and normal state of a healthy organisation as, “In sum, a dynamic equilibrium fosters and reinforces commitment to multiple, competing agendas”, from Smith and Lewis (2011, p. 393).

Equally, achieving a state of dynamic equilibrium, or ‘continuous change’, could be the goal of transformation. By way of evidence that continuous change is sustainable in practice, Corporate Rebels January 2024 email newsletter features Mindera, a successful firm whose guiding principles are ‘We are humans’, ‘We work together’, and ‘We change’. It is a broader ambition than Deming’s (1986) ‘continuous improvement’, and perhaps one more aware of its dynamic environment.

Moving from ‘either/or’ to ‘both/and’ thinking approaches, as described by Smith and Lewis (2022) could be transformational for managers. As with managing tensions, it is practical and should be within the reach of managers.

Owen (2000) suggests that we think in terms of either order or chaos, but that ‘both/and’ is more usual, offering the example of a firm discontinuing an item of stock. That is, for the firm, an orderly business decision, but throws the maker of that product into chaos when it threatens their livelihood. Owen’s example of the difference between deciding to discontinue a stock item versus losing the only customer you have for a product you make, is a reminder of the utility of thinking systemically (*ibid*).

Systems reveal tensions which may be beyond the manager’s field of awareness, and this was the purpose of the Senge’s (2006) ‘Beer game’. In the game, participants learn that consumers, retailers, distributors, and producers (brewers) can be studied as a system of interdependence. As it is a closed system, cafes placing extra orders to meet a spike in demand impact the brewery, which makes more beer than the customers in the system can consume. When the retailers refuse to buy the excess, the brewery loses money. If this cycle

happens too often, the brewery increases its prices to recover its losses which means, counter-intuitively, that café owners increased their own costs. Since it is human nature to meddle with things in the hopes of making them better, it comes as a surprise that the players who let their orders stand unchanged generally perform the best in this game. Reality is more complex and not all systems are closed, but plenty of ecosystems can be modelled as dynamic systems like this using causal loop diagrams.

The theory of statistical process control as explained by Wheeler (2000) and advocated by Deming (1986) helps managers interpret and act on the signals available from performance data. In the beer game, there are no external events that disrupt the system, so any changes internally (such as varying the quantities ordered) are likely to affect the system's performance. Statistical process control is a reminder that given a means of monitoring performance and understanding signals, managers have agency to decide whether or not action is required. Of course, without the knowledge to support a decision to do nothing, being seen to 'do something' may seem like a safer course of action.

Knowledge enables agency. Appreciating how complex adaptive systems behave, understanding how to interpret a performance chart, and learning to differentiate between emergent-value and predictable-value activities, are enablers that could be transformational.

I conclude this section with the reminder of Battilana *et al.*'s (2017) paradox of embedded agency, the tension between individual agency and collective determinism. And offer this variation on a theme:

How wonderful that we have the tools to make use of a paradox; now we have some hope of making progress (Lewis, 2024).

## 6.2 Recommendations

This section answers the question I imagine readers silently pose, so what? What does any of this mean for managers wanting to know how to improve their organisation's effectiveness whilst nurturing their careers?

To answer this, I provide some missing detail about the goal of transformation then reframe transformation as an ongoing, systemic feature of Business as Usual. I then recommend five principles that help managers to manage and improve their organisations' effectiveness.

### Adaptable efficiency - efficient adaptability

When I introduced my conceptual framework in the literature review, the caption in the centre of Figure 1 was a placeholder, it read 'Desired outcome'. Although the ambition of transformation is to survive and thrive, 'Desired outcome' represented the space where the symbols for transformation, ambidexterity, and tensions management overlapped each other. I now replace that placeholder with the tension of *adaptable efficiency - efficient adaptability*, or 'adaptable efficiency' for short.

Adaptable efficiency is not merely clever word play, despite the appeal of positioning the term as a paradoxical tension. It recognises that increasing efficiency is a continual pressure for managers, as is the increasing need to adapt to uncertainty, and it also provides a tangible objective for transformation, ambidexterity, and tensions management. Adaptable efficiency is essentially an outcome of contextual ambidexterity, and requires local managers to create the conditions and set the expectations for it.

An organisation determined to increase efficiency by learning to adapt efficiently gains the opportunity to measure performance improvement in whatever ways are important to the



organisation.<sup>43</sup> For instance, operation, innovation, adaptive capability, learning, diversity, environmental and social impact improvements are all quantifiable.

As an objective therefore, adaptable efficiency matches the increasingly dynamic, uncertain, digital, yet socially connected world in which organisations find themselves; under pressure to reduce costs whilst continuously learning to adapt. The key to this is continuous learning.

### Reconceptualising transformation

A problem with the concept of structural ambidexterity and models like Cynefin, is that they allow us to simplify our complex world into explore or exploit, disordered or ordered. We need to remind ourselves that these simplifications are mere tools that may help us understand a situation, but resolution involves engaging with the systemic complexity of other stakeholders.

It is difficult to recognise when a concept has been constructed into reality. In an organisation where budgets are divided between Change and Run and separate teams work on each, there is little doubt that the structural separation is real. It is this way because financial analysts attach greater importance to the cost of operating (Run) than to the cost of improving (Change) and so finances are structured to reflect this. Yet, money is either spent or received, everything else is interpretation for accounting purposes. Although a transformation program may be managed and funded by a Change budget, it exists within and amongst all the other programs, priorities, and management agendas of the organisation. A complaint that I often heard from managers was that transformation activities were always ‘side of the desk’, as they had to fit them in to an already busy workload. Another was that although a manager

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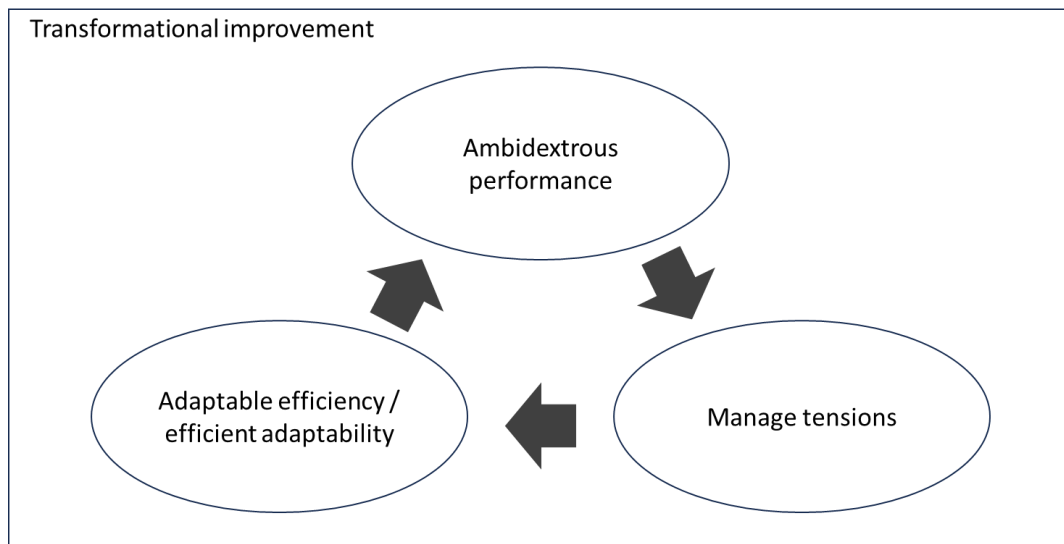
<sup>43</sup> Doughnut economics’ visualisation describes the social and planetary boundaries that are “safe and just” for humanity to operate within (<https://doughnuteconomics.org/>). B Corp provides a set of measures and certification for firms (<https://www.bcorporation.net>).

recognised that ‘something needed to be done’ the expectation was that it should be done by someone else, usually higher-up the hierarchy.

Reconceptualising transformation as part of every manager’s everyday work and aiming for adaptable efficiency in every unit, solves the problems of structural separation and inaction (insufficient capacity and someone else’s job). A recent story illustrates this rather well.

My friend told me about a senior manager colleague who was being coached because she was struggling to cope with her workload. The coach’s recommendation was to start work at nine, finish at five, then make a list of all the tasks that were remaining. Then, when her manager asked why things were piling-up, to show this list and ask her manager to prioritise which items could be dropped or reassigned. I asked, “Is she going to do that, or will she continue to do what needs doing because she takes her responsibilities to the organisation too seriously to not do them?” My friend agreed she would continue to do whatever work was needed to keep everything running as it should. Applying the principle of leadership at every level, I suggested she prioritise the list herself, inform her manager of what she had decided could be dropped, and involve her in exploring the options for dealing with the balance. My friend commented that this approach framed his colleague as a leader who was improving their organisation, rather than a victim waiting for someone to rescue them.

With adaptable efficiency as the objective of transformation, ambidexterity, and tensions management, a new diagram emerges. Figure 11 below reveals the reinforcing loop of positive feedback within the context of transformation.



*Figure 11 Reconceptualising transformation through tensions management (Lewis, 2024)*

By recognising or rewarding ambidextrous performance, staff will learn to combine the dual goals of *exploration-exploitation*, just as the DevOps teams I introduced in Chapter 1 did. As managers and team members begin to discuss tensions openly and positively, they will develop the skills to resolve those tensions or adjust them to suit the current needs. In so doing, they will improve operational efficiency and/or adaptive capacity, which in turn will improve overall (ambidextrous) performance. As their embedded agency increases, so will their skill at managing tensions. It is easy to see how this reinforcing loop could be transformational.

#### Visualising tensions

One of the most useful practices that I employed as an Agile coach was visualisation. We would map product development from idea, through prioritisation and development, into a working feature in the customer's hands so that everyone knew how the process worked and could see how to improve it. We used a Kanban board to visualise the work (jobs) that was committed to be done, work in progress (WIP), and work completed but waiting for the next

team to pick-up.<sup>44</sup> With a bit of theory, such as Agile coaches provide, a Kanban board helps teams learn to self-manage their workload. Through trial and error, they soon find the optimum amount of WIP for them and set a limit accordingly.<sup>45</sup>

Based on this experience, I suggest that visualising tensions has the potential to help stakeholders explore the options and the impact of their decisions. Since the Kanban board is known to be an effective solution to optimising throughput (flow efficiency), I have reverse engineered the tension sources to reveal the tension(s) solved by Kanban. The most obvious tension is *output-time*, which in this example is working software (output) *versus* the time dedicated to producing that output by software developers, their managers, and other internal stakeholders. In Figure 12 below, I visualise this tension as an adjustable slider.

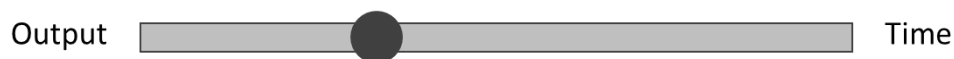


Figure 12 Visualisation of output-time tension

The slider suggests that there is a position where output and time are balanced to produce optimal throughput. Also, that the position cannot be zero output or zero time.

I classify *output-time* as a specific example of the *intention-execution* basic tension. The approach that I recommended to managing this tension in Chapter 2, was self-organisation and offered ‘pull not push’ as an example. As a reminder, ‘pull not push’ means ensuring that the process *pulls* work in, only when it has capacity to complete that work. A mechanism for achieving this is the Kanban board.<sup>46</sup>

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<sup>44</sup> Kanban boards are visual displays that show the current and next state of a resource such as a train, or a job.

<sup>45</sup> This video explains the basic idea in 2 minutes: <https://youtu.be/5izyN66PTxs>. The theory and guidance can be found in Anderson and Carmichael’s (2016) little book for practitioners, “Essential Kanban condensed”.

<sup>46</sup> I conducted this as a thought experiment whilst writing this section, without consciously knowing which base tension or tactic would emerge. Imagine my delight at discovering this tension led to this solution.

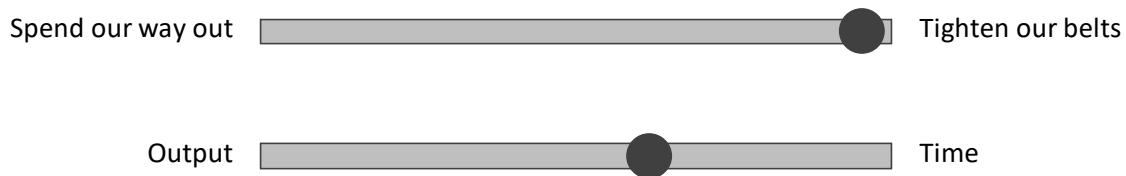
Visualising tensions could help firms explore where to move the balance point to meet changing conditions? When the organisation is cutting costs, should the slider move toward increasing output (more features and products) or toward spending more time validating assumptions and improving the user's experience? Clearly, this is something that managers and teams should explore together and consider their options collaboratively.

Another application arises from Keynes' "Paradox of Thrift".<sup>47</sup> When times are financially difficult, many organisations intuitively look for ways to reduce costs, presumably in the hope of surviving the period of difficulty. But a counter-intuitive argument increases spending in key areas of activity, thereby emerging faster and stronger from the period. This was the tactic of a company that faced the economic crisis of 2008 by increasing spending on its ten core products and is currently thriving (Convo 9). It was also Barack Obama's approach when he declared "We must spend our way out of recession".<sup>48</sup> Again, the benefit of visualising tensions emerges from dialog. Smith and Lewis (2011, p. 387) describe 'dialogic tensions' as "Contradictory elements (thesis and antithesis) resolved through integration (synthesis), which, over time, will confront new opposition". For such a paradox, visualising the tensions allows stakeholders to explore the potential consequences of their decisions. In Figure 13 below, the consequence of 'Tightening our belts' is that less time resource is available to create output, raising the question, 'Can we meet our commitments to existing customers?'

