

CRANFIELD UNIVERSITY

Deborah Catherine Simpson

An explanatory theory of power in inter-organisation relationships:
Evidence from the aerospace and defence industry

School of Management

PhD

Academic Year: 2021 - 2022

Supervisor: Professor Richard Wilding O.B.E
Associate Supervisor: Professor Michael Bourlakis
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ABSTRACT

This thesis concerns the phenomenon power, heralded the most fundamental yet contested phenomenon / concept in social science. The focus is establishing the essential qualities that describe, characterize, and explain power in inter-organisation relationships (IOR-power) to inform debates on the significance of IOR-power to supply chain performance. The thesis is founded on an iterative and critical synthesis of core academic perspectives spanning 50 years and 27 practitioner perspectives obtained from three field studies, unearthing meanings and experiences attributed to IOR-power. It is argued that IOR-power standing replete with unresolved contestations has been under-theorised and under-valued in the literature and in practice. An imbued distain for IOR-power is fuelled by an untenable dichotomisation of *consensual* IOR-influence and *coercive* IOR-power – unnecessarily stripping IOR-power of much of its potency – leaving both precariously sharing the burden of explaining IOR-behaviour wherein accounts thus far are insufficient to explain IOR-outcomes of interest.

Underpinned by a dialectical critical realism perspective, the main contribution is a plausible theory of IOR-power, a fundamental explanatory process *building block* complemented by a conceptual framework supported by evidence from the aerospace and defence industry. Advancing alignment with natural-based power, IOR-power is more comprehensively claimed to be the combination of *embedded* individual behaviour, human creations, and Nature, at work exploiting resources in pursuit of goal attainment – an emergent, downwardly inclusive social and natural-based process governing IOR-outcomes. Accordingly, IOR-influence is distinct from but wholly integral to IOR-power that is rendered situated, negotiated, and indeterminate. IOR-power is conferred its full weight in explaining IOR-performance across economic, social, and environmental domains rendering adopted perspective and attribution salient in IOR-power accounts. The only antithesis of IOR-power is IOR-powerlessness wherein empowerment and disempowerment stand as theoretical bridges.

Keywords: supply chain management; aerospace and defence; dialectical critical realism; influence; agency; empowerment; performance

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This thesis is dedicated in loving memory to my father – a life-long student of philosophy, and my dearest mother – always by my side, relentlessly willing me over the finish line with all her loving heart and strength.

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LIST OF ABBREVIATIONS

CADB	Central Analysis Database
CEO	Chief Executive Officer
CS	Confirmatory Study
CS-RQ	Confirmatory Study Research Question
CQ	Critical Theoretical Question
DCR	Dialectical Critical Realism
DNA	Deoxyribonucleic acid (unique genetic code)
ED	Educative Process
ES	Exploratory Study
ES-RQ	Exploratory Study Research Question
F&R	French and Raven
fsQCA	Fuzzy-set Qualitative Comparative Analysis
IDEF	Integration Definition for Function Modelling (language)
IOR	Inter-Organisation Relationship
IPA	Interpretative Phenomenological Analysis
IOR-power	Power in IORs
KMV	Key Mediating Variables Model (trust-commitment theory)
LE	Life Experience Process (verification / falsification)
RQ	Research Question (main)
SCM	Supply Chain Management
SLR	Systematic Literature Review
SLRQ	Systematic Literature Review Question
SS	Search String
TA	Theoretical Analysis Process
TD1	Theory Development Phase 1
TD2	Theory Development Phase 2
TS	Test Case Study
TS-RQ	Test Case Study Research Question
NOFT	Anywhere except full text (ABI/Inform database)
TCE	Transaction Cost Economics

1 INTRODUCTION

1.1 Chapter introduction

This thesis argues the significance of IOR-power to supply chain performance has been under-theorised and under-valued, positing a plausible contemporary explanatory theory of IOR-power more comprehensively establishing its essential role. This chapter introduces the thesis, outlining its foundations, content, and boundaries. First, the background to the research is provided followed by the central problem addressed and claimed contributions. Justification for the research and a summary of the research methodology employed is then given. An outline of the thesis structure and salient definitions are provided. Lastly, scope delimitations and key assumptions underpinning the thesis are qualified.

1.2 Background to the research

The commercial aerospace sector of the aerospace and defence industry is a global, multi-billion-dollar industry characterized as highly political, competitive, regulated, and complex (Rose-Anderssen et al., 2008; Rossetti and Choi, 2008). Outsourcing and risk-sharing strategies (Bettis, Bradley and Hamel, 1992; Christopher, 2011; Collis, 1991; Cox, 1999; Gulati and Kletter, 2005; Jap, 2001; Prahalad and Hamel, 1990) mark evolution in this industry since the early 1900s, explaining the emergence of major aircraft manufacturers leading global, political, and highly integrated supply chains on their complex aircraft programmes (Bales, Maull and Radnor, 2004; Rose-Anderssen et al., 2008, 2009). In the aftermarket, global, political supply chains have also emerged (Farris II, Wittmann and Hasty, 2005; Mecham, 2010; Tegtmeier, 2010). The two industry sectors (manufacturing and aftermarket) are highly inter-dependent with organisations operating and vying for position in both (Feldman, 2001; Rossetti and Choi, 2008).

Natural and social disasters including global financial crises, terrorist attacks, climate change, and health pandemics over the past two decades have presented significant challenges and at times proved catastrophic for the industry and participating organisations. The industry continues to face uncertainty and mounting pressures to improve sustainability.

“It would be no exaggeration to say that the impact of this crisis [COVID-19] will, in the long term, be worse felt than that of the 2008 economic crisis, or the knock-on economic impact of 9/11. The projected economic fallout has changed week on week, with IATA’s latest projection in April forecasting a drop in global airline passenger revenues of \$314 billion in 2020 – a 55% decline compared to 2019.” (Airlines UK, 2020 p.2)

“... the contribution of aviation activities to climate change, noise and air quality impacts is increasing thereby affecting the health and quality of life of European citizens... Effective coordination between stakeholders is of the utmost importance to build on existing measures and address the environmental challenges.” (EASA, 2019 p.7)

Major structural changes across the industry continue in response to the current COVID-19 pandemic (Bruno, 2020a, 2020b, 2020c, 2020d; Deloitte, 2021; Massy-Beresford, 2021a, 2021b; Parliament, 2020). The connection between the social and natural world has never been so manifest than in today’s world. Global sustainability across economic, social, and environmental domains, is the emerging imperative across industries (Choi, Rogers and Vakil, 2020; Lopes de Sousa Jabbour et al., 2020; Spence and Bourlakis, 2009; Wilding, 2020) amidst calls for re-conception of the role of firms (Crane et al., 2014). Research interest lay in advancing management of supply chain partnerships to improve supply chain performance in the commercial aerospace industry.

As presented in Chapter 2, prominent theories exist on how firms achieve sustained competitive advantage emanating from industrial organisation perspectives (Miles et al., 1978; Porter, 1980; Williamson, 1979, 1994), resource based views (Barney, 1991; Penrose, 1952, 1955, 1959), relational views (Dyer and Singh, 1998), through to organisational economy perspectives (Ghoshal and Moran, 1996; Teece and Pisano, 1994). The implications for supply chain management thereafter are far reaching. Accordingly, supply chain paradigms and strategies abound as to how to improve supply chain performance, from integration of processes and systems to integration of philosophies and behaviours (Christopher, 2011; Gattorna, Chorn and Day, 1991; Goldratt and Cox, 1989; Koberg and Longoni, 2019; Peck, 2006; Stevens and Johnson, 2016; Womack, Jones and Roos, 1990; Yusuf, Sarhadi and Gunasekaran, 1999).

Notwithstanding, supply chains are viewed rather as a nexus of organisations, each leveraging inter-organisation relationships to achieve positive returns, whilst collectively competing as complex, adaptive supply network systems (Autry and Griffis, 2008; Choi, Dooley and Rungtusanatham, 2001; Defee and Stank, 2005; Wilding, 2008). Inter-organisation *relationship* (IOR) management is thus pivotal to organisation and supply chain performance (Christopher, 2011; Cox, 1999; Cox, Sanderson and Watson, 2000; Lambert, Emmelhainz and Gardner, 1996; Maheshwari, Kumar and Kumar, 2006; Wong et al., 2012).

A range of prominent theories inform how to manage IORs in the face of goal incongruency, risk, and complexity including, agency (Eisenhardt, 1989; Jensen and Meckling, 1976; Panda and Leepsa, 2017), commitment-trust (Brown, Crosno and Tong, 2019; Gundlach, Achrol and Mentzer, 1995; Morgan and Hunt, 1994), and power-conflict theories (Beier and Stern, 1969; Vickers, 1972; Schellenberg, 1996; McDonald, 1999; Cox *et al.*, 2005; Sword, 2008; Belaya and Hanf, 2009; Lumineau, Eckerd and Handley, 2015; McNamara, Pazzaglia and Sonpar, 2018). Yet, each offers an incomplete and partially conflicting view.

Against a backdrop of leadership capabilities reportedly impeding performance in the commercial aerospace industry (Bruno, 2009; Feldman, 2001; Rossetti and Choi, 2008; Smock, 2009), more specifically it has been questioned whether outsourcing strategies have transferred too much *power* to major suppliers, adversely impacting supply chain performance? (Sparaco, 2009). This question whilst surfaced as the driving force behind this research, remains to be answered, perhaps now more than ever as organisations seek solutions to survive the current crisis. Behind this important question lay festering a more fundamental question that needed *first* to be resolved, *what is power?*

Exemplified by Hingley's attempt to address IOR-power asymmetry within the field of relationship marketing (Hingley, 2005), debates are exacerbated by the concept of power standing as not self-evident, defying easy definition, messy, and complex (Blois, 2005; Kumar, 2005; Naude, 2005). Power as an elusive concept is echoed in the broader power literature where social, political and psychological perspectives dominate with limited appeals to alignment with the

relatively robust natural sciences concept of power (Clegg, 1989; Haugaard, 2002a). As further outlined in Sections 1.3 and 1.4 and detailed in Chapter 2 (Section 2.3), *power* in IORs (IOR-power) became the focal *phenomenon* of interest.

1.3 Research problem, theories, and contribution

1.3.1 Research problem

The question of interest in this research simply stated is, what is power? More precisely the research problem addressed is:

RQ: What are the essential qualities that describe, characterize, and explain power in inter-organisation relationships?

The central argument is that that largely undetected, various definitions and theories of power relied on to promulgate the meaning of power employed by studies in the IOR-context only capture perspectives of IOR-power that under-explain the phenomenon of interest, fuelling controversy. A critical synthesis of academic and practitioner perspectives nevertheless enables capturing essential qualities of IOR-power and render intelligible the full complexity of the phenomenon. Importantly, it is argued that an explanation of IOR-power can only be given through an explanation of power grounded at the individual-level, as a *process*. It is further argued that any meaningful explanation must explicitly accommodate links if not alignment between social and natural power, especially *if* sustainability is a real interest of individuals and organisations, *and* power is held to carry the same sense in the social world as ‘Energy’ in the natural world (Russell, 2004). Advancing alignment with natural-based power, the central claim is that IOR-influence is distinct from but wholly integral to IOR-power that is a downwardly inclusive, complex social and natural process explaining IOR-performance and governing IOR-outcomes across sustainability domains.

1.3.2 Theories and propositions

The overarching methodology adopted is broadly introduced in Section 1.5 and detailed in Chapter 3 is an explanatory critique (Bhaskar, 2008; Danermark et al., 2002). The rationale of an explanatory critique requires moving between theory

and practice to continuously advance and test the plausibility of a theory. This occurs in each of the three phases of the research project, progressively generating and advancing propositions directed towards resolving the research problem, as follows.

1.3.2.1 Research phase 1

In the power literature, several issues persist hindering establishing a general theory of power from defining the concept of causality through to determining 'real interests' (Clegg, 1989; Haugaard, 2002a). Contestations are cast within broader sociological debates surrounding the nature of human beings as *subjects* and the role of human *agency* versus *structures* in the social world in explaining societies (Foucault, 1982a; Giddens, 2002; Parsons, 1963; Weber, 1947). Recognising a claim that power is context specific (Haugaard, 2010), research phase 1 focuses on determining why power in the IOR-context (IOR-power) is a difficult concept and exploring practitioner meanings and experiences attributed to IOR-power.

Core-studies central to establishing the concept of IOR-power include the origins of conceptualisation, four studies (origin studies) from the broader power literature, Simon (1953), Dahl (1957), French and Raven (1959), and Emerson (1962), marking a move towards establishing a more rigorous and measurable concept of power.

"If political power is taken as one of the central phenomena to be explained in political science... to what extent have the operational tools of observation and measurement been provided us? That a great deal remains to be done can be made clear, I think." (Simon, 1953 p.500)

"Most people have an intuitive notion of what it means. But scientists have not yet formulated a statement of the concept of power that is rigorous enough to be of use in the systematic study of this important social phenomenon." (Dahl, 1957 p.201)

"The processes of power are pervasive, complex, and often disguised in our society. Accordingly one finds in political science, in sociology, and in social psychology a variety of distinctions among different types of social power or among qualitatively different processes of social influence... Our main purpose is to identify the major types of power and to define them systematically..." (French and Raven, 1959 p.440)

“Our integrated knowledge of power does not significantly surpass the conceptions left by Max Weber... [*footnote*: a classic formulation of power, authority and legitimacy... a typology rather than an organized theory of power.] This suggests there is a place at this moment for a systematic treatment of social power.” (Emerson, 1962 p.31)

Embracing the rationale of an explanatory critique, core-studies are subjected to a detailed critical evaluation, commencing with the identified origin studies, thereafter conceptual evolution in the IOR-context initially spanning over 40 years. Evidenced in Chapter 2 (Section 2.5.3) is how largely undetected origin studies conceptualise power differently setting different trajectories for the conceptualisation of IOR-power. Contestations from the broader power literature also progressively filter through framed further by theories of organisations, supply chains, and IORs. Although a preliminary conceptual framework emerges from the origin studies that holds *in* the IOR-context, there are fundamental contestations *across* studies and critical theoretical questions to be resolved. Collectively, this explains why IOR-power is rather a difficult *construct*.

The possibility through *structured* integration of unifying conceptualisations into a theory encapsulating more fully qualities that describe, characterize, and explain IOR-power is nevertheless discernible and led to establishing the central proposition advanced in this thesis:

TP: Meaningful integration of core IOR-power perspectives unearthed into a unifying, comprehensive, and contemporary explanatory theory of IOR-power applicable across IORs, is feasible.

Correspondingly, advancing the following two propositions captures the main thrust of the research undertaken purposefully retaining clear theoretical roots in the broader power literature:

TP1: The different conceptualisations of power laid down by the origin studies represent different perspectives of power that are fully reconcilable to form a unified explanatory theory of power.

TP2: A unified explanatory theory of power reconciling power origin perspectives can accommodate dominant and marginalised IOR-power perspectives.

1.3.2.2 Research phase 2

Phase 2 of the research focuses on advancing propositions TP1 and TP2 in a first phase of theory development and yields a provisional theory of IOR-power found in Chapter 4 (Section 4.2). The extent to which the theory is intelligible to practitioners, that is captures what IOR-power means and signifies in practice, is central to arguing plausibility and to advancing alignment between academic and practitioner perspectives, thus a second central proposition advanced is.

IP: The contemporary theory of IOR-power is reasonably intelligible to practitioners and full alignment is not insurmountable.

Correspondingly, a confirmatory study seeks to advance plausibility and alignment through evidencing proposition IP1:

IP1: The provisional theory of IOR-power is reasonably intelligible to practitioners on direct detailed critical examination.

Notwithstanding, confirmatory study findings (Chapter 5, Section 5.3) reveal the need to enhance explanatory significance or strength (explanatory power) spawning a further proposition TP3. Proposition TP3 is specifically addressed in Section 4.3 as a second phase of theory development, leading to a revised explanatory theory of IOR-power, advancing both central propositions TP and IP.

TP3: Under-explained power qualities can be resolved through theory re-descriptions that are supported by the literature.

1.3.2.3 Research phase 3

To enhance plausibility of the revised theory, research phase 3 focuses on testing the theory through evidencing the following third central proposition:

EP: The revised theory of IOR-power aligns to practitioner descriptions and explanations of behaviour and outcomes in a concrete IOR-Case.

Importantly, grounded in the literature (Chapter 2) and supported by intensive practitioner evaluation in phase 2 (Section 5.3), certain IOR-power qualities referred to as general power qualities are relatively uncontested. For example, the existence of power sources such as expertise are readily identifiable in accounts of IOR-power (El-Ansary and Stern, 1972; Gaski, 1986). Other IOR-

power qualities and interrelations between qualities although gaining credibility based on practitioner perspectives are nonetheless shown in Chapter 2 to be marginalised by core IOR-power studies. Marginalised qualities, referred to as specific qualities, translate into 10 propositions P1 to P10 and thus are the main focus of empirical testing in the test case study (Chapter 3, Section 3.10).

In phase 3, theory intelligibility is also broadly revisited to extend and support testing conducted in research phase 2. The final proposition tested is:

IP2: The distinction between power as the process governing outcomes and influence as the process governing behaviour, is reasonably intelligible to practitioners.

Figure 1 summarises the three central inter-connected propositions advanced in this thesis to address the main research question (RQ). Propositions that emerged for consideration in future research are given in Chapter 7.

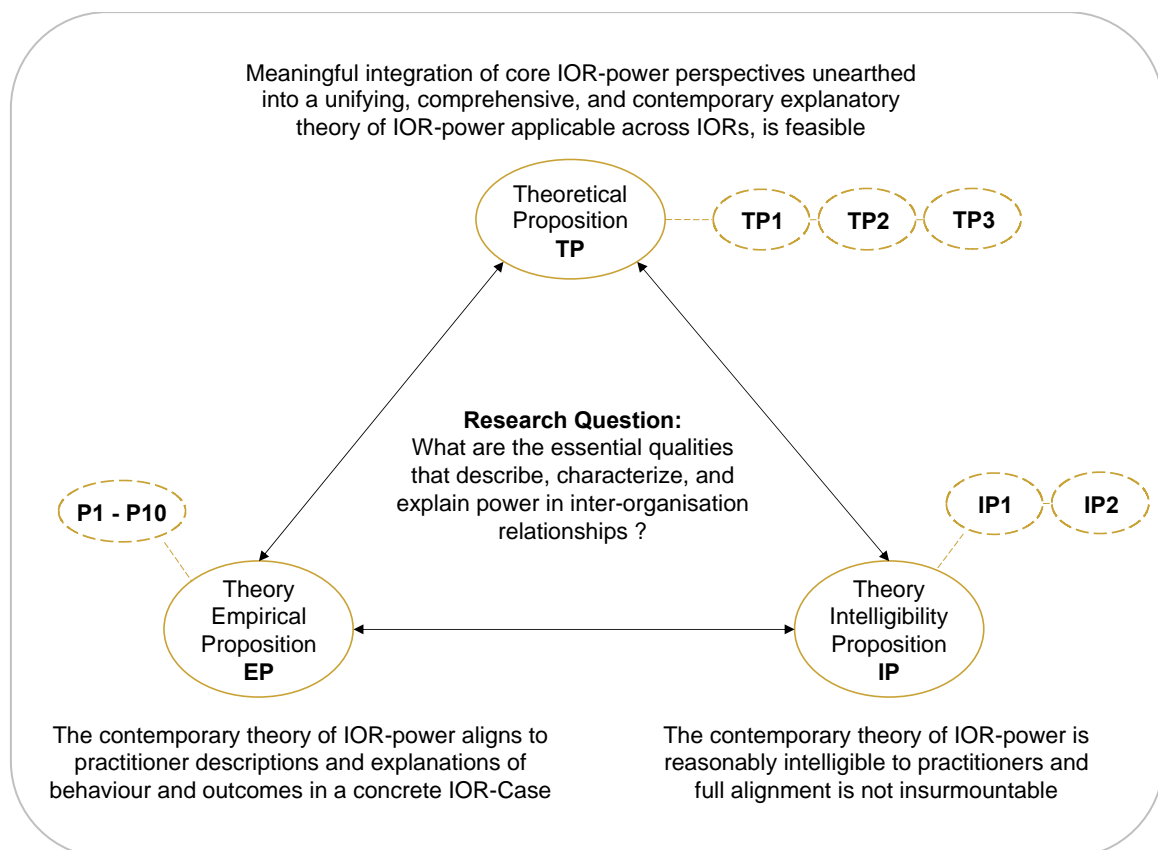


Figure 1. Summary of central propositions advanced

1.3.3 Contributions

The central contribution is theoretical, a *plausible* contemporary explanatory theory of IOR-power. The theory, foremost a process model complemented by a conceptual framework, expresses in transfactual terms the essential qualities that describe, characterize, and explain IOR-power. As a *unifying* explanatory theory, the theory answers a long outstanding call for a conceptual structure to assimilate evidence and guide IOR-power analysis that retrospectively applied, permits meaningful synthesis of empirical findings gathered over the past 50 years. The contribution to research and practice follows as an explanatory lens through which academic research informing management practice in matters of power distribution, performance, and sustainability may be advanced and debates about the significance of IOR-power may be more fruitfully held.

1.4 Justification for the research

It is not disputed that *IORs* are pivotal to organisation and supply chain performance. What remains disputed is how organisations can better manage these relationships to improve organisation *and* supply chain performance. A prominent industry debate is the driving force behind this research:

“A Dangerous Equation... Both manufacturers (Airbus; Boeing) find themselves unable to keep all-new aircraft on track while deeply overhauling supply chains and revising links with risk-sharing partners and vendors. Have they gone too far, or simply gone too fast?... Medium-size suppliers, who, by the way, consider the "Tier 2" label to be pejorative, could benefit from Bombardier's and Embraer's more conservative approach. And China could well follow the same path, needing Western suppliers but seeking to curtail the amount of power they have.” (Sparaco, 2009)

“The Realities of Industry's Shifts... these changes stem from a long, progressive and consensually based transformation of the value chain... there is no evidence that either the new industry shape or the new supply chain paradigm will have any detrimental effects on the ability of primes to manage and deliver programs. On the contrary, programs will benefit from bigger and more comprehensive work packages and allowing suppliers to propose superior optimizations. Direct relationships with fewer but more skilled and empowered suppliers will allow Airbus to keep control of programs more effectively.” (Enders, 2009)

Questioning implications of power distribution in industry partnerships resonates with unresolved academic debates. Is power the antithesis to trust in fostering effective and positive inter-organisation relationships? (Kumar, 1996; Morgan and Hunt, 1994). Moreover, is power a fundamental *property* of relationships and supply chains requiring appropriate management? (Cox, 2001a; Hingley, 2005). Non-resolution of these debates generates conflicting advice to management practice (Cox, Sanderson and Watson, 2001; Morgan and Hunt, 1994).

The significance of power distribution and specifically IOR-power asymmetry has preoccupied scholars for over 50 years (Beier and Stern, 1969; McNamara, Pazzaglia and Sonpar, 2018). Yet, as the systematic literature review in Chapter 2 reveals, IOR-power remains under-theorised with only 7% of IOR studies employing the concept of power focusing on theory development to qualify sufficiently what power is, and how to determine IOR-power, if indeed it can be determined. A call for a conceptual structure to assimilate evidence and guide analysis of power (Heskett, Stern and Beier, 1970) remains unanswered.

Furthermore, the broader power literature does not provide an uncontested power concept or means of determination. Rudimentary to debates, lingers whether the *concept* power, is *essentially* contested whereby power is ontologically *real* and meaningful but epistemically disputed (Lukes, 2005), or, following Wittgenstein, that the concept power is a *family resemblance word*, like *game*, having no single common essence, rendering the search for a single concept illusory (Haugaard, 2010).

To begin to scientifically answer the implications of IOR-power distributions, demands clarity in conceptualisation of IOR-power or explicit and *appropriate* vagueness (Podsakoff, MacKenzie and Podsakoff, 2016; Strunz, 2012) whether construed as real or as a family concept. In the words of Simon (1953):

“Like Humpty Dumpty, we will insist that a word means what we want it to mean. But if our aim is to construct a body of science, and if we already have in view the general range of phenomena to be explained, our definitions may be willful, but they must not be arbitrary.” (p.501)

Thus far there has been no attempt to fully *synthesise* IOR-power perspectives to obtain a comprehensive explanatory theory. Such a theory would provide an analytical tool to evaluate IOR-contexts of interest and begin to answer the question sitting as the practical driving force behind this research. There can be “no evidence” (Enders, 2009) to support or refute the possible “dangerous equation” (Sparaco, 2009) emerging from reported transfers of power to major suppliers without clarity of what power is. Power cannot be appropriately managed without understanding the realities of power, held to constitute the DNA of supply chains (Cox, 1999; Cox, Sanderson and Watson, 2000).

That it is important scientifically to establish a robust conceptualisation of power is broadly justified by the level of attention thus far given to this very task by eminent scholars (Bourdieu, 1989; Dahl, 1957; Emerson, 1962; Foucault, 1982b; French and Raven, 1959; Giddens, 1984, 2002; Parsons, 1963; Russell, 2004; Simon, 1953; Weber, 1947).

“... I shall be concerned to prove that the fundamental concept in social science is Power, in the same sense in which Energy is the fundamental concept in physics.”
(Russell, 2004 p.4)

This thesis *systematically* builds on the work of IOR-power scholars over the past 50 years in continuing the pursuit of a comprehensive explanation of IOR-power to inform research and practice. The aim is to establish an explanatory theory of IOR-power standing as ontologically real and meaningful but equally standing as a family concept. This may appear paradoxical, but is argued reconcilable, when explaining IOR-power as a construct and a process, in transfactual terms. That is, explaining IOR-power through types of entities for example human beings, and types of mechanisms for example psychological forces such as value resistance, and how these interrelated mechanisms combine as a process over time.

If power is the most fundamental concept in social sciences, as Russell (2004) argued, an identified opportunity to advance understanding of IOR-power stands as justification for this research.

1.5 Methodology

The philosophical perspective assumed is dialectical critical realism (DCR) underpinning the overarching methodology adopted of an explanatory critique. This research critically explores how the origins of IOR-power theory shaped conceptual evolution in the IOR-context and through synthesis advances a unified theory providing greater explanatory power. Correspondence with the world is systematically and iteratively tested in developing the theory, moving backward and forward between theory and empirical evidence. To conduct the explanatory critique, different methodologies are adopted at different stages of the research project as follows.

A systematic literature review methodology (Tranfield, Denyer and Smart, 2003) is adopted incorporating first a scoping study (LSS) as displayed in Figure 2 to identify a clear and purposeful systematic literature review question. Details of this methodology are provided in Chapter 2 (Section 2.2). The review question established is *why is power a difficult concept in the IOR-context?* The review proceeds to identify core-studies most directly contributing to IOR-power theory. Thematic extraction and synthesis of data from these studies generates a preliminary conceptual framework and critical theoretical questions to be resolved to meaningfully unify perspectives of IOR-power unearthed.

The review conducted in research phase 1 (SLR1) was extended in research phase 3 (SLR2) as depicted in Figure 2 due to a suspension in research. Although not planned, this provides a useful comparison in phase 3 between the literature pre and post theory development revealing the extent to which the theoretical direction of the literature aligns with the theory posited in this thesis. The systematic methodology adopted also enables quantitative descriptions of the literature including levels of theory importation from other contexts and relevance of other areas of study. For example, the organisation context is broadly indicated to be the primary *context* of theoretical reference, and thematically studies related to culture to be of least relevance to advances in IOR-power theory.

Turning to research phase 2, specific methodologies are developed providing an overall rationale and structured approach to meet the aims of each phase of theory development conducted in research phase 2 (TD1 and TD2) as follows.

The aim in phase 1 of theory development (TD1) is to *meaningfully* integrate theoretical perspectives using abduction and retroduction (Alvesson and Sköldbberg, 2009; Danermark et al., 2002; Downward and Mearman, 2006) as reasoning methods to resolve theoretical questions and advance propositions TP1 and TP2 (Section 1.3.2.1). The methodology involves six analytical stages outlined in Chapter 3 (Section 3.7) and yields a *provisional* explanatory theory of IOR-power in the form of a process model with existential commitment, complemented by an elaborated version of the preliminary conceptual framework developed from the core-studies, a *provisional* conceptual framework.

The aim of the second phase of theory development is to advance proposition TP3 (section 1.3.2.2) by addressing under-explained qualities identified by the confirmatory study (CS). The methodology also based on six analytical stages, is detailed in Chapter 3 (Section 3.9). Each analytical stage introduces theory re-descriptions such as extending the process to explicitly capture power outcomes, culminating in a revised explanatory theory of IOR-power.

A multiple case study methodology (Yin, 2009) is employed in each of three field studies undertaken designed to meet the purpose of each study. Case selection is purposive and data collection is primarily through mixed-method interviews guided by interview protocols to obtain qualitative and corresponding quantitative data (Harris and Brown, 2010; Kvale and Brinkmann, 2009; Miles and Huberman, 1994). Various analysis methods including content analysis (Duriau, Reger and Pfarrer, 2007; Flick, U., E. von Kardoff, and I. Steinke, 2004) interpretative phenomenological analysis (IPA) (Smith, Flowers and Larkin, 2009), fuzzy set qualitative comparative analysis (fsQCA) (Greckhamer et al., 2018; Ragin, 2008), and process tracing (McKelvey, 2004; Van de Ven and Poole, 2005) are selectively employed according with study designs.

In research phase 1, the *exploratory* study (ES) explores *how power in aerospace industry supply chains manifests itself to 4 practitioners?* Each practitioner stands

as an independent case where study design privileges unearthing fresh insights. Cross-case findings presented (Section 5.2) indicate broad alignment in meaning attributed to IOR-power with the literature but confirms power as a difficult concept. Attention is drawn to the complex nature of IOR-power in practice moreover as a dynamic field of power-plays. Findings as tentative propositions contribute to establishing the preliminary (SLR1) thereafter provisional (TD1) conceptual framework.

In research phase 2, the *confirmatory* study (CS) seeks to advance proposition IP1 (Section 1.3.2.2) by establishing *to what extent the provisional theory renders intelligible and explains IOR-power to 4 practitioners?* Each practitioner again stands as an independent case and study design privileges soliciting reasons for specific theory convergences and divergences. Cross-case findings presented (Section 5.3) expose a full intelligibility level of 62% due to aspects of the provisional theory being difficult to grasp or manifestly under-explained warranting theory re-descriptions (TD2).

In research phase 3, the case *test* study (TS) primarily seeks to advance proposition EP (Section 1.3.2.3) by demonstrating *how theory specific qualities representing marginalised IOR-power perspectives manifest in a concrete IOR-Case?* In this study 21 practitioners are each IOR *embedded* cases. The study further advances proposition IP2 (Section 1.3.2.3) through testing *how broadly intelligible the revised theory is to practitioners?* Findings in Section 5.4 indicate an overall cross-case evidence level of 85% for theory specific qualities and that certain combinations of case conditions may contribute to intelligibility, such as role centrality. It is also found that accorded agreement with *broad* definitions of power (outcomes) and influence (behaviour) is hindered by interpretation and emotive factors.

Lastly, valuable insights to the *significance* of IOR-power to practice in terms of role, value, distribution, and performance emerge and are duly collated across field studies. Notably revealed is how the population of practitioners involved had not previously engaged in logical reflection of what power is and obtaining academic-practitioner conceptual alignment may not be insurmountable.

Figure 2 provides an introductory overview of the research undertaken in three phases referred to earlier (Section 1.3.2).

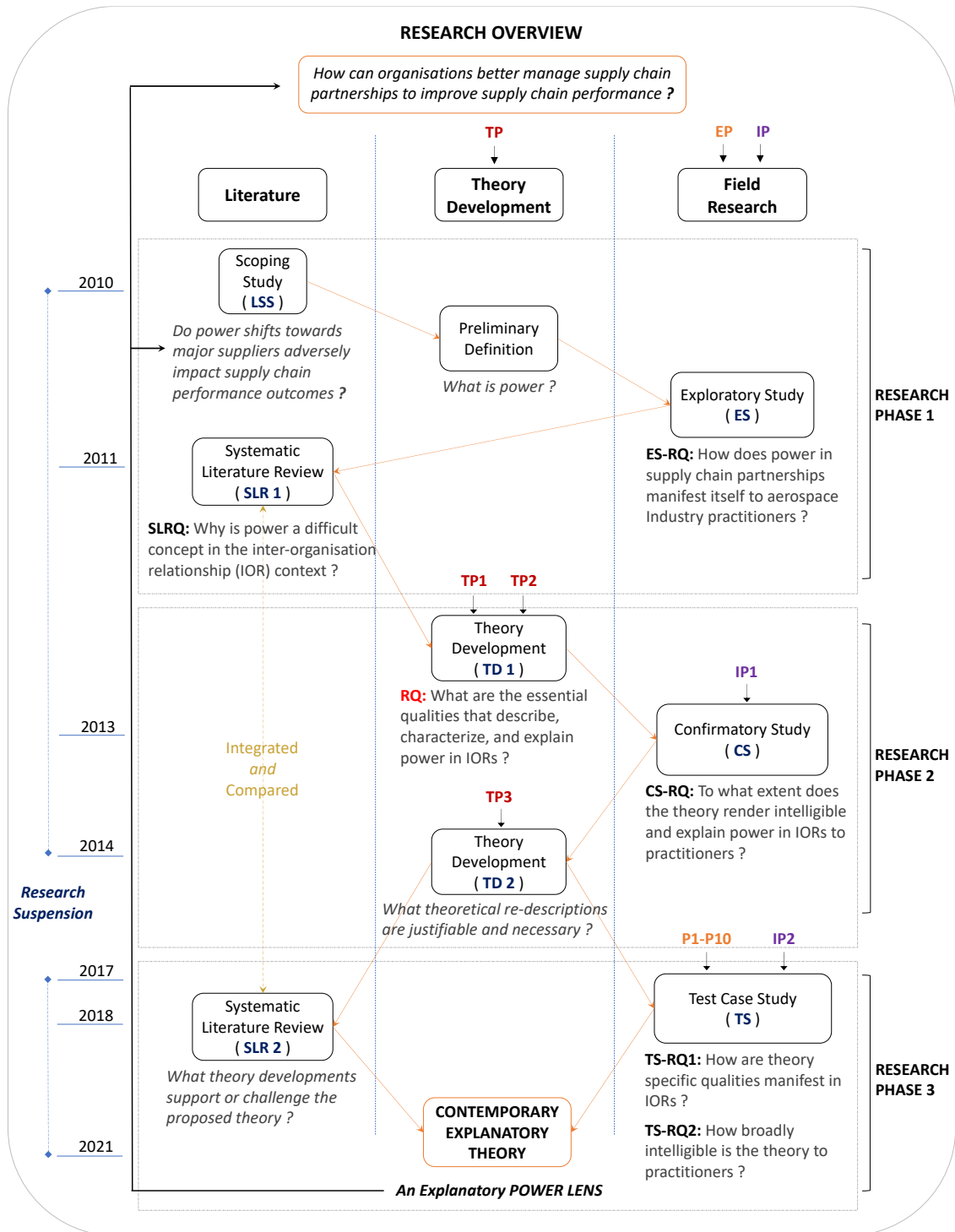


Figure 2. Introductory research project overview

1.6 Thesis outline

Figure 1 summarised propositions advanced in this research to address the main research question (RQ) and Figure 2 provided an introductory overview of the research undertaken. Further to this introductory chapter, the thesis structure is organised thematically into six chapters, as follows.

Chapter 2 focuses on the literature. After qualifying the systematic methodology applied, this chapter presents the findings of the scoping study, establishing IOR-power as the phenomenon of interest. Further to profiling the core literature and core-studies underpinning the argument of this thesis, the focus of the chapter is evidencing *why power is a difficult concept in the IOR-context*, justifying the research problem addressed, formulated as the main research question.

Chapter 3 presents and justifies foremost adoption of dialectical critical realism (DCR) as a philosophical perspective, central to understanding the overarching methodology, an explanatory critique, and the significance of the theory developed. To avoid repetition, overall research aims, strategy, and design, including various methodologies and core methods applied throughout the research are first explained generally and justified. Thereafter, specific field study designs, strategies, and tailoring of methods to meet the purpose of each field study are detailed. This includes formulating propositions advanced in theory development (Chapter 4) and field studies (Chapter 5) outlined in Section 1.3.2. The methodical approaches adopted in theory development are also outlined.

Chapter 4 concentrates on presenting first in Section 4.2 the *provisional* theory developed in research phase 2, based on the core-studies (Chapter 2) and findings of the exploratory (ES) study (Chapter 5). The *revised* explanatory theory incorporating theory re-descriptions addressing intelligibility short-falls identified in the confirmatory (CS) study (Chapter 5), is then exposed in Section 4.3.

Chapter 5 focuses on presenting the findings of the three independent but related field studies. The exploratory and confirmatory study findings are presented first in Sections 5.2 and 5.3 respectively, both contributing to theory development. The test case study findings are exhibited thereafter in Section 5.4. For each study a

brief contextual summary is provided to frame the findings presented. Findings are supported by a selection of quantitative (descriptive) and qualitative data. Section 5.5, draws across field studies to evidence the significance of IOR-power to the population of participating practitioners.