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<sup>47</sup> According to: <https://www.theguardian.com/commentisfree/2022/nov/03/interest-rate-rise-labour-keynesian-policies>.

<sup>48</sup> According to The Times (2009) available at: <https://www.thetimes.co.uk/article/barack-obama-we-must-spend-our-way-out-of-recession-p9n7ww56pp9>



*Figure 13 Relating tensions visually*

Visual devices such as these can help to promote collaboration, especially in context of decisions for which no right or wrong answer can be deduced.

#### Validation by thought experiment

By way of testing these recommendations, I consider the contemporary socio-technical context for organisations in transformation, which has changed during the two years of my research. Sources of tension that have impacted firms include generative AI, wars in Ukraine and the Middle East, lack of economic growth in Western economies, Trump and Biden administrations in the US, and fourteen years of continuous Conservative government in the UK. In 2024, the UK is still transitioning from the events of Brexit and COVID-19 and organisations that have historically relied on growth to pay for the costs of both operation and innovation are now dealing with economic challenges they are unaccustomed to facing. These global and national stresses are just the messy background to what goes on in individual sectors.<sup>49</sup>

For example, UK universities are no longer as attractive to European students as they were before Brexit and the government's cap on domestic fees has not increased in seven years, despite inflationary rises in the cost of living.

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<sup>49</sup> I use the term 'messy' here as in "A system of problems" from Ackoff (1981).

I have no hesitation in predicting that generative AI will disrupt universities' operating models and impact their ways of working. Through my own investigations, I have ascertained that for information that already exists within its model, AI can produce credible written (and graphical) output consistent with some undergraduate and postgraduate assignments. It draws on existing information, follows instructions, and communicates very well.<sup>50</sup> It is readily available and accessible by students, yet not normally provided to members of academic staff within universities.

Yet AI is not, as it is sometimes perceived, an external, digital disruption that threatens university jobs. It is an additional factor amongst multiple sources of tension. Student work must be read and assessed by tutors, supervisors, and examiners and AI is likely to increase the volume of this demand because it aids content generation. Students will produce more content, more quickly, and more easily. However, the references generated by some AIs are fictitious, although the author names are real. That means supervisors are going to receive papers that include references that they are not going to be able to find, let alone have time to evaluate. Supervisors I have spoken with are already experiencing the stress of increased workloads as a result of their institutions having to maintain services amidst rising costs and frozen revenues. Doing 'more for less' is an example of the tension of the basic *intention-execution*. I believe one more prediction can be made; people will adapt to the changing tensions that they experience, and organisations will change as a result.

I predict that, in the short term, those university employees most affected by the increased workload will adapt to it. Some will work longer hours to meet the new demands, some will lower their standards (adjust the quality specification) in order to increase their throughput,

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<sup>50</sup> I experimented and learned that ChatGPT can generate a credible summary to the prompt 'Summarise organizational ambidexterity for a transdisciplinary PhD academic examiner in 60 words including references'. This is because the knowledge and the rules to express it already exist within its language libraries.

and some will quit and find other work. Eventually, those people who remember ‘the good old days’ will be replaced by those for whom this new way is normal. Hence, as surely as the transistors that wiped-out the thermionic valve industry and the quartz movements that broke the mechanical watch industry in Tushman and O’Reilly’s (1996) paper, AI will change higher education one way or another.

### *Managing tensions as response*

Ambidextrous performance for a university is the combination of research (exploration) and tuition (exploitation). The same people do both, but they are typically managed and measured separately. By setting ambidextrous targets or rewarding ambidextrous behaviour in context, universities could take advantage of their members’ knowledge and creativity to proactively develop responses to this disruption, even as AI itself is still developing. In other words, rebalance the *exploration-exploitation* tension by intentionally increasing innovation. It may be appropriate to intentionally hire disruptors and people who think and act differently and enact some of their suggestions. Although this will create tension for those resisting change, it may address some of the *illusion-reality* barriers that have developed over the years.

One response that may emerge accepts that the job universities are hired to do is develop and assess student’s thinking and creative skills, not their knowledge recycling abilities. That may mean, instead of spending years developing new modules and marking mechanisms that are scalable, experimenting with human-centric alternatives. In this way, approaches that work may be built-on and those which do not are dropped, without detriment to students. Of course, iterative and incremental approaches are the basis of Agile methodologies, ideally suited to managing emergent-value activities such as developing a response to AI’s disruption. In so doing, universities have a viable approach for resolving the increasing *agility-steadfastness* problem, as well as a tactic for the *exploration-exploitation* imbalance.



## Chapter 6 Outcomes

By transparently recognising the tensions of those concerned, managers can appreciate the perspective of all members of staff and associates. Listening to their experiences and views and empathising with individuals provides the opportunity to create caring contexts in response. The context does not need to solve all problems (which it cannot), just provide space for people to be heard, problems to be recognised, and tensions considered. Given these conditions, and over a very little time, I believe that solutions will surface, and leaders, those prepared to try them, will emerge.

As demonstrated in the theoretical exercise above, AI technologies may be a disruptive force and digital transformation an outcome, but the mechanisms are social. They are the myriad of actions of the organisation's managers, processed by the organisation's stakeholders.

### Principles for managing the socio-technical age

The notion of tensions as the source of barriers emerged during my literature search, followed by understanding how paradox thinking ('both/and') could resolve tensions. With ambidextrous performance as a measurable objective, and contextual ambidexterity an evidence-based approach, I now offer tensions management as a way for managers to support organisational transformation into socio-digital age ways of working.

Covey (1989), Beck *et al.* (2001), and Dalio (2017) have established that principles are an effective means of guiding people towards appropriate decisions and behaviours. In Figure 14 below, I summarise the key take-aways from my research as principles for managers, complete with icons to increase visual appeal, and titles to create a memorable list.

These principles have been well-received at talks by audiences of practitioner managers, consultants, post-graduates, and academics.


 <p>–</p>	<ul style="list-style-type: none"> <li>– <b>Adaptable efficiency</b></li> <li>– Aim for ambidextrous performance, not efficiency at the expense of variety.</li> </ul>
 <p>–</p>	<ul style="list-style-type: none"> <li>– <b>'Both/and' thinking</b></li> <li>– Look for paradoxes so you can transform 'either/or' decisions into 'both/and' outcomes.</li> </ul>
 <p>–</p>	<ul style="list-style-type: none"> <li>– <b>Manage tensions not people</b></li> <li>– Find the tensions that matter and help people resolve them, then ask if they need help to manage things.</li> </ul>
 <p>–</p>	<ul style="list-style-type: none"> <li>– <b>Love to learn</b></li> <li>– Invest in your self development and develop your self awareness.</li> </ul>
 <p>–</p>	<ul style="list-style-type: none"> <li>– <b>Be eco-friendly</b></li> <li>– Improving the organisation's overall effectiveness is the job of every manager at every level.</li> </ul>

Figure 14 Principles for managing the socio-technical age (Lewis, 2024)

What follows is an extract from a (2024) workshop that I delivered to an audience of MBA candidates, their professor, and managers.

## Chapter 6 Outcomes

### Empirical validation

The session began with the ice-breaking question, ‘What drives a large, profitable organisation such as J P Morgan Chase to transformation, when its previous year’s profits were \$48bn?’<sup>51</sup> I described my research method then asked the group to replicate it by pairing-up and collecting a list of tensions and tension resolution tactics to use as data.

I briefly explained each principle to the group, then invited people to explore them using the following questions and prompts.

For adaptable efficiency:

- What ambidextrous goals can you set?
- What’s your context (unit, dept, team)?
- How will these goals be measured?

For ‘Both/and’ thinking, list three paradoxes in your context:

- Which are currently seen as either/or choices?
- Reword them in terms of ‘both/and’ outcomes.

For manage tensions not people:

- Which obstacles are currently getting in the way?
- What’s the value of removing that barrier?

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<sup>51</sup> This figure is from the company’s published accounts JP Morgan Chase & Co (2022).

## Chapter 6 Outcomes

- Does classifying it (as one of the six tension types) help you see how to resolve it?

For love to learn:

- What is stopping you from learning?
- What would you like to learn and how?
- How might your learning help your organisation?

For being eco-friendly, how do you know that your employees:

- Feel cared for?
- Know what they should be doing and why?
- Believe your actions match your rhetoric?
- See you developing the ecosystem?

When asked, participants said they had never explored tensions in this way before and that they found it useful to do so.

In sharing the ideas they had generated during the 90-minute session, it was clear that some groups had been able to reframe troublesome situations. In one case, recognising that the tension between their team and another department was inevitably cyclical in nature, with periods of opposition followed by intervention then compliance, being normal.

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This workshop was the first public test of these principles amongst managers and gave me the confidence to know that they were understandable and usable.<sup>52</sup>

### *Postscript*

I have run several tensions workshops since. What I have noticed is that flexible working and return office continues to be a recurring tension for as many people in late 2024 as it was in mid-2023 when I was holding conversations with managers for this research. Given that COVID-19 lockdowns took place four years ago, it suggests that a lot of organisations have yet to adjust their policies if they are to successfully retain their valued employees. The point is that although we humans are highly adaptable, we allow organisational governance and policy to delay for dangerously long periods of time. It seems that the sources of *updating-waiting* for policy change, and those of *participative-authoritative* policy development could be useful tensions to explore with the stakeholders involved.

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<sup>52</sup> I received this feedback after one event, “I wanted to extend my heartfelt thanks for your great presentation during our Digital Transformation Trip to Europe. The executive MBA participants were particularly impressed, and your contribution was pivotal in making the event a great success.”

### 6.3 Contributions

This thesis contributes to knowledge in the area of transformation in organisations, in addition to making contributions in the areas of organisational management practice.

Through a comprehensive review of literature, I identified six basic categories of tensions by organising the diverse tensions in existing theories and studies. This contributes a structure for future researchers to better analyse organisational tensions. Another layer to this contribution is that I anticipated the tactics that managers could use to manage each tension and constructed a literature-based argument for each. I then extended this conceptualisation of tensions and tensions management through my empirical work with managers of organisations in transformation. Finally, I validated my findings against existing theory papers including Smith and Lewis (2011) and Strode *et al.* (2022).

From data collected in the field, I have shown that specific tensions can be organised according to my categorisation and empirically shown how those tensions manifest in the context of organisational transformation.

Through the process of researching using Eisenhardt's (1989) method, I conducted a thematic analysis of my data, which I performed manually, and found evidence of higher-order practices. These broader insights reveal tension management practices that are not specific to any categorisation of tension but speak to the actions and role of managers. Articulating these as general principles may help managers to manage tensions, whilst actively improving the effectiveness of their organisations. The result being transformational in the medium-long time period.

It is worth noting that the tensions findings of Chapter 4 can be seen as the result of a predictable-value and planned activity, whereas my later findings emerged unexpectedly, as a

consequence of previous findings, re-analysis, and conversations within my supervisory team. This reflects the emergent nature of transformation; one may start in one direction with a certain set of assumptions, then find that serendipity and accident reveal astounding new opportunities.

I now describe my distinct contributions to theoretical knowledge and practice knowledge.

### Contributions to theoretical knowledge

My literature review and empirical study address three distinct issues in theoretical and practitioner literatures.

I have made a contribution to theory that emerged from practice, using data gathered from practitioner knowledge, to inform my theory generation. I demonstrated it is possible to follow Eisenhardt's (1989) method as a guide, apply it to conversations instead of cases, run other research methods alongside it, and develop mid-range theory to the standards required of a professional doctorate. As noted by Eisenhardt (1989, p. 549) research in this "Less common direction from data to theory completes the cycle" since "Most empirical studies lead from theory to data". Or, as in the case of university spinouts, theory leads to entrepreneurial practice.

Firstly, by coding the literature for tensions, I exposed the lack of organisational studies on tensions management and the diversity of ambidextrous tensions in organisations.

Ambidexterity research considers how organisations balance the need to explore new opportunities whilst exploiting existing resources but is focused on theoretical designs for ambidexterity, rather than the way ambidexterity emerged from manager's actions in practice. I engaged in some of the debates about units of analysis and definition of ambidexterity that concern Raisch and Birkinshaw (2008) and Raisch *et al.* (2009). One of

the key theoretical debates is whether ambidexterity extends beyond March's (1991) *explore-exploit* tension. My research shines new light on that issue by revealing six basic tensions from within the literature. Five of these tensions are ambidextrous organisational paradoxes: *explore-exploit*; *variation-routine*; *agility-steadfastness*; *intention-execution*; *exploitation-preservation*. The fifth tension, *illusion-reality*, represents an important social barrier to organisational transformation and improvement, generally. 'Illusion-reality' was the phrase used by Taichi Ohno (1988), the manager who successfully transformed the system of management at Toyota and whose work, now known as Lean, helped transform manufacturing and IT processes.

Secondly, my discussion of the empirical evidence as compared with the theoretical tensions and tensions management tactics, contextualises my findings within the literature. Tarba *et al.* (2020) highlight the lack of research explaining the microfoundations that produce ambidextrous performance and how individuals effect organisational ambidexterity. This study is a step in that direction, describing a method of gathering data from managers that can be extended to include conversations with colleagues to gain a wider perspective. It extends our understanding of tensions and tensions management in organisations and indicates the tensions lens as a way of further contributing to our knowledge of organisations.