Chapter 6 discusses for each proposition captured in Figure 1 (Section 1.3.2), salient new themes advanced in this thesis through theory development (Chapter 4) and field research (Chapter 5) and accordingly summarises implications thereof, such as, embracing consensual IOR-power. Based on the research findings, limitations, and reflections, the overall plausibility of the posited theory of IOR-power is finally deliberated.

Chapter 7 concludes the thesis by positioning and summarising contributions to theory, research, and practice. The extent to which contributions are argued to have advanced resolving the research problem stands as the main contribution of this thesis – a plausible contemporary explanatory theory of IOR-power. This chapter finishes with suggestions for future research.

Appendices A through to E, are submitted as a specific appendices volume. These appendices underpin the thesis exposing further details of the theory, and debates, methodology, and data analyses referred to in the thesis but not necessary to follow the argument of the thesis. Appendices B to E align to thesis chapters where Appendix B relates to the literature, Appendix C covers methodology, Appendix D extends theory details, and Appendix E exposes specific empirical analyses and findings. Appendix A gives a listing of further extensive *supplementary* appendices available on request.

1.7 Definitions

1.7.1 Organisation

Organisations have varying forms and nature and may be understood differently from different perspectives (Morgan, 2006). Philosophically, an organisation may be understood to exist as an entity or a process (Van de Ven and Poole, 2005). This thesis does not seek to resolve these competing philosophical stances rather acknowledges both arguments.

Recognised as integral to the very nature of organisations across internal and external boundaries, are dynamic emergent processes, natural (brain metaphor) and systematic (machine metaphor). Organisations are also held to consist of people and more or less enduring social structures (Elder-Vass, 2011), and various resources from fixed assets to human capabilities to intellectual property (Barney, 1991). The definition employed is thus broad, embracing organisations as evolving human-based entities of varying form, nature, and levels of stability.

Definition: An *organisation* is an organized group of people with a purpose.

1.7.2 Inter-organisation relationships as the focal context

Acknowledged in the literature are different types of relationships sitting on a continuum from arms-length (quasi-market) through to joint ventures (Lambert, D. M., 2008; Lambert, Emmelhainz and Gardner, 1996). There is however no apparent *standard* definition of an inter-organisation *relationship*. Founded on critical evaluation of what constitutes contractual based relationships, held to involve to varying degrees complex exchanges (valued resources) and relational components (behavioural norms) across organisation levels, evolving over time (Blois, 2002, 1996), the definition employed is:

Definition: An *inter-organisation relationship* (IOR) exists between two organisations when there is an aggregated mutual acceptance of goal interdependence and belief that exchanges will continue into the future.

1.7.3 Power

There is a level distinction in the phenomenon of power recognised in this thesis, most notably a distinction between power at the individual-level and power at the IOR-level. The use of the term IOR-power is reserved for where the significance of power in-use is referring to power at the IOR-level.

1.8 Delimitations of scope and key assumptions

The research problem addressed by this thesis sets an important boundary to this research. The theory of power developed applies to the IOR-context, including IORs as components of supply chains, although the theory is potentially applicable to other contexts as noted in thesis conclusions (Chapter 7).

Central to the thesis and consistent with sociological, psychological, and critical realism perspectives adopted by various scholars, human beings are assumed to be semi-autonomous, goal oriented, thinking individuals, endowed with identities (meaning of the self in the world), capabilities, and liabilities to act (Archer, M. et al., 1998; Deci and Ryan, 2000; Simon and Oakes, 2006).

1.9 Chapter summary

This chapter provided a thesis overview, outlining the background to the research undertaken, methodology employed, and the research problem addressed, that of establishing the essential qualities that describe, characterize, and explain power in IORs (IOR-power). The main contribution was qualified to be a contemporary explanatory theory of IOR-power and the main claim advanced that IOR-influence is distinct from but wholly integral to IOR-power that is a downwardly inclusive, complex social and natural process explaining IOR-performance and governing IOR-outcomes across economic, social, and environmental domains. Following the thesis structure specified, the next chapter presents the literature underpinning the argument of this thesis.

2 LITERATURE

2.1 Chapter introduction

As stated in Chapter 1 (Section 1.2), interest lay in advancing how organisations can better manage supply chain partnerships to improve supply chain performance in the commercial aerospace industry. This chapter presents a progressive synthesis of the literature informing this problem area and the more specific *focal* research problem addressed by this thesis. Section 2.2 first provides an outline of the 5-staged systematic literature review (SLR) methodology employed. Specifics of the methodology are provided in Sections 2.3 to 2.6 that present the findings at each process stage. Figure 3 captures relationships between relevant literature domains (SCM, IOR, and power) and classifications (body of literature, core literature, core-studies) referred to in chapter sections, framing the focal research problem and corresponding research question addressed in this thesis.

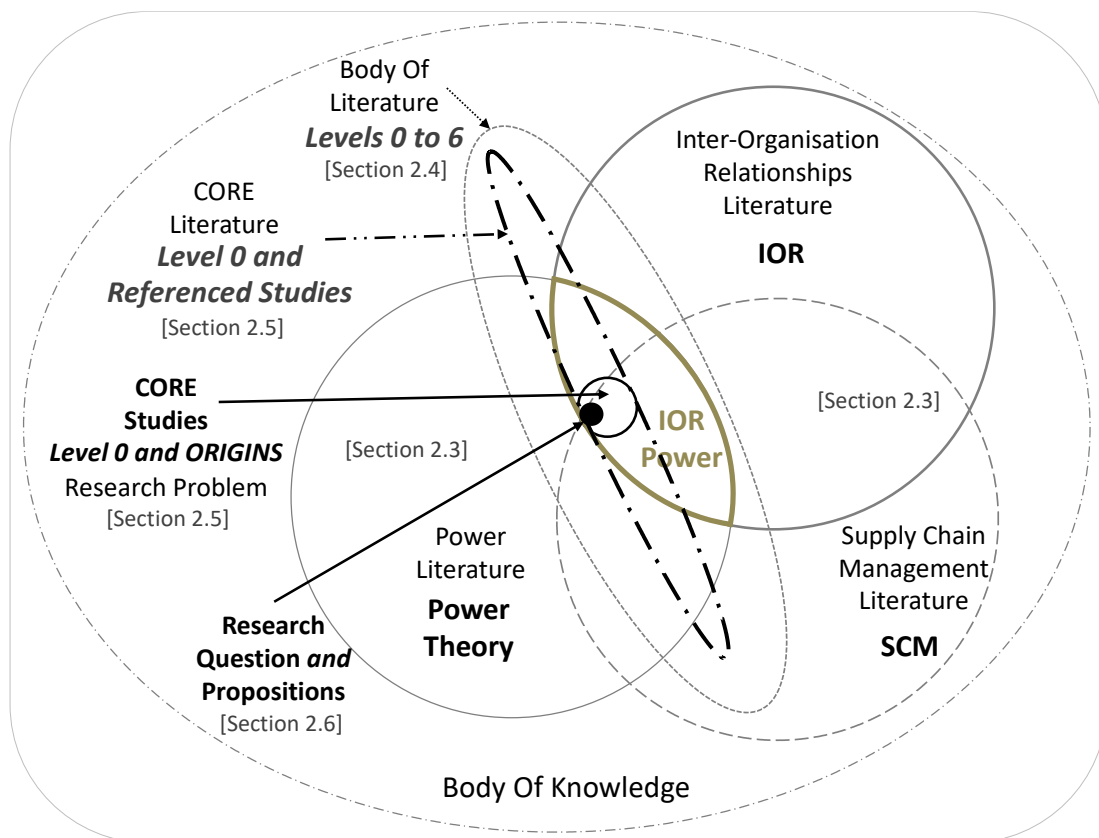


Figure 3. Mapping of relevant literature fields

2.2 Systematic review methodology

2.2.1 Background and purpose

A systematic approach to literature reviews originated in the medical science field in a drive to obtain the best available evidence on which to base policy, practice, and research. The underlying principle of combining knowledge in an unbiased, coherent manner is argued to be both necessary and achievable in the social sciences. To accommodate non-randomized, context specific, and qualitative inquiries in the social sciences, emphasis in management studies is given to adopting a suitable *process* of inquiry that is replicable, scientific, and transparent (Tranfield et al, 2003).

The systematic process adopted follows the Cranfield School of Management methodology as developed by Tranfield et al (2003) designed to guide a critical, unbiased, and accurate exploitation of the existing body of knowledge. It stands as a recognised approach in the supply chain field and beyond (Ellram and Murfield, 2019). Although the process itself cannot guarantee the quality of a review (Durach, Kembro and Wieland, 2017), it has been demonstrated to be effective (MacDonell et al., 2010). As a structured approach, how literature is established as the best available evidence, and where the literature is positioned in the body of literature is made clear. The approach further facilitates establishing origins of embraced theories, a key tenet of dialectical critical realism (DCR), the philosophical perspective underpinning this thesis (Chapter 3).

2.2.2 Process stages

The five stages in the review process are summarised in Figure 4. Stage 1 planning of the review involves establishing a review panel to critically guide adherence to good research practice. This stage includes scoping of parent literature domains (Section 2.3) encompassing the *problem area* of interest, here supply chain partnership performance, and developing a systematic review protocol. Central to the protocol is a purposeful literature review question concerning an identified *focal problem* and methods to assess and utilise literature to inform the review question.

Guided by the review protocol, stage 2 entails identifying and evaluating the most relevant literature, referred to as core-studies (Section 2.4). Stage 3 involves extracting and synthesising data from the core-studies to identify a knowledge gap concerning the focal problem meriting addressing (Section 2.5). This chapter constitutes both latter review process stages in reporting (stage 4) and utilising the findings (stage 5) to develop a research question (Section 2.6).

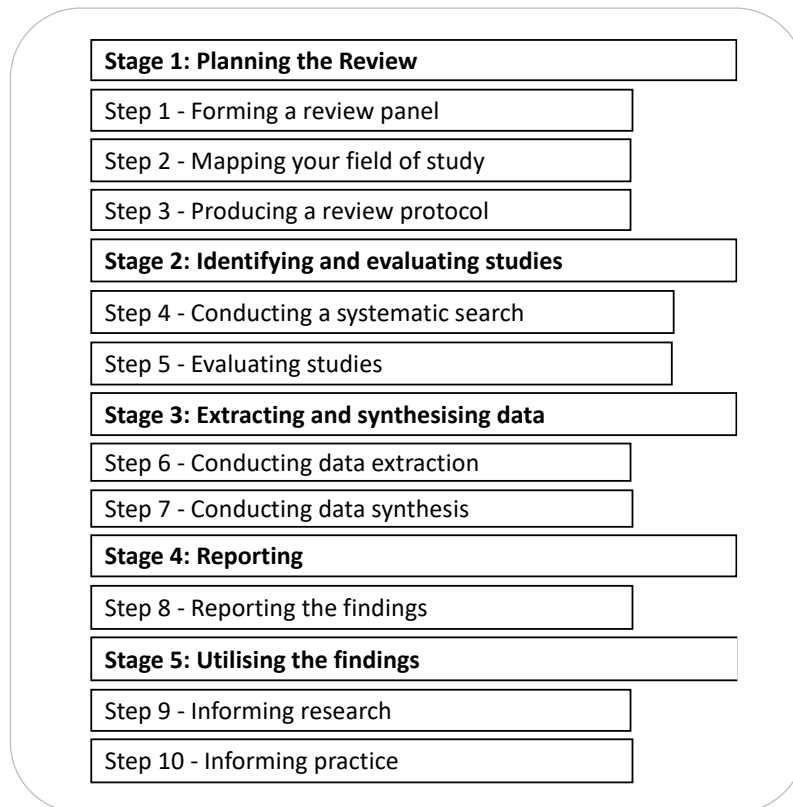


Figure 4. Cranfield School of Management (SOM) SLR methodology overview

2.2.3 Central analysis database (CADB1)

Robust data management methods and tools are essential to systematic literature reviews. A purposefully developed central analysis database, CADB1 (excel) hosted data extracted from literature and was used to conduct various analyses and syntheses using embedded functions. Synthesised data was also captured in various mind-maps using Mindjet mapping software.

2.3 Stage 1 – Planning the review

According with Figure 3, the following sections first briefly expose significant influential debates in the SCM and IOR domains framing this thesis and tabulates key related themes of reference in deliberating research findings in Chapter 6. This is followed by exposing IOR-power distribution as a focal problem area in the academic and commercial aerospace industry literature, thereafter key insights drawn from the power literature. The section concludes by specifying the *systematic* review question (SLRQ) established. The literature reviewed largely pre-dates 2011 in initially directing the research but includes recent literature demonstrating continued relevance.

2.3.1 Supply chain management (SCM) debates

Influential Debates	Significance to Research Problem	Key Power Themes / Concepts
How organisations achieve sustained competitive advantage?	<i>Perspectives on strategies to achieve sustained economic performance amidst growing social and environment sustainability pressures and the relevance of supply chains</i>	Goals Motive Resources Value Outcomes Environment
How to define supply chain management?	<i>What constitutes supply chains and thereby the purview of supply chain management</i>	Expression Connectivity Perspective Process
The nature of supply chains?	<i>Supply chains as complex adaptive systems with embedded social networks that cannot be fully controlled</i>	Dynamic Level Feedback Enactment Emergence Indeterminacy Time
The importance of supply chain strategy?	<i>Link between organisation strategy and supply chain strategy renders IORs pivotal to sustainability (economic, social, environmental)</i>	Relationships Resistance

Table 1. Supply chain management influential debates and theories

As a broad and eclectic field of study, SCM debates are correspondingly extensive and transcend disciplines (Burgess, Singh and Koroglu, 2006). Table 1 lists four influential SCM debates of significance to the research problem.

2.3.1.1 Sustained competitive advantage

Perspectives on how firms achieve sustained competitive advantage foremost includes the industrial organisation (IO) view whereby firms are held market led and focus is given to adapting to the market (Collis, 1991; Miles et al., 1978; Parnell, 2002; Porter, 1980, 1985), contrasting with the resource based view (RBV) advocating firms be resource led and develop *core* competences that yield a sustainable market position (Barney, 1991, 2001b, 2001a; Bettis, Bradley and Hamel, 1992; Grant, 1997; Penrose, 1952, 1955, 1959; Prahalad and Hamel, 1990; Quinn, Doorley and Paquette, 1990; Theriou, Aggelidis and Theriou, 2009). Thereafter, the relational view emphasises the opportunity to create enhanced value through inter-firm relations (Dyer and Singh, 1998), the dynamic capabilities perspective stresses relevance of entrepreneurial competences to adapt to changing environments (Ambrosini and Bowman, 2009; Eisenhardt and Martin, 2000; Teece and Pisano, 1994) and the competitive advantage system view promotes holistic and constant management of actual and potential advantages (Ma, 2000).

Notwithstanding, debates critically point to the importance of embracing a socio-economic perspective wherein the saliency of social capital, human imagination, and human mental models in how value is assessed and created, is emphasised (Autry and Griffis, 2008; Bowman and Ambrosini, 2000; Cousins et al., 2006; Kraaijenbrink, Spender and Groen, 2010; Krause, Handfield and Tyler, 2007; Mandják and Szántó, 2010; Simons et al., 2003). Advocating “leveraging the human ability to take initiative, to cooperate, and to learn” (Ghoshal and Moran, 1996 p.42) moreover as an organisational economy, the social-psychological peculiarities of social relationships gain significance pointing to the relevance of informal not merely formal organisation structures and processes (Mandják and Szántó, 2010; Morton et al., 2004, 2006). Thereafter, emphasised is the broader role of firms in *social* and *environmental* sustainability (Chaffee, 2017; Crane et al., 2014; Elkington, 1994; Frynas and Stephens, 2015; Latapí Agudelo, Jóhannsdóttir and Davídsdóttir, 2019; McWilliams and Siegel, 2011; Phillips, Schrempf-Stirling and Stutz, 2020; Porter and Kramer, 2006; Wood, 1991).

Given the prevalence of core competency-based strategies and outsourcing across industries, today's firms stand as contributors embedded within vertical often global supply chains. Firms must not only attend to horizontal relationships and appropriating value from the market but equally appropriating value *from* vertical relationships, whilst attending to sustainability on all fronts. Strategic management of supply chains is an imperative for today's firms (Christopher, 2011; Cox, 1999; Harrison and van Hoek, 2008; Lambert, D. M., 2008).

2.3.1.2 SCM definition and responsibility

Turning to the second influential debate in Table 1, attention is first drawn to the importance of meaningful definitions, especially for complex constructs. For SCM, adopted perspective is pertinent in matters of designating the start and end of a supply chain, what constitutes a supply chain, and responsibility thereof. Despite there being no apparent consensus on a definition of SCM, Stock and Boyer's (2009 p.706) consolidated definition of SCM juxtaposed to Mentzer et al's (2001 p.18) definition reflect debates on firm sustained competitive advantage at the SCM level. Definitions further capture the importance of managing inherent linkages, processes, and value flows across organisations to firm and supply chain performance, wherein the thorny question of value appropriation lies (Cox, 1999). Definitions appear to infer SCM responsibility rests *within* and thereby *across* participating organisations.

Although cited definitions emphasise economic sustainability, SCM attention following firms has become oriented towards social and environmental sustainability, adding further complexity (APICS, 2017; Choi, Rogers and Vakil, 2020; Koliouisis et al., 2022; Lopes de Sousa Jabbour et al., 2020; Wilding, 2020; Zokaei and Manikas, 2014). Correspondingly, whilst general SCM definitions broadly capture what SCM entails, detailed frameworks and models, such as the supply chain operations reference model (SCOR) serve as generalisable "process building blocks" (APICS, 2017 p.9) exposing the essential components and complexity of supply chains and SCM (APICS, 2017; Lambert, D. M., 2008; Mentzer et al., 2001; Supply-Chain Council, 2008). This leads to recognising more fully the nature of supply chains.

2.3.1.3 SCM nature of supply chains

The third debate in Table 1 centres on complexity further cementing the relevance of a socio-economic perspective to supply chains (Autry and Griffis, 2008; Borgatti and Foster, 2003; Borgatti and Li, 2009; Van Hoek, Chatham and Wilding, 2002; Mandják and Szántó, 2010), and more concretely the significance of internal and external environments. A supply chain *incorporating* its relevant environment is held to be a complex adaptive system characterized by self-organisation and emergence. Attention is drawn to recognising a distinction yet inter-relationship between different system levels, where at each level (individual, group, organisation, supply chain) agents interpret and enact with its relevant environment, co-evolving over time. Supply chains are held intrinsically dynamic, subject to negative and positive (amplifying) feedback, and indeterminate in nature (Carlsson, 2016; Choi, Dooley and Rungtusanatham, 2001; Choi and Krause, 2006; Forrester, 2007, 1958; Mena, Humphries and Choi, 2013; Nair and Reed-Tsochas, 2019; Pathak et al., 2007; Wilding, 1998).

A key implication for SCM is the posited “elusive endeavour” (Choi, Dooley and Rungtusanatham, 2001 p.364) of seeking to control an entire supply network rather SCM thinking requires a mindset change. There are desirable and feasible levels of deterministic control (negative feedback) for certain aspects of the network and benefits to be gained from other aspects being left to emerge, fostering agility and innovation albeit requiring vigilance (positive feedback) (Choi, Dooley and Rungtusanatham, 2001).

2.3.1.4 SCM strategies and paradigms

The final debate in Table 1 concerns the importance of SCM strategy where leveraging supply chain value is a central concern (Bourlakis, Maglaras and Fotopoulos, 2012; Cox, 1999; Gulati and Kletter, 2005; Harland, 1996; Stock and Boyer, 2009). Governed by a paradigm of competition between supply chains as extended co-operative value chains rather than between firms, a prominent SCM strategy advocated is *integration* of key business processes across supply chains. Several methodologies or philosophies such as just in time (JIT), and strategic imperatives for example resilience, in principle, underpin this strategy

(Christopher, 2011; Christopher and Braithwaite, 1989; Gattorna, Chorn and Day, 1991; Goldratt and Cox, 1989; Gupta and Snyder, 2009; Hall, 1989; Humphries and Wilding, 2003; Naor, Bernardes and Coman, 2013; Peck, 2006; Peters and Jill Austin, 1995; Rimiené, 2011; Smart et al., 2003; Womack, Jones and Roos, 1990; Yusuf, Sarhadi and Gunasekaran, 1999). Correspondingly, supply chain *leadership* is advocated as necessary to foster alignment of goals, strategies, and process orientation (Christopher, 2011; Defee, Stank and Esper, 2010; Defee and Stank, 2005; Fawcett et al., 2006; Lambert, D. M., 2008; Mokhtar et al., 2019; Wilding, 2008; Wong et al., 2012).

A dominant network member may nevertheless privilege own firm interests over the interests of other members (Cox, 1999; Defee and Stank, 2005; Nalebuff and Brandenburger, 1997). Firms may also serve multiple supply chains with often conflicting demands (De Carvalho et al., 2016; Cox et al., 2005; Cox and Chicksand, 2005; Nalebuff and Brandenburger, 1997; Sinha, Whitman and Malzahn, 2004). Globalisation has increased the complexity faced by people (Kelliher et al., 2012), and organisations (De Carvalho et al., 2016; Christopher, 2011; Koberg and Longoni, 2019). How to manage sustainability across global supply chains is a *critical* question facing industries, governments, and academia (Choi, Rogers and Vakil, 2020; EASA, 2019; Kalaitzi et al., 2018; Koberg and Longoni, 2019; Parliament, 2020; Spence and Bourlakis, 2009). There is no panacea for firms or supply chains to achieve superior performance. Moreover, conflicts of interest and tensions exist between individuals, organisations, and supply chains, pointing to the relevance of managing all relationships appropriately, and importantly IORs (Cox, 1999; Cox et al., 2005; Defee and Stank, 2005; Wong et al., 2012).

It is envisaged that the back-bone of global supply chains will become small communities of collaborating organisations operating in democratic networks where “integration will be philosophical and driven by behaviours, insight and information, not processes and systems” (Stevens and Johnson, 2016 p.38). This leads to the domain of IORs.

2.3.2 Inter-organisation relationships (IOR) debates

Influential Debates and Theories	Significance to Research Problem	Key Power Themes / Concepts
What renders a relationship a partnership ?	<i>Partnerships exist on a collaborative continuum, the essential components of which, are contested</i>	Joint Goals Continuum
What explains how IORs function ?	<i>Key concepts and theories are held to explain IORs implicating possible approaches to management of IORs</i>	Multiple Goals Obscurity Trust – Commitment Power – Conflict
How to achieve partnership performance ?	<i>Partnership model advocates tailored partnerships to be recognised as a process</i>	Empowerment

Table 2. Inter-organisation relationships influential debates and theories

Positioning IOR debates is the adopted general definition of an IOR as an aggregated mutual acceptance of goal interdependence and belief that exchanges will continue into the future (Chapter 1, Section 1.7.2). To understand IORs, it is argued necessary to look beyond any contract, recognise the nature of the exchange, understand the behaviours of the individuals and groups involved in the relationship, consider perspectives of both organisations, and incorporate a temporal dimension (Blois, 2002). Table 2 lists three related influential debates.

2.3.2.1 IOR partnership relationships

The first debate in Table 2, mirroring SCM, is what constitutes a *partnership* relationship. A consensus within SCM appears to be that the point at which a relationship becomes a partnership is when a relationship ceases to be arms-length, representative of a market relationship (Harland, 1996; Lambert, Emmelhainz and Gardner, 1996; Mena, Humphries and Wilding, 2009), or quasi-market / durable arms-length (Dyer, Cho and Chu, 1998), with low levels of goal interdependence (Blois, 2002) and no sense of joint commitment or joint operations (Lambert, Emmelhainz and Gardner, 1996). Thereafter, partnerships exist on a continuum, representing increased strength of relationship up to joint venture arrangements (Harland, 1996; Lambert, Emmelhainz and Gardner, 1996) and arguably includes joint ventures (Mena, Humphries and Wilding, 2009).

For some scholars the partnership continuum signifies a move from co-operation to co-ordination through to collaboration with increasing levels of trust enhancing mutually beneficial performance that may involve idiosyncratic investments (Ryu, So and Koo, 2009; Wilding, 2006; Wilding and Humphries, 2006).

Definitions of partnerships employ several concepts such as shared reward/risk, long term focus, joint activities, trust, openness, and yielding competitive advantage (Lambert, Emmelhainz and Gardner, 1996). A definition formulated by the global supply chain forum (Lambert, D. M., 2008) emphasises partnerships as tailored, performance driven relationships, based on mutuality, trust, and commitment. Whether partnerships should be or are by definition equitable is nonetheless contentious (Cox, 2004a; Frazier, 1983a; Jap, 2001). Furthermore, trust and mutuality are themselves deemed complex constructs requiring clarity and proper use in explaining partnerships (Blois, 1999; Cox, 2004b) pointing to the importance of understanding key concepts and theories employed.

2.3.2.2 IOR theoretical landscape

Turning to the second debate in Table 2, key influential theories explaining partnerships are captured in Figure 5 aligned to relevant disciplines. Focus here is given to agency theory, trust-commitment theory, thereafter power and conflict theory, each closely related to the inner-workings of IORs.

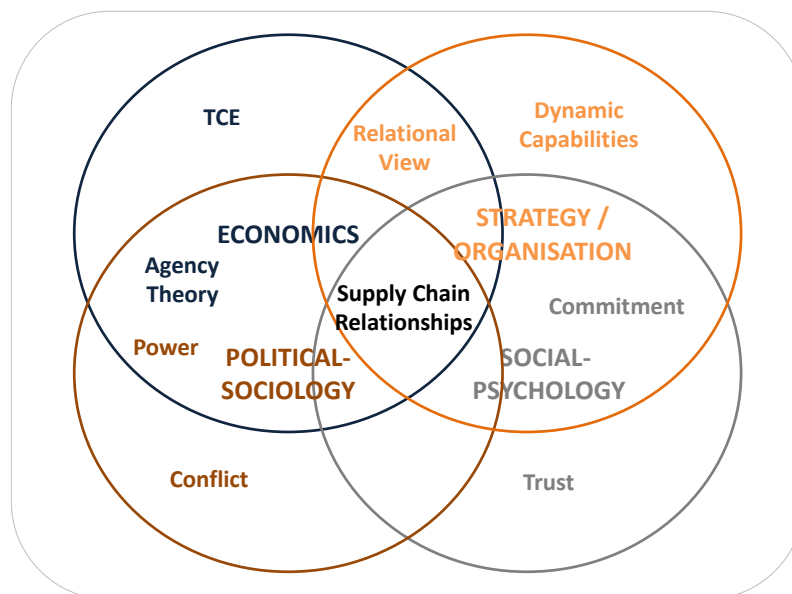


Figure 5. Theoretical landscape

Agency theory

Agency theory, rooted in economics is held to be an important theory for organisational research and relevant to any co-operative based relationship, including supply chain relationships, where “one party (the principal) delegates work to another party (the agent) who performs the work” (Eisenhardt, 1989 p.58). The unit of analysis is the contract of engagement between parties thus formed, formally or informally. The theory serves to identify contracting options (positivist approach) and it can serve to evaluate optimisation of contracts under different circumstances (principal-agent approach). Agents are assumed to have bounded rationality, that is decision-making is bound by cognitive limits, information available, and time, thereafter, to act in self-interest and be more risk averse than principals. The problem thereof is how a principal can efficiently ensure that the agent performs the work as agreed when each has different goals and attitudes to risk, both of which may lead to the agent taking actions that serve agent interests rather than the principal.

Against controversy mirroring criticism of TCE (Ghoshal and Moran, 1996) that the theory is too simplistic and potentially dangerous given organisation life is complex, variable, dynamic, and more subtle, is the argument that the principal-agent approach offers a level of adaptability to real conditions (Eisenhardt, 1989). The theory provides a perspective on improving IOR-performance through optimised *contracting* wherein commitment and trust are notable relevant factors.

Commitment-trust theory

As depicted in Figure 5, commitment and trust are rooted in social-psychology. In commitment-trust theory, known as the KMV model (Morgan and Hunt, 1994) both stand as key mediating variables (KMV) in relationship marketing that is “activities directed towards establishing, developing, and maintaining successful relational exchanges” (Morgan and Hunt, 1994 p.22). Relationship commitment, instrumental or affective, is where an exchange party invests maximum efforts to maintain a relationship indefinitely believing the relationship to be important or valuable. Trust is where one party has confidence in the reliability and integrity of the other party. Both are held key to encouraging co-operation and suppressing

opportunism enabling parties to preserve relationship investments, take prudent high-risk actions, and favour long-term benefits over short-term alternative gains that in turn generate efficiency, productivity, and effectiveness of the relationship. The model posits determinants of commitment and trust.

There are nonetheless controversies surrounding the theory from lack of robust *definitions* of trust and commitment (Blois, 1999; Gundlach, Achrol and Mentzer, 1995; Paluri and Mishal, 2020), to attributing trust to organisations (Blois, 1999; Gundlach, Achrol and Mentzer, 1995), to whether both need be reciprocal, and implications of asymmetry and relationship longevity (Blois, 1999; Brown, Crosno and Tong, 2019; Gundlach, Achrol and Mentzer, 1995), through to *directionality* of the trust-commitment relationship (Brown, Crosno and Tong, 2019; Paluri and Mishal, 2020). Overall, the KMV model is not rigorously validated rather the inter-relationship between components found theoretically and empirically variable (Brown, Crosno and Tong, 2019; Paluri and Mishal, 2020).

Cultural differences (Abosag, 2015; Abosag, Tynan and Lewis, 2006), other relationship realities such as human propensity to seek control (Musarra, Robson and Katsikeas, 2016), political and managerial ties (Chung et al., 2016), degree of environment turbulence and competition (Heirati et al., 2016), role conflicts and ambiguity, and power (Chowdhury, Gruber and Zolkiewski, 2016), are also held conditioning factors, deemed the dark side of IORs. Some scholars strongly advocate upfront consideration of IOR-power before and after relationship establishment, as IOR-power may consequently *shift* (Cox et al., 2005) and links to understanding power-conflict theory.

Power-conflict theory

Power and conflict theories as shown in Figure 5 have political-sociology origins, are strongly associated with each other by scholars, and not unlike the trust-commitment relationship, the interlink between power and conflict is found similarly disputed, that is whether power is positively related to conflict or rather the inverse (Frazier, 1984; Gaski, 1984a) or indeed contingent on other relationship factors such as culture (Kale and McIntyre, 1991; Zhao et al., 2008).

The *extended* KMV model reflects the impact of *coercive* power, where non-coercive power is held “at best non sequitur and at worst an oxymoron” (Morgan and Hunt, 1994 p.33). This distinction reportedly stands as generally accepted, reflecting a clear difference between power as forced compliance and influence as consensual compliance.

“To many academics, as well as most practitioners, the term power implies, or at least strongly connotes, coercion, that is “do this or else!”. If one does not have the ability to force compliance, then one might be said to have some degree of influence, but not genuine power.” (p. 33)

Power (coercive) is held to generate conflict, here denoting dysfunctionality in the relationship, that forces acquiescence and reduces relationship commitment and trust. Power, like opportunism, is claimed to explain relationship marketing failures and could not be the construct to explain success, rather commitment and trust in IORs are the prerequisites to firm and supply chain performance.

The clear stance taken by Morgan and Hunt (1994) on the relevance of power, including *non-coercive* power is nevertheless controversial (Belaya and Hanf, 2009; Cox, 1999; Cox et al., 2005; Haugaard, 2002b; McDonald, 1999; Simon and Oakes, 2006). A multi-theoretical (sociological, psychological, managerial) analysis more reveals power conceptualisation to be generally under-developed, hindering power studies (Belaya, Gagalyuk and Hanf, 2009).

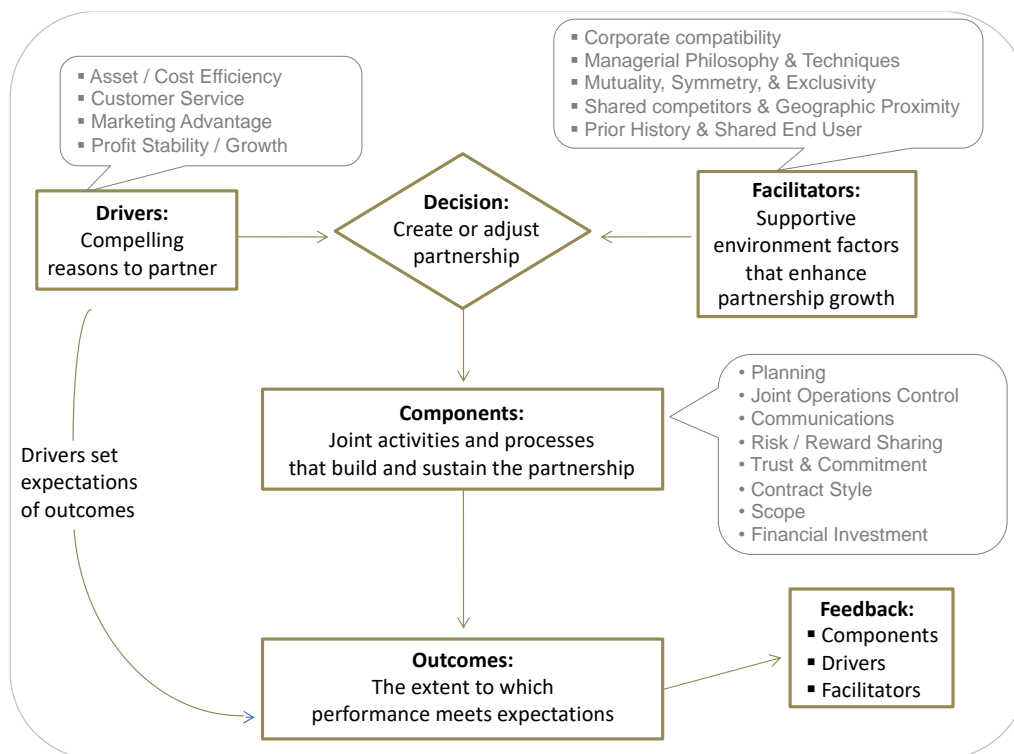
Turning to theories on conflict, where conflict may be defined as “opposition between individuals and groups on the basis of competing interest, different identities, and/or differing attitudes” (Schellenberg, 1996 p.9), an important focus is how conflicts may be *resolved*. Yet, similar to power, recognised is that conflict need not be negative and undesirable rather positive and desirable when for example salient interests are impeded by others and notably in stimulating creativity. Correspondingly, conflict resolution may also be negative where outcomes are not of necessity desirable (Schellenberg, 1996).

Different conflict perspectives are adopted from individual characteristics to society (Schellenberg, 1996), and conflict approaches and style typologies developed (Mo, Booth and Wang, 2012; Rahim, 1983; Schellenberg, 1996).

Nonetheless, there remain calls for a more comprehensive and cohesive understanding of conflict (Lumineau, Eckerd and Handley, 2015), greater recognition of the ambiguities surrounding conflict, the role of individual mental maps, and the complex, multi-levelled, emergent, and indeterminate nature of conflict (Lumineau, Eckerd and Handley, 2015; Sword, 2008; Vickers, 1972).

2.3.2.3 IOR partnership performance

The final debate in Table 2 concerns how to achieve partnership performance contrasted with the realities of partnership. The most comprehensive model identified offering such guidance is shown in Figure 6 adapted to incorporate component features highlighted (Lambert, Emmelhainz and Gardner, 1996). The model depicts the decision process leading to prescribing the appropriate type of partnership (components) based on drivers and facilitators, where drivers shape the expected outcomes. Feedback enables appropriate adjustments to the partnership during implementation and continuous development (process). The model is supported by more detailed guidelines (Lambert, D. M., 2008) where features highlighted further reflect debates across the SCM literature.



Source: Adapted from (Lambert, Emmelhainz and Gardner, 1996 p.4)

Figure 6. Partnership model

Framed by a sense of shared destiny, partners are to clearly agree the appropriate level of partnership and respect agreements reached but recognise adaptations may be required, even be fruitful, subject to changes in drivers and facilitators. The aim is to develop the right type of partnership tailored to the mutual benefit of both parties where commitment and trust are deemed essential, that is “no partnership can exist without trust and commitment” (Lambert, Emmelhainz and Gardner, 1996 p.11). A strong indicator of the strength of commitment and trust is held to be the contract style being short and less specific where attitude to *empowerment* rather than power is given explicit relevance.

Some scholars nonetheless contest that trust and commitment are prerequisites rather more features of these types of relationships that may exist and be beneficial, or not (Cox, 2004b; Cox et al., 2004, 2005). Other scholars advocate a move towards *vested outsourcing* rather than emphasising mutual gainsharing. In principle this stands as an incentivised desired outcome based relationship (agency theory), where focus is given to optimising and improving goods provided whilst reducing cost and improving profits for the outsourced goods *provider* (Vitasek and Ledyard, 2009).

Empirical studies confirm some partnerships to have been formed based on drivers identified in the partnership model (Figure 6) (Ellram, 1995; Lambert, Knemeyer and Gardner, 2004; Min *et al.*, 2005; Ryu, So and Koo, 2009) but not all. Further drivers include cultural based management philosophies (Dyer, Cho and Chu, 1998), or being politically and financially mandated akin to arranged marriages where partners are often rivals in other contexts (Jordon and Lowe, 2004), or monopolistic based (Humphries and Wilding, 2004). Furthermore, although theoretical benefits are acknowledged, empirical studies reveal the many issues facing organisations from managing goal incongruence (Rossetti and Choi, 2008; Vitasek and Ledyard, 2009) to abilities to standardise and integrate processes, through to establishing mutual trust and commitment (Maheshwari, Kumar and Kumar, 2006), reflected in insights to why partnerships have failed to deliver expected outcomes from lack of shared goals to poor upfront planning (Ellram, 1995; Spekman, Kamauff Jr and Myhr, 1998).

Notwithstanding, reaffirming partnerships do not exist in a vacuum rather are embedded in dynamic supply networks and markets (Choi, Dooley and Rungtusanatham, 2001; Choi, Rogers and Vakil, 2020; Christopher, 2011; Cox, 1999; Defee and Stank, 2005; Wong et al., 2012), attention is drawn to the importance of employing appropriate failure assessment criteria. Partnering drivers and challenges may change where adaptation is central to performance (model feedback component) and may include dissolution (Smith, 2003). Context is therefore important to understanding any partnership and led to reviewing the background context to this research, the aerospace and defence industry, and more specifically, the commercial aerospace industry.

2.3.3 Aerospace and defence industry

The aerospace and defence industry comprises a diverse set of companies from large global corporations (e.g. BAE Systems, Lockheed Martin) through to local niche players (e.g. Subsea Craft, The Centech Group Inc.) constituting supply chains that provide a wide range of end-products to military and/or civil customers including, weapons, aircraft, spacecraft, and security systems. Thereafter, the provision of a range of support services including maintenance, repair, and overhaul (MRO) of end-products and sub-components, is an important facet of this industry wherein third-party organisations, that is not original equipment manufacturers (OEM), are significant contributors and competitors to OEMs (Derber, 2020; Feldman, 2001; Mahoney, 2020).

In the US, the industry is represented by several associations foremost the Aerospace Industry Association (AIA) and the National Defence Industry Association (NDIA). Similarly, the Aerospace and Defence Industry Association (ADS) represents UK industry interests, organised around sectors defined by ADS as aerospace (civil), defence, security and resilience, and space (ADS, 2021a). ADS along with 20 European national associations and 20 major European companies as direct members further form the Aerospace and Defence Industries Association of Europe (ASD). Alliances also exist between governments, the industry's prime *defence* or military customers (foreign and domestic), most notably the North Atlantic Treaty Organization (NATO) in which

30 member countries collaborate in pursuit of a shared purpose, “to guarantee the freedom and security of its members through political and military means” (NATO, 2022 p.3). Similarly, alliances between commercial airlines (government fully or partially owned, and publicly owned) as the industry’s prime *civil* or commercial customers exist, for example, SkyTeam, oneworld, and the Star Alliance. Member airlines collaborate on such things as optimising route efficiencies and leveraging purchasing power (Gerlach, Cleophas and Kliewer, 2013; oneworld, 2022; SkyTeam, 2022; Star Alliance, 2022; Tieman, 2006).

Thus, alliances frame the network of defence and aerospace industry companies competitively seeking economic gains and sustainability, amidst mounting social and environmental sustainability pressures (ADS, 2021b; AIA, 2017; Airlines UK, 2020; ASD, 2021; EASA, 2019).

Primary research and reports on the industry are hindered by security and commercial confidentialities, and are not easy to reconcile or synthesise given sectors are *in*consistently defined by the various associations and governments, and the sheer scale of the industry that is interrelated across sectors both technologically and organisationally (ADS, 2021a; AeroDynamic Advisory & Teal Group, 2018; AIA, 2022; Dowdall, 2004; Soshkin, 2016). It is possible however to characterise the industry’s supply chains that distinguish or align the industry from/to other industries, such as construction (Green, Fernie and Weller, 2005).

Foremost, the industry stands as a major *global* industry reporting \$697 billion in revenues for 2020 (PwC, 2021) with global defence spending expected to have risen above \$2 trillion dollars in 2021 (Deloitte, 2021), alongside continued growth in the commercial sector, expected to rebound from the COVID-19 pandemic by 2023/2024 (Deloitte, 2021; PwC, 2021). The US has built and maintained a dominant market position with the UK standing fourth in generating revenues, behind France and Germany (Soshkin, 2016). Generally acknowledged as highly political with high barriers to entry due to it being a high-technology, high-investment, high-risk, and importantly highly regulated industry (Mahoney, 2020; Sanderson, 2009; Soshkin, 2016; Varoutsas and Scapens, 2015), analysts and researchers have pointed to prominent supply chain characteristics of complexity,

clock speed and relatedly product life-cycles, offsetting, and market stability, thereafter longevity and type of relationships, as follows.

Commencing with complexity, in addition to technological and geographical complexity, there is significant depth, breadth, and interconnectedness to the industry's supply chains, moreover networks, that are not always industry specific rather competitively connect to other industry supply chains (Dowdall, 2004; Moore, Neal and Antill, 2001). Complexity is further heightened by manufacturing supply chains involving tens of thousands of parts (Airbus, 2021a) and significant end-product customisation (Eckert, Clarkson and Zanker, 2004). Product MRO supply chains are also complex involving forward and reverse material flows and pooling arrangements wherein traceability is paramount (Farris II, Wittmann and Hasty, 2005), and moves to servitization across different sectors inherently increases complexity (Johnstone, Dainty and Wilkinson, 2009).

Implementing Industry 4.0 technologies, including IoT (Internet of Things) and artificial intelligence (AI) to create a "digital manufacturing enterprise that is not only interconnected but also communicates, analyzes, and uses information to drive further intelligent action back in the physical world" (Lineburger et al., 2019 p.3), across these complex supply chains is also advancing albeit remains under-exploited thus far (Lineburger et al., 2019). Challenges include not least transforming/building a digital culture and capability that readily shares information, and as a high safety and security conscious industry, maintaining robust cybersecurity levels (Burton, 2021; Ghadge et al., 2020; Vergun, 2022).

Importantly, increased interconnectedness between digital, physical, and biological worlds deemed the "most powerful when they combine and reenforce one another" (Philbeck and Davis, 2019 p.17) fundamentally alters how individuals experience the world. As Industry 4.0 technologies become more fully integrated into the industry's supply chains, a Fourth Industrial Revolution or 4IR will emerge, "a series of significant shifts in the way that economic, political, and social value is being created, exchanged, and distributed" (Philbeck and Davis, 2019 p.17), or indeed destroyed (value). Broader implications for governments of an ethical and moral nature, for example the sale and use of lethal autonomous

drones, will need to be addressed collectively by governments and stakeholders (Klug, Garz and Hassl, 2014; Philbeck and Davis, 2019).

Turning to “clock speed” (Carrillo, 2005). The industry operates at a much slower pace than other industries on *new* product development programmes. In particular the defence sector where product developments often require new standard operating procedures (SOPs) to be developed and learnt (resistance), and necessitates networking amongst several players from technical experts to policy makers (Rao et al., 2019). Programmes arise relatively infrequently and take years to come to fruition (Carrillo, 2005), for example the Airbus A380 from programme launch to first delivery took approximately 7 years (Airbus, 2021b). Relatedly, product life-cycles typically span decades rather than years (Airbus, 2022; Rao et al., 2019).

Notwithstanding, ongoing product enhancements to rectify in-service problems and incorporate emerging technologies arise at a faster pace (months), and in-service support, at an even faster and unpredictable pace (Liu et al., 2014). Defence end-users especially in war-time (soldiers) and commercial end-users in daily operations (airlines) work to minutes, not months or years, in highly dynamic and demanding environments. Fast and efficient supply of new components, materials, and commodities, fast and efficient maintenance, overhaul, and repair (MRO) of end-products and sub-components (limiting buffer stock requirements), thereafter real-time technical and service field support, is more the order of the day (Farris II, Wittmann and Hasty, 2005; Ng and Nudurupati, 2010; Tegtmeier, 2010). Industry 4.0 technologies are poised to transform efficiency through not least remote monitoring to enhance predictive capabilities, additive manufacturing (AM) for supply of slow moving parts, and tracking of parts in transit, but currently lags behind other industries (Deloitte, 2022; Derber, 2020; Liu et al., 2014).

Moving briefly to offsetting and market stability, offsetting, that is overseas participation in product programmes offering in return access to overseas markets, as a government and industry practice, marks how supply chains have evolved into global supply chains although access to resources and capabilities

is also a significant driver (Dowdall, 2004; MacPherson and Pritchard, 2007; Rose-Anderssen et al., 2008, 2009). In terms of market stability, exposed has been a difference between defence and civil sectors, where the defence sector has historically offered a more stable market. In contrast, the commercial aerospace industry has become renowned for its cyclic nature, and sensitivity to economic downturns, natural disasters, and political unrest, albeit overall exhibiting a strong growth trend (Deloitte, 2021; PwC, 2021). Nonetheless, given the industry's strategic relevance as a whole, some authors point to the privileged relationship the industry enjoys with governments and greater support/benefits derived thereof during downturns (Green, Fernie and Weller, 2005).

Lastly, focusing on relationships, strategic alliances including joint ventures between prime contractors/suppliers also form an integral part of the structure of industry supply chains (Neal and Taylor, 2001; Sanderson, 2009; Smith, 2003). Corresponding with product life-cycles, these alliances and relationships thereafter with prime customers, are essentially long-term in nature involving high levels of specific investments. This explains the need for prime customer judicious selection of prime contractors/suppliers, to protect interests post-contract "lock-in" (Sanderson, 2009 p.335), that is equally important to prime contractors/suppliers responsible for delivering integrated systems and solutions, in engaging the next level of contractors/suppliers, and so forth.

In terms of relationship types, governments faced with assuring national security within a longer-term strategic horizon (Pugh, 2007), as a "mission-driven innovation industry" (Rao et al., 2019 p.3), and representing the bigger market in terms of expenditure, are typically considered to hold a dominant position over prime *contractors*, more *dictating* requirements and *controlling* industry supply chains solutions (Bates and Kukalis, 1998; Rao et al., 2019). In contrast, airlines (prime civil customers) are more recognised as working *collaboratively* with *suppliers* such as aircraft manufactures (e.g. Boeing and Airbus) to identify and develop solutions to meet airline operating requirements and deliver programmes (Cullen et al., 2005). However, such a distinction between civil/defence sector *relationships*, has become less marked, if not erroneous, for several reasons.

Continued consolidation and restructuring of the defence sector through mergers and acquisitions, triggered by cuts in US and UK defence expenditure post the cold war, generated a concentration of major defence corporations, reducing competition. Accompanied by shifting focus on exploiting opportunities in the growing commercial market and increasing government reliance on industry developed technologies, all together has changed the defence sector landscape (Bates and Kukalis, 1998; Mahoney, 2020). The US department of defence (DoD) uses contractors to provide direct support to military operations in the field, employs venture capital contracting approaches to engage niche technology companies in innovative research and development for military applications, and more than ever corporations are involved in operational decision making. The DoD's current level of dependence on industry is such that "without contractor support, the United States would not be able to arm and field an effective fighting force" (Mahoney, 2020 p.181). The US armed forces are no longer recognisable collectively as a public institution, rather have strong interest in safeguarding the future of leading defence industry corporations (Mahoney, 2020).

The UK MoD also works collaboratively with its main industry suppliers (Humphries and Wilding, 2004). Consistent with the US model the MOD has outsourced MRO services (Ng and Nudurupati, 2010) and is pursuing closer relationships with small, medium, enterprises (SME) in niche innovative technology developments (MoD, 2022a). Active support is further given to ADS's supply chain programme (SC21) aimed at continuously improving through-life delivery of quality solutions and services. Relationship management is a recognised SC21 key enabler underpinned by a code of practice, promoting working collaboratively in the best interests of all stakeholders, fostering customer trust, and focusing on agility and innovation (Manville, Papadopoulos and Garengo, 2021; SC21, 2021).

Accordingly, the voice of the supply chain has become more prominent in steering the offering and delivery of defence solutions. US and UK governments no longer rely on traditional cost-plus contracting arrangements (absorbing risk) rather utilise fixed price and incentivised outcome based contracts, framework

agreements, and as noted venture capital approaches (Mahoney, 2020; Ng and Nudurupati, 2010; SSRO, 2016).

Notwithstanding, amidst reports of partnering initiatives, for example Niteworks 3 (MoD, 2018) and in tackling cybersecurity (MoD, 2022b), the UK government adopts an adversarial stance by default. Collaborations are explicitly positioned as “partnerships within competition” (Sanderson, 2009 p.337) based on public sector procurement principles and accountabilities.

“As a public sector organisation, we procure in a different way to industry with competition as the default position, we set objective tender selection criteria, and we are fair and transparent and will be held accountable for procurement decisions in a way the private sector is not. We do not operate preferred supplier lists. Our principles include non-discrimination (on grounds of nationality), equal treatment (of all suppliers), transparency (act in fair and non-discriminatory manner), mutual recognition (of equivalent documents and standards).” (MoD, 2021)

Deemed a hybrid model, the UK MoD partnering approach is thereby viewed to impede collaboration given it works against obtaining accurate and full information upon which to make sound contracting decisions, as companies protect intellectual property rights pre-contract, leading to unrealistic yet taut contracts. Post-contract, companies are burdened with protecting themselves against damages. This likely contributes to explaining significant delays and cost overruns that frequently arise on government contracts (Cullen and Hickman, 2001; Sanderson, 2009).

Furthermore, not unlike the civil sector, there is reasoning and evidence to suggest that the effectiveness of UK defence sector collaborations in practice remain subject to levels of trust developed, and are impeded by power asymmetries across the supply chain and knowledge protection practices (Humphries and Wilding, 2004; Jordon and Lowe, 2004; Rose-Anderssen et al., 2008, 2009; Sanderson, 2009). There are calls to reset how UK government collaborations function to create a “coherent concept-to-capability journey” that enables industry to appropriately invest and align with defence requirements (Cullen et al., 2005; Mathiot, 2020). This appears to be acknowledged by the UK

government in its recent procurement reform proposal to “provide as much freedom as possible to amend contracts, to ensure maximum flexibility to respond to MOD requirements and the characteristics of the defence and security markets” (UK Cabinet Office, 2021 p.66).

Therefore, how different defence versus civil sector contracting and relationships are in practice, at present time, is a moot point, and may be more a question of dealing with higher levels of government bureaucracy. In other words, differences in cultures, values, and principles arise across companies and national boundaries in both sectors, leading to different collaborative forms, adversarial and non-adversarial (Jordon and Lowe, 2004; Sanderson, 2009). Furthermore, although industry supply chains are characterised by major upstream alliances and risk-sharing partnerships, these constitute the tip of the iceberg given the numbers and importance of supporting SMEs (Burton, 2020; Moore, Neal and Antill, 2001) and breadth in product and service offerings. Not *all* rather selected relationships are highly collaborative in nature with different levels of maturity, competition, and dominance arising at different points in the supply chain wherein no two relationships are wholly comparable (Graham and Hardaker, 1998; Haillette and Plandé, 2015; Sanderson, 2009; Varoutsas and Scapens, 2015).

Distinctions between defence and civil sectors may be drawn based on status, imperatives, and environments of the respective *prime* customers, governments versus commercial airlines (ADS, 2021a; Rao et al., 2019). It is the cyclic nature of the commercial aerospace market and overall higher-levels of competition, especially in the in-service support arena (aftermarket), however, that more appears to distinguish sector *supply chains*. The commercial aerospace sector is where the *problem of interest* driving this thesis was initially identified.

2.3.3.1 Commercial aerospace industry sector influential debates

Competition, uncertainty, safety, and sustainability on all fronts (environment, social, economic) are synonymous with the commercial aerospace industry, with sustainability having been on the agendas of aerospace companies and associations such as ADS and governments, for some time (Blair, 2003; EASA, 2019; Hoyle, 2008; SC21, 2021; Sparaco and Proctor, 1998; Woolsey, 1971). It

was deregulation of markets in the late 1970s, opening the door to the ‘low cost’ and ‘no frills’ airline operating model, however, that transformed the industry heightening cost and revenue pressures across established national airlines, and in turn industry supply chains (Mahoney, 2020; Rose-Anderssen et al., 2009; Tatalović, Bajić and Šupuković, 2017).

Not least, deregulation marked the growth of aircraft leasing, including new industry players, enabling airlines to avoid the burden of aircraft ownership costs (Capital Markets Intelligence, 2022) and emergence of third-party (not original manufacturer) MRO providers (Derber, 2020). In addition, came the move first to “power by the hour” engine contracts, a fixed price per flying hour removing maintenance cost uncertainty, thereafter moves to servitization (Baines et al., 2009; Braziotis, Tannock and Bourlakis, 2017; Derber, 2020; Johnstone, Dainty and Wilkinson, 2009; Rolls Royce, 2012).

The two segments of the industry, manufacturing and aftermarket (aircraft operations) are thus recognised to be highly inter-dependent not only given “sales are once, you support for life” (Nelms, 2000) but the opportunity presented by the aftermarket estimated over a 20 year period (2000-2019) to be worth \$2.7 trillion compared to aircraft sales of \$1.7 trillion (Feldman, 2001). Organisations increasingly vie for position in both segments (Cohen, Agrawal and Agrawal, 2006; Feldman, 2001; Rossetti and Choi, 2008) amidst continued industry restructuring and consolidation, recalling the industry no longer benefits from government fully funded defence contracts and aerospace corporations are “financially exposed” (Cullen and Hickman, 2001 p.546).

Several industry debates surrounding supply chain performance align with academic debates from emphasising agility (Feldman, 2001) to the importance of leadership (Bruno, 2009; Editorial, 2009) where delivery on commitments across complex supply networks are key concerns. Relatedly, the strategic and operational implications of power distribution across programme supply chains, emerged contentious, as captured in the direct exchange exposed in Chapter 1 between the late reputed industry reporter, Pierre Sparaco (2009) and former Airbus CEO, Thomas Enders (2009).

Sparaco (2009) raised concern that continued consolidation and the creation of “Super Tier 1” suppliers was a “dangerous equation” that risked “the end of a healthy competitive base” and that outsourcing strategies were transferring too much *power* to major suppliers rendering Airbus (Europe) and Boeing (USA) unable to control their respective major aircraft programmes of the time. There was a further tentative suggestion that power-shifts may enable these suppliers to “alter the rules of the game”. In response, Enders (2009) stated that Airbus’s ability to manage, control and deliver programmes was conversely enhanced within the emerging collaborative supply chain practices through closer relationships with fewer “empowered suppliers” that are “best-in-class in innovation, design and production capabilities”, clearly stating that “there is no evidence” to undermine this approach. The debate pointed to a salient shared academic and industry-wide problem of interest, meriting further research:

Do power shifts towards major suppliers adversely impact supply chain performance?

However, power reportedly being a highly contested concept renders debates about IOR-power distribution and shifts inherently difficult to resolve. This led to reviewing the broader power literature for guidance.

2.3.4 Power literature

The review of the power literature as the final parent literature domain (Figure 3) was not exhaustive. The primary aim was to broadly establish the status of the concept of power. Largely through insightful reviews of the social and political power literature by Clegg (Clegg, 1989) and Haugaard (Haugaard, 2002a), conceptual developments, contestations, and breadth, are now considered.

Foremost, whilst the centrality of power in the social world appears unquestioned, a broad trajectory of conceptual development re-enforces power as highly contested and complicated (Bachrach and Baratz, 1962; Barnes, 2002; Benton, 1981; Bourdieu, 1989; Clegg, 1989; Dahl, 1957, 2002; Flyvbjerg, 2003; Foucault, 2005, 1982b, 1995; Giddens, 2002; Harré and Madden, 1975; Haugaard, 2002a, 2010; Lasswell and Kaplan, 1950; Lukes, 2005; Morriss, 2002; Parsons, 1963; Poulantzas, 2002; Russell, 2004; Simon and Oakes, 2006; Weber, 1947; Wrong,

1968). Debates range from the intricacies of power such as the role of intentions, through to the validity of consensual power echoing debates in the IOR-context.

Accounts of power seem to ignore natural-based power (physical and Nature) other than implicating its use as a threat or embedded in the concept of agency. Correspondingly, debates centre on social-based power and social outcomes. Nevertheless, conceptual links and analogies between social and natural power are evident (Clegg, 1989; Nailen, 1996; Nye Jr., 1990; Russell, 2004; Swackhamer, 2005) and despite issues surrounding establishing a mind-body relationship (Barrett, 2009; Cacioppo and Decety, 2009; Collins, 1997, 2008; Gibb, 2010; Lowe, 2000; Miller, 2010; Pitts, 2020; Robinson, 2020), advances in connecting human mental and *physical* worlds (Atmanspacher, 2020; Liu, 2018; Lowe, 2000; Rainio, 2009a, 2009b) based on the notion of the mind as a non-material field of psychological *forces at work* (Lewin, 1938) offers avenues for closer conceptual alignment.

One underlying theme is *context*, and following Wittgenstein, a claim that power is a family resemblance word and has no single common essence rather *is* context and enquiry dependent. Meaning is to be derived from the scientific inquiry at hand and entails recognising the specific family member of power in use in a given *context*, and whether it is being used in an analytical (*is*) or normative (*ought*) sense (Haugaard, 2010). The implication is that there is no robust concept of power available to directly employ in researching IOR-power distribution moreover some indication that any such concept would need to be grounded in the IOR-context.

As a way forward, integral to the initial research phase 1 (Section 1.5; Figure 2), first, the broad literature review (SCM, IOR, and power) permitted developing an initial answer to the question, *what is power?* (framework; model) to guide exploring practitioner perspectives of power (Chapter 3, Section 3.6). Second, the *systematic* review of the literature was directed at more thoroughly unearthing *why power* is a difficult concept in the IOR-context.

2.3.5 Systematic literature review questions

As a precursor to systematically reviewing the IOR literature, a clear review question was formulated (Tranfield, Denyer and Smart, 2003):

SLRQ: Why is power a difficult concept in the IOR-context?

To inform this review question the following more specific sub-questions (SLRQs) were formulated and according with the tenets of the DCR philosophical perspective adopted in this research, included understanding conceptual origins.

SLRQ1: *What are the origins of power conceptualisation?*

SLRQ2: *How is power conceptualised?*

SLRQ3: *How is power operationalised?*

SLRQ4: *What are the limitations in the study of power?*

2.4 Identifying and evaluating studies

2.4.1 Section introduction

Stage 2 entailed identifying and evaluating literature to determine the best evidence to inform the systematic literature sub-review questions. First outlined is the replicable search strategy adopted to identify studies (section 2.4.2) thereafter search results as the body of literature sourced and evaluated, core literature established, and IOR-power origin studies identified (section 2.4.3).

2.4.2 Search strategy

The search strategy was to identify 50-60 most relevant and quality published journal articles being most representative of academic perspectives on IOR-power. Further published literature in other forms, notably conference papers and books remained considered where referenced by the selected journal articles.

2.4.2.1 Search strings and database

Under advisement (Cranfield library), the ABI/Inform database was selected as sufficiently comprehensive to source the most relevant journal articles recognising extensive use of terms power and relationship in the literature would yield high volumes of studies possibly unmanageable across several data-bases.

Six search string(s) shown in Table 3 were purposefully constructed based on salient terms notably power, relationship, and supply chain to interrogate article titles and abstracts (NOFT filter) for potential relevancy. Search strings were devised recognising extensive use of terms power and relationship in other contexts, but equally use of specific terms such as distribution channels and were not consolidated to avoid data-base overload and data transfer problems. As a general quality filter, the search was limited to peer reviewed articles. Citation data was exported to RefWorks reference management database thereafter Mendeley (Cranfield University supported) for abstract evaluation. Basic citation data (title, authors, date, journal) for *all* studies was transferred to the CADB1 database for analyses.

		Bibliographical Search (NOFT; Anywhere except full text) Search Strings (SS)
SS 1	AND	Box 1: power AND NOT (wind OR electric* OR thermal) Box 2: interorgani* OR inter-organi* OR interfirm OR inter-firm OR intercompany OR inter-company Box 3: relationship*
SS 2	AND AND	Box 1: power AND NOT (wind OR electric* OR thermal) Box 2: supplier* OR customer* OR supply chain OR sell* OR buy* Box 3: relationship*
SS 3	AND AND	Box 1: power AND NOT (wind OR electric* OR thermal) Box 2: partner* OR alliance* OR vendor* Box 3: relationship*
SS 4	AND AND	Box 1: power AND NOT (wind OR electric* OR thermal) Box 2: "business to business" OR "business-to-business" OR B2B Box 3: relationship*
SS 5	AND AND	Box 1: power AND NOT (wind OR electric* OR thermal) Box 2: marketing OR distribution Box 3: relationship* OR channel*
SS 6	AND	Box 1: power AND NOT (wind OR electric* OR thermal) Box 2: "business relationship"

Table 3. Search strings employed to identify relevant literature

2.4.2.2 Study relevance criteria

Study relevance was initially based on pre-defined inclusion and exclusion criteria. Given the high number of IOR-power studies of some relevance (889), criteria were *translated* into a more discriminatory and meaningful relevancy classification system displayed in Table 4 permitting informative profiling of core studies, as follows.

LEVEL	Study Purpose (Intellectual Project)					
	Directly ANSWERS at least one SLR question	Concept of Power CENTRAL	Unit of Analysis IOR	Concept of Power NOT central	NOT Relevant	
					NO apparent Relevancy or Comprehension	NOT accessible and precursor to studies included (Not highly referenced)
0	Y	Y	Y			
1		Y	Y			
2	Y	Y				
3		Y				
4				Y		
5					Y	
6						Y

Table 4. Relevancy classification system employed to isolate core literature

Where IOR-power theory refers to studies seeking to directly answer at least one of the sub-review questions, study relevancy levels distinguished between the *main purpose* of the studies being: IOR-power theory (level 0); power as central to an IOR study but the main purpose is not IOR-power theory (level 1); power theory in other contexts (level 2); power as central to a study in another context but the main purpose is not power theory (level 3); power not being central to the study (level 4); study relevancy is incomprehensible (not English or French) or not apparently relevant (level 5), or lastly, as being inaccessible directly, not highly referenced, and a precursor to a study included (level 6). Based on this classification system, *core literature* was established as level 0 studies and all level 0 *referenced* studies up to level 4.

After removing duplicated studies across search strings, all studies were *initially* level coded from 0 to 6 based on evaluation of title and abstract or if highly ambiguous, full text. Initially classified level 0 studies were used to further identify and source referenced studies that were added to CADB1 and level classified. A further study classification, P-Theory, was introduced to appropriately distinguish between general power theory and level 2 context specific power theory.

2.4.2.3 Study quality levels

A critical, non-biased evaluation of studies is an essential ingredient of the systematic process. A framework consisting of six recognised criteria: intellectual project; main claim; evidence; theoretical orientation; value stance; and support

(Wallace and Wray, 2006) was employed to guide assessment of the general quality of each identified level 0 study. Compliance against each quality criteria was assessed and scored using a *basic* 5-point scale to drive a coarse but *manageable* discriminatory assessment, where 0% = not compliant; 25% = limited compliance; 50% = adequate compliance; 75% = high compliance; and 100% = fully compliant. As summarised in Table 5, a quality score *inclusion* threshold of 50% for intellectual project, emphasising study purpose as IOR-power theory was first applied. Thereafter, reflecting more specifically study quality, for all other criteria an *inclusion* threshold of 50% average with no criteria less than 25% was applied to identify and target high quality studies.

Study Inclusion / Exclusion Criteria				
Category	Threshold Quality Score – All Categories		Study Quality Threshold	
Intellectual Project	Equal or greater than fifty percent	= / > 50%	Equal or greater than fifty percent	= / > 50%
Main Claim	Equal or greater than twenty five percent	= / > 25%	AVERAGE score equal or greater than fifty percent AND No one category score less than twenty five percent (= / > 25%)	= / > 50%
Evidence	Equal or greater than twenty five percent	= / > 25%		
Theoretical Orientation	Equal or greater than twenty five percent	= / > 25%		
Value Stance	Equal or greater than twenty five percent	= / > 25%		
Support	Equal or greater than twenty five percent	= / > 25%		

Table 5. Level 0 study inclusion quality criteria and threshold scores

The detailed quality review resulted in relevancy level re-classifications. Level 0 *referenced* studies in the CADB1 were updated accordingly (deletions and inclusions) to establish a final fully classified *body* of sourced literature and *core* literature, corresponding with Figure 3 (Section 2.1).

2.4.2.4 Study classifications and categories

In addition to classifying relevancy and quality levels further general and specific analytical classifications and categories (Jacob, 2004) were employed to support profiling and assimilation of the literature. These included context distinctions for level 2 and 3 studies for example individual-level context, and for level 4 studies,

dominant themes such as methodology. Specific codes were also employed to enable filtering studies for analysis purposes such as study referencing levels.

2.4.2.5 Determining conceptual origins

Theoretical origins may be claimed based on different criteria and methods. Five reasonable approaches were considered however a compound approach was used given each approach had disadvantages. The combined assessment was based on an overall ranking position given by publication date and number of times referenced for the top 10 earliest and top 10 most referenced power theory studies (P-Theory; Level 2) using 20 methods, thereafter those referenced by the first IOR-power study, referenced within the first decade (1969-1979), and level of theoretical import.

2.4.3 Search results

2.4.3.1 Body of literature

Across the initial systematic review conducted 10 March 2011 and the extended review conducted 17 July 2018, a total of 7,243 primary and secondary studies were sourced. Eliminating 1,615 search string duplicates, a total of 5,628 studies remained. Eliminating reference duplicates, a total of 4,472 studies remained as the body of literature.

2.4.3.2 Core literature

Level 5 and level 6 studies (943) were automatically excluded. The review yielded 61 core IOR-studies generating a core literature of 1,611 studies (level 0 and referenced studies) with a relevancy level profile shown in Figure 7. Most level 0 referenced studies were level 4 (1,179), thereafter level 1 (165), level 3 (73) studies, P-Theory (78), level 2 (51), and included 4 IOR-power origin studies.

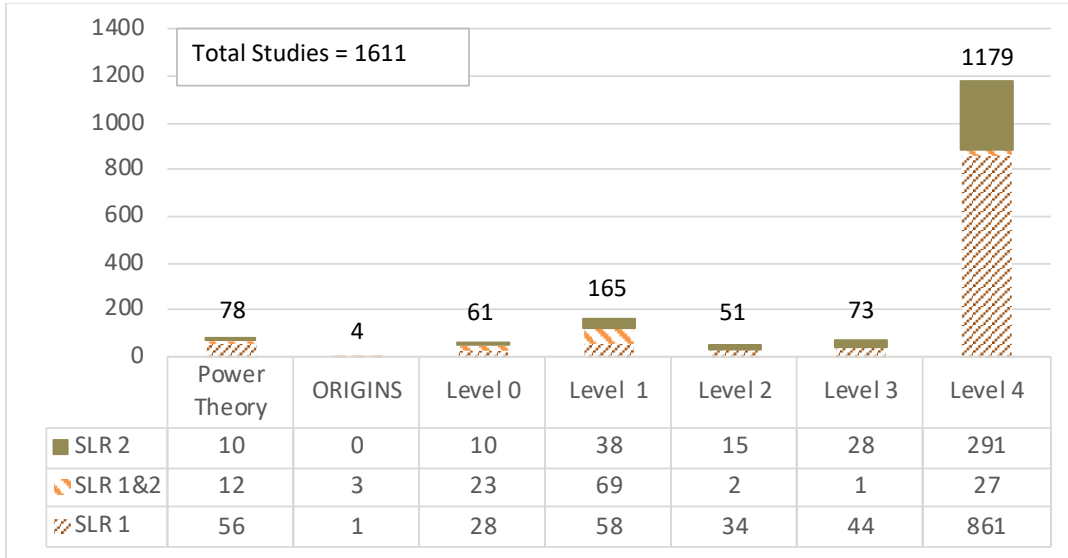


Figure 7. Core literature level profile of studies

The profiles of level 2 and level 3 studies are provided in Figure 8 and Figure 9. These profiles suggest IOR-power theory to be primarily influenced by organisation power theory either through studies focusing on theory development (26) or employing power theory (20) contrasting with no apparent influence from consumer or culture-based contexts. Studies *employing* power theory in individual contexts also appeared influential with 16 studies referenced compared to 7 in the next most referenced contexts of group or industry.

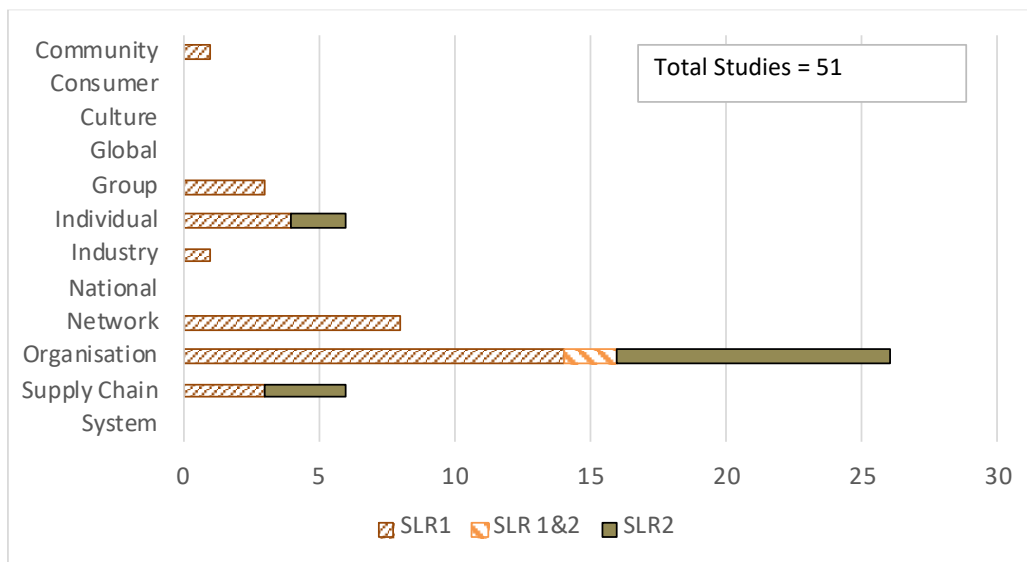


Figure 8. Context profile of level 2 studies (power theory)

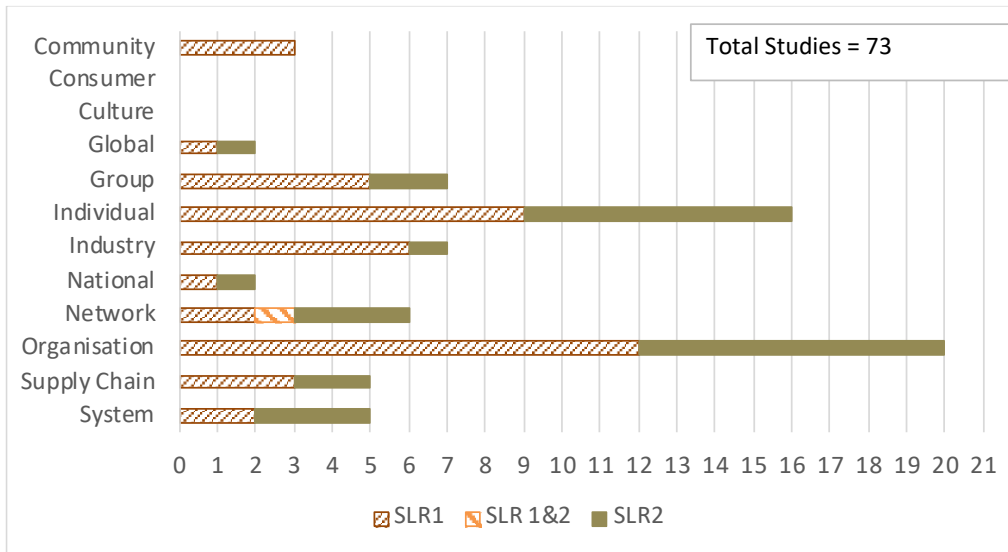


Figure 9. Context profile for level 3 studies (power exploitation)

Studies employing power theory are more referenced and might be due to the number of available studies, *if* profiles mirror the IOR-context. In the IOR-context 889 power studies were identified dating back to 1969. As shown in Figure 10, the percentage of studies focusing on IOR-power theory development (level 0) versus exploiting IOR-power theory, referenced (level 1) or not (level 1 EX) by level 0 studies, decreases each decade from 24% (70s) to 4% (2010s), and overall averages 7%.