Thirdly, starting from ambidexterity, I developed a theory of tensions management for organisations in transformation by exploring the relationship between tensions and tension management from the perspective of managers. This extends Andriopoulos and Lewis' (2009) findings and responds to their call to explore managers' sensemaking processes by suggesting a resolution approach to each of these six tension bases.

Managing tensions in context builds on Smith and Lewis' (2011) paradox theory by combining elements of contextual ambidexterity as advanced by (eg. Adler *et al.*, 1999;



Gibson and Birkinshaw, 2004; Papachroni *et al.*, 2015). It is consistent with recent research by Papachroni and Heracleous (2020) that ambidexterity is a paradoxical practice easily within the capabilities of managers and extends their view by arguing that ambidextrous performance needs to become an explicit objective for managers at all levels of hierarchy. It speaks to what Battilana *et al.* (2009) call the ‘logic’ that combines commercial and social development factors in organisations.

### Contributions to practitioner knowledge

In bringing together elements that support Agile and digital transformations by managing tensions, this work contributes to the lack of generalised practitioner literature for leaders and managers in transformation. It contributes a set of basic organisational tensions from literature and confirms they are experienced empirically and contributes tactics for managing those tensions.

The core concept of organisational ambidexterity, in what Birkinshaw and Gupta (2013) term its ‘definition phase’, was that organisations had to both explore new opportunities, and exploit existing certainties, as described by March (1991) and Levinthal and March (1993). Although the *explore-exploit* tension is an academic concept, all the participants in this project recognised it as a *de facto* obligation and some senior managers described their firm’s method for balancing exploration and exploitation activities. For example, the leadership team of Convo 14 *both* reviewed thirty medium- to long-term ‘must wins’ every month, *and* reviewed production weekly.

The intersection of literature and empirical research that I have amplified, signals the possibility of a real-world method for transformation by managers. Its findings are relatable and accessible, without the challenges of learning complexity theory or systems thinking. For instance, my phrase, ‘Managing tensions instead of people’ is instantly recognised. It

resonates, perhaps as a practical alternative to the legacy of industrial age and resource-based practices, or perhaps simply as an emotional response. Few of us would choose to be told what to do if offered a practical alternative.

I focussed my efforts towards producing actionable insights and an actionable method for managers. This came from my practitioner positionality, but aligns with Lewin's, "No action without research; no research without action" as cited by Adelman (1993, p. 8). However, it is an unusual contribution in that I am a very experienced practitioner, and this thesis is a transdisciplinary professional doctorate, not a PhD.<sup>53</sup>

The literature is largely case study based, secondary reviews of case studies, or papers written by consultancy firms and their clients. A problem with case studies is that many authors have commercial reasons to tell a good story. This study minimised this risk as my data came from individuals, who were told their contribution would be anonymised.<sup>54</sup>

Immediately apparent from my findings is the difference in people's relationship with tensions. Those who felt they had agency spoke about what they did to improve the situation in their organisations, whilst amongst those who felt they had no agency, two quit their jobs and left the industry. This highlights the social tension that affects transformation and manager's agency to make improvements, generally. Through Battilana *et al.*'s (2009) lens of organisational entrepreneurship, 'change agency' is a divergent force. Change agents want to change the organisation from within and feel able to do so.

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<sup>53</sup> According to my Director of Studies, PhDs start with a research question, select an established methodology, conduct the research activities and report according to that methodology, and assessment includes adherence to that methodology. A professional doctorate begins with the practitioner's knowledge and curiosity, from which an appropriate methodology develops as the research progresses.

<sup>54</sup> Even so, I was aware of the possibility of self-promotion during some conversations.

## Chapter 6 Outcomes

As Birkinshaw and Gupta observed, ambidexterity is “About the multitude of ways that organizations sought to manage the tensions involved in doing two different things at the same time” (2013, p. 288). I trust readers agree that tensions management creates exciting opportunities for managers and organisation studies. Particularly regarding the role of managers as leaders of improvement, when that is not explicit in their job description.

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# Glossary of terms

- AI: Artificial Intelligence.
- Agile: The Manifesto for Agile Software Development defines four values and twelve principles, to which Agile methods conform.
- ABC: Agile Business Consortium, UK body that developed the Agile project management courses for the APMG examining group.
- ARN: Agile Research Network, a collaboration between the Open University, University of Lancashire, and the Agile Business Consortium.
- BAI: Business Agility Institute.
- BAU: Business as Usual, see also Run the Business.
- CAS: Complex Adaptive Systems theory.
- CEO: Chief Executive Officer of an organisation.
- CIO: Chief Information Officer.
- CPD: Continuous Professional Development.
- CTO: Chief Technology Officer.
- CTB: Change the Business, used for accounting purposes, see also Run the Business.
- DevOps: Union of Developer and Operations activities into a team whose purpose is to both build and run software.
- FAANG: Facebook, Apple, Amazon, Netflix, Google.

## Glossary of terms

- HR: Human Resources department.
- IID: Iterative and Incremental Development of something valuable, usually software.
- IT: Information Technologies generally, or Information Technology department.
- Lean: Systemic thinking and activities aimed at reducing waste in the process of delivering value to customers.
- MAMAA: Meta, Amazon, Microsoft, Apple, Alphabet.
- RTB: Run the Business, used for accounting purposes, see also Change the Business.
- Scrum: Agile method for organising software development.
- SME: Subject Matter Expert.
- SoPK: Deming's System of Profound Knowledge.
- SPC: Statistical Process Control, a method for predicting routine variation of performance.
- TPS: Toyota Production System, a management methodology developed for manufacturing by Taichi Ohno.
- WIP: Work In Progress, as a measure and indicator of current workload.
- WW2: Second World War, 1939-1945.

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Appendix A: Core collection of ambidexterity papers

Coded	Year	Author	Type	Importance	Review	Design	Tension 1	Area(s)
Y	1999	Adler, Paul S.; Goldoftas, Barbara; Levine, David I.	Empirical	Seminal		Y		
abstract	2014	Agostini, Lara; Nosella, Anna	Empirical			Y		Behavior
abstract	2016	Agostini, Lara; Nosella, Anna; Filippini, Roberto	Empirical				radical and incremental innovation	
abstract	2017	Agostini, Lara; Nosella, Anna; Filippini, Roberto	Empirical				exploration and exploitation	Microfoundations
Y	2009	Andriopoulos, Constantine; Lewis, Marianne W.	Empirical	Significant			exploitation and exploration	Paradox
abstract	2021	Bell, Liezl; Hofmeyr, Karl	Empirical				explore and exploit	Leadership ambidexterity
abstract	2015	Benner, Mary J.; Tushman, Michael L.	?					
abstract	2003	Benner, Mary J.; Tushman, Michael L.	Conceptual	Significant			exploitation and exploration	Dynamic capabilities
abstract	2020	Bidmon, Christina M.; Boe-Lillegraven, Siri	Empirical				exploration and exploitation	
abstract	2004	Birkinshaw, Julian; Gibson, Cristina	Empirical				adaptability and alignment	

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abstract	2013	Birkinshaw, Julian; Gupta, Kamini	Review	Significant	Y			
abstract	2009	Cao, Qing; Gedajlovic, Eric; Zhang, Hongping	?				exploratory and exploitative activities	Balance and Combine dimensions of ambidexterity
abstract	2010	Cao, Qing; Simsek, Zeki; Zhang, Hongping	Empirical				CEO and TMT behaviors	Behavior
abstract	2015	Chebbi, Hela; Yahiaoui, Dorra; Vrontis, Demetris; Thrassou, Alkis	Conceptual				integration and adaptability	
	1977	Child, John						
abstract	1997	Christensen, Clayton M.	?					Innovation
abstract	1976	Duncan, Robert	?	Significant		Y		Innovation
Y	2010	Eisenhardt, Kathleen M.; Furr, Nathan R.; Bingham, Christopher B.	Conceptual	Significant		Y	efficiency and flexibility	Microfoundations
abstract	2017	Fernández-Pérez de la Lastra, Susana; García-Carbonell, Natalia; Martín-Alcázar, Fernando; Sánchez-Gardey, Gonzalo	?				exploration and exploitation	Multilevel ambidexterity
abstract	2016	García-Lillo, Francisco; Úbeda-García, Mercedes; Marco-Lajara, Bartolomé	Review		Y	Y		
	1994	Ghoshal, Sumantra; Bartlett, Christopher A.						

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abstract	2004	Gibson, Cristina B.; Birkinshaw, Julian	Empirical	Seminal		Y	alignment and adaptability	
abstract	2006	Gupta, Anil K.; Smith, Ken G.; Shalley, Christina E.	Conceptual	Significant	Y		exploration and exploitation	
Y	2009	Güttel, Wolfgang H.; Konlechner, Stefan W.	Empirical				exploration and exploitation	Behavior
abstract	2015	Güttel, Wolfgang H.; Konlechner, Stefan W.; Trede, Julia K.	Empirical				short-term efficiency and long-term innovation	Multilevel
abstract	2020	Harris, Martin; Wood, Geoffrey	Empirical			Y	exploratory and exploitative innovation	Managerial ambidexterity; microfoundations; Multilevel
Y	2004	He, Zi-Lin; Wong, Poh-Kam	Empirical	Seminal			exploration and exploitation	Impact
abstract	2008	Im, Ghiyoung; Rai, Arun	?	Significant			exploration and exploitation	Interorganizational; Knowledge management
abstract	2009	Jansen, Justin J. P.; Tempelaar, Michiel P.; van den Bosch, Frans A. J.; Volberda, Henk	Conceptual			Y	exploration and exploitation	Multilevel
abstract	2012	Jansen, Justin J.P.; Simsek, Zeki; Cao, Qing	Empirical	Significant		Y	exploration and exploitation	Impact; Multilevel
abstract	2010	Kauppila, Olli-Pekka	Conceptual				exploration and exploitation	Interorganizational
abstract	2010	Lavie, Dovev; Stettner, Uriel; Tushman, Michael L.	Review	Significant	Y		Interorganizational exploration and exploitation	Interorganizational

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Y	1993	Levinthal, Daniel; March, James	Conceptual	Significant			exploring and exploiting	Knowledge management
abstract	2018	Lis, Andrzej; Jozefowicz, Barbara; Tomanek, Mateusz; Gulak, Patrycja	Review	Significant	Y			
abstract	2012	López Zapata, Esteban; García Muiña, Fernando Enrique; García Moreno, Susana María	Conceptual				exploration and exploitation	Knowledge management
Y	2006	Lubatkin, Michael H.; Simsek, Zeki; Ling, Yan; Veiga, John F.	Empirical	Significant			exploitative and exploratory in TMT	Leadership ambidexterity ; SME
abstract	2018	Luger, Johannes; Raisch, Sebastian; Schimmer, Markus	Empirical	Significant		Y	exploration and exploitation	
Y	1991	March, James G.	Conceptual	Significant		Y	exploration and exploitation	Knowledge management
Y	2019	Martin, Alexander; Keller, Arne; Fortwengel, Johann	Conceptual				exploitation and exploration	Conflict
abstract	2021	Mascareño, Jesus; Rietzschel, Eric F.; Wisse, Barbara	Empirical				opening and closing leadership behavior	Behavior; ; Innovation; Leadership ambidexterity;
abstract	2011	McCarthy, Ian P.; Gordon, Brian R.	Conceptual				exploitation and exploration	Innovation
Y	2001	McGrath, Rita Gunther	Empirical				variance-seeking and mean-seeking learning	Innovation; Knowledge; Managerial ambidexterity; Microfoundations
Y	2009	Mom, Tom J. M.; van den Bosch, Frans A. J.; Volberda, Henk W.	Empirical	Significant			organizational-individual	Managerial ambidexterity; Microfoundations; Paradox



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Y	2015	Mom, Tom; Fourne, Sebastian; Jansen, Justin J. P.	Empirical				organizational-individual manager performance	
abstract	2019	Montealegre, Ramiro; Iyengar, Kishen; Sweeney, Jeffrey	Empirical					Paradox
abstract	2008	O'Reilly, Charles A.; Tushman, Michael L.	Conceptual	Significant		Y	explore and exploit	Dynamic capabilities
abstract	2009	O'Reilly, Charles A.; Harreld, J. Bruce; Tushman, Michael L.	Empirical				exploit and explore	Dynamic capabilities
abstract	2011	O'Reilly, Charles A.; Tushman, Michael L.	Empirical				exploitation and exploration	Leadership ambidexterity
abstract	2013	O'Reilly, Charles A.; Tushman, Michael L.	Review		Y		explore and exploit	
abstract	2004	O'Reilly, Charles A.; Tushman, Michael L.	?	Significant			radical innovation and incremental gain	
abstract	2019	Ossenbrink, Jan; Hoppmann, Joern; Hoffmann, Volker H.	Empirical			Y		Managerial ambidexterity; Multilevel
abstract	2020	Papachroni, Angeliki; Heracleous, Loizos	Conceptual				exploration and exploitation	Paradox
abstract	2016	Papachroni, Angeliki; Heracleous, Loizos; Paroutis, Sotirios	Empirical				innovation-efficiency tensions	Multilevel
	1977	Pfeffer, Jeffrey						
abstract	2020	Posch, Arthur; Garaus, Christian	Empirical				strategic planning and ambidexterity	strategy