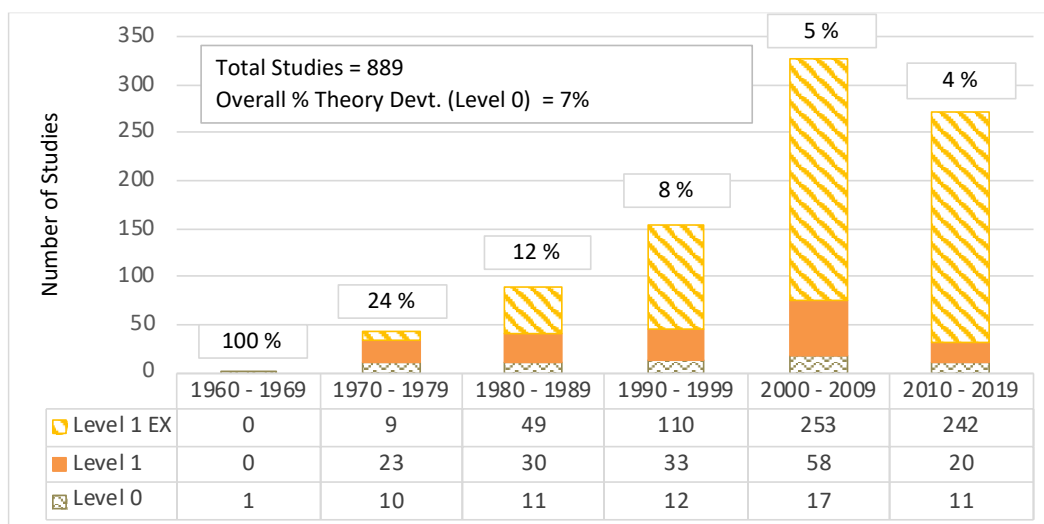


Figure 10. Profile of IOR-power theory development versus exploitation

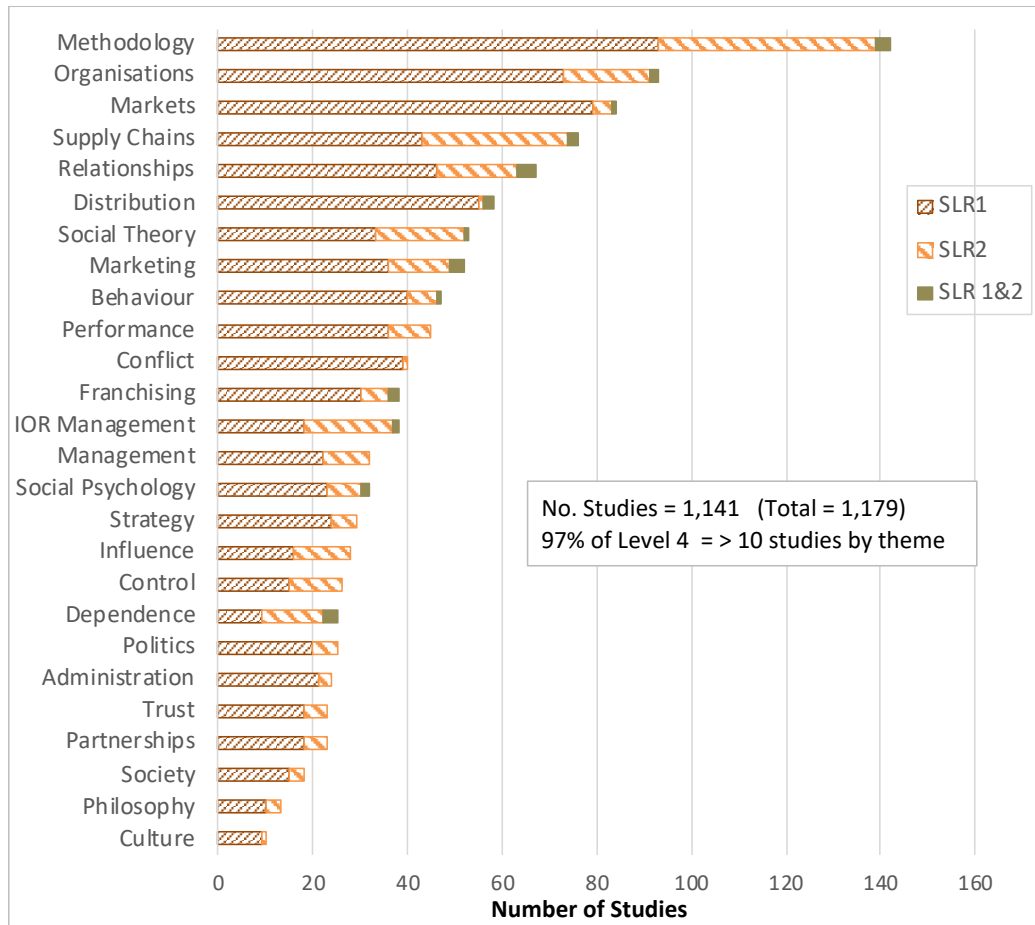


Figure 11. Thematic profile of level 4 studies informing IOR theory

Figure 11 thematically profiles level 4 studies (≥ 10 studies; 97% of level 4) where methodology emerges as the most referenced theme (142 studies) followed by organisations (93 studies) again contrasting with culture (10 studies). Conflict appears of greater relevance (40 studies) than trust (23 studies) and social-psychology (32 studies) also appears relevant.

2.4.3.3 IOR-Power theory origins

IOR-power origin studies were determined to be Simon (1953), Dahl (1957), French and Raven (1959), and Emerson (1962). With the exception of Simon (1953), these studies were all referenced by the first identified study of power in the IOR-context (methodology 1), Beier and Stern (1969). All four studies were amongst the group of studies either in the top 10 *earliest* or top 10 *most* referenced studies with Simon (1953) and Dahl (1957) appearing in both categories. Moreover, the suite of 20 methods (methodology 2) variably

privileging date versus times referenced, revealed how feasible it was to identify different origins, whereby Emerson (1962) using method 16 would not have emerged as a clear origin study, thus the merit of a comprehensive analysis.

The established justifiable theory origins hereafter collectively referred to as the Origins, were amongst 82 general power theory studies drawn upon (P-Theory). As shown in Figure 12, the majority were referenced by only one core study contrasting with French and Raven (1959) and Emerson (1962) referenced 33 and 30 times respectively.

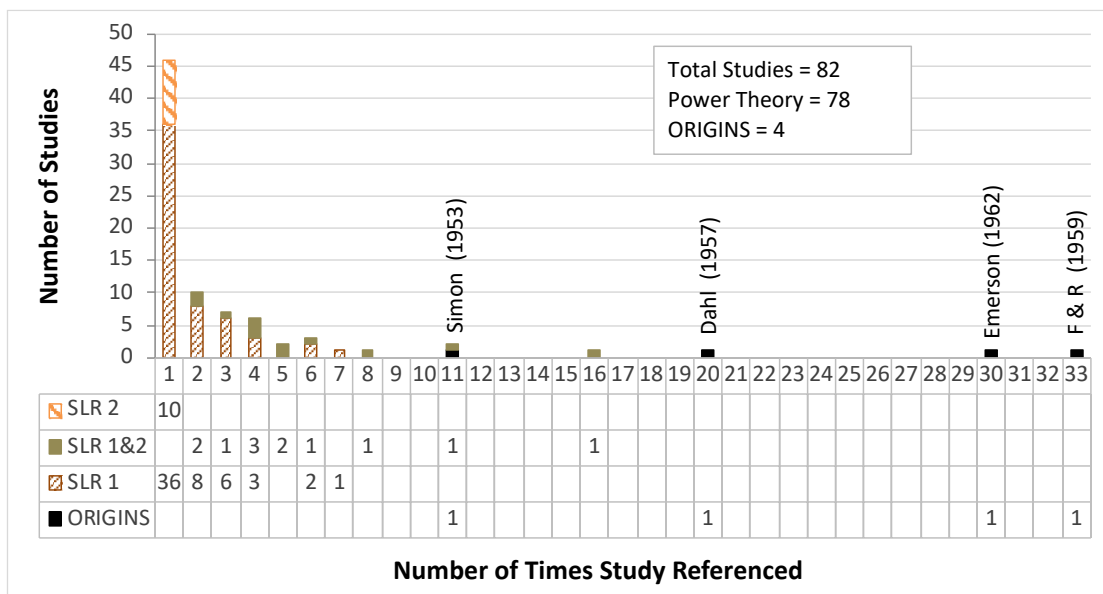


Figure 12. General power theory referencing profile

Figure 13 shows the date profile for the 194 power theory studies across levels (P-Theory; origins; level 0; level 2), indicating continued and constant IOR-power theory development since inception in 1969. General power theory dating from the 1930s up to the late 1980s was mostly drawn upon where power theory in other contexts (level 2) from the 1980s became equally relevant. The profile for the last decade (2010-2019) suggests IOR-power theory to have become less influenced by contemporary developments outside the IOR-context.

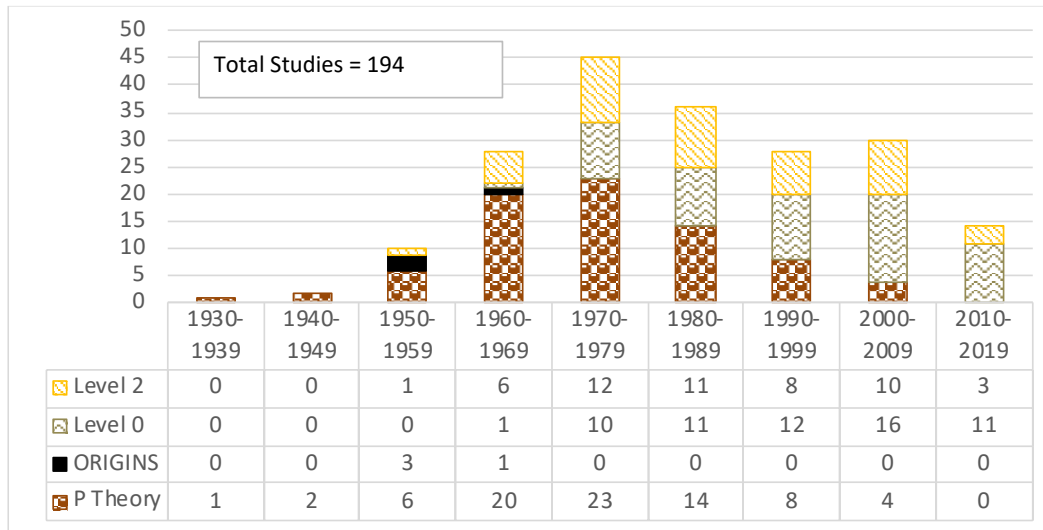


Figure 13. Power theory development studies date profile

Having profiled the core literature, focus turns to the core-studies.

2.5 Extracting and synthesising data

2.5.1 Section introduction

Stage 3 of the SLR process was the extraction and synthesis of data from the 65 core-studies sourced (61 IOR-core-studies; 4 origin studies) and was conducted in 7 stages, the first stage being quality assessment of core-studies. Integral to quality assessment was general coding of study content to guide collating and recording salient quality criteria data directly in the CADB1 used to profile core-studies (65) as stage 2 of the analysis. Stages 1 and 2 framed a more intensive and critical interpretative analysis of core-studies in stages 3 to 7.

In summary, stage 3 involved a qualitative comparative analysis of the Origins. Descriptive and explanatory texts characterising power were critically synthesised as power attributes into a preliminary conceptual framework. Stage 4 analysis was an evolutionary qualitative comparative analysis of IOR core-studies that chronologically assessed adoption and explicit or implicit development of power attributes in the IOR-context complimented by focused analyses for example, consistency in explicit IOR-power definitions and posited process models. Stage 5 synthesised theory importation (level 2 and P-Theory) exposing how these studies had explicitly influenced IOR-power theory. Stage 6

was a final *critical* synthesis of theoretical developments to identify dominant and marginalised attribute features. Stage 7 concluded the analysis with formal assessment of the significance and exploitation of main claims, and compilation of tabulated study summaries.

Section 2.5.2 outlines implications of the profile of core-studies unearthed. Presentation of specific findings commences in Section 2.5.3 with the Origins hereafter for brevity Dahl, Emerson, F&R, and Simon followed in Section 2.5.4 by theoretical advances in IOR-power theory.

2.5.2 Core-studies profile

The profile of core-studies was broadly informative in establishing that studies were of reasonable quality (average 68%), noting on final assessment in total 29 studies were rejected, but nevertheless of some relevance standing as *periphery* studies. The core-studies were strongly theoretically based but also indicated a good level of empirical grounding (38 studies). There was clear breadth in theoretical perspective that encompassed economics, politics, sociology, and psychology and similarly contextual breadth in types of IORs studied, from the fast-moving consumer goods (FMCG) industry through to the automobile industry.

Notwithstanding, studies reflected a strong social-psychology perspective and predominantly an industrial distribution channel context. A move away from quantitative towards qualitative methods accompanied by reemphasis on conceptualisation in later studies pointed to IOR-power theory being held an intermediate rather than mature theory. Additionally, exhibited was a relatively low level of cohesion or connectivity as a collective body of studies carrying under-exploited significant claims. Overall the profile pointed to a need for a detailed critical synthesis of studies.

This leads to presenting critical findings from the Origins in relative detail, being fundamental to this thesis.

2.5.3 IOR-power theory origins

The Origins revealed 25 attributes characterizing power. These attributes aligned to 4 functional characteristics termed, definition, classification, properties, and operationalisation. Where *definition* broadly captures the essence of power, *classification* flows from definition adding precision to specific manifestations or instances of power. *Properties* characterises the nature of power reflecting how power exists and manifests itself and is central to *operationalisation*, relating to how power may be determined.

The preliminary conceptual framework developed is displayed in Figure 14, in Section 2.5.4, where each attribute is further annotated signifying the ensuing level of theoretical development within the IOR-context. Whilst the framework depicts convergence on power attributes across Origins, attribute features capture important divergences. The following summarily presents by functional characteristic the significance of each attribute through its dominant *baseline* features but focuses on features that highlight key material divergences in power theory formulations, across the Origins.

2.5.3.1 Definition

Attribute	BASELINE	Simon	Dahl	F&R	Emerson
Expression	Governing behaviour Power-over	Exercised ability Process	Actual ability Capacity state	Potential ability Capacity state Potential and Kinetic	Actual ability Capacity state Resistance
Level	Multi-levelled Inter-levelled Embedded A-B			Actor B = Individual (psychological process) Isolated A-B	
Variable	Influence state				
Attribution	A-B relation Dependent	Independent or Dependent		Independent (ambiguity)	
Assumptions	Determinable Expectations			Enduring, stable relationships (Power predictable)	Ideal Groups (total unification)

Table 6. Definition attributes material divergences across Origins

The Origins sought to establish a more rigorous and measurable concept of power, noting as Simon states, “definitions may be willful, but they must not be arbitrary” (p. 501). Summarily captured in Table 6, there were five attributes

broadly capturing what power is, namely: expression, level, variable, attribution, and assumptions. Commencing with *expression*, the Origins offered succinct expressions to capture the essence of power as an actor A (or O) inducing behaviour change in actor B (or P) in the sense of A's power-over B:

“The exercise of influence (influence process) consists in affecting policies of others than the self.” (Simon p.503)

“A has power over B to the extent that he can get B to do something that he would not have otherwise done.” (Dahl p.202)

“The strength of power O/P in some system **a**, is defined as the maximum potential ability of O to influence P in **a**.” (F&R p.442)

“The power of agent A over agent B is the amount of resistance on the part of B which can be potentially overcome by A.” (Emerson p.32)

These expressions alone signify two fundamental theoretical divergences across the Origins. First, power is conceived in three discernible states, *potential*, as some ability to influence (F&R), *actual*, as clear capability to influence (Dahl, Emerson), and lastly *exercised*, as capability to influence used to effect behaviour change (Simon). Simon stands apart in positioning power as an exercised rather than capacity state (F&R, Dahl, Emerson) albeit the former infers prior existence of the latter. The relevance of the distinction yet inextricable link between these two states is most explicitly noted by F&R in aligning states to energy states in the natural sciences, “influence is kinetic power, just as power is Potential-influence” (p.442). Second, Emerson (p.33) alone renders resistance of B to demands by A, a prerequisite of power, explicitly denoting power as coercive, in stating how A's power “will be empirically manifest only if A makes some demand, and only if this demand runs counter to B's desires (resistance to be overcome)”.

The following three attributes align with the afore expressions, the first being *level*. The actors A and B, or, O and P, are expressly denoted to be any recognised human-based entity, from individual and group through to nations. Power is held to be multi-levelled (individual-individual; group-group) and inter-levelled (group-individual). Attribute, *variable* also aligned capturing what is central to signifying that power exists. Across the Origins, it is influence in some

state (potential, actual, exercised) that stands as the central variable. Where attribute level, denotes relevant actors A and B, *attribution*, specifies to what or whom power is an inherent part or characteristic. The Origins concur that power is attributed to an A-B relation, and expressly not, A or B alone.

Amongst these three attributes two significant divergences are evident and is where F&R stand apart. First, in terms of level, F&R explicitly limit P (or B) in all instances to being an individual, a person, given power is conceived at B's mental or psychological level as a resultant psychological force. Second, concerning attribution, F&R delimit power to arising within an A-B relationship formally excluding the relevance of all other relationships in which the A-B relationship is embedded. In stark contrast, for Emerson, the A-B relationship has to be considered as embedded, when stating "the internal features of one relation are nonetheless a function of the entire network. Any adequate conception of a 'power structure' must be based upon this fact" (p.36). For Dahl the A-B relationship is implicitly embedded. This qualifies the distinction accorded in this thesis between potential (F&R) and actual (Dahl, Emerson) power states. In Simon's terminology this relates to qualifying the extent to which A's power is derived from and/or subject to the social structure for attribution to A, that is A's *dependent* power versus A's independent power. According or not relevance to the environment is crucial, significantly altering the meaning of power, power distribution, and power amounts (Simon).

The final definition attribute, *assumptions*, captures things that are accepted as true or as certain to happen, without proof. Not insignificant first is the basic assumption that power may be determined. According to Simon, not least this relies on assumptions about patterns of human expectations and group coordination to hold true. Second, that groups (level) be considered *directly* influenced as a single entity, B, not merely individuals (F&R), carries an implicit assumption of total unification or an *ideal* group (Emerson p.38). Emerson further assumes that power imbalance creates "*tensions*" given generally imbalance "encourages the use of power" (p.34) that in Emerson's construction reflects coercion. Lastly, a significant assumption adopted by F&R, is that power

(potential) *is predictable* in effects obtained when exercised, *residing* inherently in social structures and relationships that are *stable*. F&R consider power as a concept to only have *utility* when reasonably stable and predictable. Non-predictable influence that has effect is rendered mere social stimulus, not power:

“Power is a useful concept for describing social structure only if it has a certain stability over time; it is useless if every momentary social stimulus is viewed as actualising social power.” (F&R p.442 footnote)

The theoretical starting point for F&R is accordingly set and limited to enduring and stable A-B relationships where A’s power is *predictable* Potential-influence.

Having broadly captured the essence of power according to the Origins yet salient differences, this frames the following classification attributes.

2.5.3.2 Classification

Attribute	BASELINE	Simon	Dahl	F&R	Emerson
Relationship	Focal A-B Embedded		Actor B comparability	Enduring, stable Isolated	Relationship comparability
Dependence	Functional Goal attainment				Constrained
Sources	Origins				
Means	Inducing Act			Actor A passive	
Scope	Effects Range Compatibility		Actor B		Relationship
Amount	-	A/B behaviour ratio	Probabilities	Maximum Psychological Force	Maximum resistance = Constrained dependence
Effects	Behaviour Consequences			Primary Covert behaviour	Positive power (desired effect)
Objectivity	Objective				
Motive	Reason Intent			Actor A passive	
Time	Discrete / Period / Lags				

Table 7. Classification attributes material divergences across Origins

Classification attributes were inspired by Dahl’s core classification system of sources, means, scope, and amount, aimed at rendering statements of power meaningful and enabling power comparisons to be drawn, given “Although the statement that the President has (some) power over Congress is not empty, neither is it useful” (Dahl p.203). Dahl’s system emerged extended by attributes

relationship, dependence, effects, objectivity, motive, and time, as displayed in Table 7, adding further precision to defining specific instances of power.

Commencing with the first three attributes, aligning with the need to attribute power to an A-B relation, the focal *relationship* of relevance requires defining, specifically the focal actors A and B. The nature of the relationship and context also requires defining when appealing to claims of power comparability. Attribute *dependence*, that is, the state of relying on or being controlled by someone or something else for goal attainment (A or B), although strictly integral to attribute relationship, is *necessary* to explain and distinguish between bases of power, and thereby stands as a distinct attribute. Attribute *sources*, refers to the place, person, thing, or factor from which power originates or is obtained. For clarity, sources, is a distinct attribute encompassing *all* formulations of the origins of power that are not necessarily *directly* related to B's dependence on A.

From these three attributes, there are two key divergences, the first concerns attribute relationship but carries implications for scope. F&R diverge in assuming a stable and enduring independent relationship and make no explicit appeal to relationship comparability, nor did Simon. Dahl nonetheless appeals to comparability between *actors* B to obtain power comparability without according particular significance to the relationship or its context. This contrasts with Emerson's emphasis on relevance of embeddedness of *relationships* between A and any actor B. Both relationship and context are thus implicitly significant in according power comparability constituting a more stringent requirement.

Second, corresponding with Emerson's distinct power formulation rendering resistance a prerequisite of power, for Emerson it is B's *constrained* dependence on A for B's goal attainment, that carries significance to power. In other words B cannot obtain B's goals without A's support (no alternatives) giving rise to A's ability to coercively influence B, as B seeks to protect A's needed support. If there is no constrained dependence, only *elected* dependence, whereby B were able to achieve B's goals without A's contribution given availability of alternative support (other relationships) and B simply chose to rely on A, there is no A-B power relation. Across the remaining Origins, B's elected and constrained

dependence, sought or not, contributes to A's power-over B, that is consensual power is still power. This is most evident in F&R's proposed typology of power bases; coercion, reward, legitimate, referent, and expert, that whilst not claimed to be exhaustive, explicitly extends beyond notions of coercion.

Turning to the next four attributes, *means*, are acts by A serving to induce B's behaviour change thereby exercise power. Attribute *scope* delimits the number of comparable actors (Bs) that A could induce to behave in a specified manner and correspondingly the types of behaviour inducible. Where *scope* qualitatively delimits power, attribute *amount*, captures the size, value, or extent of power, as a quantity of power. Lastly, *effects*, are induced behavioural changes, overt and covert, and extends beyond behaviour change to include broader outcomes such as *formal* decisions and policies. Effects, like relationship, are integral to *scope* but necessarily distinct enabling *total* power (full scope), to be distinguished from an *element* of total power exercised (effects).

Across these four attributes are three specific divergences. First, F&R diverge in acknowledging that A may be passive in inducing B's behaviour, that is A does not have to act (*means*) or intend (*motive*) to induce B's behaviour. Second, both F&R and Dahl explicitly recognise negative power where the effect obtained is not the desired effect. Negative power is incoherent in Emerson's formulation, but not necessarily excluded from Simon's formulation. For Emerson, power centres on the ability to obtain desired effects in the face of resistance, but it is unclear whether this precludes partial attainment. The third, is F&R's explicit theoretical stand-point that focuses on primary/direct behaviour effects albeit acknowledging secondary/consequential effects may arise, formally including *covert* behaviour changes (attitudes; opinions etc.) within B's psychological field as power effects.

A fourth divergence arises across the Origins regarding attribute power amount. In terms of power as a capacity (potential or actual), Dahl alone offers a clear *quantity*, that being the probability of obtaining a specified effect. This is limited to signifying an estimated, not concrete amount, and only meaningful within a given context or across comparable relationships, although as noted previously, Dahl more emphasises comparability in actors B. F&R's formulation of power

rests on the concept of psychological forces, where the size of a maximum resultant psychological force constitutes the amount whereas Emerson posits the level of constrained dependence. Neither F&R nor Emerson however specify quantifiable units. In contrast, as an induced observable effect, Simon proposes the use of set theory to establish power amounts as a ratio of A's and B's behaviour for power comparability purposes.

The final three classification attributes, strongly rooted in Simon and F&R's power constructions, are as follows. The first, *objectivity*, refers to the extent to which power is independent or dependent on the mind and perceptions for its existence. Although across the Origins perceptions of A and B are recognised as integral to power, power is theorised as an objectively real phenomenon. The second, *motive*, captures conscious and sub-conscious reasons of actors A and B, to behave in certain ways. The final attribute, *time*, the indefinite continued progress of existence and events in the past, present, and future, recognises that power exists at a given time and may endure over a time-period. It further signifies time lags or delayed periods between behaviour changes. There are no noted material divergences across these attributes rather varying levels of emphasis or significance, such as the importance of time lags in power observation (Simon).

Having summarily captured classification attributes, this leads to the third functional characteristic, properties.

2.5.3.3 Properties

Attribute	BASELINE	Simon	Dahl	F&R	Emerson
Connectivity	Primary Bases Environment Consequences			Excludes environment Primary effects	
Reciprocity	A power-over B B power over A	Anticipated Reactions		Conceptually separable	
Asymmetry	Intrinsic Reciprocal				Balancing operations
Dynamic	Change Transient			Delimited Predictable (context stable)	
Transparency	Partially obscured				

Table 8. Property attributes material divergences across Origins

Salient properties capturing the general nature of power all have bearing on attempts to determine power and are presented in turn namely: connectivity, reciprocity, asymmetry, dynamic, and transparency, according with Table 8.

Connectivity relates to there being a real or notional link between two things, and the primary connection of concern in power across the Origins is the link between A and B's, such that B's behaviour is attributable to A. Both Simon and Dahl are explicit in avoiding the term causation given the prevailing philosophical doctrine of the time, "there is no causation, only functional interrelations" (Simon p.503). However, Dahl's statement that "there is no action-at-a-distance" (p.204) to argue there must be such a primary link for power to exist, raises ambiguity. The Origins are not explicating physical power (physical contact), rather the primary connection is influence held not directly observable. This more appeals to the notion of action-at-a-distance from the natural sciences, denoting no observable physical contact yet interaction, as in explanations of gravity (gravitational field forces). Notwithstanding, Dahl notes the need to establish a "flow of influence" (p.204) and all Origins recognise the principle of there being a primary connection inferring some causality by terms used notably: alters (Simon); response (Dahl); overcome resistance (Emerson); and force (F&R).

Further connections are also recognised, notably inter-base connections, where bases / sources combine to alter the amounts of power in a given situation, such as legitimate power augmenting coercive power. Connectivity with the environment, and connectivity between primary and secondary effects that may constitute a more complex or compound effect, are two further connections albeit F&R exclude such connections in their formulation of power. Property, reciprocity, constitutes a further connection bearing distinct significance, as follows.

Reciprocity signifies something is given, and felt or done in return, capturing that whilst A can influence B, this does not preclude B influencing A. Reciprocity is recognised by Emerson in laying the foundations for cohesion between A and B or mutual dependence. Although F&R hold the A-B power relation and the B-A power relations conceptually independent, this is not to deny that such reciprocity exists. The B-A power relation rather appears to pre-condition the A-B power

relation in stating “It is assumed that O is capable of various acts which, because of some more or less enduring relation to P, are able to exert influence on P” (p. 442). The potential for B to resist (resistance force), also stands as a form of reciprocity (F&R). Simon is most explicit in recognising “reciprocal influences” (p.506) as reverse feedback and the difficulty in separating A’s influence over B from B’s influence over A, when A anticipates reactions of B or expects consequential actions of B and/or others (expectations) that alters A’s means in exercising power, if not refraining from use.

Asymmetry signifies a lack of equality or equivalence between parts or aspects of something in two ways. First, there is not of necessity a reaction to a behaviour inducement, unlike many physical systems where, “for every action, there is an equal and opposite reaction” (Simon p.503). This does not hold for power, rather “power involves an asymmetrical relation between influencer and influencee” (p.503) hereafter termed *intrinsic* asymmetry; A makes a demand and B conforms to the demand. Second, following on from reciprocity, *reciprocal* asymmetry, a difference in A’s power-over B versus B’s power-over A, termed “power advantage” by Emerson (p. 34) is noted. Emerson posits balancing operations by which power advantage may be redressed by the power disadvantaged party but maintains that even where reciprocal asymmetry is balanced, intrinsic asymmetry remains operable, and coercion continues. F&R in separating the B-A power relation correspondingly do not formally account for reciprocal asymmetry rather presumably this further pre-conditions the enduring relationship. For Simon and Dahl, reciprocal asymmetry is not irrelevant, nor necessarily reasonably stable, but is also not formally accounted for rather appears to rest embedded in A’s power-over B, at a given time.

Dynamic captures how power is characterised by constant change, activity, or progress and is thereby transient in nature. Power is conceived as a process which induces change as opposed to maintaining the status quo (Simon) or as a capacity to induce change (Dahl, F&R, Emerson) that is inherently unstable given balancing operations (Emerson). Although Dahl did not explicitly deal with power dynamics, it is implicit in his arguments and expressly in noting how the power of

senators can change (p.205). Similarly, whilst F&R's theory delimits power for theoretical utility as something reasonably stable and predictable in its primary and isolated effect, it is nevertheless acknowledged as dynamic in both referring to influence as kinetic power (Section 2.5.3.1), aligning with Simon, and further recognising dynamic dependence (F&R p.442 to p.444).

Transparency denotes the extent to which power can be distinctly seen or is easy to perceive. The Origins concur that power is moreover obscure especially as a capacity state (Dahl, F&R, Emerson). Simon notes that even when exercised and overt behaviour is directly observed, power remains difficult to fully observe given it rests grounded in a non-directly observable influence process hindered by other power properties, especially connectivity. Transparency appears to be the most troublesome property in power determination and leads to the final power functional characteristic, operationalisation.

2.5.3.4 Operationalisation

Attribute	BASELINE	Simon	Dahl	F&R	Emerson
Operational Definition	-	General	Specific	General	Specific
Measures	Representative Valid	A/B behaviour ratio (ordinal-cardinal) Partial behaviour sets	Probabilities (ordinal-cardinal) Actor B (no. and type) Effect	Maximum Psychological Force	Maximum resistance = Constrained dependence A goal desirability (B dependence) A alternatives (other support)
Measurement	Direct Indirect			Independence Most effective means	Resistance
				Under-determination (maximum level)	
Interpretation	-				
Generalisation	Premature				

Table 9. Operationalisation attributes material divergences across Origins

Operationalisation as a functional characteristic formalises power qualities key to determining power and as presented in Table 9, attributes accord with recognised research terms, operational definition, measures, measurement, interpretation, and generalisation.

Operational definition explicitly defines what is to be empirically determined. Simon states, “there must be agreement as to the operational definition of the term ‘power’ and the operational means that are to be used to determine the degree of its presence or absence in any situation” (p.500). As such, Simon’s expression of power stands as a general operational definition and whilst F&R posit a range of power bases, similarly F&R’s power expression is derived from an operational definition of social influence. In contrast, Dahl sought to establish an operational definition but conceded that the power expression offered must be tailored or effectively translated to the specific instance of power under study, and that an operational definition and means of determination, may remain elusive.

“In practice the concept of power will have to be defined by operational criteria that will undoubtedly modify its pure meaning... But the concept provides us with a standard against which to compare the operational alternatives we actually employ. In this way it helps us to specify the defects of the operational definitions as measures of power.” (Dahl p.214)

Moreover in opposition, Emerson is emphatic that no general definition is sufficient to guide determining power. An appropriate context specific operational definition is necessary to account for differences across social situations. Thus, the Origins not only offer materially different power expressions but contest the need for specific operational definitions mirroring the *family resemblance* debate.

Measures are the specified dimensions scaled in units that represent the size, amount, or degree of power to be determined corresponding with the operational definition, as being internally (reliability) and externally (validity) consistent. Posited measures are to correspond with attribute, amount (Section 2.5.3.2). First, comparing Simon and F&R that both posit operational definitions, Simon points to constructing defined sets of partially ordered behaviours as dimensions whereby increases and decreases in defined sets of behaviours offer an ordinal expression of amount (more or less). According to Simon, if sets could then be attributed cardinal numbers representing size, this would permit constructing a power measure as the ratio of A’s and B’s behaviour. For F&R it is a single dimension representing a maximum psychological force that stands as the

measure of potential power but neither offer a proposed unit of force nor standard measures of influence (kinetic power).

Dahl, advocating probability as the scaled power dimension, requires the number and type of respondents (Bs) to be defined and comparable, permitting in principle a comparative measure across a range of actors (As) of the ability to induce a specified effect(s) across respondents. Probabilities might be deemed ordinal or cardinal subject to the nature of the data (certainty) used to assign probability, but in principle the measure is proposed as an ordinal measure of power for comparability purposes only (more or less).

Emerson as noted stands apart whereby measures suitable to the social situation under study require developing. Notwithstanding, the key dimension of interest in Emerson's theory is constrained dependence, a compound measure specified as being a function of two dimensions, the importance to A of A's goals upon which A is dependent on B for attainment, and how readily A can achieve these goals without B, including any costs incurred in doing so, as follows:

“Dependence (Dab). The dependence of actor A upon actor B is (I) directly proportional to A's motivational investment in goals mediated by B, and (I) inversely proportional to the availability of those goals to A outside of the A-B relation.”
(Emerson p.32)

There is however no guidance on how to construct either dimension or combine dimensions into a single measure of *constrained* dependence, thereby power.

Measurement is the act of ascertaining the size, amount, or degree of power using an instrument or device marked in standard units. Evidently, according with measures that overall are varied, highly under-developed, and relate to different power concepts, foremost there is no proposed standard instrument or standard unit with which to measure power. Furthermore, according with attribute transparency, there is consensus that *direct* observation of power is difficult even where power is exercised given it remains always partially obscured and relies on indirect measures that must first be established as valid (Simon).

Importantly, F&R's formulation of power although theoretically appears to simplify power measurement in isolating a focal A-B relationships from its *stable*

environment, the extent to which this condition can be empirically justified remains central to measurement of F&R's power. Power determination in principle is thus no less complex (valid independence) or power more limited in relevance (dynamic environment). Furthermore, to obtain a *maximum* Potential-influence, thereby power, A would need to be adopting the most effective means available under measurement conditions. In observations of normal practice this may not be the case, whereby power would be under-determined. This equally applies to Emerson's power, if determined through observation of B's resistance to a demand by A; A's demand would need to be at its extreme limit.

More broadly the Origins point to the complexity of power measurement, where definitional and methodological precision is essential. The Origins highlight specific challenges that must be overcome, including, how connectivity is to be verified? How should timing of observations be captured and treated? How are perceptions of power, or intent to be assessed? How is covert behavioural change to be observed? How are anticipated reactions and expectations to be accounted for? If resistance is a prerequisite of power, how is resistance to be determined? How are environmental influences to be distinguished or isolated?

Overall, power is characterised as a phenomenon eluding robust measurement, but nonetheless explainable, detectable, and estimable. Heavy reliance is placed on researchers to develop an appropriate measurement methodology, noting as Simon stated, "to what extent have the operational tools of observation and measurement been provided us? That a great deal remains to be done can be made clear, I think" (p.500).

Interpretation refers to the meaning and significance attributable to empirical evidence obtained, which is highly dependent on the methodology employed and objective nature of the empirical evidence. Implicit in attributes, operational definition, measures, and measurement, is that empirical evidence of power demands careful interpretation. The Origins do not directly address interpretation rather point to it being incumbent on the researcher to follow sound research practices. This leads to attribute generalisation.

Generalisation refers to the extent to which empirical findings may be deemed to apply generally in the social world. Embedded in generalisability is a notion of the capacity to make inferences or predict. Assuming correct interpretation and validity of a specific instance of power determined, generalisation first concerns the focal relationship itself, thereafter other relationships, where it was stipulated that not least relationship and contextual comparability are salient factors. According to Simon and Emerson, assumptions made concerning a specific instance of power must hold in the future to have predictive value. Expectations of group co-ordination is one such assumption, recalling Simon and Emerson emphasise A-B power relations as embedded within a network of power relations.

In addition, Emerson explicitly recognises that his power theory requires validation and refinement in stating “Once the basic ideas in this theory have been adequately validated and refined, both theoretical and empirical work must be extended” (p.41). According to the Origins, claims to generalisation based on theories offered would be premature. A reasonably robust power theory that includes operationalisation must first be established.

2.5.3.5 Critical implications

The origins were concerned with enhancing conceptual rigour aimed at rendering power more measurable, thereby comparable. Where F&R and Emerson sought to do so through focusing on *what* generate power (*sources*), Dahl focused on its relevance *why* (*effects*), and Simon predominantly the *how* (*process*). Although a shared preliminary conceptual framework (Figure 14) emerged, noted divergences reflect different power concepts across the Origins and there is no clear guidance on how to determine power.

The first implication was that further theoretical development was necessary to reconcile material differences across Origins to establish a robust power concept. The second implication was that claims to power determination, necessitated careful interpretation. This leads to considering theoretical developments thereafter in the IOR-field of study.

2.5.4 Theoretical developments in the IOR-field of study

Indicative levels of IOR-power theory development based on the initial literature review (SLR1) are exposed first, positioning presentation of findings from detailed critical analysis of these core IOR-power studies. Focus is given to explicit challenges directed at the Origins thereafter IOR-power studies. Further significant claims reflecting theoretical development are then summarised. In conclusion, critical implications of the status of IOR-power are presented. Findings are supported by focused analyses of definitions employed, process perspectives adopted, dimensions operationalised, theory importation, and exploitation of significant claims.