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abstract	2008	Raisch, Sebastian; Birkinshaw, Julian	Review	Seminal	Y		efficient and adaptive	
Y	2009	Raisch, Sebastian; Birkinshaw, Julian; Probst, Gilbert; Tushman, Michael L.	Conceptual	Significant		Y	exploitation and exploration	
abstract	2012	Raisch, Sebastian; Zimmermann, Alexander; Cardinal, Laura B.	Empirical			Y	exploitation-exploration	Behavior
abstract	2021	Randhawa, Krithika; Nikolova, Natalia; Ahuja, Sumati; Schweitzer, Jochen	Empirical				exploration and exploitation	Managerial ambidexterity
abstract	2014	Rogan, Michelle; Mors, Marie Louise	?				exploring and exploiting	Managerial ambidexterity; Microfoundations
abstract	2019	Secchi, Raffaele; Camuffo, Arnaldo	?					
Y	2009	Simsek, Zeki	Review	Significant	Y	Y		Managerial ambidexterity; Multilevel
Y	2009	Simsek, Zeki; Heavey, Ciaran; Veiga, John F.; Souder, David	Review	Significant	Y	Y		Multilevel
abstract	2020	Tarba, Shlomo Y.; Jansen, Justin J. P.; Mom, Tom J. M.; Raisch, Sebastian; Lawton, Thomas C.	Empirical	Significant	Y		exploitative and explorative	microfoundations
abstract	2009	Taylor, Alva; Helfat, Constance E.	?				exploiting and exploratory	Managerial ambidexterity
abstract	1997	Tushman, Michael	?				optimize and encourage innovation	
Y	1996	Tushman, Michael L.; O'Reilly, Charles A.	?	Seminal		Y	incremental and evolutionary change	

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abstract	2010	Tushman, Michael; Smith, Wendy K.; Wood, Robert Chapman; Westerman, George; O'Reilly, Charles	Empirical			Y	explore and exploit	
	2018	Uhl-Bien, Mary; Arena, Michael	Review	Seminal	Y			
abstract	2017	Venugopal, Aparna; T.N., Krishnan; Kumar, Manish; Rajesh, Upadhyayula	Empirical				explorative and exploitative innovation	Leadership ambidexterity
abstract	2009	Wang, Fengbin; Jiang, Hong	Empirical				exploration and exploitation	Multilevel
Y	2020	Zimmermann, Alexander; Hill, Susan A.; Birkinshaw, Julian; Jaeckel, Martin	Empirical			Y	exploration-exploitation tensions	microfoundations in SMEs
abstract	2013	Zimmermann, Alexander; Raisch, Sebastian; Birkinshaw, Julian	Empirical	Significant			exploitation and exploration	Multilevel
Y	2015	Zimmermann, Alexander; Raisch, Sebastian; Birkinshaw, Julian	Empirical	Significant		Y		Managerial ambidexterity
	2014	Hill, Susan A.; Birkinshaw, Julian						
Y	2019	Mom, Tom; Chang, Yi-Ying; Cholakova, Magdalena; Jansen, Justin J. P.	Empirical				organizational-individual manager performance	

Table 11 Core ambidexterity papers



Appendix B: Tensions coding from the ambidexterity literature

Abstract approach	Base tension	Functional focus	Specific tension	Exemplar paper	Literal meaning
		Mostly stated in the source	All from the literature sources		
<b>Balance exploration-exploitation</b>					
	explore-exploit	knowledge management	exploration-exploitation	March, 1991	"adaptation by exploring new possibilities or exploiting old certainties"
	explore-exploit	leadership & management	radical-incremental change short-long term	Tushman & O'Reilly, 1996	"To remain successful over long periods, managers and organizations must be ambidextrous—able to implement both incremental and revolutionary change."
	explore-exploit	strategy	variance-mean seeking (as strategy)	He & Wong, 2004 also McGrath, 2001	"Burgelman's (1991, 2002) internal ecology model of strategy making distinguishes between two types of strategy processes, variation-reducing induced processes and variation-increasing autonomous processes."
	explore-exploit	operation	autonomy-supervision	McGrath, 2001	"given high exploration, organizational learning was more effective when the projects operated with autonomy with respect to goals and supervision. As degree of exploration decreased, better

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					results were associated with less autonomy on both counts (Thompson, 1967)"
	explore-exploit	knowledge	exploration-exploitation	Guttel & Konlechner, 2009	"Exploration and exploitation can be conceptualized as organizational learning routines which pull in opposite directions (Benner and Tushman (2002); Smith and Tushman (2005))"
	explore-exploit	operation	brand preservation-change	Beverland et al, 2015	"balancing the preservation of existing brand identity through consistency with the need to maintain relevance, which requires change and innovation."
	explore-exploit	strategy	capability building-shifting	Luger et al, 2018	Dynamic capabilities lens. "capability-building processes (to balance exploration and exploitation) with capability-shifting processes (to adapt the exploration-exploitation balance)."
	explore-exploit	strategy	academic-commercial	Ambos et al, 2008	"tensions (academic and commercially-oriented activities)" in universities
	explore-exploit	management	innovation-efficiency	O'Reilly & Tushman, 2008	"We suggest that efficiency and innovation need not be strategic tradeoffs and highlight the substantive role of senior teams in building dynamic capabilities."
	explore-exploit	operation	relational-contractual governance	Cao et al, 2013	"Contractual governance helps improve efficiency in an outsourcing relationship,

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					whereas relational governance facilitates satisfying changing business needs."
	explore-exploit	operation	sales-service	Agnihotri et al, 2017	"sales-service ambidexterity"
	explore-exploit	innovation	exploration-exploitation	Tushman, Smith, Wood, Chapman; Westerman, O'Reilly, 2010	"We operationalize exploitation and exploration in terms of innovation streams; incremental innovation in existing products as well as architectural and/or discontinuous innovation."
	explore-exploit	knowledge	broad-deep	Simsek et al, 2009	"search scope and depth (Katila and Ahuja, 2002 in Simsek et al, 2015)" and "Taylor and Greve (2006) stress that knowledge breadth and depth enable product development" (in Andriopoulos & Lewis, 2009).
	explore-exploit	org design	downstream-upstream	Simsek, 2009	"upstream units, such as production, are responsible for exploitation, while downstream units, such as marketing and sales, are responsible for exploration. These separate units are held together by a common strategic intent, an overarching set of values, and targeted structural linking mechanisms that enable a productive integration of independent efforts."
	explore-exploit	leadership	entrepreneurial-operational	Uhl-Bien & Arena, 2018	"leadership for organizational adaptability can thus be represented by a process

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					framework describing the function and role of entrepreneurial, enabling, and operational leadership. It is, quite simply, the study of how leaders enable the adaptive process"
	explore-exploit	leadership	transformational-transactional	Zimmerman et al. 2020	transformational and transactional leadership styles
<b>Manage variation</b>					
	variation-routine	operation	routine-nonroutine flexibility-efficiency	Adler et al, 1999	"NUMMI used four mechanisms to support its exceptional flexibility/efficiency combination."
	variation-routine	operation	adaptability-efficiency	Adler et al, 1999	"metaroutines (routines for changing other routines) facilitated the efficient performance of nonroutine tasks." "Toyota process emphasis efficiency, but is efficient with respect to adaptation too" (Ohno, 1988)
	variation-routine	management	externally-internally aligned culture	Raisch et al, 2012	"work units can be differentiated into those that have externally oriented cultures and those that have cultures that are internally aligned with the mainstream organization."
	variation-routine	org design	tight-loose internal coupling	McGrath, 2001	Loose coupling increases variance and potential for local discovery, whilst tighter



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					coupling helps units diffuse variation and incorporate new knowledge.
	variation-routine	org design	organic-mechanistic	Adler et al. 1999	"Organizational theory presents a string of contrasts reflecting this mechanistic/organic polarity: machine bureaucracies vs. adhocracies (Mintzberg 1979)"
	variation-routine	management	environmental uncertainty-stability	McGrath, 2001	"By implication, the greater the environmental uncertainty, those organizations that prove to have superior abilities to manage exploration will be better able to adapt to changing circumstances."
	variation-routine	management	goal autonomy-oversight	McGrath, 2010	"At one extreme, managers may allow a group complete latitude in terms of goals, focusing on possibilities and opportunities. At the other extreme, managers may be directive, defining "specific project goals, objectives or outcome criteria" (Cheng & Van de Ven, 1996: 608)"
	variation-routine	HR	opportunity-motivation	Mom et al, 2019	"our multilevel [ability, motivation, and opportunity] framework provides a novel understanding about how HR practices affect organizational outcomes by supporting individual behaviors to emerge"

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	variation-routine	HR	fresh blood-accumulated wisdom	Guttel & Konlechner, 2009	"Planned, but limited, turnover rates facilitate experience accumulation on the one hand and innovation through "fresh blood" on the other."
	variation-routine	management of innovation	continuous-discontinuous innovation	He & Wong, 2004	"Another implication from this paper is the need for senior managers to manage explorative and exploitative innovation simultaneously in 'a steady-state perspective,' beside 'a life cycle perspective' "
	variation-routine	operational	consensus-dissent	Smith & Tushman, 2005	"Murnighan and Conlon (1991) found performance was associated with members recognizing contradictions inherent in their group processes—democracy and leadership, conflict and compromise."
	variation-routine	leadership	opening-closing leadership behaviours	Mascareno et al. 2021	"Ambidextrous leadership therefore comprises three components: opening leadership behaviours, closing leadership behaviours, and temporal flexibility"
<b>Empower workers to self-organise</b>					
	intention-execution	management	strategic-operational	Lubatkin et al, 2006	"the dilemma is, Should the operations manager pursue his or her operating agenda by championing the new technology, or should he or she pursue the

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					team's strategic agenda and remain silent about the technology?"
	intention-execution	management (comms)	direct-cascaded communication	Lubatkin et al, 2006	"operating managers typically communicate their insights and recommended initiatives to middle managers, who, in turn, choose what to convey, if anything, to senior managers." Also Gemba and speaking directly (Ohno, 1988)
	intention-execution	management	planning-execution	Zimmerman, Raisch, Birkinshaw, 2015	"charter definition process is the pattern of actions exhibited by organizational unit managers and their superiors that leads to the adoption of the ambidextrous charter. The charter execution process is the subsequent pattern of actions through which an ambidextrous orientation is achieved and maintained"
	intention-execution	management	adapting-obeying	Zimmerman, Raisch, Birkinshaw, 2015	"our study highlights the value of frontline managers who are not only alert to new opportunities but also proactive in their pursuit, even when this goes against the will of senior executives"
	intention-execution	org design	bottom-up-top-down	Levinthal & March, 1993	"standard organizational structures make an inappropriate decomposition of the problems of the organization." Top managers buffered from end customer

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					preferences creates conflict for middle managers
	intention-execution	strategy	bottom-up-top-down	Janssen & Haiko, 2016	Strategies of adaptive governance include utilizing internal and external capabilities, decentralizing decision-making power, and seeking to inform higher-level decisions from bottom-up.
	intention-execution	org design	centralization-decentralization	Martin et al, 2019	HP "vacillated, between centralization (to increase exploitation, routinization, and coordination) and decentralization (to ignite exploration, innovation, and search)"
	intention-execution	org design	local-distant	Levinthal & March, 1993	"Depending on an organization's structure, global problems of poor performance are viewed as local problems of cost reduction or as local problems of revenue enhancement."
	intention-execution	org design	individual-organisational	Raisch et al, 2009	"second tension [in ambidexterity research] relates to the question of whether ambidexterity manifests itself at the individual or organizational level."
	intention-execution	strategy	internal-external	Tushman & O'Reilly, 1996	"from the outside it appeared that they had committed themselves to transistors, the inside picture was very different."
	intention-execution	knowledge management	social-technical learning	Easterby-Smith & Prieto, 2008	"when knowledge management motivates and supports people and collective activities that dynamic capabilities can be

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					triggered, therefore social elements may be more significant than technical ones"
	intention-execution	HR	motivation-skill	Wedell-Wedellsborg, 2017	"What the managers had first framed as a skill-set problem was better approached as a motivation problem."
	intention-execution	management	personal discipline-passion	Martin et al, 2019	"At Google and 3M, employees are permitted to spend a certain amount of their time on freely selected projects."
<b>Evidence based management</b>					
	illusion-reality	management	reality-illusion	Ohno, 1988	mass production creates the illusion of reducing cost, whilst reducing volume reduces cost. Similarly resource optimization versus limiting WIP and inventory.
	illusion-reality	management	capacity-demand	Ohno, 1988	"make only what you need, in the quantities you need, when you need it."
	illusion-reality	operation	prototype for design-prototype to correct	Adler et al, 1999	"Toyota puts a lot of effort into prototyping and pilots, and that reduces the number of engineering changes after they issue production drawings. At GM they use pilots to "confirm" what they think they already know, not to uncover what they don't know."

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	illusion-reality		problem diagnosis-solution	Weddell-Weddellsborg, 2017	"What they [executives] struggle with, it turns out, is not solving problems but figuring out what the problems are."
<b>Leadership for adaptability</b>					
	agility-steadfastness	operation?	adaptability-alignment	Birkinshaw & Gibson, 2004	"Adaptability: the ability to move quickly toward new opportunities, to adjust to volatile markets and to avoid complacency. Alignment: a clear sense of how value is being created in the short term and how activities should be coordinated and streamlined to deliver that value."
	agility-steadfastness  explore-exploit  intention-execution	innovation and operation	tight-loose customer coupling  profit-breakthrough innovation  passion-discipline	Andriopoulos & Lewis, 2009	three paradoxes of innovation: paradox of strategic intent (fundamental tension between profit and breakthrough innovation); paradox of tight and loose coupling to the client; and paradox of personal drivers, not least the tension between discipline and passion."

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	agility-steadfastness	management	risk seeking-avoiding	Levinthal & March, 1993	"Successful managers tend to underestimate the risk they have experienced and the risk they currently face, and intentionally risk-averse decision makers may actually be risk seeking in behavior."
	agility-steadfastness	decision-making	cognitive-biased decisions heuristic guidelines-formal routines	Eisenhardt, Furr, Bingham, 2010	"single, cognitively sophisticated solutions at the individual and group levels complement and may substitute for maintaining contradictory, dual cognitive agendas"
	agility-steadfastness	leadership	deliberate disruption-preservation	Eisenhardt, Furr, Bingham, 2010	"we describe how leaders achieve balance between efficiency and flexibility by unbalancing to counter the tendency of organizations to become more structured as they age and grow"
	agility-steadfastness	org design (governance?)	flexibility-efficiency	Eisenhardt, Furr, Bingham, 2010	"Although there are many types of structure such as rules, roles, and embeddedness, we define structure as simply constraint on action (Davis et al. 2009). Structure shapes both efficiency and flexibility, but in opposite directions"
	agility-steadfastness	decision-making	entrepreneurial-administrative	Eisenhardt, Furr, Bingham, 2010	"flexibility-injecting structures such prototypes and probes"
	agility-steadfastness	management	entrepreneurial-administrative	Mom et al, 2019	"Operational managers conduct both routine and nonroutine activities (Adler, Goldoftas, & Levine, 1999), fulfill

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					administrative and entrepreneurial roles (Probst, Raisch, & Tushman, 2011), and combine short- and long-term views (O'Reilly & Tushman, 2013)."
<b>value conflicts</b>					
	exploitation-preservation	environment	dry land-wet land farming	Midgeley, 2016	Reports of resolving conflicts affecting farmers in rural New Zealand
	exploitation-preservation	environment	environmental-commercial values		
	exploitation-preservation	environment	farming resource-fragile habitat		
	exploitation-preservation	environment	food modifying-clean green farming		
	exploitation-preservation	environment	genetically modified food		
	exploitation-preservation	environment	water conservation policy		
	exploitation-preservation	environment	water storage dam		



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	exploitation- preservation	environment	salmon farming-first nation beliefs	Hewitt, 2000	policy-making for commercial fishing sensitive to indigenous people having ancestral connections with salmon
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*Table 12 Sample of specific tension codes*

### Appendix C: STGT research method

I discovered that Action Research was a popular option for investigations into IT projects, and recognised that Lewin, Freire, and Argyris, had been calling my attention for a few years, as had evidence-based management, recently. My first supervisor, RH, introduced me to Revans' Action Learning (Hale, Norgate and Traeger, 2018), and the social and psychological impact of researching technological change in coal mining (Trist, 2010). Action Research helps managers solve real problems, as is the aim of my research.

Research into Agile practices has been done through both case study and grounded theory (GT) approaches (eg. Hoda, Noble and Marshall, 2012; Hoda and Noble, 2017). I critically analysed Hoda's Socio-Technical Grounded Theory (STGT) approach for Agile (Hoda, 2021). I learned about classical GT with its influence on theory-building research, and the argument for abductive reasoning based on researchers' expertise. Also, I learned I can be critical of a method, something I would have previously felt unqualified to do. Where Hoda claim STGT differs from classical, Glaserian, and Constructivist GT is its contextual combination of social research practice based on the technical knowledge of the researcher. Data that would be unnoticed by the purely social observer is visible to the technically informed researcher. This acknowledgement of the researcher's expertise seems reasonable and practical. It has the potential to provide rich and relevant data. However, my limited understanding of GT is that both Straussian and Charmez's forms already accommodate the researcher's prior knowledge of the subject (Easterby-Smith *et al.*, 2021, pp. 100-105) and confirmed that I do not have the resources to conduct a worthwhile GT study.

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### Appendix D: Participant Information with Consent

See next page.

## MIDDLESEX UNIVERSITY - Participant Information with Consent

### **1. Business Agility Leadership Research**

The title of my doctoral study is '*Strategic transformation of large organisations; towards a theory of enhancing management through business agility leadership.*'

My research aims to understand the ways managers at all levels improve their organisations. I want to catalogue the barriers to effectiveness and identify the tensions that hold those barriers in place.

My approach will be to facilitate open conversations with individual managers and groups of managers. During those conversations, we will focus on the most significant tensions experienced, and explore ways to manage them.

### **2. Invitation**

You are being invited to take part in a research study because of your role as a manager.

Before making that decision, it is important for you to understand why the research is being done and what it will involve (see below). You are free to share and discuss this invitation with others in reaching this decision. I am available for clarification and to answer any questions.

### **3. Purpose of this study**

Managers in a range of sectors recognise that many organisations are facing threats from the pace of technological innovations and social awareness that have occurred during the past two decades. I believe that managers are the experts of their organisation's problems and are

crucial for leading its improvement. I want to understand how managers are adapting their role to suit the digital age.

The study focusses on the how managers balance conflicting demands. For example, how to lead change and ensure continuity, or operate in a socially responsible way whilst reducing operational costs.

#### **4. Why you have been invited**

For the purposes of inclusion in the study, a manager is anyone who has people who report to them directly. Managers from every level of the hierarchy are participating.

I am particularly interested in organisations that have a strategy of transformation or acknowledge themselves to be in a period of transition.

#### **5. What will you be invited to do**

You will be invited to join me for a one-one conversation, either 30 or 60 minutes depending on your availability. As gatekeepers in your organisation, if you are willing to extend this invitation to other participants, I would be happy to facilitate group sessions. If you believe that such research conversations would also be a learning opportunity for your colleagues, I would be happy to offer to facilitate group conversations.

#### **6. Participation**

The sessions will be recorded, and all inputs will be anonymised. You are free to decline or reschedule any sessions. You can withdraw from the study at any time but please note it may not be possible to withdraw your specific contributions once they have been analysed but they will continue to have been anonymised.

## **7. Pros and cons of taking part**

At an organisational level, you may benefit from participating in an improvement process that uses your wisdom as a manager. Personally, you may find the experience rewarding and valuable.

Your contributions will support efforts to help managers shape the systems of work for effectiveness and for people to be happy in their work. Through this research I hope to extend management theory to describe a methodology for managing tensions and leading transformations. This can keep continuous professional development relevant and anticipates likely changes in dynamic local and global environments.

No risks are anticipated in taking part in a management research study such as this one.

## **8. Data protection and confidentiality**

Personal data that can identify you, such as name, job title, department, and role, will be tokenised (anonymised by code) and stored separately from the data you provide in conversation and group sessions. The table of names and tokens will be stored in the University's secure OneDrive repository in a password-protected Excel file.

Names of participating organisations and individuals will be anonymised (using tokens) and described in general terms in the final report. For example, where a quotation is used, it will follow the style 'participant B25 said "something poignant"'. Comments that are specifically flagged as needing to be held in confidence will not be used unless a mutually satisfactory way can be agreed to make them anonymous.

## **9. Publication of findings**

The report and an executive-style summary will be available to all participants and any organisational sponsors on request.

Research findings are available to the higher education researchers and may be used in subsequent publications in the management literature.

## **10. Ethical review of the study**

The study has received ethical clearance from the University's Research Ethics Committee who reviewed the study. The ethics committee is the Transdisciplinary Programs in the faculty of Business and Law. My study is self-funded.

## **11. Further information**

If you require further information, have any questions, or would like to withdraw your data then please contact me directly: Russ Lewis [rl637@live.mdx.ac.uk](mailto:rl637@live.mdx.ac.uk)

Should participants have any concerns about the ethics or conduct of the study they can contact Kate Maguire my director of studies at [k.maguire@mdx.ac.uk](mailto:k.maguire@mdx.ac.uk), who is also the chair of the ethics committee for this programme and a member of the University ethics committee.

## **12. Your statement of consent**

**I have read and understood the participant information above and by answering questions in interviews, questionnaires and participating in conversations and group sessions, I freely and voluntarily give my consent to participate in this study.**

Thank you again for agreeing to take part in this study. If you are now comfortable to do so, please go ahead and sign the 'Consent Form' on the next page. You should then keep this document since it contains important information and contact details.

Russ Lewis

May 2023



## CONSENT FORM

Participant Identification Number:

**Title of Project: Business Agility Leadership Research**

**Name of Researcher: Russ Lewis**

**Your initials**

1. I confirm that I have read and understand the information sheet dated May 2023 for the above study and have had the opportunity to ask questions.
2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason and without penalty.
3. I agree that this form that bears my name and signature may be seen by a designated auditor.
4. I agree that my non-identifiable research data may be stored in national archives and used anonymously by others for future research. I am assured that the confidentiality of my data will be upheld through the removal of any personal identifiers.
5. I understand that my conversations may be recorded and subsequently transcribed.
6. I agree to take part in the above study.

\_\_\_\_\_  
Name of participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name of person taking consent  
(if different from researcher)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Researcher

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

1 copy for participant; 1 copy for researcher.

Appendix E: *A priori* constructs

Table 11 below contains the *a priori* constructs I brought with me, into the empirical data collection stage of the research.

<b>Construct</b>	<b>Description</b>	<b>Potential measures</b>	<b>Evidence</b>
Barriers to self-organising improvement	Barriers are created, maintained, and removed by managers	Improvement items aging on backlog	Anecdotal as consultant (inside researcher)
DevOps	Prime directive of Change and Run are in competition with each other	DevOps metrics: eg. releases, incidents, MTTR, MTBF	Accelerate, 2018; DORA, etc.
Policy to resolve a persistent tension	Conflicting priorities of quality vs delivery were causing waste, resolved by executive decision	Business performance	Wisetech Engineering quality over faster delivery
3 tensions designed into op model	Social purpose, excellence, and profit	Profit, projects, people	Thoughtworks Ben & Jerry's
Context-shaping forces	Org forces meet in the stem of the Chalice model, the point where management's influence is greatest	Eg. commitments to shareholders, market expectations, weight of the org	Lewis, 2022
Leadership at all levels	Hierarchical & siloed decision-making is too slow	Rate of flow of value, distributed decision-making	Lean
6 basic tensions	Tension sources create conflicting priorities	Ambidextrous performance	Literature, Convo 1
Both/and thinking	Way to manage paradox that transforms either/or	Ambidextrous performance	Birkinshaw, 2022 (via email); Smith & Lewis, 2011; 2022

Table 13 *A priori* constructs, description, and evidence

## Appendix F: Tensions and constructs from analysis of the data

### F.1 Candidates

Candidates that emerged that needed to be recorded for further consideration as constructs, themes, or hypotheses.

<b>Candidate</b>	<b>Description</b>	<b>Potential measures</b>	<b>Evidence</b>
Transformation as result of continual improvement including reflection and personal development	<p>Intention is top-down intention, but learning is bottom-up.</p> <p>Takes years for critical mass of managers at all levels to learn the new paradigm</p> <p>Not revolution over evolution (punctuated equilibrium)</p>	Reflection on differences (that make a difference)	<p>Convos 17, 18, 25</p> <p>Roots in Lean, adopted by Agile, now best practice in tech Eg. FAANGs, DevOps,</p>
Movement between action and reflection	Self-awareness is not enough, application and experimentation is required to make progress		<p>Convos 3, 10, 15, 22</p> <p>Principle of meditation, essence of PDSA, blue/red thinking (Marquet, 2015)</p>
Moral purpose	<p>Doing what's right, vs following orders is a personal judgement call.</p> <p>Takes courage to speak up.</p>	Upsetting the established order!	Convos 2, 3
If not growth, what do firms strive for?	Capital markets assume financial growth of all firms, but that fails many employees (eg. those who don't want to retire or leave), communities that depend on a firm's presence and activities, the environment (threatens	Purpose, social well-being	<p>Owen, 2000</p> <p>Stodd, 2023</p>

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	sustainability), and the national identity (whose spirit is boosted by pride in its activities)		
Not 'walking the talk'	Ignorance and incongruence amplify hierarchical divisions	Agile mindset, 'othering' managers who don't 'get it'	Success factors in lit.
Relationship with ambiguity	Desire for control may smother natural emergence	Too many notices, pages of T&Cs	Owen, 2000 p.39; Wilkinson, 2006. Conflicting priorities, constant pressure (1,
Internal vs external change (this would be nice to have vs this has already happened)	Internal change happens organically at bottom- or middle- levels. Top levels may be supportive, even believing what happened in one area can be scaled out to the whole org.  External change demands a response by top level management, on behalf of the entire organisation		
'Being human' / or telling a good story about being so!	Leadership seems to be associated with caring for both for employees and the organisation	Performance, motivation, and well-being	Convos 14, 15, 16 with elite participants Buckingham & Coffman, 2005
Managerial competence	Organisations are designed with the expectation that managers are competent – transformation may be sought because they are failing to do what's needed		Constructs marked with † are not uniquely digital
Activation	Managers act when they realise something cannot be allowed to continue, and they feel they have agency to improve the situation		Martin et al, 2019 (conflict) Dewey in English, 2014