2.5.4.1 Indicative levels of theory development

As depicted in Figure 14, in total there were 523 discrete developments (including adoption) whereby each attribute was adopted by at least one study and all developments related to at least one of the 25 attributes. Thus, there were no emergent attributes identified. Each development was aligned to the focal attribute of relevance recognising inter-relationships between attributes, and most related to operationalisation (219; 42%) reflecting operationalisation issues. Correspondingly, was a significant number of developments related to classification (189; 36%) reflecting under-specification of IOR-power. Remaining developments were evenly distributed across characteristics, definition (59; 11%) and properties (56; 11%).

For characteristic *definition*, the main developments related to expression and assumptions (35; 59%) across the 5 attributes. Across characteristic *properties*, attribute connectivity attracted the greatest attention (24; 43%) across the 5 attributes. For characteristic *operationalisation*, similar levels of development arose in attribute operational definition (24) as noted in attribute expression (20). The main developments related to attributes measures (89; 41%) and measurement (78; 36%). Lastly, for characteristic *classification*, the four attributes most developed were relationship (26), dependence (25) sources (30) and effects (21) collectively accounting for 54% of classification developments.

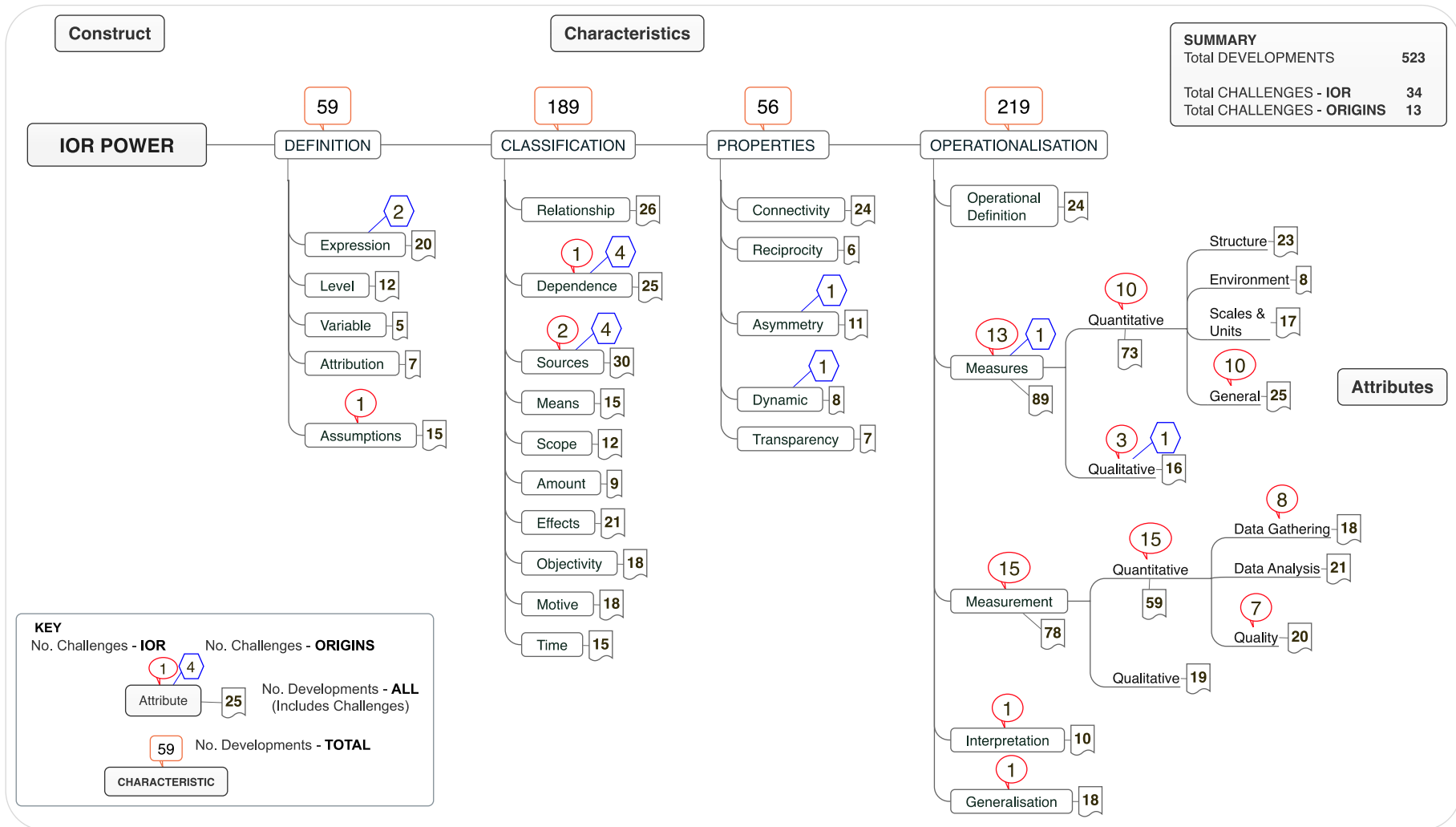


Figure 14. Indicative levels of theoretical development across attributes

2.5.4.2 Direct challenges to the Origins

There were 13 direct challenges to the Origins, all related to key material divergences exposed in Section 2.5.3.

Commencing with 5 challenges to Emerson's theory, in alignment with Emerson, reciprocity was prominent, reflected in attention given to inter-dependence. However, this drew attention to resistance being held a prerequisite of power. Power defined in terms of overcoming resistance (coercion) was challenged as inadequate, limiting power to stand as a conflict theory, ignoring consensual power (Stannack, 1996) in obtaining desired outcomes. It was claimed that through a processual lens rather the distinction between the use of power and its outcomes was central, where freedom to act (power-to) also becomes salient (Stannack, 1996). Indirectly the postulated dimensions of power (motivational investment; alternative) were also relatedly challenged based on cultural differences in attitudes to power, where dependence might actively be sought rather than passively endured, rendering power asymmetry not necessarily unstable, and alternatives a distinct dimension from dependence (Zhuang and Zhou, 2004). Commitment and stake were held to more represent dependence in the IOR-context (El-Ansary, 1975).

Challenges to F&R's theory reflect focus given to F&R bases of power thereafter its explanatory limitations. The first of five challenges is not unrelated to challenges laid at Emerson and concerns the ability to distinguish between F&R bases and dependence serving as sources of power with claims that they are conceptually inseparable (Frazier, 1983b; Gaski, 1984a). In principle this holds where power is being embraced as both coercive and consensual, and as actual *not* potential power. However, the former condition aligns to F&R's potential power (isolated), but not Emerson (resistance), whilst the latter condition aligns to Emerson's actual power (embedded) but not F&R (isolated; potential). Holding bases and dependence conceptually inseparable thus demands both reconciling Emerson's and F&R's theories and accounting for the claim that Dahl's and F&R's bases are also reconcilable through the latter standing as perceptions of the former (Gaski, 1994).

The remaining 4 challenges highlight limitations in F&R's theory, that in espousing power is *potential* power and a maximum Potential-influence, it fails to account for the actual means adopted, the willingness to use power, and ambiguities introduced when influence is not mutually acknowledged (Brown, Johnson and Koenig, 1995). The theory further fails to account for manipulative (ecological) (Gaski, 1986), informational, hierarchical, and incremental power (Belaya, Gagalyuk and Hanf, 2009), all of which require embracing the significance of the environment, not least in how power may operate in an indirect manner and full accounting of sources of power, but implicitly in how power is attributed. The fifth challenge to F&R is more indirect in emanating from a disconnected study where power is held sanction-based but *use* of coercion signifies power has broken down (Lane and Bachmann, 1997). Challenged thereby is F&R's coercive based power *in-use* as being power including more subtly the explanatory link forged between power (stored) and influence (use), alongside Emerson in implicating use of coercion in overcoming resistance (cost).

The final 3 challenges are directed at Dahl and resonate with the broader power literature in increased recognition of Machiavelli's conceptualisation of power. Dahl's formulation of power is challenged for portraying power as entity-like, akin to a static property or possession of an object rather than something that is relational and emergent, involving strategies and tactics in seeking desired outcomes (Marshall and Rollinson, 2004). Emphasis is given to situational analysis in attempts to explain and determine power, arguing that knowledge and power are mutually constituted in what amounts to an ongoing dynamic negotiation process amongst actors involving sense-making, learning, and re-negotiating meanings.

2.5.4.3 Challenges to IOR studies

Turning to IOR studies, the majority (30; 88%) of the 34 direct IOR study challenges relate to characteristic operationalisation.

Commencing initially with four remaining challenges to other characteristics, the first concerns definition attribute, assumptions. Any assumption that power can be treated as an object, recognisable by all, is deemed flawed, given it might only

be recognisable by those who are *induced* to perform actions for others (Etgar, 1976). The second, relates to classification attribute, dependence, where adoption of dependence alone to explain power in purchasing and SCM is challenged as being incomplete not least in ignoring the importance of engendering commitment rather than compliance (Stannack, 1996). In practice, exercised power might manifest itself on a coercion-obligation continuum, with dependence (exchange rewards; costs), influence (inducement), and persuasion (convince), as intermediate approaches (Stannack, 1996).

It is classification attribute sources that attracts the remaining two challenges. The first relates to a common practice of dichotomising F&R bases into coercive versus non-coercive bases that for analysis purposes is held to mask the richness of the framework and examination of the use of different non-coercive sources (Kasulis and Spekman, 1980). The second challenges F&R bases as being unsuitable for explaining the origins of a firm's power (Frazier, 1984). As noted in direct challenges to the Origins, there is a recognised overlap between F&R bases and Emerson's dependence; F&R bases are judged to be less well developed and contrary to Gaski (1994) deemed not to fit the framework developed by Frazier (1984) based on Dahl's power formulation.

Turning to operationalisation, challenges may be summarily captured as largely pointing to lack of precision in conceptualisation and the inherent complexity of IOR-power. Foremost is lack of clarity in *what* dimensions need to be operationalised and importantly *how* in terms of validity, reliability, comparability, measurement timing, directness (direct versus indirect measures), and not least data sources in appropriateness of single versus multiple informants and treatment of bias including lack of awareness (Belaya, Gagalyuk and Hanf, 2009; Brown, Johnson and Koenig, 1995; Brown and Frazier, 1978; Dapiran and Hogarth-Scott, 2003; Etgar, 1976; Frazier, 1983b; Gaski, 1996; Lusch, 1977; Lusch and Brown, 1982; Lusch and Ross, 1985). A key concern is under-representing and under-explaining IOR-power.

Correspondingly, stressed is the importance of accessing the process of IOR-power, that is the proactive and reactive behaviours of individuals in realistic

situations, including mental processes, with greater emphasis on the quality of raw data (Ford, 1980). Specifically, there is the need to distinguish between potential versus exercised or rather enacted IOR-power whilst recognising the important link between them (Cronin Jr., Baker and Hawes, 1994; Etgar, 1976; Frazier, 1983b, 1984; Provan, Beyer and Kruytbosch, 1980). In addition, not to ignore cultural distinctions when seeking to translate western IOR-power measures and propositions across national boundaries (Yavas, 1998). Conversely, other distinctions employed are controversial, namely corporate versus boundary (Frazier, 1983b) dependence versus alternatives (El-Ansary, 1975; Frazier, 1983b; Zhuang and Zhou, 2004), and as noted dichotomisation of F&R bases (Kasulis and Spekman, 1980). The utility of certain measures is also questioned such as absolute power of only one agent in a dyad (Frazier, 1983b) and role performance as dependency measure (Frazier, 1983b; Gaski, 1996), whilst capturing relevancy of the environment is salient (Belaya, Gagalyuk and Hanf, 2009; Gaski, 1996; Welch and Wilkinson, 2005).

Overall, replete with controversy, relatively limited real advancement in IOR-power operationalisation is detectable despite focused efforts. This is encapsulated in the following critical statement that appears to remain as valid today as when first published in 1988 (thereafter 1996), and where a more recent review directly points to under-theorisation and continued methodological issues (Belaya, Gagalyuk and Hanf, 2009):

“Considering the significance of the construct, and the futility of 15 years of attempted power measurement, perhaps the time has come for a national academic association... to fund a crash programme to measure the vital and elusive construct of power in distribution channels definitively.”

(Gaski, 1996 p.90)

2.5.4.4 Significant claims

In concluding advancements, significant claims not exposed in the preceding syntheses are as follows.

Firstly, *qualified* is how Origin-based power attributes translate to IORs. For example, captured is the embeddedness of IORs within market (Beier and Stern,

1969), legal (Cox, 2001a; Kochan, 1975), and supply chain *structures* (Butaney and Wortzel, 1988; Cox, Sanderson and Watson, 2001; Kadiyali, Chintagunta and Vilcassim, 2000; Watson, 2001). Types of *agents* (Beier and Stern, 1969; Cox, 2001b; Kochan, 1975; Wilkinson, 1974), *temporal conditions, strategies and consequences* to increasing or using IOR-power (Akpinar and Zettinig, 2008; Hunt and Nevin, 1974; Quinn and Doherty, 2000; Stannack, 1996) and how *linkages* might be formal or informal (Lister, 2000) are captured.

Secondly, some claims enrich the *significance* of attributes. For example, the concept of “uncertainty absorption” (Beier and Stern, 1969 p.102) is introduced to capture how *control* over primary information enabling management of uncertainty, not only generates *expert* power but enables maintaining this power base as others remain unable to access the same primary information.

Thereafter, claims significantly advance the essential meaning of IOR-power in different directions, as follows.

Introduced foremost is how organisations may be treated as individuals with a distinct personality, needs and wants (Beier and Stern, 1969) permitting drawing on the Origins and other power theories recognised to be “cast in terms of an interpersonal dyad” (p.94) most notably F&R’s formulation at the individual psychological level. The implication is that organisations be treated as ideal in Emerson’s terminology exhibiting complete unification whereby organisations may be *directly* influenced. It became coherent to state that organisation A has direct power-over organisation B, simplifying IOR-power.

This key assumption is not explicitly challenged by core IOR-studies but indirectly is called into question as under-explaining IOR-power in several ways. There are appeals to recognise boundary spanning personnel as distinct from an organisation’s strategic core (Kochan, 1975; Zemanek Jr., 1997; Zemanek Jr. and Frankel, 2001; Zemanek Jr. and Pride, 1996) and validity of informant reports in representing organisations is questioned (Gaski, 1984a). Relevance is given to cultural differences (Yavas, 1998; Zhuang and Zhou, 2004) that might equally reside within organisations, and explicitly that organisational power is shared among organisation members (Lusch and Ross, 1985).

A second group of claims links to how organisations are conceived and points to the significance of organisation boundaries where there is not necessarily a prescribed authority structure or that it might be contested (Brown, Johnson and Koenig, 1995; Heskett, Stern and Beier, 1970; Kochan, 1975). Informal aspects of IORs might capture important yet even more obscured aspects of IOR-power (Dörrenbächer and Gammelgaard, 2011; Heskett, Stern and Beier, 1970). This extends to personal traits and relationships, even friendships, that not only contribute to the 'power mix' generating organisation power (Heskett, Stern and Beier, 1970), but the power mix across organisation boundaries (Brown and Frazier, 1978; Lister, 2000). These claims carry implications for how IOR-power is conceived as *structured* and *operates* across organisation boundaries. Moreover, the importance of grounding IOR-power in the perceptions and agency of individuals (Pandey and Wooldridge, 2003) without ignoring the saliency of formal structures or the environment, "it is not a question of structures producing agency, or agents producing structures, but a weaving together of the two in an ongoing and emergent chain" (Marshall and Rollinson, 2004 p.76).

Noted claims also concern the purpose of IORs. An early advancement was to embrace the concept of joint control implicating *joint* power-to albeit significance was given more to *channel* leadership (Wilkinson, 1973). Joint power-to corresponds with collaborative relationships where collective or joint outcomes are integral to the purpose of an IOR. It also resonates with emphasis on commitment in IORs when considering the potential burdens and liabilities or benefits and advantages thereof (Beier and Stern, 1969; Cox, 2001a), and to conceiving in a directional sense how influence is structured and flows across organisation boundaries. Recognising the potential number of individuals involved (organisation size), evokes the sense of a *flux* of influence processes somehow combining together and a notion of *relational* power corresponding with the relational view (Dyer and Singh, 1998).

A further claim also relates to the purpose of IORs. Outcomes of relevance concern performance that includes the *productive capacity* of organisations as power-to (Stannack, 1996). Examples given relate to product quality, product

development and delivery lead-times, thereby incorporating the use of equipment and natural resources. IOR-power is held to influence productive behaviour that implicitly appeals to *physical* power and the natural world. The implication is that *IOR-power* capturing 'social power' as influencing behaviour alone is not strictly adequate for the IOR-context. IOR-power in social terms concerns productive *outcomes*, encompassing *influencing behaviour* whether against opposition (overcoming resistance) or not, contrary to the distinction made by some scholars where social power is confined to "the ability of one party to adversely affect the interests of a second" (Cox *et al.*, 2005 p.33) and distinct from outcome power.

Another claim concerns attribute asymmetry, where departing from Emerson, asymmetry in *Actual-influence* is recognised as a prerequisite of a "power relationship" (Belaya, Gagalyuk and Hanf, 2009 p.175) but also how asymmetry in Exercised-influence may be of equal, if not more relevance (Wilkinson, 1973) formally extending the meaning and significance of asymmetry.

Finally, in addition to acknowledging the informal organisation (Dörrenbächer and Gammelgaard, 2011; Heskett, Stern and Beier, 1970) recognised also are *unintended* effects in the passive sense and unwanted effects in the unavoidable sense (Beier and Stern, 1969; Heskett, Stern and Beier, 1970; Wilkinson, 1996). The potential scope of IOR-power is thus not only a question of being *specific* or *pervasive* in relation to the type of effects that might be *intentionally* induced (Wilkinson, 1974) but in principle encompasses a much broader, less observable range of effects, including those of non-decision making and in-action (Welch and Wilkinson, 2005). Hence, the complexity of IOR-power might "defy analysis" (Heskett, Stern and Beier, 1970 p.90) or at least full analysis, yet remains held by some scholars the most fundamental construct and phenomenon explaining IORs (Dapiran and Hogarth-Scott, 2003).

2.5.4.5 Dominant and marginalised perspectives

Various explicit challenges relate to fundamental divergences across the Origins, and weigh towards advancing IOR-power as an emergent, obscured *process* (Ford, 1980; Marshall and Rollinson, 2004; Stannack, 1996), coercive and *consensual* (Frazier and Antia, 1995; Stannack, 1996; Zhuang and Zhou, 2004),

concerning overt and *covert* behaviour (Ford, 1980; Marshall and Rollinson, 2004) but extending beyond behaviours towards *outcomes* (Marshall and Rollinson, 2004; Stannack, 1996), and *not* necessarily predictable, (Lane and Bachmann, 1997; Marshall and Rollinson, 2004; Stannack, 1996), wherein A's power-over B is *inseparable* from B's power-over A, rather interwoven in a negotiated process (Marshall and Rollinson, 2004), and embeddedness in the *environment* (system power) is salient (Lane and Bachman, 1997).

Studies that critically shift IOR-power conceptualisation in this more nuanced direction are largely disconnected from other core-studies and thus marginalised yet this conceptual shift is discernible in how other core IOR-studies embrace IOR-power, for example Kochan (1975), Etgar (1976), Brown and Frazier (1978), Lister (2000), Provan et al (1980), Dapiran and Hogarth-Scott (2003), and Dörrenbächer and Gammelgaard (2011). In summary, against a baseline meaning of IOR-power, stood prominent features representing dominant and marginalised perspectives collectively forming a *rugged* conceptual landscape (Levinthal, 1997; Marks, Gerrits and Marx, 2019).

Ref No.	Critical Theoretical Question
CQ1	How to reconcile yet retain distinction between potential, actual, and exercised power states in a power process ?
CQ2	How are sources, bases, and dependence reconcilable ?
CQ3	How to account for mutuality (cohesion) in IOR-power?
CQ4	How is IOR-power grounded at the psychological process level?
CQ5	How to conceptualise IOR-power without recourse to the questionable limiting assumption that organisations are ideal?
CQ6	How are IOR-power effects and outcomes to be defined and limited in an IOR-power process?
CQ7	How to obtain valid comparability between IOR agents or rather relationships?
CQ8	How is IOR-power philosophically grounded ?
CQ9	How can IOR-power amounts be established or is IOR-power essentially immeasurable ?
CQ10	How to capture an adopted perspective and its theoretical basis ?
CQ11	How to obtain an explanatory theory that permits meaningful empirical study of IOR-power?

Table 10. Outstanding critical theoretical questions

A synthesis of the conceptual landscape surfaced 11 critical theoretical questions (CQs) that required structured resolution to obtain *meaningful* integration and *fitness-for-purpose*. Summarily captured in Table 10, these distinct but inter-related questions ranged from how to reconcile power states in a process, to how to enable meaningful study of IOR-power? Periphery studies although not qualifying as *core-studies* also pointed to resolving these questions (Blois, 2005; Casciaro and Piskorski, 2005; Hingley, 2005; Kumar, 2005; Naude, 2005)

2.6 Developing a research question

The following first provides succinct answers to the four sub-literature review questions (SLRQ1 to SLRQ4) thereafter the primary review question. The *research question* addressed in this thesis is then justified.

2.6.1.1 What are the origins of power conceptualisation?

The origins of IOR-power theory are four studies, Simon (1953), Dahl (1957), French and Raven (1959), and Emerson (1962) marking in the broader literature a move towards establishing a more rigorous and measurable concept of power, and enable power comparability. Although a shared conceptual framework (Figure 14) is discernible consisting of four functional characteristics and 25 attributes characterising power, different conceptions of power nonetheless are posited across the Origins. There are material divergences standing as fundamental contestations precluding appeals to conceptual inseparability.

2.6.1.2 How is power conceptualised?

Foremost, no two core studies at the detailed level conceive or characterize IOR-power in precisely the same manner. Notwithstanding, collectively the Origins-based conceptual framework holds in the IOR-context *across* core-studies whilst fundamental contestations persist unresolved albeit partially surfaced and challenged. The framework is enriched in qualifying how attributes translate to the IOR-context that emphasise and extend attributes features. In what amounts to a rugged theoretical landscape, stands a dominant perspective of IOR-power against marginalised perspectives rather than a unified and clear conceptualisation of IOR-power.

The dominant perspective in summary embraces IOR-power as A's power-over B, A's capacity (state) to coercively control the behaviour of B, and/or vice versa, contrasting with marginalised perspectives emphasising IOR-power as an emergent negotiated process between A and B, concerned with obtaining desired outcomes. Formal power definitions are inconsistent and process models developed to capture why and how IOR-power exists are also inconsistent. There are inherent ambiguities given variation in terminology and treatment of the environment compounded by different adopted perspectives of IOR-power.

2.6.1.3 How is power operationalised?

Power operationalisation is captured as integral to the preliminary conceptual framework and overall is the least advanced IOR-power characteristic. The range and inconsistency in dimensions adopted to determine IOR-power attracts the highest level of criticism by core-studies. In part criticisms stem from the lack of consensus and ambiguities in the essential meaning of power. There is thus no robust methodology available to determine IOR-power and any claim to have determined IOR-power is inherently theory laden requiring careful interpretation, representing a perspective of IOR-power.

2.6.1.4 What are the limitations in the study of power?

There are three interlinked basic limitations to the study of IOR-power. The first as noted is the absence of a sufficiently robust comprehensive conceptualisation of IOR-power, to guide studies. The second, is that there is insufficient explicit recognition that the concept of IOR-power is so fundamentally contested limiting the validity and utility of IOR-power studies. Third, critical theoretical questions remain unanswered masking incoherence across IOR-power studies.

2.6.1.5 Why is power a difficult concept?

The concept of power is difficult because the phenomenon it is held to represent *is* complex, dynamic, and obscured. That human sense-making and perceptions are undeniably an integral part of the phenomenon adds an important layer of complexity given the uniqueness of individuals. That IORs as the context of interest are equally complex and contested adds a further layer of complexity.

There are no clear boundaries between IOR-power, what constitutes IORs including other key concepts, or the environment. Adopting a process or state perspective of IOR-power does not alter the fact that for any account of IOR-power, the multi-dimensional process it represents (process) or of which it is an integral part (state) requires establishing, for meaning and significance. An uncontested concept of IOR-power that does not under-represent the phenomenon but has utility in the IOR-context, has remained elusive – IOR-power is essentially and epistemically a difficult concept or rather construct.

2.6.1.6 Research question and propositions

There can be *no evidence* to support or refute (Enders, 2009) the possible *dangerous equation* (Sparaco, 2009) emerging from reported transfers of power to major suppliers in the commercial aerospace industry without clarity of what power is. Neither can IOR-power be appropriately managed without understanding the realities of IOR-power (Cox, 1999). Findings of the exploratory research (Chapter 5) attested to the complexities and ambiguities surrounding IOR-power in practice and need for theoretical clarity.

Whether more generally construed as ontologically real or as a family concept (Haugaard, 2010; Lukes, 2005), IOR-power is treated as ontologically real but epistemically contested and lacking clarity, hindering valid determination of IOR-power to inform practice. To begin to scientifically answer the implications of power distributions demands conceptual precision, not conceptual vagueness (Podsakoff, MacKenzie and Podsakoff, 2016; Strunz, 2012; Wacker, 2004). The problem of interest was no longer *whether power shifts towards major suppliers adversely impact supply chain performance* rather *what is power?* More precisely the research question became:

RQ: What are the essential qualities that describe, characterize, and explain power in inter-organisation relationships?

There has been no attempt to *synthesise* extant IOR-power perspectives to obtain a unified, comprehensive theory of IOR-power, intelligible to academics and practitioners. The primary evidence for developing such a theory lay manifestly in the extensive analysis of core-studies undertaken that in some

manner had sought to address the problem and practitioner views from the exploratory study. Embracing contestations as more reflecting different and incomplete perspectives, the central proposition advanced in this thesis is:

TP: Meaningful integration of core IOR-power perspectives unearthed into a unifying, comprehensive, and contemporary explanatory theory of IOR-power applicable across IORs, is feasible.

A logical approach was to reconcile foremost perspectives across the Origins with due consideration to all 11 critical questions reflecting the IOR-context thereby retaining clear roots in the general power literature. Obtaining integration in this manner translated into advancing the following two sub-propositions:

TP1: The different conceptualisations of power laid down by the origin studies represent different perspectives of power that are fully reconcilable to form a unified explanatory theory of power.

TP2: A unified explanatory theory of power reconciling power origin perspectives can accommodate dominant and marginalised IOR-power perspectives.

2.6.1.7 Further justification of research question and propositions

The Origins standing as the foundations of proposition TP1 retained validity in the extended literature review. Examination of the main claims indicated that IOR-power conceptualisation remains considered under-developed with seminal works (F&R) warranting critical appraisal (Blois and Hopkinson, 2013), and that critical questions identified (CQ1 to CQ11) linger unanswered (Hingley, Angell and Lindgreen, 2015; Hopkinson and Blois, 2014; Reimann and Ketchen Jr., 2017). It is notably marginalised perspectives that gain traction in considering contemporary supply chains, where the complexity of IOR-power as a multi-levelled dynamic process is firmly advanced (Hopkinson and Blois, 2014; Kraus and Strömsten, 2016; McNamara, Pazzaglia and Sonpar, 2018; Meehan and Wright, 2012).

Accordingly, the relevance of adopted perspective in studies (Reimann and Ketchen Jr., 2017), dynamic links between organisation power and IOR-power (Kraus and Strömsten, 2016), and how goals are central to explaining power sources (Meehan and Wright, 2012) are all emphasised. Appeals to

contemporary thinking on power, including Clegg (1989), Hardy (1996), and Simon and Oakes (2006), further highlighted that power need not be coercive, and the significance of identity, sense-making, and meaning to IOR-power (Hopkinson and Blois, 2014; Kraus and Strömsten, 2016; McNamara, Pazzaglia and Sonpar, 2018). Attention is also directly drawn to the importance of mutual dependence in IOR-power analysis with calls to recognise the nuances of IOR-power due to embeddedness in social structures, local to global (Kraus and Strömsten, 2016; McNamara, Pazzaglia and Sonpar, 2018; O'Brien and Evans, 2017; Reimann and Ketchen Jr., 2017). The pertinence of the distinction between relationship benefits as equitable, not necessarily egalitarian, is also stressed (McNamara, Pazzaglia and Sonpar, 2018).

Critically debated is F&R's power concept (Blois and Hopkinson, 2013, 2015; Hunt, 2015). The theory is claimed to be limited, lacking sufficient robustness to guide empirical studies of IOR-power resulting in conflicting findings in the relationship between F&R power bases and IOR-power, conflict, commitment, and trust (Hopkinson and Blois, 2014), and that broader conceptualisations require due consideration (Blois and Hopkinson, 2013; Hopkinson and Blois, 2014). In a critique of how F&R's formulation has been embraced, the assumption that the theory applies directly to organisations, that is organisations are ideal and may be treated as persons capable of being directly influenced, is specifically called into question (Hopkinson and Blois, 2014) and that a way forward requires establishing (Hingley, Angell and Lindgreen, 2015).

Incorrect application of F&R's theory and inadequate conceptualisation generally (Elias, 2008), continue to impede informative IOR-power empirical studies. More qualitative analysis and accuracy in measurement continues to be advocated (Blois and Hopkinson, 2013; Hingley, Angell and Lindgreen, 2015; Hopkinson and Blois, 2014), where accessing the voice of the practitioner to illuminate power in practice is held critical (Meehan and Wright, 2012). The relevance of IOR-power to broader outcomes of sustainability (economic, social, environment) is also advanced (Kraus and Strömsten, 2016; O'Brien and Evans, 2017).

Periphery studies add further weight to embracing the multi-levelled nature of IOR-power and saliency of emergence, mutuality, feedback, (Dallas, 2014; Mahutga, 2014; Metcalfe and Lapenta, 2014), consensual power, and effectiveness (Metcalfe and Lapenta, 2014). The role of perceptions and the significance of discrepant perceptions (Lacoste and Blois, 2015), strategies, sense-making, judgement, (Akpinar, 2017), cognitive evaluation (Chae, Choi and Hur, 2017), through to the relevance of the environment (Kähkönen and Virolainen, 2011) are re-enforced. Lastly, grounding in the Origins remains evident (Chae, Choi and Hur, 2017; Cowan, Paswan and Van Steenburg, 2015) with an appeal to ground thinking across levels in broader conceptions of power rather than adding further concepts to do the work of power (Dallas, 2014).

Thus, ongoing challenges to IOR-power theory re-emphasise the importance of the research question.

2.7 Chapter summary

This chapter has established and justified in detail the research question addressed by this thesis, positioning the argument and contribution of a unifying theory of IOR-power put forward within key debates in the literature. Core-studies including established theoretical origins underpinning the research have been exposed, providing the grounding for a central proposition (TP) to be advanced in Chapter 4. The following chapter turns to present and justify the research methodology employed.

3 METHODOLOGY

3.1 Chapter introduction

Chapter 2 identified the focal research question and central proposition to be advanced. This chapter exposes and justifies first in Section 3.2 the philosophical perspective underpinning the overall research project followed in Section 3.3 by detailing the overall research strategy corresponding with Figure 2 (Chapter 1, Section 1.6). Thereafter, research methods employed to collect data across field studies are provided and substantiated in Section 3.4 and similarly methods to analyse data in Section 3.5. These initial sections frame Sections 3.6 to 3.10 that in *chronological* order elaborate specific study designs and tailoring of methods to meet the purpose of three field studies (ES, CS, TS) and two theoretical development phases (TD1, TD2) undertaken.

3.2 Philosophical perspective

The following encapsulates the origins, tenets, and impetus of *DCR* (Archer, M. et al., 1998; Bhaskar, 2008; Danermark et al., 2002; Elder-Vass, 2004; Fleetwood, 2009; Olsen, 2009; Ryan et al., 2012; Sousa, 2010) and explains why this philosophical stance was adopted in this research.

The origins lie in a realist theory of science (Bhaskar, 2008 first published 1975). The answer to “what must the world be like for science to be possible” (Bhaskar, 2008 p.23), Bhaskar argued should be given the name ontology. Through analysis of the intelligibility of experimental activity given to be rationally justified and the intelligibility of perception, Bhaskar gave credence to a *stratified ontology* (stratified reality domains). For science to be possible the world must be conceived as stratified consisting of mechanisms, events, and experience, where “natural mechanisms or structures at work” represent “the core of theory” (p.12).

In other words, mechanisms may be defined as:

“a structure performing a function in virtue of its component parts, component operations, and their organization. The orchestrated functioning of the mechanism is responsible for one or more phenomena.”

(Hedström and Ylikoski, 2010; *Ref. Bechtel and Abrahamsen 2005*)

Following Elder-Vass's (2004) interpretation and refinement of Bhaskar's original work (Bhaskar, 2008 p.56), first, the *stratified real world* comprises more fully of mechanisms, *entities*, events, and experiences. Second, the real world as stratified is founded on the phenomenon of emergence, a property of entities simply defined as the process of coming into existence or prominence. It is through emergence that for example atoms (lower-level) form molecules (higher-level) and so forth, and people (lower level) form groups (higher-level) and so forth. Third, an event is "the behaviour of a given entity at a given time" (Elder-Vass, 2004 p.6), and it is also the case that events are stratified. The explanation of an event, that is identification of the *causal powers* of entities (generative mechanisms) giving rise to the event, is thus practically given through its component events (subsets) rendering the event a "downwardly-inclusive event" (p.6) that subsequently may be used to explain other events, of which it is a part (supersets). Fourth, although stratified, our experience of events and entities is subject to interpretation of sense data, itself limited to our perceptual abilities and "we generally perceive reality as "flat" ' or 'at a single level of stratification" (p.5). Experiences are thus impressions of entities and events that may not be exact, and do not of necessity capture all of an event or all events, "things do go on behind our backs" (Archer *et al.*, 1998 p.199).

Crucially, whilst natural mechanisms and by implication natural entities exist and endure, it is not always the case that they are active generating new entities or events or even patterns of events (and states) in the world. There is an ontological difference therefore between these natural mechanisms and entities that are transfactual types, and the instances of entities and events possibly or actually generated by them. Categorically, experiences of instantiated events and entities are *independent* of the events and entities themselves giving rise to a further ontological distinction between actual events and entities, and experiences.

Figure 15 is a reproduction (Elder-Vass, 2004 p.13) showing how Bhaskar's *stratified world* (mechanisms; events; experiences) is extended (entities) and constituted within four rather than three *explanatory domains* where the original domain of the real is divided into the domain of the transfactual and possible.

	<i>Domain of Transfactual</i>	<i>Domain of Possible</i>	<i>Domain of Actual</i>	<i>Domain of Empirical</i>
<i>Mechanisms</i>	Types	Instances	Instances	
<i>Entities</i>	Types	Instances	Instances	
<i>Events</i>		X	X	
<i>Experiences</i>		X	X	X

Figure 15. An alternative set of domains (Elder-Vass, 2004)

Hence, following Elder-Vass, (2004), the four explanatory domains of reality are: the domain of the *transfactual* that encompasses types of naturally enduring mechanisms and entities existing independently of any particular event or outcome; the domain of the *possible* that represents all instances of mechanisms, entities, events, and experiences that could come into being but have not (the unrealised); the domain of the *actual* that consists of mechanisms, entities, events and experience that have come into being or exist; and the domain of the *empirical* that represents experiences of the domain of the actual and possible. The domain of the possible renders clear, the significance of *dialectical* critical realism in how absences, including where entities are present but their generative mechanisms are *inactive*, mediate what occurs in the actual domain.

Foremost, the perspective thus embraces an ontological position of *realism* that acknowledges a reality independent of man’s mind and knowledge, and a *hermeneutic* position that knowledge is communicatively constructed, historically rooted, and fallible (Bhaskar, 2008; Wikgren, 2005). Against extreme positivism that positions *sensory experience* as the ultimate basis of scientific knowledge (empiricism), resolved is the weakness that this conception of the world cannot explain how and why experience is significant to science and depreciates the role of theory in science that seeks to explain a world extending beyond human experience (transcendental). Against extreme constructivism and interpretivism that denies a reality independent of the mind, “that see[s] everything as constructed and that turn[s] away from the reality of our world” (Elder-Vass, 2012

p.20), resolved is the impossibility of reconciling this with “what we know of our sheer materiality” (Elder-Vass, 2012 p.20). The tenets fundamental to a critical realist stance follow.

First, the world is conceived as an open not closed system in which constant conjunctions of events or regularities do *not* prevail and there is a clear distinction between the *intransitive objects* of scientific knowledge, that is objects of knowledge that exist and act independently of identification or man’s knowledge of such objects, for example gravity, and *transitive objects* of scientific knowledge produced by man, for example theoretical models and scientific concepts (cognition of the world). The former (intransitive) constitute the objects of science whilst the later (transitive) are produced through the process of science (scientific knowledge), a *social* activity “whose aim is the production of knowledge of the kinds and ways of acting of independently existing and active things” (Bhaskar, 2008 p.24). In other words, “the quest for non-observable generative mechanisms whose powers may exist unexercised or be exercised unrealised” (Archer *et al.*, 1998 p.190) enabling causal relations as *tendencies* to be established.