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Representable as a tension	If a problem can be represented as a tension, it can be resolved as such	Dualism or pluralism – ‘both/and’ applies	Convos where I interpreted what I heard as tensions or tension resolution approaches
Transformation by leap-frogging evolutionary stages	Instead of efficiency as the goal of transformation, set the objective of achieving simultaneous ambidexterity, effectively leap-frogging the evolutionary process of improving operations and product development separately, then having to work-out how to bring them together.	Whole org effectiveness becomes the measure, not cost efficiency	Firm that was failing to perform in operations and innovation

*Table 14 Candidates shortlisted for further consideration*

F.2 Constructs that impede performance

Constructs that impede performance			
Construct	Description	Measures	Evidence
Connecting legacy tech with modern practices and expectations	Systems built without automatable unit tests and associated thinking are problematic in DevOps era	DevOps metrics	<p>Convo 1 “<i>mainframes can’t do what microservices can</i>”;</p> <p>Convo 4 “<i>mainframe teams worked at a different pace than modern devs - needed abstraction layers</i>”</p> <p>Convo 9 “<i>Legacy tech works fine, but legacy ways of thinking are potentially damaging</i>”</p> <p>Convo 11 “<i>Old KPIs don’t work with agile</i>”</p>
No sandbox for managers to learn in	<p>Fear of consequences and no training in designing experiments.</p> <p>Pilots are really projects.</p>	Number of experiments / empirical learning	Convo 1 “ <i>Managers are too scared to experiment in case they lose their jobs</i> ”
Bureaucracy	Non-specific factors that prevent getting things done – but not accounted for, hence intention-execution.	Time to complete tasks (drag)	Convo 1 “ <i>Project approved in January, but budget only released end May!</i> ”
Tensions between departments	Poor comms between silos or ‘them and us’ between silos		<p>Group 2 “<i>lack of comms at middle manager level. Eg product features released without customer service teams knowing</i>”</p> <p>Convo 2 “<i>consultants would challenge us with ‘what did you do to my patient?’ and ‘fear of complaints from patients and consultants created enormous pressure</i>”</p>

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Generational divisions			<p>Casual 5 <i>“I’m on the board of the company founded 30 years ago by my father but I’m seen as young and naïve [as a 40-year-old woman] – they just don’t get digital”</i></p> <p>Convo 27 <i>Had to maintain an inferior surgical tool for the older generation, despite evidence the new design would extend their practice years up to 20%.</i></p>
Short termism			<p>Convo 21 <i>“Short tenure at the top leads to short termism and need to have one big thing a year”</i></p>
Need to absorb variety	<p>Hospital walls are often plastered with notices and rules, each being important but unable to get attention amongst the noise. The result is that nobody pays attention to any of them.</p>		<p>Convo 18 <i>“So many different KPIs!”</i></p>
Don’t rock the boat			<p>Convo 18 <i>“Me, as a black woman, in this positive action work, I wanted it to have the greatest chance of success, but it wasn't the right time to challenge [the program I led] and I self-silenced”</i></p> <p>Casual 4 <i>“Peers and above don’t want to change [the system] – believe its necessary and delivering – can be quite political”</i></p>

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<p>Org structure generates tensions which need managing</p>	<p>Silos and role boundaries create tensions</p>		<p>Convo 5 “<i>Companies create roles with boundaries</i>”</p> <p>Casual 3 <i>After-care for customers is not incentivised in same way as lead generation (with KPIs and bonuses)</i></p>
<p>Central-local priorities</p>	<p>Org vs local tensions as demand, controls, policy, culture, etc. Also, global-regional, firm-business unit</p>		<p>Convos 1, 2, 5, 7, 9 (<i>Agile within a non-agile process</i>), 11 (<i>Teams as fixed cost but finance expected project-based costing</i>)</p> <p>Convo 18 “<i>Covid vaccine [as Government- not hospital-issued] condition of employment caused incredible amount of tension - was incredibly difficult for staff to hear</i>”</p>
<p>Professional cover up</p>	<p>Covering up, to protect personal reputations, instead of learning and improving processes</p>		<p>Convo 2 “<i>not safe to criticise - felt like a club - insiders looked after each other</i>”</p>
<p>Not suited to management</p>	<p>Eg. difference between being engineering led and led by engineers</p>		<p>Convo 25 “<i>Can be brilliant engineers, but not good at politics or dealing with complexity</i>”</p> <p>Convo 11 “<i>none of us were politically savvy enough to protect ourselves [after executive sponsor left]</i>”</p> <p>Global move to take AI governance away from technologists who developed it</p>



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Imposing transformation practices	Transformation activities that create ‘them and us’ divisions disengage people instead of leading them		Convo 25 <i>“Cant transform by sacking all the PMs – it creates enemies without giving people an option”</i>
Stress-related ill health amongst senior managers			Convo 8’s <i>Digestive system stopped diagnosed as stress – paralyticilius</i> Convo 12 <i>Unable to work for several weeks due to (toxic) stress</i> Convo 26 <i>“lots of tension from ppl feeling their roles are being threatened”</i>
Uncertainty cascaded as targets	How management responds when they encounter complexity, depends on leader’s relationship with ambiguity		Convo 8 <i>“Target to increase capital growth cascaded to snr managers as 10% growth target”</i> Wilkinson, 2006
Financial pressure affects ppl’s appetite for change	Management tends to give up on transformation goals (including agile) when times are tough See Disruption as opportunity Convo 9		Convo 10 <i>“Org in decline and stressing old methods; command and control, individual performance management”</i> Convo 12 <i>“Revert to old ways when going gets tough, seen it in oil, insurance, banking, and healthcare”</i>
Consultancy capacity / development dilemmas	Firm needs enough people on the bench to match demand (contingency) and build knowledge assets (exploration) whilst staying profitable See Convo 19 on when to recruit		Convo 8 <i>“Obviously tensions between [chargeable] client work and practice-building work, also building a bench so you have capacity and people not being utilised [charging]”</i> Convo 19 <i>“Major tension is deciding when to recruit for sales vs revenue</i>

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			<i>positions – need confidence in your business growth”</i>
Contractors vs ‘permies’	Consulting firms make bigger profits on permies and permies more likely to contribute to knowledge sharing than contractors		Convo 8
Gap between expectation and delivery	Poorly communicated outcomes and specifications or poor quality of delegation.  Expectations beyond org’s capabilities or demands made without context		Convo 8 “ <i>Quality of delegate work can be ‘shocking’ problem is with the delegator”</i>  Convo 15 “ <i>ridiculous requests from above - regional presidents who want xyz training now – with no understanding of the training needs”</i>  Convo 18 “ <i>So many opportunities but staff don’t have the time to engage - I try to help individuals create time when needed - it could be unsociable hours”</i>
Brexit			Convo 9 “ <i>Brexit making it hard to access talent - Ireland [unit] gets people we cant - and has much less regulatory submissions to make”</i>
Gaming the system	Managers find ways to get things done, despite systemic barriers		Casual 4 “ <i>Spending public money has to be publicly accountable but leads to bureaucracy – I’m customer facing and need to act swiftly so either go without the process or network to get around it”</i>

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Distance from customer			<p>Convo 10 <i>“HR has grown, so has Product, neither ever visit our customers nor know the skills engineers need”</i></p> <p>Haier’s RenDanHeY; Parkinson’s Admiralty observation</p>
Longevity means absorbing more and more complexity	Coordinating different ways of working across teams and departments, different technologies, processes, with shared purpose		<p>Convo 9 <i>“Really a waterfall-agile tension played out as the org vs this [agile] department”</i></p> <p>Convo 16 <i>“used to make a product, sell it, review, then repeat” “now speed of iteration brings new markets, new fuels, each with a number of potential solutions, increasing connectivity and data”</i></p> <p>Convo 25 <i>“Complexity comes from the legacy, not there if you start from scratch – Agile can’t solve this”</i></p> <p>Panel 1 <i>Revolutionary tech appears in emerging markets [leapfrog], whilst its evolutionary in regulated</i></p> <p>Convo 27 <i>Younger surgeons adopted the new scissor and got better performance because they knew no different</i></p>

F.3 Constructs which emerge from reflection (including learning from failure)

Constructs which emerge from reflection (including learning from failure)			
Construct	Description	Measures	Evidence
Awareness of shadow attributes	Strengths have their opposite weaknesses which can lead to negative behaviours.	Self-doubt, imposter.  Too much confidence.	Convo 3 <i>“I realised [writing the book about being bullied] I was actually conquering the bully inside”</i>  Shadows cause defensive reactions (de Vries and Balazs, 2011) such as splitting into ‘them and us’
Accruing tech debt without understanding consequences	Lack of tech savviness (competence/literacy?) leads to decisions with negative consequences.  See ‘Manage funding risks’		Convo 4 <i>Tech voice easily drowned out at exec level - hard to get support [from peers] when everyone else is commercial or manufacturing expert – but not tech savvy.</i>
Fashion-led decisions, not fundamental changes	Companies want to be cloud-based, but don’t know how to be cloud efficient		Convo 4 <i>CEO wants to be a tech-led org, but ‘lift and shift’ into cloud isn’t cloud-native.</i>
Overestimating team / self	Managers who believe they have superstars in their teams, or think they are smarter than they are, create friction with those who really are		Convo 4
Seeing what you expect and missing what matters	Gemba – go to the place of work to see the situation first hand – relies on the viewer being told what to look for /seeing what is hidden in plain sight		Convo 10 <i>“directors have accompanied engineers but are probably seeing what they want to”</i>

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Colour blocks help self-awareness and communication	Red: just do it Yellow: yes, count me in Green: how can I help you? Blue: let me check the details		Convo 9, 16 <i>showed me physical Insights ® colour energy blocks and mentioned benefiting from Insights' training</i> <i>HDBI</i>
Tensions can motivate change			Convo 9 <i>"We decided to adopt agile because we had too much tech debt"</i> Owen, 2000;
Recognising the need to prove oneself	People will accept a leader's authority when they can trust them to do what's right for the org		Convo 16 <i>White male, new to role but very young [for such a senior role] made good decisions "including correcting someone who'd been overpromoted"</i>  Convo 26 <i>"always felt a pressure to outperform as a woman, as a lesbian, etc. As a leader I felt I had no option but to intentionally dial it [DEI] up"</i>
Ability to reflect	Reflection requires a mixture of curiosity and humility		Convo 16 <i>"Schoolboy asked me what made me say you're a people person, made me think. I only replied the next day."</i>
Transformation comes from within	Cant outsource transformation to an outside agency (eg. consultancy firm)		Convo 11 <i>"Their [big 4] arrogance made a lot of enemies and made bosses realise we didn't need them any more"</i>
Cost to achieve (CTA) fallacy	Orgs fund cost of hiring transformation experts based on predicting the number of FTE jobs saved		Convo 12 <i>"FTE saves works for digitising and closing branches, but not for agile"</i>
Context can be motivational			Convo 22 <i>Noticed new dept was open to change which "broadened my</i>

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			<i>mind. I was happy in roles before but now I'm enthused and feel I can do so much more"</i>
Human condition	If tension and conflict are normal, then organisation depends on managing difference  Listening		Convo 27 <i>"Human condition has always been about managing tensions - there's always difference and differences can always lead to conflict"</i>  Convo 27 <i>"Do I understand what this person is trying to achieve?"</i>
Legacy creates complexity	Tech debt is a label rather than anything of value		Convo 25 <i>"complexity comes from the legacy it's not there if you start from scratch and agile can't solve that complexity for you"</i>
BAU in change	What to do with old teams doing valuable BAU stuff whilst bringing new ppl and thinking in		Convo 25

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### F.4 Constructs for resolving tensions

Key to symbols:

† Mainstream role of the manager according to systemic organisational design

‡ Structural (or policy) factors that could enable transformation at scale

※ Factors that may have become more significant in the digital age

Constructs for resolving tensions			
Construct	Description	Measures	Evidence
† Manager as enabler	<p>Developing people includes removing org's systemic barriers and individual's personal barriers</p> <p>Managers' job is to improve the system</p> <p>Could measure ratio of barriers identified to barriers resolved</p>		<p>Convo 5 "<i>Manager's job is to enable people then leave [move on], not become permanent bureaucrats</i>"</p> <p>Convo 9 "<i>Top-down initiatives have good intentions but don't really translate into reality on the ground</i>"</p> <p>Convo 14 <i>Restorative culture (like airlines) not looking for blame - why do ppl behave this way? "We do lots of [psych safety] work during onboard and there's constant reinforcement"</i></p> <p>Convo 23 "<i>10k staff are educated but not technical. Can't prevent this [phishing attacks], never</i>"</p> <p>Convo 26 "<i>You don't need to manage good senior ppl, just ask curious, probing questions - coaching essentially - no more than that. Trust</i>"</p>

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			<p><i>comes from being present and being fully connected to get lots of feedback"</i></p> <p>Deming</p>
‡Hybrid working expectations			<p>Convo 8, 20 <i>People no longer want to be forced to work from an office</i></p> <p>Convo 20 <i>"Make everyone part of the solution – I don't try to resolve it myself [as manager]"</i></p>
※Manager as coach to overcome personal-company tension	<p>Intervention needed when personal aspirations or misconceptions conflict with company's needs</p> <p>Potentially measured by people quitting or failing</p>		<p>Convo 5 <i>"Had to correct misconceptions around the perceived glory of the SM role by coaching people to look inside themselves to see the [SM] job was really navigating emotional conflict"</i></p> <p>Convo 14 <i>"Ppl react to change differently so must adapt to each team – no one size fits all and managers must be in listening mode"</i></p> <p>Convo 18 <i>"We're using the apprentice levy and training own coaches internally"</i></p> <p>Convo 26 <i>Wouldn't put-up with managers (especially in leadership positions) who believe they can't change the system - "some just need coaching but they have to be open to it"</i></p>
†Manager as shield	Managers shield teams to protect them from something above		<p>Convo 26 <i>To deal with toxic individuals, conflicting priorities, or</i></p>