These tenets avoid an “epistemic fallacy” that the world is limited to our knowledge of it (Bhaskar, 2008 p.36-38) and at the same time establishes scientific knowledge as an antecedently rooted, social product that is fallible and incomplete, in which theory or explanation is primordial.

“For realists, the re-assessment of other academics’ work (and of government reports and other documentary sources) counts as empirical research even though there is no field component... culling the material for falsehood, poor ontic assertions, and self-limiting mono-theoretical orientations is considered part of the realist approach to research.”

(Olsen, 2009 p.15)

Second, although Bhaskar initially established an ontological and thereby epistemological *difference* between physical and social reality, this thesis follows the arguments of Benton, Porpora, Collier, Archer (Archer, M. et al., 1998) and Elder-Vass (Elder-Vass, 2004, 2012), whereby a marked distinction is unnecessary. That, intransitive *social* objects, for example belief systems and

organisation forms are *not* self-subsistent like Nature rather only relatively enduring in being activity-dependent and concept-dependent, and that man is capable of reflexion, creativity, and choice precluding fully controlled experiments that *might* be achievable in the physical world, more raises *methodological* challenges and the saliency of *historicity*. Bhaskar's later transformation model of social action (TMSA) captures this interplay between society and man, *over time*. Through this model and derivatives (e.g. Archer *et al.*, 1998 p.378), scientific theorising is made possible whilst avoiding individualism that positions society as an epiphenomena of man and conversely collectivism that reduces humans to "similar organic parcels with space-time co-ordinates and proper names" (Archer *et al.*, 1998 p.378 p.193), ignoring human capacity for agency.

Third, embraced is a commitment to moral realism, that is there are moral facts, and ethical naturalism, that is natural facts serve to justify ethics. A role of science, especially social science, is to address human emancipation, the "transformation from unwanted, unneeded and oppressive to wanted, needed and liberating (including empowering) states of affairs, especially structures" (Archer *et al.*, 1998 p.672). Science serves as a conditioned *explanatory critique* of what is and what is not true (reality). In doing so science is implicitly *critical* of theory and practice, including scientific practice, that is based on what is *not* true thereby working against human emancipation (Archer *et al.*, 1998 p.568). This is not however to deny or ignore the difficulty in establishing facts and consensus on what to change and how, amidst contradictions arising from different critical and value laden stand-points (Sayer, 1997).

Lastly, of specific relevance is the significance and role given to *real* definitions and *theory* that qualifies and positions the methodology and contributions of this thesis. Establishing a real definition is to capture the essential nature of something in language terms that stands as its definitional properties, where precision is indispensable given language "stands to the conceptual aspect of social science as geometry stands to physics" (Archer *et al.*, 1998 p.294). In the words of Bhaskar, to stand as a theory, entities and mechanisms contained in a theoretical model are conceived as real in the transfactual domain (Figure 15).

“...a theory is a model with existential commitment; that is, a model conceived, and meant to be taken as true, i.e. a model in which entities posited and mechanisms described are conceived as real. It is relatively easy for the scientist to invent models, but much more difficult for him to construct theories.” (Bhaskar, 2008 p.192)

In other words, theory is an indispensable abstract language that provides an interpretative framework of conceptualized causal mechanisms to describe and explain concrete phenomena (Danermark et al., 2002).

Critical realism is increasingly being adopted in IOR studies (Ryan et al., 2012) and offers the ontological depth, framework, and language to meaningfully resolve the critical theoretical questions unearthed (Table 10), involving non-observable psychological forces (F&R), states, and events (Dahl; F&R; Emerson; Simon). Furthermore, there is a natural alignment of DCR to power discourse and theories. Generative mechanisms are conceived as *casual powers* and integration of the conceptual landscape encompasses recognising both action (domain of the actual) and in-action (domain of the possible) in accounts of IOR-power. Unwanted coercion with notions of misuse, if not abuse, points to relevancy of explanatory critiques and appeals to the domain of the possible.

Importantly, where within a transcendental *idealistic* philosophical perspective, scientific study stops at the development of theory (model), within a critical realist perspective “empirical scrutiny” is necessary (Bhaskar, 2008 p.146). Theory is argued justifiable to the extent it is intelligible and empirical evidence supports a theory. Correspondingly, a theory is falsifiable to the extent it fails to carry general explanatory significance and empirical evidence appears to falsify the theory (Archer, M. et al., 1998; Bhaskar, 2008; Danermark et al., 2002). Notably, for the concept of power, Bhaskar emphasises the importance of intelligibility:

“...real definitions of concepts such as capitalism, democracy, power, love can only be justified by their capacity to render intelligible a certain domain of phenomena. I suggest that they are falsified by their incapacity to explain in a non ad-hoc way a range of phenomenon that takes on a special significance for the agents that participate in the forms of social life they define.” (Bhaskar, 2008 p.246)

Qualitative methods are deemed essential, and abduction and retroduction methods *indispensable* to develop theory and assess how well a theory corresponds with the world. Adoption of a range of methods is also promoted to access and analyse data representing different vantage points and may include *quantitative* methods as appropriate (Alvesson and Sköldbberg, 2009; Danermark et al., 2002; Edwards, P. K., J. O'Mahoney, and S. Vincent, 2014; Olsen, 2009). That a research design favours intensive (small N), or extensive (Large N) examination is judged by the type of knowledge sought (Edwards, P. K., J. O'Mahoney, and S. Vincent, 2014). This leads to explaining how an explanatory theory of IOR-power was developed and subjected to empirical scrutiny.

3.3 Research aims, strategy and design

In addressing the research question, the primary aim was to advance central proposition TP (Chapter 2, Section 2.6.1.6) and develop a plausible theory of IOR-power in critical realist terms, following an explanatory critique methodology. Understanding theoretical origins and why related theories come into being and prominence (Archer, M. et al., 1998; Bhaskar, 2008) had been established in the form of a conceptual framework based on competing IOR-power origin theories (Simon; Dahl; F&R; Emerson) and evolution in the IOR-field (Chapter 2). The strategy adopted was to build on this conceptual framework firmly grounded in the literature and through resolving the 11 critical theoretical questions surfaced obtain meaningful integration of perspectives of IOR-power into a unifying *explanatory* theory, hereafter, the theory.

To enhance plausibility the aim was also to advance two complimentary propositions given below. Recognising scientific enquiry to be an iterative process, the strategy was to empirically scrutinise the theory at each stage of the research project whereby practitioners contribute to both theory development and validation (Section 1.5; Figure 2).

IP: The contemporary theory of IOR-power is reasonably intelligible to practitioners and full alignment is not insurmountable.

EP: The revised theory of IOR-power aligns to practitioner descriptions and explanations of behaviour and outcomes in a concrete IOR-Case.

A secondary aim was to explore practitioner traits that might explain intelligibility levels, supporting interpretation of any divergences that arose, but also to assess the practical challenge of establishing a shared academic-practice based understanding of IOR-power. The following exposes in more detail the overall research design.

3.3.1 Case study methodology

As noted, within the adopted philosophical perspective, qualitative methods are deemed essential. It is also advocated more generally that methodologies be aligned to concept maturity and the purpose of the study (Edmondson and McManus, 2007). Aligned with the findings in Chapter 2, IOR-power was treated as a borderline nascent-intermediate concept. Field research studies sought to capture more specifically *what* and *how* practitioners attributed meaning to IOR-power and *what* and *how* experiences of IOR-power arise, not the extent or amount in a concrete case. In the confirmatory (CS) and test case (TS) studies, interest extended to *why* practitioners attribute meaning and experience to IOR-power according with advancing an *explanatory* theory. Correspondingly, qualitative based methodologies were employed across field studies.

Specifically, a *case study* based methodology for empirical inquiry (Yin, 2009) was consistently employed to investigate the phenomenon IOR-power in depth noting the boundary between IOR-power and context (embedded IORs) is unclear (Chapter 2). In following Yin (2009), the methodology used aligns with a realist and post-positivist philosophical perspective (Easton, 2010) that *strives* for objectivity through the research methods employed to manage rich data associated with complex phenomenon, whilst acknowledging the inherent descriptive and interpretative nature of case studies, that is:

“maintaining intellectual honesty, managing bias, and acknowledging limitations, coupled with meticulous data collection and accurate reporting.”
(Harrison *et al.*, 2017 p.10)

The case study methodology adopted thus contrasts with interpretivist and constructivist case study methodologies, where reality is assumed to be situation dependent and/or “constructed intersubjectively” (Harrison *et al.*, 2017 p.10).

Nevertheless, similar qualitative based methods to access and understand attributed meanings and experiences such as, interviews, thematic analysis, and interpretative phenomenological analysis (IPA) were employed.

Case studies, single or multiple, have become increasingly recognised as an important research practice to obtain relevance, understanding, and depth in empirical inquiries (Edwards, P. K., J. O'Mahoney, and S. Vincent, 2014; Flyvbjerg, 2006; Harrison et al., 2017; Koliouisis et al., 2022; Meredith, 1998; Selviaridis et al., 2016; Spence and Bourlakis, 2009; Zokaeï and Manikas, 2014), and are not limited to *exploratory* studies rather can serve to test theories about complex phenomenon by demonstrating a theory holds, appealing to Popper's falsification logic thereafter replication logic (Flyvbjerg, 2006; Ulriksen and Dadalauri, 2016; Yin, 2009). Nothing precludes studies conducted in this research being replicated across individual cases or IOR-Cases or industries, albeit the theoretical frame guiding both earlier studies (ES, CS) has been significantly advanced in this research.

3.3.1.1 Individuals as cases

The purpose across field studies was to access practitioner experience of IOR-power and meanings attributed IOR-power, as individuals in their own right. Adopting a case based methodology (Yin, 2009) enabled respecting practitioners as semi-autonomous, thinking individuals, endowed with identities (meaning of the self in the world), capabilities, and liabilities to act, at all times *idiosyncratic*, and as *individual cases* (Yin, 2009 p.29). Importantly as individual human beings, data obtained from each case relates to the case embedded in its own experiential context that whilst purposefully directed towards the phenomenon and context of interest, IOR-power, remains embedded within the general life-world experience of the case. Case selection criteria thus related to case conditions sufficient to control for IOR-experience and potentially explain attributed meanings but not to fully define cases.

3.3.1.2 Case replication logic

It was *theoretical* generalisability across relevant individual cases, not empirical generalisability or predictability based on statistical assumptions that was sought

(Carminati, 2018; Danermark et al., 2002; Downward and Mearman, 2006; Meredith, 1998). All quantitative data was exploited for case analysis, cross-case analysis, and reporting purposes only, appealing to replication logic (Yin, 2009 p.37), not statistical inference. The research strategy across field studies constituted more specifically a *case-comparison* research strategy (Yin, 2009).

Difficulties associated with case study research relying on direct observation over time, such as dealing with specific *context* dynamics and complexity during observation (Meredith, 1998) were thus avoided. Potential difficulties rather lay in unearthing the breadth and depth of data sought that relied on practitioner willingness, openness, and ability to articulate meaning and experience of a largely obscured complex phenomenon.

3.3.2 Direct and indirect practitioner perspectives

Within a critical realist perspective, social science must recognise the importance of situated practice, be directed towards providing practitioners with explanatory knowledge, and promoting practitioner participation directly in the scientific process through “participating in the theoretical discussion” (Danermark *et al.*, 2002 p.141). For each empirical study direct and indirect participation by practitioners was solicited to varying degrees according to the study purpose.

For the *exploratory* study, emphasis was given to indirect participation, that is progressively unearthing fresh views on meanings attributed to IOR-power and how IOR-power manifests itself in practice. At appropriate stages in the process academic based meaning was nevertheless shared and discussed to assess level of alignment with case views. For the *confirmatory* study, the theory was thoroughly exposed to cases and subjected to a direct explanatory critique by cases. Direct participation was thus privileged but explicit accounts of experience provided an element of indirect participation. For the *test case* study emphasis returned to indirect participation through fresh albeit guided accounts of how case behaviour and outcomes were governed in practice. Direct participation was solicited thereafter (post account) to broadly advance theory intelligibility.

3.3.3 Level of theory versus level of analysis and level of data

Using the distinction of *focal unit* (individual, group etc.) as the unit about which the *level of theory* and theoretical generalisations are intended to apply, *level of analysis* as representing the level at which empirical data is analysed, and the *level of data* as the level of entity (individual, group etc.) from which data is derived, in principle all levels should be consistent (Hitt et al., 2007).

Across field studies the level of data was consistently at the individual case level and two types of qualitative data were gathered, data representing described experience of IOR-power including explanations of behaviour and outcomes, and data capturing meaning attributed to IOR-power. Both data types were held interlinked given meanings are based on lived-experience and lived-experience is recognisable through meaning (Smith, Flowers and Larkin, 2009). For the confirmatory (CS) and test study (TS) quantified levels of agreement with the theory generating also generated quantitative data. The level of analysis was also conducted at the individual case level including comparative analysis across cases for descriptive purposes and evidencing replication. Consistency was thus held between level of analysis and level of data. The focal unit corresponding with the level of theory is however IORs (IOR-power). There exists therefore a misalignment between levels of data and analysis, and unit of analysis.

Notwithstanding, IORs are assumed to exhibit varying levels of homogeneity, heterogeneity, and independence at, between, and across all entity levels from individuals through groups and organisations to the IOR-level (Klein, Dansereau and Hall, 1994). As formalised in Chapter 4, IOR-power is theorised to exist as a flux of power processes *grounded* at the embedded individual-level that combine horizontally (within levels), vertically (across-levels), and longitudinally (over-time), emerging as a downwardly inclusive phenomenon at the IOR-level. The theory is thus founded on individual-level theory as a process building block that explains IOR-power at the individual-individual dyadic level thereafter appeals to *functional* explanatory equivalence between levels to *explain* the IOR-level (IOR-power) even though structurally each level is different (Morgeson and Hofmann, 1999; Whetten, Felin and King, 2009).

The emergent, complex, and temporal nature of IOR-power also prohibits empirical access to the *full* process at the IOR-level. Evidencing IOR-power at the individual-level was the most pertinent level to scrutinise the theory. The misalignment in this research is therefore both theoretically and practically justifiable yet reconcilable insofar as theory plausibility at the individual-level, infers plausibility at the IOR-level.

3.3.4 Pilot studies

In research, it is considered good practice if not essential to conduct a pilot study to assess and enhance research methods employed in quantitative and qualitative studies (Sampson, 2004; Van Teijlingen and Hundley, 2001). Data collection methods as detailed in Section 3.4 primarily utilises a semi-structured interview method (Kvale and Brinkmann, 2009). Pilot studies with one individual case were conducted for all three studies, principally to test the intelligibility of interview questions and the extent to which the questions and sequencing was effective in unearthing the type of data sought.

A pilot study may not yield quality data suitable for inclusion in research outputs where the pilot study does not constitute a complete study rendering the data *incomplete* or changes in methods are subsequently introduced rendering the data *incompatible* or participants are not sufficiently relevant to the research qualitatively or in statistical population terms, rendering the data *irrelevant*. In *qualitative* research pilot data quality and utility rests more on the judgement of the researcher based on the study purpose given the inherently dynamic, multi-layered, interpretative, and progressive nature of qualitative research (Kvale and Brinkmann, 2009; Sampson, 2004; Van Teijlingen and Hundley, 2001).

For the exploratory study (ES) the pilot did not meet case selection criteria and the interview was not recorded. Data was both irrelevant and incomplete thus the pilot case was not included in the research output.

For the confirmatory study (CS), the subject matter (theory) and questions were complex and the interview protocol warranted thorough testing and evaluation. The pilot case was specifically selected as an individual known *not* to be

conversant with theory or models to test fully comprehension limits. The interview was recorded, and complete data was obtained and analysed. In this study, pilot case data although not originally planned, was included in the research output. The case data was complete and compatible in that no material changes to the interview protocol were introduced, and the case emerged as a relevant, informative *counter-extreme* case.

Notwithstanding, the pilot study led to judicious rather than routine use of explanatory examples to improve interview efficiency. In addition, the process was conceived / designed to position the theory in juxtaposition to a stable, extant meaning attached to IOR-power. Initial analysis nevertheless evidenced that such a distinct direct comparison was a false representation of the process. Integral to making sense of the theory was *life experience* and *meanings*, and exposure to the theory altered the meaning attached to IOR-power and life experience. The process was more exactly an iterative, reflective, and potential learning process for participants, where the *levels of agreement* might be predominantly theory led through an *educative* process (ED), predominantly *life experience* led, through a verification / falsification process (LE), or both, through moreover a theoretical analysis process (TA). The pilot case thus sensitised the researcher to give due analytical attention to the primary driver for theory intelligibility (ED, LE, TA).

For the test case study (TS), the pilot case was a member of organisation B (Org-B) and was conducted based on a *potential* IOR-Case, involving organisations, B and C. Two interview protocols were tested. The first protocol related to establishing an understanding of Org-B and the nature of the IOR-Case, referred to as the *partnership* interview. The second protocol related to obtaining the data to test the theory, standing as the *main* process interview. The interviews were recorded, transcribed, and complete data was analysed. The pilot was further used to refine analysis techniques (Samson, 2004).

Identified specifically from this pilot was the need to analyse data across qualities characterizing IOR-power, not merely theory specific qualities as intended, and in a logical sequence to manage the interrelatedness and compound nature of

qualities. Careful consideration of pilot feedback also led to inviting but not stipulating that for the main interview participants note down thoughts during preparation as memory joggers. In addition, the partnership protocol was separated into an *organisation* context interview specifically gathering information about each organisation, and a partnership context interview, to better delineate interviews and data. To aid gathering relevant information about the IOR-Case, the partnership model exposed in Section 2.3.2.3 (Figure 6) was also shared with participants to better frame interview questions.

The actual test case study undertaken was an IOR-Case between organisations A and B, where organisation C (initial proposed case study) stood as a mutual customer. The pilot case thus first contributed to understanding the IOR-Case context by capturing the complexity of managing multiple IORs including the implications of managing simultaneously, shared *end* customer relationships and direct independent relationships with the same organisation. Second, the main process interview data was judged complete, compatible, and relevant, therefore the pilot case was also included as an individual case in the research output.

3.3.5 Reliability and validity

Following Kvale and Brinkman (2009) on what might stand as reliability and validity in qualitative research, all field studies were conducted mindful of obtaining a balance between striving for repeatability versus creativity in terms of reliability of data, recognising all cases to be idiosyncratic, the interactive nature of the interviews, and the type of data required. Moreover, trustworthiness in the findings were sought through thoughtful research design and attention to helping and guiding participants to be as thoughtful, open, and frank as possible. Thereafter, offering high levels of data transparency in appendices and as far a space permitted within the thesis.

In terms of validity, emphasis was given to methods employed being appropriate and effective in accessing quality data, that is fit for purpose, and remaining faithful to the data during analysis. Thus, validity as “quality of craftsmanship” was pursued throughout from thematizing, designing, interviewing, transcribing, analysing, validating, through to reporting (Kvale and Brinkmann, 2009 p.248-

249), although verifying rather than validating more accurately captures the sixth stage in this research. This reflects the extent to which verification of adherence to methods was conducted rather than formal validation of the research output by participants or fellow researchers.

Notably, all studies were conducted in accordance with Cranfield University ethical guidelines with due attention to ensuring participants well-being and freedom to voice their views, object to the theory, and share experience in their own words. Transcriptions were provided to participants from the exploratory and test case studies to verify accuracy, that is, reasonably reflecting their views and descriptions provided (as far as recalled) and accord opportunity to note areas considered personally or organisationally confidential. In the confirmatory study given the interview structure, reliability and validity of contributions were formally explored in the interview to assess the extent to which findings reflected faithful, stable, or robust views (reliability) and fully captured meanings attributed to IOR-power (validity). Interpretations were consistently revisited to control for unwarranted bias (case or researcher), recognising certain case biases proved informative in exposing deep-rooted attitudes to power generally. Extensive automated checks for computed data were also incorporated in databases developed (Section 3.4.4).

3.4 Data collection methods

Established methods were employed across field studies to guide case selection (Miles and Huberman, 1994), conduct interviews (Kvale and Brinkmann, 2009), and manage mixed data (quantitative and qualitative) collection (Harris and Brown, 2010).

3.4.1 Case selection

Case selection is important to ensure cases align to the purpose of the research (Yin, 2009). The method of sampling employed was purposive sampling given each phase of research was theoretically informed and served a specific purpose (Curtis et al., 2000). Cases as *individuals* were primarily selected for each field study based on *primary* case conditions that satisfied sampling criteria outlined

in Miles and Huberman, 1994 (p.34) of relevancy, potential, generalisability, credibility, ethics, and feasibility, directing effort towards accessing pertinent and useful cases. Specifically for the test case study, where individual cases were *embedded* in a focal concrete IOR-Case, IOR-Case selection was also purposive, following the same sampling criteria.

3.4.2 Interview Method

Interviews were considered the most effective method to unearth field data at each research phase given data sought centred around participant attributed meanings, experiences, and thought processes not directly observable. Interview methods were designed and conducted in accordance with Kvale and Brinkmann's (2009) guidelines, complete with interview protocols. For the exploratory and test studies (ES, TS) interviews were semi-structured privileging freedom of thought and expression by cases whereas for the confirmatory study (CS) comparatively more structured to cover the full extent of the theory and readily align reasons for theory convergences and divergences. For the test case study interviews were further framed by an IOR-Case study research protocol.

All interviews were nonetheless conducted in the same manner in being private and relaxed. Fostering a sense of freedom to speak and think out loud was considered crucial to access deep thought processes of real substance. Following Sandberg (2005) *communicative* validity was sought in all interviews, recognising valid researcher interpretation of elicited meanings and descriptions were central to arguing plausibility of the theory. Accordingly, first the purpose of the research was rendered transparent with the opportunity to ask questions about the research or the interview at any time. Second, engagement in dialogue with participants was pursued at junctures where clarity was needed or criticality appropriate rather than purely asking questions and obtaining answers.

All interviews were digitally recorded and transcribed either verbatim by the researcher (ES, CS) or intelligent verbatim through a professional transcription service (TS) and accuracy checked by the researcher. Transcriptions were the main source of data, but recordings were used to qualify meaning as necessary such as capturing strength and style of voice and length of delay in responses,

and so forth. Observations of body language such as appearing confused or concerned or being reflexive were also consciously made to support managing effectiveness of interviews and interpretation of transcriptions.

3.4.3 Mixed method data collection

Although rich explanations and descriptions were the primary data source, theory intelligibility data was simultaneously captured quantitatively and qualitatively (narratives) in both confirmatory and test case studies. Researcher adjustments to quantitative data were also made based on interpretation of qualitative data. As such, the method is more appropriately described as blended data collection fulfilling the first four of Harris and Brown's (2010) six recommendations for mixed-data collection. The remaining recommendations were unavoidable or not relevant in that "focusing on psychological objects that have simple internal structure" did not align with the purpose of the research. Thereafter, "estimating agreement between methods, albeit cautiously in light of data distribution" (Harris and Brown, 2010 p.11) in seeking triangulation or corroboration in *evidence* (Johnson, Onwuegbuzie and Turner, 2007) was not strictly applicable given the blended approach and focus on establishing data alignment.

3.4.4 Databases

For the confirmatory and test case studies two further databases (excel) were developed respectively, CADB2 and CADB3, hosting full transcriptions to effectively conduct extensive data analyses and syntheses in a single location. The exploratory study was relatively small in terms of data volume and a central database was not therefore constructed rather coded transcription data was synthesised directly into discrete tables (Microsoft Excel, Word) for case comparative analysis purposes.

3.5 Data analysis methods

Established data analysis methods were employed across field studies and included descriptive statistical analysis, abduction and retroduction, content analysis, interpretative phenomenological analysis (IPA), fuzzy set qualitative comparison analysis (fsQCA), and process tracing.

3.5.1 Descriptive statistics

Descriptive frequency statistics (Field, 2009; Larson, 2006) were employed to analyse and report confirmatory (CS) and test case (TS) study quantitative data generated using excel analysis functions within respective databases. Specifically in the confirmatory study where more comprehensive quantitative data was obtained, case location and dispersion statistics were further generated to expose graphically variation across cases in both theory understanding and agreement. It is fully acknowledged that given quantitative data was obtained from very small, purposive samples, and for the confirmatory study was based on Likert scales thereby not strictly *interval* data, descriptive statistics reported are not strictly statistical permitting inferences to be drawn across any practitioner population, rather describe the cases and variations across cases in each study.

3.5.2 Abduction and retroduction analysis methods

Having established the overarching research approach to be *qualitative* case study methodology, it is important to account for how qualitative data was interpreted and treated analytically to build evidence. Markedly distinct from purely deductive or inductive reasoning, two forms of reasoning and inference, abduction and retroduction (Danermark et al., 2002; Edwards, P. K., J. O'Mahoney, and S. Vincent, 2014; Meyer and Lunnay, 2013) were employed to move between domains of empirical, actual, and real (Figure 15, Section 3.2).

In *deductive* reasoning conclusions drawn are strictly logic based, that is, given a stated theory (rule) that is true (premise), and an actual case covered by the theory, the conclusion about the case necessarily follows the theory and relies on ability to conduct strict logical reasoning. In examining or testing a theory, a theory is proven or falsified. In *inductive* reasoning, given an actual case and a finding about the case, any conclusion that the finding applies generally as a rule or theory is one of probability requiring examination of further cases and where feasible statistical analysis.

Deductive and inductive reasoning are complemented by *abductive* reasoning, where starting with a theory (rule) and finding an actual case not fully covered by

the theory, a plausible but not necessarily true conclusion may be drawn about the finding and / or the theory. In examining or testing a theory, a theory is open to plausible validation or re-description. Abduction relies on creativity and an ability to see patterns and connections between data, other theories, and other phenomena not necessarily self-evident within the data, to explain the case findings and draw conclusions. This demands “careful interpretation and reflection” (Alvesson and Sköldbberg, 2009, p.9)

Given the nascent-intermediate standing of IOR-power theory, abductive reasoning was used to enable analysis to go beyond theory guiding research at each phase, to fully embrace data that lay outside theory boundaries thereby neither privileging theory nor empirical data rather seeking to compare theory with all available empirical data to draw plausible theoretical conclusions. This form of reasoning was employed primarily to reconcile as necessary the domain of the empirical (case experience and attributed meaning) and the domain of the actual *given by* extant theory. This leads to how retroduction was an important further form of reasoning employed.

Retroduction goes beyond abduction to establish through transcendental (beyond human experience) and transfactual (enduring types) argument, the real types of entities and mechanisms that must exist for something, in this case IOR-power, to be possible or actually exist / arise. This form of reasoning was employed first in developing the *theory* (Chapter 4) to establish the real entities (A and B) and mechanisms (psychological forces) necessary to explain IOR-power, thereafter to reconcile this theory residing in the domain of the real with the domain of the actual established from empirical data and abduction as either supporting the theory or generating theory re-descriptions (Chapter 5).

The strategies adopted to develop arguments were specifically counterfactual thinking, comparison of different theories and cases, embracing marginalised theory and extreme cases (Danermark et al., 2002; Weick, 1989). Counterfactual thinking involved considering what qualities were and were not essential to explaining IOR-power by evaluating the significance of the presence or absence of qualities found attributed to IOR-power. Comparison of different theories

including marginalised theories enabled initially discerning common and contested qualities across theories (Chapter 2). Similarly, comparison of meanings and experiences across cases, supported theory development and testing where extreme cases provided a stronger test of theory in being more likely to surface essential qualities not previously considered.

3.5.3 Content analysis

Content analysis may be understood as methodological measurement of text for social science purposes recognising language as important to human cognition (Duriiau, Reger and Pfarrer, 2007). At a basic level it permits for example establishing frequency in usage of words that may indicate a level of significance being given to what a word represents to someone or several people. Content analysis has various advantages not least in being replicable and applicable to a wide range of phenomena including cognition that may be conducted at two levels, the manifest level given by the text and a deeper level referred to as the latent content requiring further interpretation. The methodology enables statistical analysis but is not a necessary feature of content analysis. Implementation varies but the main methods concern case selection from a sampling frame of all relevant cases and data collection, establishing coding categories and coding techniques, and analysis of coded data (Duriiau, Reger and Pfarrer, 2007; Flick, U., E. von Kardoff, and I. Steinke, 2004; Hall and Wright, 2008; Hsieh and Shannon, 2005).

Directed content analysis (Hsieh and Shannon, 2005) was used in the exploratory study and test case study to ultimately align *interpreted* case narrative data to codes representing theory qualities being explored (ES) or tested (TS). In the confirmatory study, narrative data was pre-structured to align to theory qualities, but still required a degree of cross-alignment. In the confirmatory and test case studies, coded qualitative evidence was transformed into quantitative data to expose frequency of evidence *within* and *across* cases, mirroring the purpose of descriptive statistics to summarily report study findings. For example, in the test case study, it enabled capturing how many embedded cases described their behaviour as having been deviant (erroneous) behaviour (codes g-E1-4 and s-

E1-4, 6 cases, 29%). It further permitted summarising the extent each embedded case contributed to positively validating theory qualities and whether organisation membership (A or B) appeared relevant (data coverage, A=97%; B=97%).

Content analysis however potentially fails to capture important nuances and idiosyncratic aspects within data “that are impossible to code objectively” (Hall and Wright, 2008 p.88) that enhance accuracy of data interpretation. The method also does not implicate a critical stance. For these reasons, a precursor to content analysis across studies was adoption of interpretative phenomenological analysis (IPA), that seeks to unearth any such nuances or criticalness within the data, essentially, “The participant is trying to make sense of their personal and social world; the researcher is trying to make sense of the participant trying to make sense of their personal and social world” (Smith, 2004 p.40).

3.5.4 Interpretative Phenomenological Analysis (IPA)

Embracing interpretative phenomenological analysis (IPA) in this research aligns to the ambition of influential phenomenological philosopher, Husserl, that of establishing “*the 'essence' or 'eidos' or 'idea'*” of something (Smith, Flowers and Larkin, 2009 p.14) through adopting principles and techniques that emphasise lived experience, hermeneutics, and an idiosyncratic focus. Although traditional IPA based studies focus on accounts of single major events, whereas accounts sought ranged from critiques of theory to general accounts of experiences using more structured data collection methods, this did not preclude adoption of IPA.

Following Smith et al (2009), first, explanatory critiques captured cases’ own *meanings* of IOR-power, representing the most comprehensive unit of *lived* experience (p.2) and was thus *idiosyncratic* (p.29-32). Second, clearly evoked across studies was a deliberate controlled reflection constituting a phenomenological reflection (p.189). Third, *discussion* and *probing* of descriptions and explanations (control questions) albeit not exhaustive, was an integral part of each interview method. The main purpose of analysis in all field studies was to generate an accurate *understanding* of what cases were seeking to describe or explain through a double *hermeneutic* process (p. 34-37) that is embracing the point of view of the individual whilst asking *critical questions*.

Communicative validity or coherence (Sandberg, 2005) *within* case was sought through interpreting elements of text data in terms of immediate text (context of statements) and also as an integral part of the whole interview with careful consideration given to the stage in the interview. In all cases, this required initial repeated full reading of transcriptions and referral back to digital recordings to almost relive the interview and become immersed in the data as a whole, before analysing from start to finish the detailed text to arrive at a faithful interpretation and coding of data. Coherence also related to consistency between quantitative and corresponding qualitative data. Full coherence supporting communicative validity was established where all interpreted parts aligned with the whole and the whole aligned with the parts, that is, there were no identified inconsistencies.

Where interpretative incoherence arose *within* case, the broader text was privileged given participant views developed and shifted vantage point at different stages in the interview. This was most evident in the confirmatory study as participants sought to understand the theory progressively in discrete elements (attributes/components) that were only partially in view at the time of according level of agreement given interrelations between the various elements. Obtaining communicative validity was thus offset in all studies by embracing transgressive validity (Sandberg, 2005) that recognises in lived experience, including first exposure to a theory and in describing experience and/or meaning, there may be complexity and ambiguity. Seeking within case valid interpretation thus recognised both coherence (communicative) and incoherence (transgressive) and through reasonable judgement a faithful interpretation.

3.5.5 Process Tracing

A process tracing method (Ulriksen and Dadalauri, 2016) was employed in the test case study (TS). Noted in the thesis introduction (Section 1.7) was how philosophically an organisation may be understood to exist as an entity or a process (Van de Ven and Poole, 2005) and acknowledgement of both arguments. The view adopted in this research was that both perspectives may be fruitfully adopted given reality is held to consist of mechanisms and entities *through* the process of emergence (Elder-Vass, 2004) where each begets the other.

The theory being grounded at the individual-level recognises individuals as entities without which the posited theory loses its grounding. There was therefore a rationale for adopting a weak process tracing method where “substance has priority over process” (Van de Ven and Poole, 2005 p.1389). A strong process tracing approach (approach III) (Van de Ven and Poole, 2005) was however adopted whereby conversely process has priority over substance given the theory defines IOR-power as an emergent causally complex *process* (verb) moreover grounded at the individual *psychological process* level and concern lay in tracing the process at this level to test the theory (Falletti, 2016).

Data required spanned the process, and process tracing as a method enabled fully embracing the emergent nature of the process and causal complexity to open up the black box (Mayntz, 2016) of IOR-power. Specifically an explanatory causal reconstruction or backward causal process tracing method was employed (Mayntz, 2016). This method has typically been employed to causally reconstruct (mainly deductively) a specific event or outcome to test a theory about the event / outcome (e.g. an election outcome). In this research the method was adapted to obtain specific process causal explanatory data that “places theory and data in close proximity” (Ulriksen and Dadalauri, 2016 p.16).

More specifically, cognitive interest lay in tracing instantiations of types of non-observable psychological forces as causal mechanisms and psychological states explaining individual behaviour and outcomes, based on case descriptions. Identification of an IOR goal was used to orient process tracing towards something recognisable and relevant to cases but cases were accorded freedom to focus on *related* situations and events of their choice with emphasis given to reflecting inwardly on what conditioned their individual behaviour and how their behaviour unfolded in practice, contributing to outcomes.

3.5.6 Fuzzy set Qualitative Comparative Analysis (fsQCA)

Qualitative comparison analysis (QCA) and more specifically fuzzy set QCA (fsQCA) was employed to efficiently *explore* relevancy of specific case conditions to intelligibility levels in both confirmatory (CS) and test case (TS) studies. These conditions were not all necessarily discernible in advance or under the control of

the researcher. Analysis therefore proceeded based on conditions obtained. Recognising that for in-depth case studies detailed qualitative analysis may itself provide for identification of stronger causal relationships (Jordan et al., 2011), it merits clarification that the focus of *detailed* qualitative analysis was to establish robust *interpretation* of interview data to unearth meanings and experiences, not exploration of causal conditions. The set-theoretic method and its application was guided by a range of literature *critically* building on the method first introduced by Ragin (Ragin, 1987). However, given the highly tentative exploratory findings for both studies, limited space is accorded to explaining fsQCA methodology here or reporting findings in Chapter 5.

This concludes reporting the overarching methodology and methods employed summarily captured in Figure 16. Specific study designs and tailoring of methods are now presented.

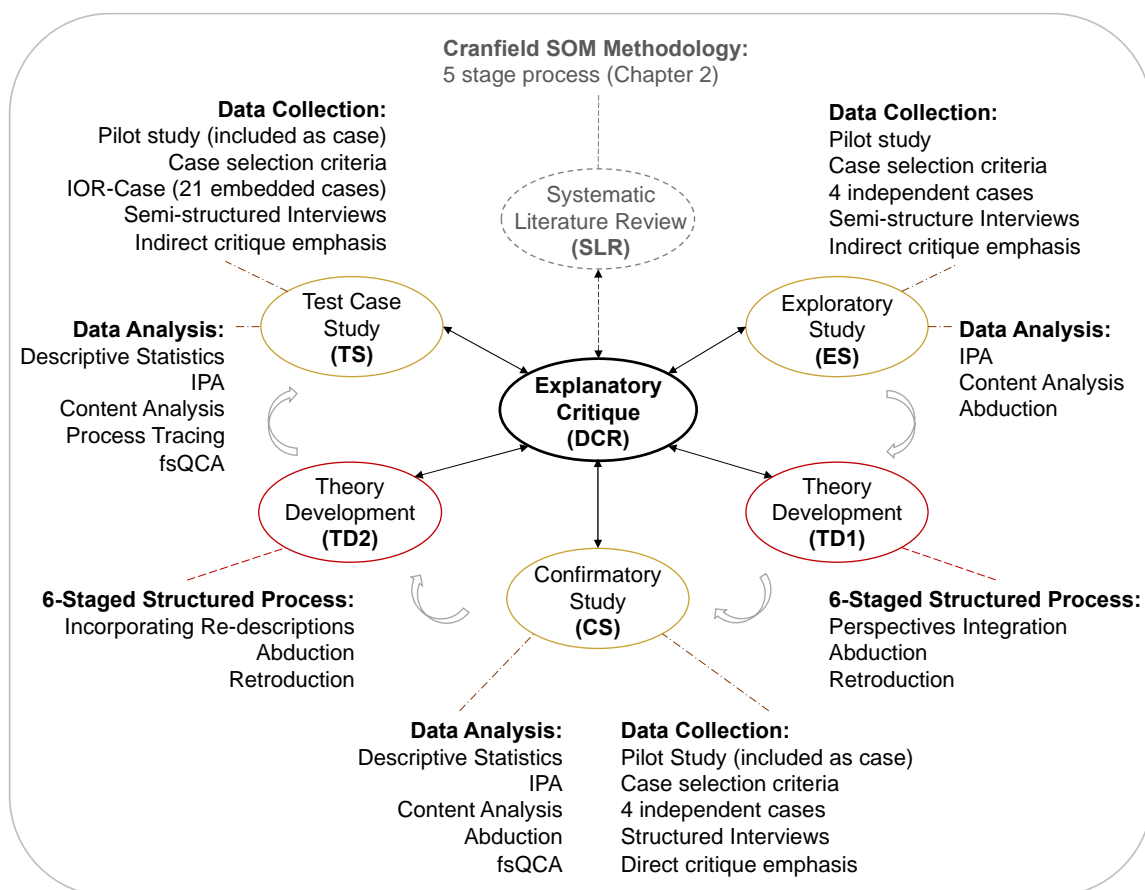


Figure 16. Research methodology summary

3.6 Exploratory study (ES)

The central context of interest being the aerospace industry explains the focus on aerospace industry practitioner experience in the exploratory study where the specific research question was:

ES-RQ: How does power in supply chain partnerships manifest itself to aerospace industry practitioners?