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			<i>areas of bad management or culture</i>
‡Non-management careers	Senior roles throughout the organisation, not only for climbing up the hierarchy		Convo 6 described an <i>'enlightened organisation' in which career progression didn't depend on moving into management role</i>
†Harnessing an ecosystem	External ecosystems can help resolve explore-exploit tensions (by providing high quality market intelligence and feedback on products)		Convo 16 <i>"Network of financially stable, individual dealers are nimble but robust in their own markets.  Each country makes its own go to market plans"</i>
‡Disruption as opportunity to transform	Whilst other firms were making redundancies and 'circling the wagons' after the 2008 crash, this firm prioritised 10 products and ditched all other projects		Convo 9 <i>"we started ramping up 7 years ago and haven't stopped"</i>  Convo 20 <i>"When ppl aren't playing nicely, you must talk to them"</i>
※Hierarchical tensions mediated by having fun and holding open conversations	Trust and motivation based on inclusivity (all departments, all grades) and evidence (not rhetoric)  Satire?		Convo 6 <i>"We managed tension between heads and scientists by running an unofficial and humorous in-house magazine"</i>  Convo 14 <i>"Cultural, hierarchical, age divisions resolved by open communications, inclusivity and helping people be what they are"</i>  Convo 19 <i>Noticeably good vibe between CEO and Commercial director</i>

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			<p><i>“famous Northern sense of humour”</i></p> <p>Convo 26 <i>“Ppl are generally happy to work for me. I’m not a threat, not an empire-builder. I’m not a threat and there’s no huge ego”</i></p>
※Talk about how you feel (at work)	Useful learnings (unexpected benefits) emerge from genuinely caring for wellbeing of both colleagues and customers		Convo 7 impact on staff of rolling-out KYC change on 100k legacy customers per month: <i>“Can’t break their backs just to get through the volumes required”</i>
†Resolving disruptive behaviour	Learning to be a better manager by listening clearly, noticing, and resolving disruptive behaviour		Convo 9
‡Commit to strategic or tactical hiring	Banks confuse burst cover with long-term staffing		<p>Convo 19 <i>“Tension is when to recruit for more revenue positions [consultants] resolved by gut feel; confidence in your business growth and sales pipeline”</i></p> <p>Convo 8 <i>“I could place 6 people now, but cant hire for another 4 months, when they’ll have another job. Our org doesn’t like hiring unemployed people”</i></p>
†Learn to say NO	Matching delivery commitments with capacity as a form of risk management		Convo 9 <i>“We’re never late since we went agile - better than the rest of the org so it’s getting difficult to NOT take on extra work and preserve capacity”</i>

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<p>※Bring suppliers along with you on all journeys</p>	<p>Tech staff augmentation firms act as silos (eg. owning QA function) but have commercial interests in blocking transformation</p>		<p>Convo 25 <i>“Bring the people doing the work closer together by breaking down layers of contracts and 3rd party management – although it’s like turkeys voting for xmas”</i></p> <p>Convo 11 <i>“Penalties for late delivery against contracting company prevented them from developing ppl and being safe to learn”</i></p> <p>Convo 26 <i>“We had lots of sub-contractors and I made them feel part of the region”</i></p>
<p>※Manage funding risks</p>	<p>Nobody wants to pay to maintain tech because there’s no visible return – Savvy managers know this and may use change projects to fund BAU</p>		<p>Convo 25 <i>“Banks assume they always going to get more funding to pay for next lot of regulatory change, which allows them to hide stuff”</i></p>
<p>※Need to learn to manage upwards</p>	<p>Local improvement practices are achievable, but get blocked beyond a certain level.</p> <p>Savvy managers balance transparency and diplomacy</p>		<p>Convo 10 <i>“Started cost-neutral initiative, defects down by 30%, morale up but only lip service support from above”</i></p> <p>Convo 1 <i>“Local product initiatives or pilots stopped by higher-ups. We pushed XX app as far as it would go - it succeeded so got support”</i></p> <p>Convo 10 <i>“Leadership can only cope with evolution, not revolution”</i></p> <p>Convo 11 <i>“Security ppl threatened by DevOps”</i></p>

			<p><i>practices and tools - found an inside champion to help get changes made below the radar”</i></p> <p>Convo 15 <i>“It took six months for me to convince a new [micro] manager he could trust me”</i></p> <p>Convo 15 <i>“Resolves tensions created by manager who only [follows orders] by asking ‘should I go to our manager and ask if he thinks this is a good idea?’”</i></p> <p>Convo 26 <i>“Don’t want to get known for having an unsolvable problem [in your region] - must balance between being transparent and when to manage upward (everything’s fine)”</i></p> <p>Goldsmith</p>
†Match measures with intrinsic motivation	Engineers and business people can have a common purpose and goals but what they value and what motivates them is unlikely to be the same. Eg. values of the Agile Manifesto are very much those of engineers, not those of business people.		<p>Convo 10 <i>“Engineers get satisfaction from solving problems and helping ppl, not going fast - intrinsic motivation”</i></p> <p>Chapman &amp; White, 2012; Pink, 2012; Buckingham &amp; Coffman, 2005</p>
※Use principles	Principles seem to work well in the digital age because they help people make decisions for themselves		<p>Convo 13 <i>“[Amazon’s] leadership principles worked quite well”</i></p> <p>Agile Manifesto’s principles, Ray Dalio’s</p>

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‡Alignment as strategy	<p>If an org puts customer first, that should be reflected in its structure (as in RenDanHeY)</p> <p>If it's a tech firm, then HR and Finance should support not control CIO</p>		<p>Convo 13 <i>"I'm trying to align product engineering, customer support, sales, with customer success – putting Product team under Sales makes it difficult"</i></p>
†Clarify strategic objectives, review regularly	<p>What management focuses on becomes important throughout the org.</p> <p>Explore-exploit is a strategic concern oil &amp; gas industry (perhaps less dynamic than tech)</p>		<p>Convo 14 <i>"We balance explore-exploit and short-long term tensions with 30 'must wins' which are reviewed monthly. Production is so important it's reviewed weekly with the CEO"</i></p>
†Explain WHY	<p>Resolve long-term planning vs responding in the short term by explaining WHY change is needed</p> <p>Listening and adapting language to the audience</p>		<p>Convo 20 <i>"Product needs roadmap to give 6-months' comfort then competitors and regs disrupt us – mitigated by telling everyone WHY we have changed direction"</i></p> <p>Convo 26 <i>"You have to educate, it's fine not to convince, but you have to listen first"</i></p> <p>Convo 26 <i>"Need to adapt your language to the audience - understand why they should care"</i></p>
‡Support for bottom-up and local initiatives	<p>Bottom-up initiatives need to be included in the organisation's central structure, as well as providing processes for selection and monitoring</p>		<p>Convo 14 <i>"We have 'beat the plan' objectives twice a month on different topics rolling through the year. Come from production managers and [8] countries. Currently it's CO2 emissions"</i></p>
※Purpose that resonates well	<p>Addressing exploitation-preservation tension is</p>		<p>Convo 14 <i>"Our vision to be a leading independent"</i></p>

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<p>with staff †Backed by a clear vision</p>	<p>critical in the Exploration &amp; Production segment of the oil and gas industry</p>		<p><i>E&amp;P company by putting more carbon into the ground than we take out resonates well with staff”</i></p>
<p>※Intentional culture</p>	<p>Management must create and model the culture they need for performance.</p> <p>Psychological safety and inclusivity should be a legal minimum not an aspiration</p>		<p>Convo 14 <i>“We established at exec level that silos are not acceptable and knowledge sharing expected – this cascades down as normal behaviour. Recently brought execs in from leave to address a design problem – ppl may die if we get this wrong”</i></p> <p>Convo 14 <i>“We created a ‘Stop culture’ because it’s hard for young person to tell an old person to stop walking up the crane in Indonesia”</i></p> <p>Convo 17 <i>“Problems are socio-technical, so limited as to what tech can do - which is why [solutions] include culture”</i></p> <p>Convo 26 <i>Acted to help nearshore region develop ownership: found out what ppl thought it did well, then growing personal and regional brand</i></p> <p>Convo 26 <i>Leaders create psychological safety at their level – even if it’s missing from the very top</i></p> <p>Convo 27 <i>“Team works to my standard - although I</i></p>

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			<p><i>place my stake in the sand, not set in concrete”</i></p> <p>Lakomski, 2001</p>
<p>※ Create a caring context for people to succeed</p>	<p>Leadership depends on an element of caring about humans</p>		<p>Convo 15 <i>“There was a time when I could have told ppl HOW to do their work, but I couldn’t be the expert forever so stepped back to let them find their way. Step 2 was providing the context for others to innovate beyond my expectations. I’m a care taker – if you don’t take care of them, why should ppl work for you?”</i></p> <p>Convo 16 <i>Between hitting numbers and closing deals vs helping humans, I want to expand the circles of those people I help”</i></p> <p>Convo 20 <i>“Even ppl who’ve gone left a bit [of themselves] Everyone drops into the water”</i></p> <p>Convo 26 <i>“of paramount importance” and “where I spend most of my time”</i></p> <p>Convo 26 <i>“My role is looking after the person. They won’t be in that function for ever, but must feel happy in the firm, else they will accept the next offer from a recruiter”</i></p>
<p>※ Appropriate autonomy and accountability</p>			<p>Convo 14 <i>“Supplier contracts are owned by operational managers [in</i></p>

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			<p><i>country], Purchasing dept checks T&amp;Cs”</i></p> <p><i>Convo 25 “Giving autonomy is really important”</i></p>
<p>※Manage knowledge risks with continuous training and assessment</p>	<p>Learning has to be encouraged and included as part of career development if it is important to organisational performance</p> <p>(This participant was the HSE of an oil and gas exploration and production firm)</p>		<p><i>Convo 14 “We send ppl to conferences (paid learning) but notice many are learning at weekends. Ppl self-assess using templates, then technical authorities (functional experts in the company) assess internally. They are externally assessed too”</i></p>
<p>※Naming of concepts</p>	<p>Naming abstract concepts helps people recognise and manage them. Best names seem to come from the US</p>		<p><i>Convo 17 “Hill finding vs hill climbing as internal metaphor for explore/exploit.</i></p> <p><i>Semantic diffusion of DevOps and Agile”</i></p>
<p>†Separation of concerns</p>	<p>A department that has separate delivery targets can operate in isolation whilst serving the organisation holistically. In this case, taking cash deposits to support another department’s lending.</p>		<p><i>Convo 24 “Deal with tension by ignoring it – [what we do] is nothing to do with any other part of the business”</i></p>
<p>†Evaluate short-long term benefits</p>	<p>Contract manufacturer wants long-term production contracts and earn short-term cash flow and keep its machines (and ppl) busy</p>		<p><i>Convo 27 “We sometimes say no to customers”</i></p>
<p>‡Design for lapses of managerial competence</p>	<p>Managers sometimes lack the competence to know what good looks like (eg. outdated tech practices or PM in tech role)</p>		<p><i>Convo 27 “Make sure you have a system in place so a) you don’t put the wrong person in place and b) so there’s a recognisable process in place”</i></p>



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<p>†Tensions are everywhere</p> <p>※Depends on managers' knowledge of quality</p>	<p>Subjective tensions resolved by finding ways to test “<i>if it achieves what’s needed</i>” and matches the quality standards</p>		<p>Convo 27 “<i>Tension for a designer could be anywhere from I don’t care what it looks like as long as it works, to image is all that matters</i>”</p>
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*Table 15 Constructs that emerged from my research*

## Appendix G: Sharpened constructs as evidence tables

### G.1 Create a caring context

Duplicate of the table in Chapter 4 for the ‘Create a caring context’ construct.

<b>Convo Id</b>	<b>Rank in org</b>	<b>Main qualities conveyed in convo</b>	<b>Care for others conveyed</b>	<b>Agency in creating a context</b>	<b>Example</b>
7	Team manager	Reflective, focussed, good communicator	Strong sense of care for customers & colleagues	5/10 Initiated team check-in meetings and peer support	<i>“Can’t break their backs” to get through this work</i>
10	Head of	Long-serving employee who loves learning and sees systemically as though a consultant	Little care conveyed in convo, but he shows care in prof group to which we both belong	Hd of small dept but sees leaders as unable to change	<i>“Org is in decline phase (Handy’s 2015 Second curve) so stressing on old methods: command and control and individual perf management”</i>
14	Dir	Exceptional leader I felt I wanted to work for	Equal focus on safety and wellbeing of ppl, and focus on business objectives	10/10 Has considerable control as Hd Health & Safety, and co-founder	Established that silos are not acceptable and sharing expected – at exec level.
15	Snr mngr	Has learned to be a leader and being a leader is important	Said he wants ppl to produce better results than he can	4/10 enables as head of training	<i>“I’m a care taker – if you don’t take care of them, why should ppl work for you?”</i>
16	Divisional CEO	Spoke about himself (self-aware), clearly	People-person (or	7/10 Has the authority and knowledge to do what’s	<i>“Between hitting numbers and closing deals vs helping humans, I</i>

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		a talented leader (young)	good story teller)	right for org locally, but wider org is an ecosystem	<i>want to expand the circles of those people I help”</i>
20	Dir	Obviously really cares as a manager	Aware it is a human system	8/10 Evidenced participatory decision-making, clearly trusted by CTO	<i>“Even ppl who've gone left a bit [of themselves] Everyone drops into the water”</i>
26	Regional Hd	Role model and leader who has her people's best interests at heart	Listened to what peers said about her region to understand its value first	8/10 controls own region, but it's a nearshore facility not a business unit	<i>“Ppl are generally happy to work for me. I'm not a threat, not an empire-builder. I'm not a threat and there's no huge ego”</i>

*Table 16 Evidence for 'Create a caring context' construct*

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### G.2 Explain WHY

Tabulation of measures and evidence for the ‘Explain WHY’ construct.