3.6.1 Study design and strategy

The research question was broken down into four sub-questions that focused on establishing what power means to practitioners, what characterises a supply chain partnership, what power characteristics are manifest in partnerships, and how valid the *initial* theoretical framework and model developed from the broad literature review were in practice. The framework assimilated key concepts from the literature held to represent power sources and effects, for example *authority* and *decisions* respectively, and the nature of power in the form of continuums, for example *rational-non-rational* and *objective-subjective*. The model depicted various perspectives of IOR-power noted, for example organisation power versus individual power. As a precursor to the systematic literature review, the study was designed as a small N qualitative study to unearth fresh practitioner perspectives.

3.6.2 Data collection

Four cases (anonymously A, B, C, and D) were purposefully selected satisfying all case selection criteria, as being mature practitioners with aerospace supply chain partnership experience, well known to the researcher, and willing to participate as independent practitioners, not as members of an organisation. Interview summaries in Table 11 shows a balanced mix of gender, age range of 43 to 58 and variation in experience in aerospace industry from 14.5 to 38 years, and in other contexts from nil to 15 years.

The interview questions were not provided in advance, only a general briefing of the broad subject of interest and purpose of the interview, re-enforced at the start of each interview. This was to solicit initially relatively pure or raw case

perspectives. Three interviews were conducted face to face in June 2010 at a private location in France. Due to diary changes, one interview was conducted using skype technology that proved only a minor hinderance given the case was well known to the researcher. Total productive interview time was 6 hours 55 mins that on average translates to single interview durations of 1hr 44 mins.

	Interviewee A	Interviewee B	Interviewee C	Interviewee D
Gender	Male	Male	Female	Female
Age	58	57	50	43
Nationality	British	British	British	British
Aerospace Experience (Years)	38	40	14.5	20
Other Experience (Years)	3	Nil	15	5
Current Role	Consultant (Aerospace)	Senior Management (Aerospace)	Principal Consultant (Ex-Aerospace)	Senior Management (Aerospace)
Interview Date	10-6-2010	17-6-2010	11-6-2010	20-06-2010
Interview Location	Toulouse (France)	Toulouse (France)	Skype (France / UK)	Toulouse (France)
Interview Duration (Mins)	105	125	115	70
No. Questions Completed	18 (100%)	18 (100%)	18 (100%)	18 (100%)

Table 11. Exploratory study interview summaries

The interview protocol purposefully generated 5 interview stages. Stage 1 sought to establish without theory guidance, case attributed meaning to power generally and specifically in the business context. Stage 2 actively reviewed with cases the initial conceptual framework to jointly assess the level of correlation with case attributed meanings. Stage 3 first established how partnerships were characterized by cases, as the context of interest, before proceeding to soliciting experience of power in partnerships exposing insights to what characterises IOR-power. Stage 4 actively reviewed with cases the initial model, to assess validity. Stage 5 was dedicated to exploring the interview experience and opportunities to improve the interview.

3.6.3 Data analysis

A highly structured coding system was developed to code different themes addressed in the interview. The primary themes of relevance to this thesis were

theme 1 and theme 4 covering expressed meanings of power and experience of power respectively, thereafter theme 9 (code T9) capturing data falling outside the coding system for themes 1 and 4. The pre-established coding system was based on the initial theoretical framework and model and guided capturing all permutations of connections between first the range of power *sources*, nature of power, and power perspectives, second the same structure for power *effects*. For example, 'Pc-AUT-Dir' was the code for customer (perspective, Pc) direct (nature, Dir) authority (source, AUT), as a power source code, and 'A-S-Pos' for supplier (perspective, S) positive (nature, Pos) action (effect, A), as a power effect code.

All data was coded directly in transcriptions thereafter assimilated into a series of summary tables synthesising by theme (1 to 9) data within and across cases. According with theme 9, a table collating power characterisations across cases found *not* to be fully covered by the initial theoretical frame, standing as new practitioner insights, were summarily captured as tentative propositions with supporting narrative data. This leads to presenting phase 1 theory development methodology that drew on findings from the exploratory study.

3.7 Theory development methodology phase 1 (TD1)

The basis and purpose of theory development phase 1 is first stated thereafter the six-staged methodical approach adopted is outlined. The section concludes with the rationale for theory validation conducted in the confirmatory study.

3.7.1 Basis

The basis of theoretical development was established in Chapter 2 (Sections 2.5.3 and 2.5.4) as a preliminary IOR-power conceptual framework (Figure 14), identified dominant and marginalised perspectives of IOR-power, and critical theoretical questions requiring resolution (Table 10) thereafter complimented by exploratory study findings (Chapter 5, Section 5.2).

3.7.2 Purpose

The purpose was to establish a unifying explanatory theory of IOR-power that meaningfully integrated perspectives, that is to advance two propositions developed in Chapter 2 (Section 2.6) restated below for ease of reference:

TP1: The different conceptualisations of power laid down by the origin studies represent different perspectives of power that are fully reconcilable to form a unified explanatory theory of power.

TP2: A unified explanatory theory of power reconciling power origin perspectives can accommodate dominant and marginalised IOR-power perspectives.

3.7.3 Approach

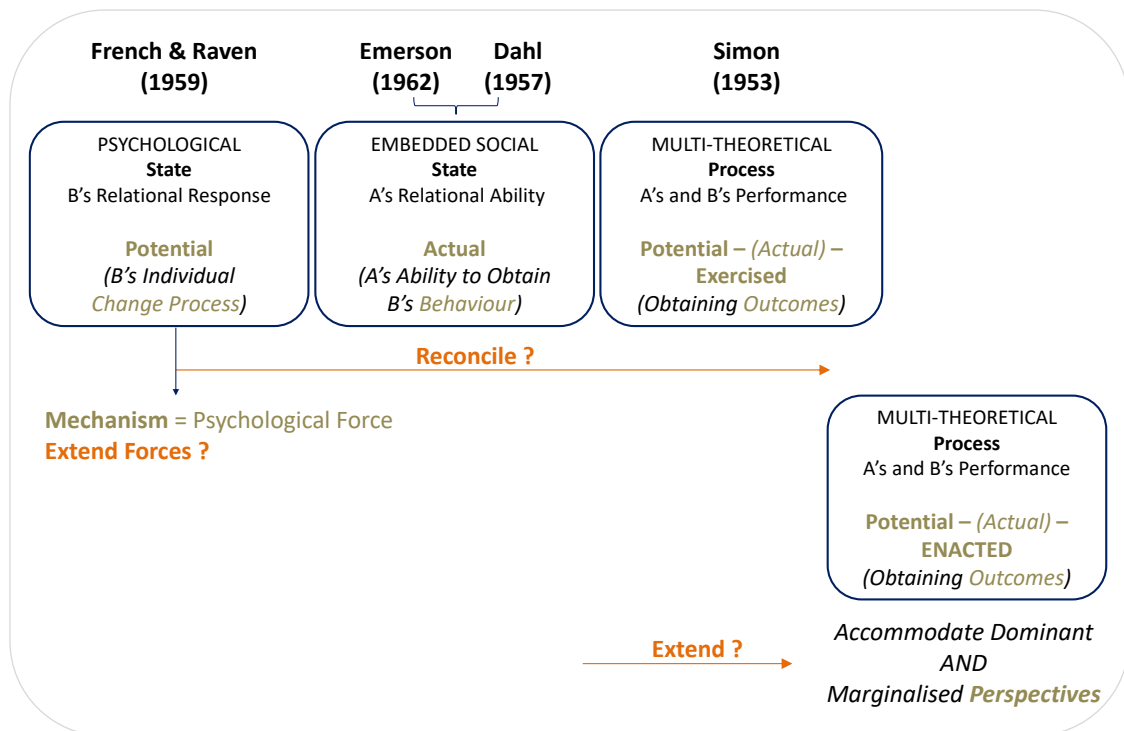


Figure 17. Approach to theoretical integration

The approach adopted is summarily depicted in Figure 17. Envisaged was the possibility of extending the narrowest conception of power laid down by the Origins, that is F&R's conception of power in terms of *Potential*-influence, a maximum resultant psychological force, to embrace first Emerson's and Dahl's conception of *Actual*-influence thereafter Simon's conception of *Exercised*-influence. More specifically, to develop a process model positing the range of

psychological forces *necessary* to account for power in all distinct states identified to stand as the basic *theoretical building block* of IOR-power, translatable to the IOR-level.

As presented in Chapter 2 (Section 2.3.4), the notion of the mind as a non-material *field of psychological forces* at work (Lewin, 1938) embraced by F&R, has credence more generally in offering a contemporary explanatory framework to meaningfully connect the mind and body, fundamental to explaining behaviour. In adopting this approach, critical theoretical questions were progressively either resolved or as a minimum plausibly addressed. The approach in detail *unfolded* as a six-staged process, each stage being subject to prior theoretical advances.

3.7.4 Stages

Stage	Description	Central Attribute	Critical Question
1	Philosophical Perspective	Objectivity	(CQ8)
2	Psychological Forces	Variable, Amount	(CQ2) (CQ4) (CQ7)
3	Comparative Analysis Model	Variable	(CQ1)
4	Forces Analysis	Assumptions	(CQ5)
5	Process Model	Relationship, Effects, Connectivity, Reciprocity, Asymmetry	(CQ3) (CQ5)
6	Explanatory Theory	All	(CQ6) (CQ9). (CQ10)

Table 12. Outline of phase 1 theory development stages 1 to 6

Table 12 summarises the main purpose of each of the six stages of theory development aligned to *central* IOR-power attribute(s) of relevance and critical theoretical questions addressed. An overview of each stage is provided sufficient to comprehend in principle how the theory was developed.

3.7.4.1 Stage 1 – Philosophical perspective

Dialectical critical realism (DCR) was established as the philosophical perspective permitting clear ontological and epistemological grounding of the theory. Correspondingly, the theory to be developed was a real definition of IOR-power in transfactual terms (Section 3.2).

3.7.4.2 Stage 2 – Psychological forces

Basic *types* of psychological forces that plausibly explain and distinguish conceptualisations across the Origins were developed through a *high-level* extension of F&R's formulation, addressing limitations. This included developing a 3-D measurement model exposing three power states, establishing value as a theoretical unit of force, and a value measurement system that gave credence to three types of psychological forces, termed *value resistance*, *importance*, and *intrinsic resistance* in explaining Potential-influence. Thereafter, two further psychological forces, *behavioural resistance* and *environmental*, permitted capturing Actual-influence and Exercised-influence states, establishing alignments between formulations of power bases, sources, Potential-influence, and dependence in an explanatory framework, and lastly theoretically a means to compare power across different relationships.

3.7.4.3 Stage 3 – Comparative analysis model

Through further *detailed* extension of F&R's formulation, a comprehensive comparative analysis model capturing a fuller interconnected system of dynamic psychological forces, in vector terms, was developed. The model meaningfully grounded power conceptualisations across Origins at the psychological process level, exposing mathematically the complexity of integration in explaining an induced discrete behaviour. This model provided a standardised language to permit moving to stage 4 of theory development.

3.7.4.4 Stage 4 – Forces analysis

The comparative analyses model was used to conduct extensive analyses exposing mathematically conceptual distinctions across the Origins and the significance of embedded assumptions. This led to unearthing implications of integration, a condition of unique alignment between power states, establishing a further basic type of psychological force, *motive*, and justification for removal of *limiting* assumptions, impeding integration.

3.7.4.5 Stage 5 – Process model

Based on stages 1 to 4 of theory development, a process model at the individual psychological level was constructed in 5 discrete steps. This involved establishing essential core process components in psychological force terms, interconnectivity across components, and grounding of forces in an A-B relationship, including relevance of acts serving as *means*, and distinguishing between power and influence. Descriptive components, *black-box*, *feedback-feedforward*, *power effectiveness* and *efficiency* were incorporated for explanatory purposes, treatment of outcomes broader than behaviour, and extension to the IOR-level.

3.7.4.6 Stage 6 – Explanatory theory

The final stage formalised the framework and model as a *provisional* explanatory theory of IOR-power, including attribute and component definitions, collectively qualities that describe, explain, and characterize IOR-power.

3.7.5 Theory validation

As a newly developed theory, the theory required initial intensive scrutiny. Central to arguing theoretical plausibility within a critical realism perspective is the extent to which the theory is intelligible to practitioners (Bhaskar, 2008). Given the complexity, obscurity, and abstract nature of the phenomenon may not be self-evident to practitioners, this translated into advancing the following proposition:

IP1: The provisional theory of IOR-power is reasonably intelligible to practitioners on direct detailed critical examination.

This leads to presenting the methodology for the confirmatory study (CS).

3.8 Confirmatory study (CS)

Aimed at advancing proposition IP1, the confirmatory study conducted in research phase 2 sought to answer the following research question with a secondary aim to explore practitioner traits that might explain intelligibility levels:

CS-RQ: To what extent does the theory render intelligible and explain power in IORs to practitioners?

3.8.1 Study specific design and strategy

Three factors identified during the exploratory study were considered in designing the confirmatory study. First, the challenge in accessing the full scope and complexity of the subject matter. Second, the difficulty individuals can have in expressing meaning of abstract concepts. Third, that recalling specific experiences of IOR-power can lead to uncomfortable emotions for participants. After careful deliberation with an emphasis on explanatory critique, the following research design was adopted.

The theory was rendered transparent to cases and subject to direct explanatory critique by cases. In doing so, attention was drawn to the full theoretical scope and complexity of the subject matter. The theory served as a datum through and by which cases could more readily anchor expressing their views, avoiding the requirement to recall specific instantiations of IOR-power albeit encouraged to do so, if helpful. This structure facilitated systematically capturing, analysing, and presenting data to expose intelligibility levels. The target number of cases was four, privileging depth over breadth of inquiry. To inform the research question in a critical and tractable manner, evidence from case critiques of the theory was sought to inform three specific interrelated sub-research questions:

CS-RQ1: What are the convergences / divergences in meaning?

CS-RQ2: What generates divergences in meaning?

CS-RQ3: What divergences justify theory re-description?

3.8.2 Data collection

Three cases were purposefully selected satisfying all primary case selection criteria, in being experienced practitioners across sectors including aerospace, but *specifically* having experience in product supply, co-operative intensive IORs, under-represented in empirical data informing the core IOR-studies (Section 2.5.2). Cases stood as extreme cases most likely to generate challenges to the theory. Two of these cases had participated in the exploratory study and were identified as highly suitable, and the third case was believed to be able to offer a different perspective.

The fourth case as noted was the pilot case (Section 3.3.4), emerging as a counter-extreme case in representing public sector education IORs, and *not* having experience in product supply, co-operative intensive IORs. All cases (anonymously W, X, Y, and Z) were well-known to the researcher and willing to participate as independent practitioners.

	Interviewee W	Interviewee X	Interviewee-Y	Interviewee-Z
Gender	Female	Male	Male	Female
Age	>60	50-59	>60	50-59
Nationality	British	British	British	British
Current Role	Retired Senior Teacher	Senior Management (Aerospace)	Consultant (Aerospace)	Retired Consultant (Ex-Aerospace)
Interview Dates	11-8-2013 12-8-2013	12-8-2013 18-8-2013	23-8-2013 9-5-2014	25-6-2014
Interview Location	UK (Manchester)	UK (Manchester)	UK (Manchester)	UK (Manchester)
Interview Duration (Hrs)	09:26	05:04	04:46	10:07
No. Questions Completed	50 (100%)	50 (100%)	50 (100%)	50 (100%)

Table 13. Confirmatory study interview summaries

Interview summaries provided in Table 13, show a balanced mix of formal gender, and that all participants were mature, being at least 50 years old. Profiles of sector, organisation role, and IOR type experience, further signified a breadth of experience. Five case secondary conditions, male traits, female traits, deference, understanding of IORs, and understanding of natural power, were targeted to explore relevance in according intelligibility. Secondary conditions obtained offered reasonable variation necessary to assess relevancy and where inclusion of the pilot case proved advantageous.

A briefing of the subject of interest and purpose of the interview was provided in advance but not the interview questions given these required further explanation. Four interviews were conducted face to face between August 2013 and June 2014 based on participant availability at a private location in the UK. Total productive interview time was 29 hours 23 mins that translates to an average interview duration of approximately 7hrs 30 mins (excludes comfort breaks).

The interview protocol purposefully generated four discrete parts to the interview (A,B,C and D) framed by a formal introduction to the interview, and closed by an opportunity to review, discuss, and offer feedback on any part of the interview. The first (A) and second parts (B) focused on direct assessment of succinct definitions of each conceptual framework attribute (25) and process model component (15) respectively. A standard glossary of key terms was provided for reference. Supplementary detailed written explanations for each attribute and component were given orally, or available to read directly. The process model was also exposed for reference in Part B of the interview.

For each question in section A and B in sequence, cases first expressed views and discussed the intelligibility of attributes and components in capturing IOR-power that included exploring avenues of thought and seeking qualifications. Using a five-point Likert scale to simplify responding, for each question after deliberation cases assigned a level 1 to 5 of *understanding* of the question (1 = not at all; 2 = limited; 3 = unsure; 4 = mostly; 5 = fully). Cases then assigned a level of agreement again using a five-point Likert, designed to clearly distinguish between strong and marginal agreement/disagreement levels (1 = strongly disagree; 2 = slightly disagree; 3 = unsure; 4 = slightly agree; 5 = strongly agree). Establishing basic comprehension levels permitted some control over possible misinterpretations and was integral to interpretation of agreement levels.

Part C was dedicated to obtaining participant self-assessment of secondary conditions (5), and the final part D, examined indirectly participant self-assessment of the reliability and validity of the explanatory critique provided (5). Similarly, after deliberation and any qualifications necessary, cases assigned levels of understanding and agreement using the same Likert scales for 8 of these 10 questions. Customised scales were used to aid cases assign levels of two secondary conditions that related to specifying *understanding* of the IOR-context (1 = none; 2 = very limited; 3 = unsure; 4 = SCM role; 5 = senior SCM role) and *understanding* of natural power (1 = none; 2 = very limited; 3 = unsure; 4 = school level; 5 = degree level).

In total, the interview contained 50 questions. At various points throughout the interview participants were reminded that there were no right or wrong answers and encouraged to be freely critical but most importantly faithful to their views, to guard against unwanted bias such as preference to offer variability in responses, as expressed by one case:

'I feel bad that's it's all the same so far, you know what I mean. It's almost like... I have a tendency not to want to put the same score down all the time, but I haven't found a reason not to...' Case-X

All participants responded to all questions despite two participants finding the byte sized nature and/or sequence of questions difficult in parts A and B. Both sensed that a holistic view would be beneficial when assessing intelligibility of discrete theory parts. The option was provided to formally accord/adjust levels of agreement at any interview stage and note attributes/components of concern for review at the end of the interview. Largely agreement levels were recorded at the allotted interview stage and limited time was taken to reconsider responses.

Reflective research notes were taken during interviews and data analysis, primarily to aid interpretative analysis.

3.8.3 Data analysis

Data analysis was undertaken in four stages. In summary, after completion of all interviews, stage 1 used descriptive statistics to profile case experience and raw quantitative responses to assess feasibility of using fsQCA to explore relevancy of secondary conditions. Likert scale responses were numerically transposed (0 to 1 scale) reflecting responses in fsQCA methodology set membership terms of fully agree or fully disagree.

Stage 2 focused on detailed IPA analysis and content analysis of case qualitative data to obtain for each question a final researcher interpretation of *actual* levels of intelligibility, case conditions, and reliability and validity of responses. This was summarily recorded directly in the database (CADB 3). Quantitative data including descriptive statistics were then accordingly adjusted. This data supported quantitatively informing sub-research question CS-RQ1 and was used

in stage 3 that established case secondary conditions relevancy using fsQCA methodology, informing sub-research question CS-RQ2.

Stage 4 consolidated data across cases, critically assessing and mapping links in theory divergences, to mentally capture and abductively synthesise valid theory intelligibility gaps as tentative theory re-descriptions. Following the format of the exploratory study, tentative theory re-descriptions were thematically tabulated with supporting interview narrative data as key qualitative findings informing all sub-research questions, and notably CS-RQ3.

Reflective notes taken during interviews were compiled and used to thematically capture the nature of the explanatory critique process, that combined with findings across analyses, collectively provided a comprehensive assessment of theory intelligibility across cases.

3.9 Theory development phase 2 methodology (TD2)

The following first clarifies the basis and purpose of theory development phase 2 thereafter presents the general approach adopted. The section concludes by clarifying the rationale behind further theory validation in the test case study.

3.9.1 Basis

The basis of theory development was the provisional conceptual framework and process model constructed in theory development phase 1 (Section 4.2), and the findings from the confirmatory study (Section 5.3).

3.9.2 Purpose

The findings of the confirmatory study surfaced the opportunity to enhance explanatory significance or strength (explanatory power) of the theory. The aim was to advance proposition TP3 to a level judged to have reasonably resolved intelligibility shortfalls, thereby enhancing intelligibility and utility of the theory.

TP3: Under-explained power qualities can be resolved through theory re-descriptions that are supported by the literature.

3.9.3 Approach

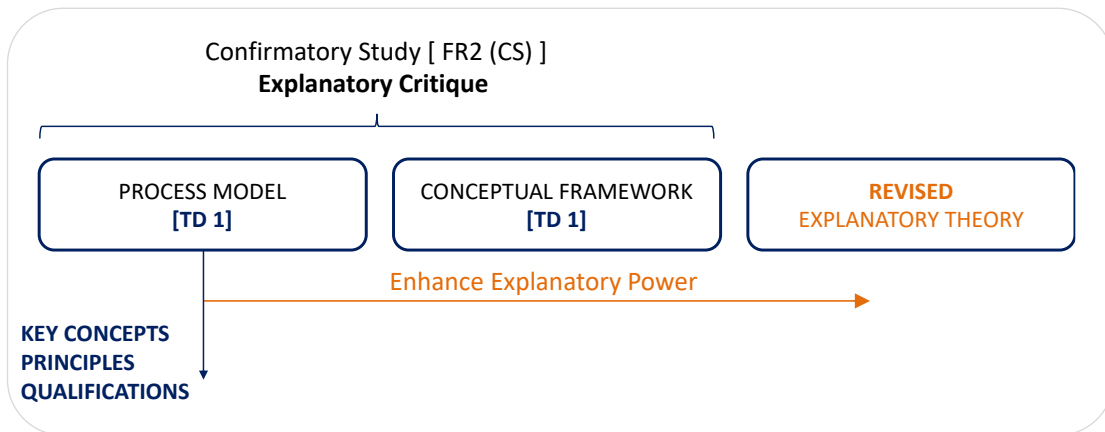


Figure 18. Approach to enhancing explanatory power

The approach adopted is summarily captured in Figure 18 where in contrast to phase 1 theory development, the process model was the focal starting point. Theoretical re-descriptions requiring resolution distilled into key concepts, principles, and qualifications. These were addressed within the model first then translated back to the conceptual framework. The rationale emerged from the confirmatory study. The process model had generated proportionally more valid divergences but was found to represent the phenomenon more clearly and lack of *full* alignment between model and framework had hindered intelligibility.

3.9.4 Stages

Stage	Description	Central Component	Key Related Component
1	Model Forward Extension	Outcome	<ul style="list-style-type: none"> Goals Environment
2	Model Backward Extension	Organised Resources	<ul style="list-style-type: none"> Dependence Value Resistance Intrinsic Resistance
3	Model Adjustments	Actual-influence Enacted-influence Means	ALL
4	Power v Influence	Motive	<ul style="list-style-type: none"> Organised Resources <i>and</i> Outcomes Power Sources <i>and</i> Effects
5	Framework / Model Alignment	ALL	-
6	Revised Explanatory Theory	ALL	-

Table 14. Outline of phase 2 theory development stages 1 to 6

Table 14 and the following summarises each of the six stages of theory development cross-related to process model components. The approach in detail unfolded again as a logical six-staged process, each stage being subject to or related to previous model developments. The following briefly presents the six stages sufficient to understand theory enhancements exposed in Chapter 4.

3.9.4.1 Stage 1 – Model forward extension

As the most basic building block of IOR-power (*the essential core*) heavy burden was placed on interpreting and visualising how through horizontal, vertical, and longitudinal extension, discrete effects (*direct and consequential*) emerge as collective effects generating relevant outcomes over time. Formal addition of three components, *outcomes*, *environment* (social and natural), and *goals*, jointly provided the requisite conceptual breadth and depth of outcomes, furthermore, enabled formally capturing the driving force behind the process, held to be goals, and establish a formal connection between the social and natural environment.

3.9.4.2 Stage 2 – Model backward extension

Extension of the model forwards called for extension of the model backwards to fully account for outcomes but more importantly enabled a clearer account (*using a recognisable model language*) of central power state, *dependence*, previously embedded in component Potential-influence as its equivalent (mirror image). The formal addition of component *organised resources*, capturing the mere existence of attributes (agent A) as resources, permitted realignment of all upstream mechanisms. In turn this generated more self-explanatory relationships between core components, through correspondence with Integration Definition for Function Modelling language, IDEF0 (Mackulak, 1984; Waissi et al., 2015).

3.9.4.3 Stage 3 – Model adjustments

Extending the model backwards and forwards permitted several model adjustments to further qualify the substance of components and key relations between components. Clarity and grounding of the process at the primary building block level (*individual psychological*) was retained whilst facilitating *translation* to the inter-organisation (IOR) level.

3.9.4.4 Stage 4 – Power versus Influence

Enhancing explanatory power permitted a clearer distinction yet inextricable link to be made between power and influence and importantly expose a clear relationship between power, empowerment, and disempowerment. Influence was fruitfully delimited and anchored in core components sources and effects, whereby power became anchored in core components organised resources and outcomes. Influence more evidently is the embedded central process of sense-making and reasoning (black box) through which behaviour is induced generating outcomes, utilising resources in the process. The direct connection between humans and Nature *at work* was forged. Aristotelian causes (efficient, material, formal, and final) were employed to capture the distinction between power and influence, whereby motive is the *efficient* cause of both influence and power.

3.9.4.5 Stage 5 – Framework / model alignment

Frameworks are basic structures underlying a system, concept, or text. In theory development phase 1, the process model was developed from the conceptual framework and sought to establish a real definition of IOR-power (existential commitment) but no attempt was made to clearly align the framework and model. Theory development phase 2 established alignment whereby the framework explicitly complements and further qualifies the process model. In concluding stage 5, and as a precursor to stage 6, tabulated was how all valid divergences distilled into 27 power qualities relating to governing principles, key concepts, qualifications, or core principles requiring further elaboration had been addressed across the framework and process model.

3.9.4.6 Stage 6 – Revised explanatory theory

To formalise the revised explanatory theory, key concepts, qualifications, and principles not visibly prominent in the framework or model, were incorporated accordingly *within* attribute and component definitions. Specific models were also used to elaborate and formalise the theory as a revised theory offering enhanced explanatory power.

3.9.5 Theory validation

Theory development phase 2 incorporated significant theory re-descriptions. To further advance theory plausibility it remained necessary to test proposition EP in a concrete IOR-Case but also capitalize on the opportunity to broadly extend theory intelligibility through advancing proposition IP2:

EP: The revised theory of IOR-power aligns to practitioner descriptions and explanations of behaviour and outcomes in a concrete IOR-Case.

IP2: The distinction between power as the process governing outcomes and influence as the process governing behaviour, is reasonably intelligible to practitioners.

The theory having emerged more complex, led to distinguishing between theory general versus specific qualities to optimise further theory validation. Theory *general* qualities captured qualities with reasonable established credibility being judged relatively uncontentious by core IOR-studies and in principle aligning to dominant perspectives of IOR-power albeit not necessarily fully accounted for, for example, sources. Theory *specific* qualities captured qualities having more tenuous credibility or weaker grounding being marginalised in extant accounts of IOR-power and/or lacking supporting empirical evidence.

In total 10 qualities were considered specific qualities namely: outcomes (broader *consequences*); environment (*natural*); goals (*guidance*); Enacted-influence (*induces behaviour*); motive (*negotiated*); Actual-influence (*contingent, temporal*); means (*passive, unnecessary*); behavioural resistance (*sustainable*); IOR-influence (*emergent process*); IOR-power (indeterminate process). This leads to presenting the methodology for the test case study (TS).

3.10 Test case study (TS)

Aimed at advancing propositions EP and IP2, the test case study conducted in research phase 3 sought to answer the following research questions with a secondary aim to explore practitioner traits that might explain intelligibility levels:

TS-RQ1: How are theory specific qualities manifest in IORs?

TS-RQ2: How broadly intelligible is the theory to practitioners?

3.10.1 Study design and strategy

Foremost the strategy was to establish a joint research project with participating *organisations* through working closely with project sponsors and/or designated project leaders. A formal research proposal was generated to facilitate engaging organisations in the project in a fully transparent manner, including providing the research background, purpose, details of the participation sought, and all interview questions (organisation, partnership, and main process).

	Org-A	Org-B	Primary Selection Criteria Satisfied
Industry	Aerospace and Defence (prime contractor)	Professional Services	Yes
Size (headcount)	Circa 20,000	Core > 1,600; Total 18,000	Yes
Location	Multi-National	Global	NA
Relationship Role	Customer	Supplier	Yes
Relationship Type	Partnership Level - Type 1 (Lambert et al, 1999; 2008)		Yes
Relationship Longevity	>10 Years		Yes
Relationship Field	Infrastructure / Construction		NA
Number Of Participants (embedded cases)	10	11	Yes
Participant Profile (role / level)	See Stage 4 Analysis (Chapter 5)	See Stage 4 Analysis (Chapter 5)	Yes
Organisation / Partnership Interviews Duration	7 hrs 30 mins		NA
Main Interviews Duration	40 hrs 50 mins		NA
Interview Time Total	48 hrs 20 mins		NA
Interview Dates	Sept. 2018 – Jan 2019	Jan 2018 – Dec 2018	NA

Table 15. IOR-Case study profile

Although level of commitment and/or sensitivity of the subject matter (power) limited IOR-Case options, a highly suitable IOR-Case (Org-A, Org-B) was engaged. As summarised in Table 15, purposive sampling criteria were fully satisfied in the IOR being a typical and significant formal customer-supplier partnership (10 years; type 1) of substantial size (>1000 employees), with identifiable joint-working practices (ideal), reflecting the complexity of the IOR-context. The case also provided further challenge to the theory, given the *focal*

industry domain was construction yet embedded in the aerospace and defence industry.

The research proposal included a desired profile of individuals as *embedded* cases across organisations exposed in Figure 19 representing a balanced range of roles, positions, and degrees of involvement (direct / indirect) in the specific IOR-Case. Embedded case conditions explored for relevance to definition intelligibility levels (were generational core values (GenX, GenY, GenBB) experience (maturity, senior management level, commercial role, centrality), and evaluation process (reflective time, formal gender). Interviews were conducted between January 2018 and January 2019. Total productive interview time was 48 hours 20 mins.

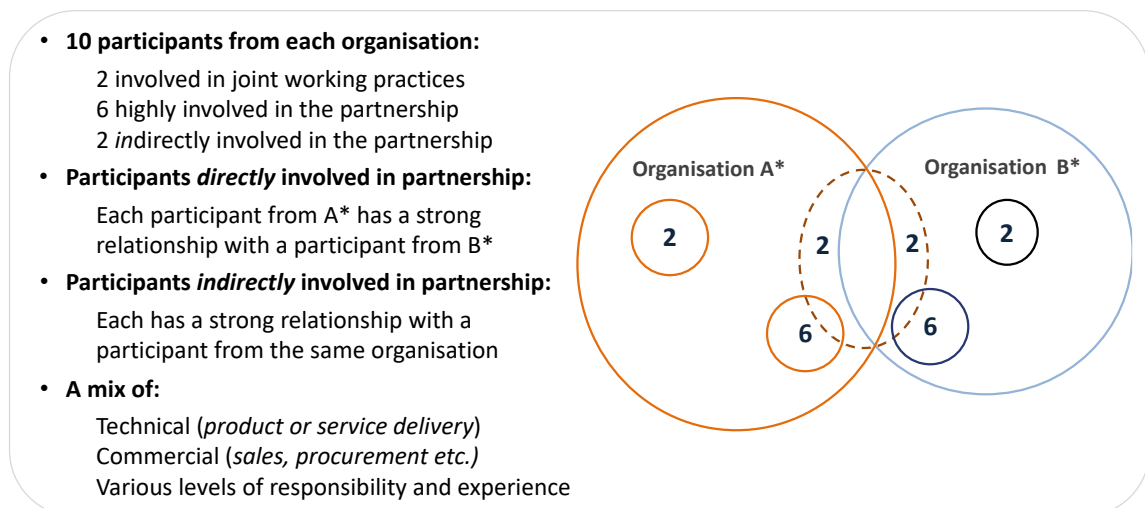


Figure 19. Profile of embedded cases

Most of the specific power qualities under test were types of psychological mechanisms (mental forces) or states that cannot be directly observed only perceived or sensed and then described or explained in some manner. Guided by Ulriksen and Dadalauri (2016), 10 specific propositions deductively following from theory *specific* qualities either *implicating* instantiations of the types of psychological forces at work or establishing relevance of entities and states were generated for testing purpose, as follows.

P1: **Outcomes** of relevance extend beyond human behaviour and includes the consequences of behaviour that may use or consume resources.

- P2: **Enacted-influence** directly induces behaviour, including abstention, that forms outcomes.
- P3: **Environments** of IORs includes material forces at work namely, Nature, human physical acts, and human creations, that are directly and indirectly relevant to IOR-behaviour and outcomes.
- P4: **Goals** guide rather than control behaviour and outcomes.
- P5: Individuals mentally negotiate reasons to behave consciously and subconsciously (**Motive**).
- P6: **Actual-influence** is a contingent and temporal ability to induce behaviour of the self and others (attributed), at will.
- P7: **Behavioural resistance** is sustainable.
- P8: **Means** as intentional and unintentional inducing acts are significant in governing behaviour but not always necessary.
- P9: **IOR-Influence** is a complex, emergent, regressive, and obscured flux of discrete influence processes.
- P10: **IOR-power** is a contingent and indeterminate process.

Each proposition was further translated into two more specific *sub-propositions* (total 20) and focused questions to be asked of case data to facilitate alignment of process descriptive data with the theory. As noted in Section 3.3.4 (pilot study), it became necessary to obtain data supporting a further 6 general theory qualities as evidentiary support adopting a similar approach. In total, 50 questions standing as data types to be evidenced were generated positioning theory and data in close proximity (Ulriksen and Dadalauri, 2016).

3.10.2 Data collection

Commencing briefly with organisation and partnership (independent, joint) interviews, all were conducted prior to the main interviews with one participant from each organisation. This provided valuable information on the broad history, nature, and status of each organisation and the focal relationship. The *joint* partnership interview also proved enlightening for each participant. Interview duration totalled 7 hours 30 mins, including the pilot interview that offered a broader relationship perspective. These participants also contributed to main process interviews and were naturally framed by these context interviews.

In addition to the pilot case, according with the desired profile (Figure 19), 20 cases were purposefully selected by organisations thereafter willingly engaged as organisation members in the research. In total therefore, 21 embedded cases contributed to theory testing (main process interviews). Case full condition profiles across organisations including secondary conditions demonstrated a reasonable variation and mix across all conditions. All cases excepting the pilot case were unknown to the researcher prior to the study.