Key to dimensions:

Stage of org development: current health and wealth of the firm.

Objective: the tension or topic being discussed at that point in the convo.

Transparency score: my assessment of management’s willingness to share the real reason (WHY) for the objective set.

Convo Id	Stage of org development	Objective	Transparency	Example
20	Growing - well funded startup	Resolve long-term planning vs responding in the short term by explaining WHY	High	<i>“Product needs roadmap to give 6-months’ comfort then competitors and regs disrupt us – mitigated by telling everyone WHY we have changed direction”</i>
10	In decline	Increase productivity – more output from each engineer	None (in denial?)	Noticed org is in decline phase (Handy's 2015 Second curve). Stressing on old methods; command and control, individual perform management (of engineers)
19	Struggling – govt funded institution	Increase efficiency whilst meeting clinical targets	Moderate Problems are public knowledge	Managers were told they should be communicating better, but they were also told they had to <i>“do more with less resource”</i>
26	Established - prospering	Tech and ways of working transformations	High	Important to explain why changes are needed and why they (individually) should care – need to adapt language to each audience

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14	Growing – Management achieved transformation of established firm – now selling it	Create a ‘stop’ culture to protect lives and maintain safety	High	Convo 14 “ <i>We do lots of [psych safety] work during onboard and there’s constant reinforcement – no blame.</i> ”
14	Growing – as above	Understand why ppl behave this way and improve system	High	“ <i>Cultural, hierarchical, age divisions resolved by open communications, inclusivity and helping people be what they are</i> ”
25	Established – minimal profits	Improve technical effectiveness by collaboration	High, but 3 <sup>rd</sup> parties are opaque	“ <i>Bringing the people doing the work closer together by breaking down layers of contracts and 3rd party [supplier] management</i> ”

*Table 17 Evidence for 'Explain WHY' construct*

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### G.3 Listen for understanding

Measures and evidence for the ‘Listening for understanding’ construct which I incorporated into Explain WHY when writing-up.

Key to dimensions:

Mentions score: number of references to the importance of listening as a density ratio.

Listener score: My impression of the participant’s listening ability during convo. How well they answered questions, especially follow-ups.

Convo Id	Mentions score	Listener score	Personal factors	Example
27	14%	8/10	Work is all about human factors First degree in philosophy (how to think) Masters in design (how to apply it)	<i>“Do I understand what this person is trying to achieve?”</i>
26	24%	9/10	Exceptional leader (with awards showing others recognise this too)	<i>“Need to adapt your language to the audience - understand why they should care”</i>  <i>“You have to educate, it’s fine not to convince, but you have to listen first</i>
14	12%	9/10	Highly convincing leader. Had prepared responses thoroughly in advance	<i>“People react to change differently so must adapt to each team and managers must be in listening mode”</i>
9	10%	7/10	Engineering manager with more empathy for workers than managers	Learnt to be a better manager by listening clearly, noticing, and resolving disruptive behaviour

Table 18 Evidence for ‘Listen for understanding’ construct

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### G.4 Develop eco not ego

Tabulation of measures and evidence for the ‘Develop eco not ego’ construct.

Key to dimensions:

Ego score: my impression of how ego-centric the participant was during the convo.

Eco score: my impression of the participant’s ambition to create and nourish an ecosystem, either amongst staff or between organisations.

Convo Id	Ego score	Eco score	Objective	Mechanism	Example
16	Medium	High	†Harnessing an ecosystem	Dealers provide high quality market intelligence and feedback on products	<i>“Network of financially stable, individual dealers are nimble but robust in their own markets”</i>
26	Low	High	Stable and harmonious environment	Trust senior people to do their work, remain curious and engaged	<i>“Ppl are generally happy to work for me...I’m not a threat and there’s no huge ego”</i>
25	Low	High	Autonomy	Bring suppliers along with you on all your journeys	<i>“Bring the people doing the work closer together by breaking down layers of contracts and 3rd party management”</i>
27	Low	Medium	Adapt to new information	Managers have to be OK with being wrong	<i>“I place my stake in the sand, not set in concrete”</i>
20	Low	High	Resolve office / home working	Self-organisation – team decides how it works	<i>“I don’t try to resolve it myself [as manager]”</i>

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8	Low	Medium	Satisfy client's expectations	None described	<i>"People no longer want to be forced to work from an office"</i>
11	Low	High	Improve skills	Create safe to learn environment	<i>"Penalties for late delivery prevented them [3<sup>rd</sup> party] from developing ppl and being safe to learn"</i>
14	Low	High	Clarity of purpose and mission	Model collaborative behaviour from the top	<i>We established at exec level that silos are not acceptable and knowledge sharing expected – this cascades down as normal behaviour".</i>
23	Medium	Low	Cyber security	Email reminders in newsletters	<i>"10k staff are educated but not technical. Can't prevent this [phishing attacks], never"</i>
18	Low	Low	Operational efficiency	Targets	<i>"So many different KPIs!"</i>
6	Low	High	Fun and criticism	Satire	<i>"We managed tension between heads and scientists by running an unofficial and humorous in-house magazine"</i>

*Table 19 Evidence for 'Develop ego to ego' construct*

This construct is closely connected with listening because too much ego gets in the way of listening.



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### Appendix H: Manifesto for Agile Software Development

Available at [www.agilemanifesto.org](http://www.agilemanifesto.org)

Headings and numbers are mine, not in the original document.

We are uncovering better ways of developing software by doing it and helping others do it.

Through this work we have come to value:

#### Values

1. Individuals and interactions over processes and tools
2. Working software over comprehensive documentation
3. Customer collaboration over contract negotiation
4. Responding to change over following a plan

That is, while there is value in the items on the right, we value the items on the left more.

#### Principles

*We follow these principles:*

1. Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.
2. Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.

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3. Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.
4. Business people and developers must work together daily throughout the project.
5. Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done.
6. The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.
7. Working software is the primary measure of progress.
8. Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely.
9. Continuous attention to technical excellence and good design enhances agility.
10. Simplicity--the art of maximizing the amount of work not done--is essential.
11. The best architectures, requirements, and designs emerge from self-organizing teams.
12. At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly (Beck *et al.*, 2001).

## Authors

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## Appendix I: Organisational metaphors (Vogt, 2021)

The following has been copied from Vogt's (2021) blog post, including Figure 15, below.

<p style="text-align: center;"><b>Community</b> (Communal Sharing) (Deontology, based on rights)</p>	<p style="text-align: center;"><b>Living Organisation</b> (Equality Matching) (Virtue ethics)</p>
<p style="text-align: center;"><b>Machine</b> (Authority Ranking) (Deontology, based on duties)</p>	<p style="text-align: center;"><b>Market</b> (Market Pricing) (Utilitarianism)</p>

Different world views, relational models and organisational metaphors

*Figure 15 Vogt's world views*

**In a MARKET organisation**, all eyes are on customers and competition. Clients are allegedly king (in reality, profits rule). The culture is meritocratic, based on market success and growth and predominantly individualistic – driven by high-power incentives. The organisational focus is on innovation and creativity, driven by visionary entrepreneurship. Excitement is in the air, the "game is on" and sales is in charge.

**In a MACHINE organisation**, order and rules are carved in stone. The CEO is the boss and the CFO is second in command. In traditionally bureaucratic organisations, long-term strategic and budgetary planning is highly ritualised. Positional authority is used by managers to impose control, driving continuous process improvements and predictability. Politics is prevalent, conformity is cultivated and the central head office sets the tone.

**A COMMUNITY organisation** cares about its members and strives to do both well and good. Employees, customers and further stakeholders are at the top of an (inverted) hierarchy. The organisation values diversity and inclusion, trust and participation, as well as harmony

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between different categories of employees. Flat structures and empowered teams enable more informal collaboration. Managers act as coaches and "therapists". In practice, however, a "common" purpose and values are still defined by headquarters.

**In a LIVING ORGANISATION** structures are heterogeneous, organic, self-managing and networked (yes, there might be hierarchies!). The setup is fluid, continually sensing and adapting to enable both individual and collective flourishing, in response to requirements, needs and circumstances. The culture is compassionate and curious, based on quality relationships and mutual commitment to enable aliveness at work. Leadership is shared and contextual, and employees act virtuously with self-determination and relational trust in teams. The organisation embraces deeply regenerative relationships inside and outside the business, to serve a "Good Society". "Appropriate" profit is a signal of efficiency, not an objective.

### Appendix J: Tensions identified by Strode et al, 2022

Extract from (Strode *et al.*, 2022) © 2022 IEEE.

#### A. Tensions in Council

*Co1 Transformation versus business as usual (BAU):* Transformation activities are those necessary to progress change, for example, designing strategy, or implementing new procedures. BAU refers to activities needed to maintain core business. Participants commented on the very high workloads required to maintain BAU and undertake transformation activities. The tension refers to dividing resources between these activities, which are conducted in parallel.

*Co2 Distributed authority versus macrolevel goals:* With distributed authority in Council, teams and staff felt empowered. However, teams' decisions were sometimes not aligned with the organization's goals. Interteam cooperation was lacking at times, and some team-based decisions were not communicated appropriately. The tension arises if teams pursue their own goals without making sure their goals align with organizational and other teams' goals.

*Co3 Distributed authority versus regulatory processes:* Teams had the autonomy to make and act on decisions, but were not necessarily aware of, or following, regulatory processes; for example, when one department attempted to handle waste management independently, they were unaware of relevant regulations. The tension relates to requiring adherence to regulations and regulatory oversight while allowing teams to fulfil their goals.

*Co4 Required behaviors versus required skills:* As part of Council's transformation, all staff underwent a behavioral assessment; any new recruits also had to show evidence of these behaviors. As a result, Council lost staff with specific skills in some areas and found it difficult to recruit people who both had the right skills and demonstrated the required commercially-minded behaviors. The tension is between employing staff with the necessary behaviors while also maintaining the necessary skills.

#### B. Tensions in University

*U1 Top-down versus bottom-up transformation:* In University, both top-down and bottom-up transformation activities were underway. This tension relates to these multiple transformation activities and the need to align senior management control to promote and support agility with operational adoption of agile practices.

*U2 Functional silos versus cross-functional cooperation:* Agility favors cross-functional cooperation but University's organizational structures and cultures are based on functional silos, i.e., production specialists, content providers, infrastructure, and support units operate independently. This tension concerns how much to structure and manage according to functional groupings and how much to structure and manage according to cross-functional teams.

*U3 Maintaining knowledge versus moving to new ways of working:* A large amount of organizational knowledge was embedded in existing ways of working. There was concern that new ways of working might override valuable experience. The tension comes in deciding how much existing organizational knowledge and experience needs to be kept when moving to new processes, and how to identify what is important enough to retain.

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*U4 One-shot delivery versus incremental refinement:* Using one-shot product delivery, the complete course is delivered as a whole to the customer, while incremental refinement focuses on smaller regular deliveries. University's previous approach was one-shot delivery, and the tension is to decide how much to deliver in one go and how much to deliver in incremental refinements.

### C. Tensions in Charity

*Ch1 Changing too quickly versus changing too slowly:* The organization needed to transform quickly enough to respond to environmental threats it faced while changing at a pace that allowed people to adapt. Also, the new strategy had to be approved by the Board of Trustees, who worked to a structured timetable. The tension is between keeping up the momentum of change while allowing sufficient time for the changes to be accepted by both the Trustees and staff.

*Ch2 How much to change versus how much to keep stable:* Changing too much at any one time can lead to instability. The evidence showed (see Table V) that the participants recognized the need to change how they work and how they support their customers, but felt a general sense of unease about continuous change and stability. The tension comes in deciding how much to change, and how much to keep stable at any one time.

*Ch3 Change for the short-term versus change for the long-term:* This tension emerged because immediate challenges needed a short-term response. But short-term changes can compromise long-term goals. For example, significant financial cuts were needed in the short term, but long-term goals such as increasing the customer base required significant investment.

*Ch4 Change the strategy versus change the structure:* Charity made extensive changes to the organizational structure prior to developing a new strategy. However, embedding an agile process to evolve the strategy iteratively required further changes to the organizational structure. This tension is between letting the strategy development process lead structure change or changing the structure to accommodate an agile strategy development process.

*Ch5 Involving enthusiastic people to energize change vs involving representatives from the whole organization (enthusiasts versus representatives):* Previous experience convinced the change managers that involving everyone from across the organization would not be successful for initiating this transformation. Instead, they started with a small, self-selected and enthusiastic group. However, other colleagues felt undervalued because their input was not sought. This tension concerns whether to initiate change through participation of enthusiasts or through representation across the organization.

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