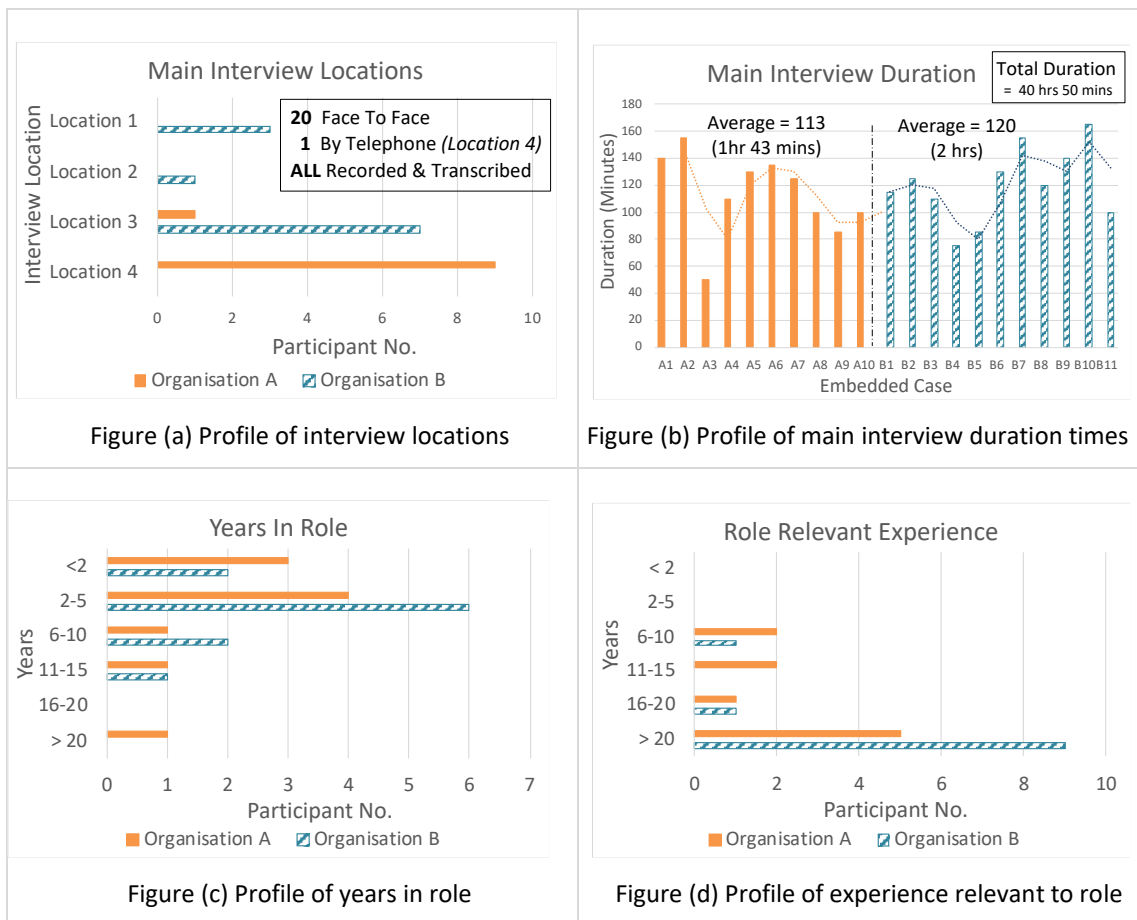


Figure 20. Embedded cases general descriptive data

As summarised in Figure 20, main process interviews were conducted at four distinct, physically distanced, organisation premises. Average interview duration for Org-A was 1 hour 43 minutes, and for Org-B, 2 hours, thereby comparable across organisations and totalled 40 hours and 50 minutes. Most cases offered in-role experience of between 2 to 5 years, but most had relevant experience spanning over 20 years.

The main interview questions provided in advance in written formal interview requests to all participants, included a general briefing of the broad subject of interest and purpose of the interview. At the request of one project leader explicit accord of confidentiality was included in interview invitations. All interviews were conducted face to face following a schedule based on participant availability, excepting one interview, that required conducting by conference call due to diary changes. One participant was also unable to attend on the day but suitably replaced, to some extent enhancing case condition diversity.

Main interview consisted of 11 core questions, designed to first solicit *general* process descriptions of how case behaviours are conditioned thereafter descriptions of two *specific* processes unfolding (questions 8 and 9), one purposefully guided towards revealing the role of behavioural resistance. The interview was designed to focus individuals towards reflecting of their own mental processes in practice, using an embedded focal individual-individual relationship and a specified IOR joint-goal (Goal G) selected by both project leaders as an anchor to orient process descriptions *collectively* towards a desired outcome.

The primary concern was that the descriptions were sufficiently detailed and *trustworthy* to stand as evidence of how theory specific qualities manifest in some form governing behaviours and outcomes, and not that the descriptions obtained be wholly accurate and undistorted. The method of analysis and synthesis of data relied on meticulous and critical interpretation of specific detailed accounts. Contextual data served to frame interpretative analysis only. For example, observations of transformation to open plan offices in both organisations (independently in progress) supported references thereof in interviews, and organisation structure and performance described were equally supported by organisation websites. Correlation between cases on specific events reported to have occurred also emerged albeit from respective viewpoints.

In contrast to the confirmatory study, participants were not made aware of the theory under test and were therefore not theory led rather experience led. The researcher however was purposefully theory led in searching for evidence to support, challenge, or refute the theory, corresponding with the objective of the

study, that of theory *testing*. Data collection and analysis nonetheless remained an abductive process whereby the researcher was guided but not blinded by the theory, remaining open to new observations and findings.

Integral to the final question 11 given in advance, 'In the organisation A-B partnership, what is the difference between influence and power?' participants were requested to quantitatively score agreement to two basic definitions of influence and power, on a 10pt scale anchored at fully disagree (0) to fully agree (10) and qualitatively explain their responses. The decision not to continue to employ a 5-point Likert scale was based on the confirmatory study, where indicated was a preference to offer more precise responses. Having conducted the interview it was believed participants would be mentally prepared to offer meaningful high-level responses to intelligibility of influence defined as the process that governs an individual's behaviour, and power defined as the process that governs outcomes, in IORs. This element of the interview proved informative. Most participants engaged in theoretical analysis, thinking through and challenging preconceived notions, ideas, and accorded meanings, providing further insights to what conditioned *perceived* intelligibility levels.

3.10.3 Data analysis

A precursor to analysis was the extraction and tabulation of all case transcript data into the preformatted central analysis database (CADB3). Thereafter, data analysis was undertaken in four stages.

Where stage 1 focused on descriptive statistical analyses to profile cases and assess feasibility of exploring relevancy of secondary conditions using fsQCA, stage 2 involved detailed IPA analysis and content analysis at the embedded case level. Following the order of interviews, for each case qualitative data was coded and aligned to sub-propositions thereby propositions P1 to P10 under test. Analysis followed the analytical sequence referred to in Section 3.3.4 that commenced with evidencing goals (P4), moving through to IOR-power (P10) coding data accordingly. For each case process tracing was consolidated at the case *general* level, drawing on general and specific process descriptions.

Stage 3 analysis turned to cross-case analysis to determine overall levels of support for propositions. Following the *format* of the exploratory and confirmatory studies, 50 tabulated summaries were compiled exposing examples of interview evidentiary data from each case for each data type (sub-proposition). Evidentiary gaps by case and sub-proposition were then tabulated providing a visual picture of evidentiary data coverage across cases and organisations, from which descriptive statistics summarising evidence were generated. Summary data was analysed to surface any significant patterns that might be material to findings.

Stage 4 turned to analysis of theory intelligibility where case accorded raw scores represented *perceived* intelligibility. IPA analysis was used to qualitatively establish researcher assessed levels of *actual* intelligibility for each case and correspondingly *actual* intelligibility scores. The rationale for adjustment of scores was recorded. A qualitative assessment of case conditions explaining actual intelligibility gaps was also conducted and thematically synthesised across cases. Analysis thereafter divided into two distinct fsQCA analyses that permitted evaluating the relevancy of conditions to *perceived* (analysis 1) versus *actual* (analysis 2) intelligibility of definitions.

3.11 Chapter summary

This chapter has explained and justified the adoption of dialectical critical realism (DCR) as the philosophical perspective to underpin the research project correspondingly designed as an explanatory critique, and the consistent use of case study methodology to advance an explanatory theory of IOR-power. In following this perspective, elaborated was how abduction and retroduction analysis techniques were appropriately embraced, practitioners as cases actively participated in the research, how pilot studies were conducted and utilised in the research output, and how reliability and validity was strived for and controlled. An overview of recognised data collection and analysis methods employed was provided and substantiated, thereafter specific designs and tailoring of methods for the three field studies and two theory development phases undertaken.

4 THEORY DEVELOPMENT

4.1 Chapter introduction

Chapter 4 is dedicated to exposing the formal theory developed in this thesis. First, Section 4.2 presents the provisional theory constructed in the first phase of theory development (TD1). This is followed in Section 4.3 by presentation of the revised theory re-constructed in the second phase of development (TD2).

4.2 Theory development phase 1

In phase 1 theory development, propositions TP1 and TP2 were advanced. Following the methodology outlined in Section 3.7, the preliminary conceptual framework presented in Chapter 2 (Figure 14) was structurally elaborated and through resolving critical theoretical questions, a transfactual process model was constructed unifying dominant and marginalised perspectives of IOR-power.

4.2.1 Conceptual framework

The elaborated provisional conceptual framework developed is exposed in Figure 21 and stands as a static descriptive definition of IOR-power. The framework captures 25 attributes by functional role characterising IOR-power, from its essence broadly and specifically, to its nature and determination thereof. corresponding fully with the preliminary framework. Attribute core features and example key dimensions thereafter elaborate the significance of attributes advanced within the IOR-field of study, enhancing explanatory power. To avoid repetition and given the conceptual framework is further developed, its presentation here is limited to providing visibility of the framework (Figure 21).

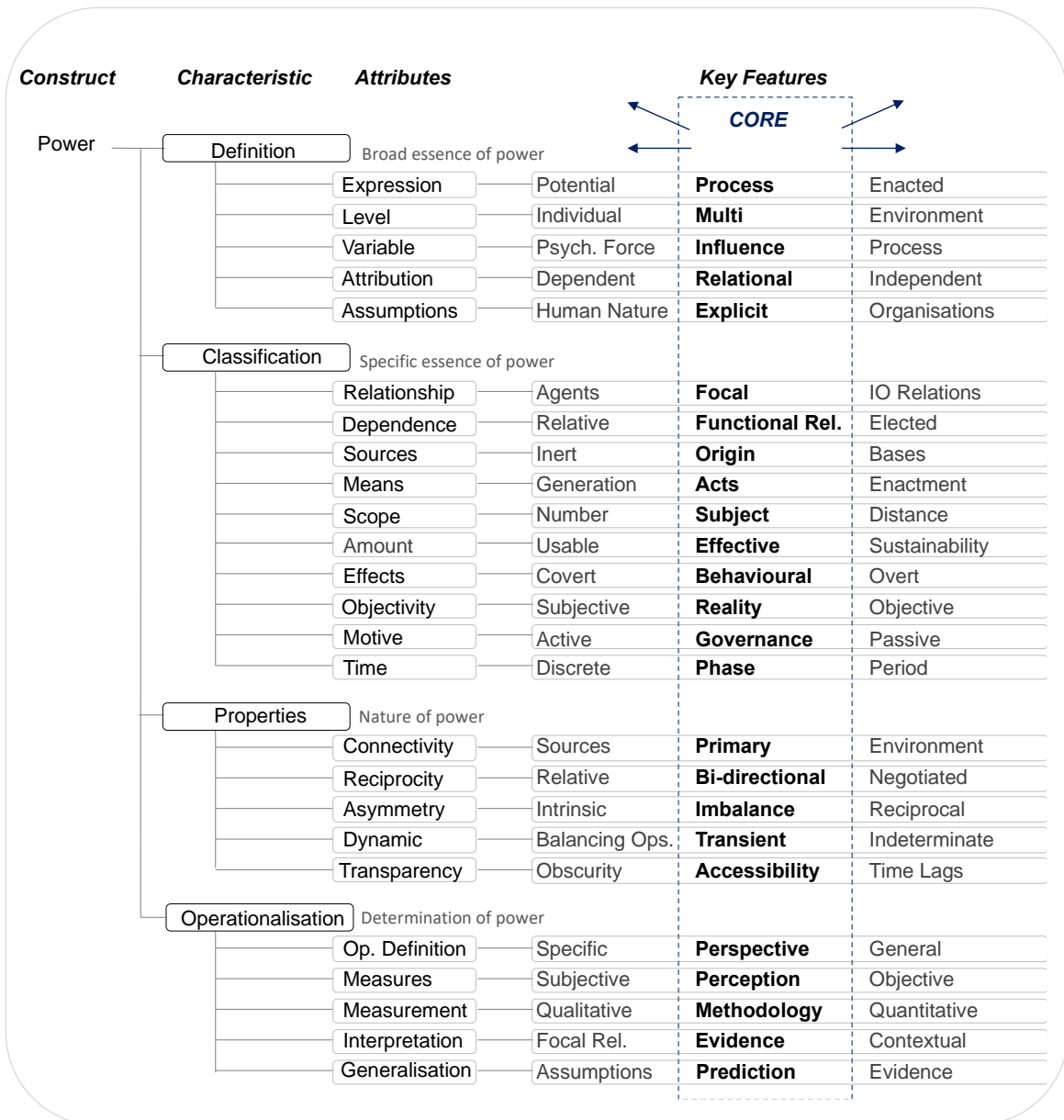


Figure 21. Theory development phase 1 provisional conceptual framework

4.2.2 Process model

The process model is exposed in Figure 22. The following summarily describes the model, elaborating key general principles and how critical theoretical questions CQ1 to CQ11 (Section 2.5.4; Table 10) that emerged from the detailed analysis of the IOR core-studies were addressed.

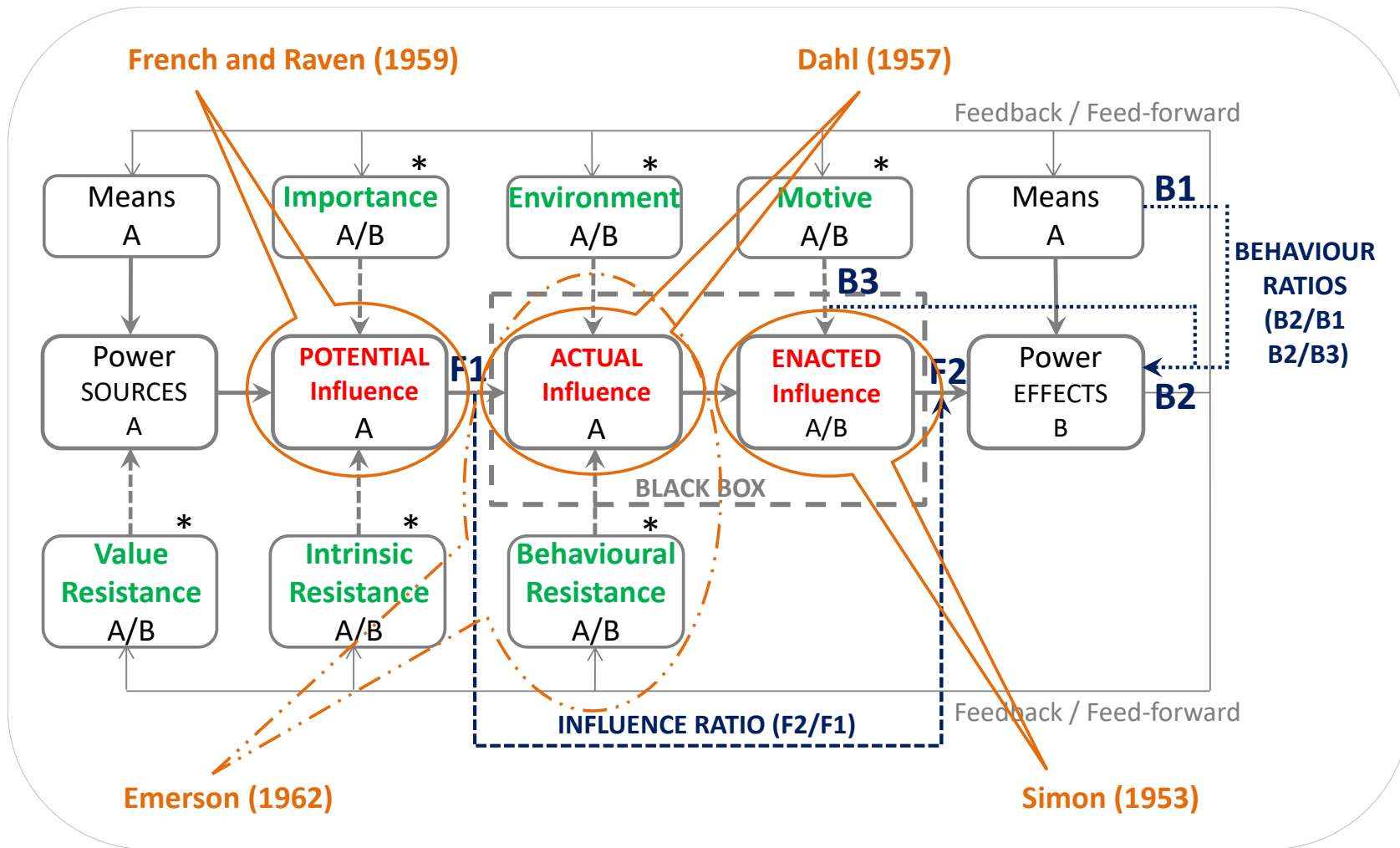


Figure 22. Theory development phase 1 provisional process model

4.2.2.1 Philosophical grounding

Foremost, the process model stands as a real definition of IOR-power with existential commitment within a DCR philosophical perspective – a *building block* of IOR-power at its most basic level, the dyadic individual level. In the first instance, IOR-power is thereby explicitly *philosophically grounded* (CQ8). The entities posited, A and B, are real types of entities, most fundamentally individuals as semi-autonomous, thinking, goal driven human beings. The types of mechanisms are real types of mechanisms (transfactual domain), most fundamentally types of psychological forces (annotated *) that when instantiated, that is, come into being, contribute to actual events, most fundamentally core mental states of individuals (Potential-influence, Actual-influence, Enacted-influence) leading to individual discrete covert and overt behaviours (power effects). Psychological forces, core mental states, mental events (covert) and physical events (overt) that arise (actual) may be experienced and perceived, or not, by the individual themselves, that is, may arise consciously, sub-consciously, or unconsciously (empirical). Similarly such events may or may not be experienced or perceived, by others.

4.2.2.2 Psychological process and unit of force

IOR-power theorised to exist in this manner resolves the ontological vagueness of IOR-power. It is formally recognised as objectively real, where perceptions are integral to IOR-power, as distinct from third party observations. The basic building block of IOR-power is conceived at the *psychological process* (CQ4) level, in the mind and mental processing of individuals, as a field of psychological forces binding the mind and body in governing individual behaviour. Central to the theory is the notion of value, the importance, worth, or usefulness of something. Value is the theorised *standard unit of force* (CQ4) applicable across the different types of psychological forces, collectively contributing to cognitive *evaluation* processes, the mental engine of IOR-power.

4.2.2.3 Reconciled power states and Emerson's resistance

At the heart of the process are visibly three but more correctly four distinct Origin power states. As indicated in in Figure 22, Potential-influence corresponds with F&R's power formulation that accords no relevance to the environment, and is thereby a potential ability to influence, subject thereafter to environmental influences. Actual-influence corresponds with Dahl's formulation that accords full relevance to the environment, capturing an ability to influence and induce a specific behaviour, that may or may not be utilised, always remaining subject to prevailing circumstances. Where behavioural resistance is present, Actual-influence further incorporates negative behavioural resistance that can be overcome, corresponding with Emerson's formulation, a sub-set of Dahl's actual power. This is the embedded fourth state. Lastly, ultimately governed by motive, Simon's formulation corresponds with Enacted-influence, where an ability to influence (Actual-influence), is drawn upon and takes effect inducing behaviour.

For influence to take effect (enacted), it must have existed previously as an ability in the prevailing circumstance (actual), and emerged from a potential ability, that might or might not be sufficient to induce behaviour (potential), subject to the prevailing situation (environment, behavioural resistance). Logically therefore Enacted-influence is generated by Actual-influence and Potential-influence is the source of Actual-influence, attending to reconciling *distinct states* (CQ1). Power sources are thus direct sources of Potential-influence, and power effects the direct effects of Enacted-influence.

4.2.2.4 Reconciled power bases, sources, and dependence

Capturing the core process from sources through to effects further reconciles *sources, bases, and dependence* (CQ2) across F&R's and Emerson's formulations. Power sources correspond with F&R bases as the general source of Potential-influence *and* dependence. Power sources captures the *general relevance* of something that is subject to value resistance reflecting not all things are generally valued the same by all individuals. Potential-influence that is equivalent to dependence as the source of *Actual-influence*, is thereafter

generated through the *specific* relevance or *importance* of the power sources in goal attainment for A and/or B.

The level of Potential-influence (dependence) accords foremost with the importance of the respective goal thereafter possibly reduced through intrinsic resistance reflecting either that whilst the specific power sources are generally valued the *specific* power sources are not fully important for goal attainment, as either not *necessary* or provisioned through *alternative* relationships (self or others). The greater the availability of alternatives, the greater the *potential* for intrinsic resistance, the less the specific importance of the specific power sources to goal attainment, and the lower the Potential-influence.

4.2.2.5 Elected versus constrained dependence

A significant distinction follows, that is whether Potential-influence (dependence) is thereafter *elected* (CQ2), that is freely sought with unlimited alternative sources available for goal attainment, versus *constrained* (CQ2), that is to some extent unavoidable given limited or no alternative power sources. The distinction is central to understanding that Emerson's formulation of power as the ability to overcome behavioural resistance (negative) is founded on constrained dependence (constrained Potential-influence). The theory however embraces all types of Potential-influence and thereby power as both coercive (overcomes resistance) and/or consensual (no or positive resistance). The distinction is nonetheless significant in explaining the forming of motives and correspondingly critical evaluation of the moral and ethical grounds of behaviour and outcomes.

4.2.2.6 Power-to versus power-over – Attributing psychological forces

The basic theoretical building block of IOR-power is an IOR *embedded A-B relationship* (CQ4). As shown in in Figure 22, psychological forces (value resistance, intrinsic resistance, behavioural resistance, importance, environment, motive), core mental states (Potential-influence, Actual-influence, Enacted-influence), the origins of power (power sources), and discrete behaviour induced (power effects) are specifically assigned or attributed to A and/or B. This optimally captures A's *power-to* act (A effects captured as A means) and simultaneously A's *power-over* B (A means; B effects) in a single *dual process* (CQ4) model for

explanatory purposes. Notwithstanding, each of these processes is physically independent, residing in the mental processing of A (power-to) or B (power-over), and only physically may interact at component power effects, if an act of A physically acts on B, or combines with B's behaviour constituting joint-behaviour.

Thus, in A's power-to process, A's Potential, Actual, and Enacted-influence is generated by A's psychological forces capturing A's *self-induced* behaviour towards attaining A's goals, where in Figure 22 A's behaviour is captured as means rather than strictly in the first instance standing as A effects. In A's power-over process, A's Potential, Actual, and Enacted-influence is generated by B's psychological forces capturing B's induced behaviour *attributed* to A, more appropriately being understood as B's power-*under* A. A's act (A means) may not only serve to physically act or combine with B's behaviour; it may also or simply serve to induce B's behaviour, as a form of demand, intentionally or otherwise, given A's Potential-influence over B, and B's perception of A's act. Furthermore, as depicted in both A power-to and A power-over processes, A may specifically act (A means) thereby generating, destroying, or utilising power sources, of potential utility to goal attainment, intentionally or otherwise.

4.2.2.7 Enacted versus exercised power – Mutuality and negotiation

Importantly, a mirror of the dual process capturing B's power-to (B means), and B's power-over A (A effects) is held to fully exist *in situ* and obtained through inversed assignment of components. Although thereby largely portrayed as four independent processes governing behaviour, all processes are concretely interwound in the minds of A and B, each being indivisible beings. Where physically the dual processes are envisaged to possibly combine at power effects, psychologically, both dual processes may possibly materially connect (causal significance) through psychological forces, and formally do connect through component *Enacted-influence*.

In practical terms, all A and B psychological forces related to A's power sources as shown in Figure 22 arise independently in the minds of A and B but may equally be *perceived* by the other. The same applies to B's power sources in the mirror in situ process. At any time, A's *situated evaluation process* (CQ4) consists

of psychological forces related to all four processes, A's power to, A's power-over B, and A's *perception* of B's power-to, and B's power-over A, all of which thereby contribute to generating A's behaviour as a demand (A means) or response to B (A effects), and vice versa for B.

Furthermore, nothing precludes A and B psychological forces being aligned and having similar causal powers. Most notably, A and B may align and effectively connect through motives, forming joint-motives governing intentional joint-behaviour. Nothing precludes sources being joint-sources, that is valued resources being attributed to A and B. It is through all such connections, that the basic process depicted in Figure 22 permits *accounting for mutuality* (CQ3).

Therefore, power within the A-B relationship is not held to be exercised per se rather emerges as enacted given any discrete induced behaviour of A or B (effects), that is in part or wholly attributable to the other (power-over), remains ultimately subject to acceptance by the performer of the behaviour, A or B. A's power-over B, and B's power-over A emerges as mentally *negotiated* (CQ4), formally or informally by both parties when seeking goal attainment. Furthermore, both power-over processes are viewed integral to power-to processes, rendering power-to, the primary power process. This strongly signifies power as a productive force, positive or negative, that *produces* and alters rather than maintains the state of affairs, through the self, and/or others.

4.2.2.8 Embeddedness – Environmental influence

In such negotiations, the significance of the environment cannot be overstated or overlooked. The environment is theoretically a key point of connection between each A-B relationships and all other relationships. The A-B relationship remains at all times embedded in its social and natural environment, in part shared by A and B, in part unique to A or B. It is psychological force *environment* that carries the weight of the demands, opportunities, and liabilities related to *all* other relationships, from internal to external organisation members as individuals, groups, organisations, through to Nature, *all* conditioning Actual-influence of both A and B, in both power-over and power-to processes. Fully embraced is the

multiplicity of goals, demands, conflicts of interest, contestations, and so forth that may arise contemporaneously within organisations and across IORs.

It is full recognition of the environment, that evaluation processes are deemed situated, recognising not only the complexity of B evaluating A's Potential-influence and demands and vice versa but that of the dynamic environment. It is theorised to be a question of prominence and mental capacity in the moment of forming a motive that governs the behaviour of A and B. Some types of Potential-influence (self, other, environment) and similarly some goals and demands (self, other, environment) will be in the foreground whilst others lie the background, out of focus or dormant.

4.2.2.9 Power comparability – Behavioural resistance

Every individual A and B, A-B relationship, and A-B power process is unique and subject to its environment and *not strictly comparable* (CQ7). Power comparability in Dahl's terms however relates to the ability of A to obtain a specific behaviour (effect) across comparable agents B and perversely full comparability of agents may not be required. Theoretically, behavioural resistance reasonably captures the significance of agent comparability in Dahl's terms and may be used as a more specific standardising tool, as follows.

Behavioural resistance stands as a compound psychological force conditioning *all* driving Potential-influences (self, other, environment) in play related to a *focal* goal against attending to *all* goals, when evaluating behavioural choices towards attainment of the focal goal. In principle, through accounting for behavioural resistance for a given demand and response obtained, different non-comparable A-B power processes in which different levels of behavioural resistance are present, may be normalised. Assuming an inverse linear relationship between behavioural resistance and obtaining a behaviour, a *form* of power comparability across inducing agents for a given effect may be derived at zero behavioural resistance. Notwithstanding, establishing a robust measure of behavioural resistance may be as difficult as justifying agents are comparable albeit Dahl gave no workable guidance on how to reasonably establish agent comparability.

4.2.2.10 Capturing complexity – Emergence and obscurity

Process components, *black box* and *feedback-feed-forward*, are key to portraying the complexity of power at the most basic building block level, thereafter at the IOR-level. Component black box, as indicated in Figure 22, frames Actual-influence and Enacted-influence reflecting the generation of Actual-influence and its *transformation* to Enacted-influence as the most complex, embedded, and obscured element of the overall process. It represents the core of the psychological field or mental engine where sense-making, evaluative, and reasoning processes arise in the human mind.

Component feedback-feed-forward visibly displays how at the basic building block level all discrete types of psychological forces are interrelated. All core states from sources through to effects may emerge, regress, or dissipate over time in an ongoing process subject to actual psychological forces in-play at a given time, feeding the black box. It is further through feedback, over time that discrete behaviour become increasingly historically rooted in prior behaviour and it is component feedback and feedforward, that lends the process to extension horizontally, vertically, and longitudinally, connecting not only A and B within an ongoing and evolving A-B relationship, but to other IOR embedded relationships, and beyond.

4.2.2.11 IOR-power – Building block extension and translation

The process model as a theoretical building block is a microscopic perspective of an IOR whereby the conceptual framework provides descriptive breadth and depth, qualifying the full complexity of IOR-power. To obtain IOR-power the building block must be replicated, aligned, and continuously resolved across all embedded A-B relationships, accounting for any conflicts and contradictions.

Theoretically, the principle of horizontal extension accounts for all individual behaviour at a moment in time, that with longitudinal extension captures all such behaviour through time, and through vertical extension captures all collective behaviour (individual, group, organisation) as upwardly inclusive, generating IOR-behaviour leading to IOR-outcomes. IOR-power is a downwardly inclusive phenomena over time; a mix of all behaviour and outcomes that emerges from

an ongoing *indeterminate flux of IOR-influence* (CQ5) and is thereby *not fully measurable* (CQ9).

Although through emergence it is acknowledged that structurally, process components are different at the IOR-level, it remains intelligible to conceive of shared understandings and functional equivalence from an explanatory standpoint and (Morgeson and Hofmann, 1999; Mouzas and Henneberg, 2015), for example motive translates into strategy. Already noted is that sources and effects may be viewed collectively. Nothing precludes further A and B as fully homogeneous, ideal groups or organisations, or recognising that certain acts may be appropriately attributed to A as an organisation such as the formal cancellation of an order (A means), thereby inducing response behaviour in Org-B. The key explanatory point is recognising that at the organisation and IOR-level such acts and response stand as downwardly inclusive, and not *necessarily* given by the response of any individual organisation member.

4.2.2.12 Adopted perspective – Theory laden

IOR-power is only partially observable, defying full analysis and explanation and is where adopted perspective becomes highly salient. Any empirical account of IOR-power is practically limited to a narrower perspective, for example a *single process component* (CQ10), sources, where it may be feasible to generate an understanding of key enabling organisation sources (enablers) or sinks (constraints) that *contribute* to explaining outcomes. Alternatively, an *embedded A-B relationship* (CQ10) may be more fully examined across the process to explain for example a prevalent behaviour. It may be necessary to make *simplifying assumptions* (CQ10). In all cases, it remains an appeal to the theory to render clear and *meaningful* (CQ11) the practical significance of an adopted perspective and inevitable limitations of empirical accounts.

4.2.2.13 Efficiency and effectiveness

Descriptive components efficiency and effectiveness as shown in Figure 22 thus elaborate the principles of IOR-power and not that such measures may be readily obtained. Effectiveness captures the extent to which desired behaviour (B3) is obtained (B2) under prevailing conditions. Effectiveness is the behaviour ratio as

shown in equation power effectiveness (1). Efficiency as a measure is more complex but follows the approach taken for physical systems where it is a product of influence efficiency (force ratio) and behaviour efficiency (movement ratio). In a power-over process, influence efficiency translates into the ratio of A's Potential-influence (F1) to B's Enacted-influence (F2). The movement ratio translates into the ratio of A's behaviour (B1) to B's behaviour (B2). Efficiency is thereby represented by equation power efficiency (2).

$$P_e = B3 / B2 \qquad \text{power effectiveness (1)}$$

$$P_\eta = (F2 / F1) \times (B2 / B1) \qquad \text{power efficiency (2)}$$

In doing so, it is intelligible to consider power being more efficient when supported by the environment and subject to positive behavioural resistance (full goal alignment), whereby a *simple* request (B1) generates an immediate and substantial behavioural response (B2), but only if the induced behaviour (B2) is the desired behaviour (B3) and outcome, is power thereby effective.

It is the explanatory aspects of the theory that offers the greatest utility in power analysis and discourse, dispelling with notions such as power *is* good or bad, *is* exercised over others simply *at will*, and can be strictly *measured*. The theory rather directs attention not least to the need to make explicit and justify any such assumptions and to the fact that any empirical account of IOR-power is necessarily or only practically ever a narrow perspective, at a given time.

This concludes presenting the principles of the theory developed in phase 1 that carry forward into presentation of the revised theory.

4.3 Theory development phase 2

In phase 2 theory development (TD2), both the conceptual framework exposed in Figure 21, and the process model exposed in Figure 22 were revised. Revisions incorporated justifiable explanatory enhancements based on the findings of the confirmatory study (Section 5.3). The following presents the revised theory that materially enhances the innate explanatory power of the theory exposed in Section 4.2.

For consistency the conceptual framework is presented first however the basis for the revisions incorporated largely follow revisions to the process model presented thereafter (Chapter 3 , Section 3.9).

4.3.1 Revised conceptual framework

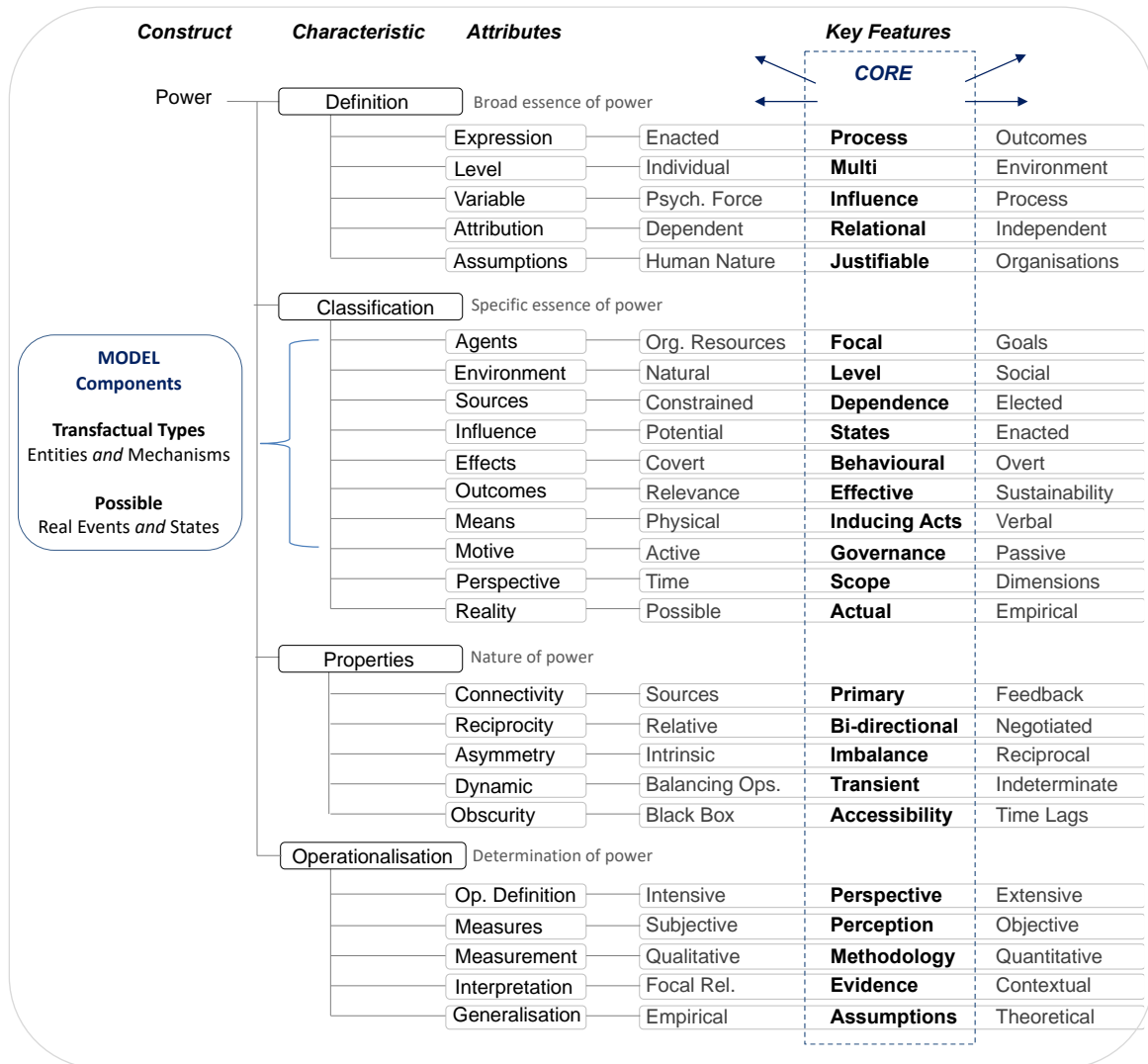


Figure 23. Theory development phase 2 revised conceptual framework

The revised conceptual framework is exposed in Figure 23 and continues as a static descriptive definition, characterising IOR-power from its essence broadly and specifically, to its nature, and determination thereof, through 25 attributes. Each attribute core may be extended further but as depicted captures essential attribute features complementing the process model in *comprehensively* characterising IOR-power. Attributes are interlinked and common features arise

across attributes. Features are thus also tailored to optimise portraying the significance of the attribute within the overall framework.

Commencing with *classification* attributes, to obtain alignment with the process model, there are significant alterations to the provisional framework. Foremost, prominence is given the *core* transfactual types of entities and mechanisms, and possible real events and states, constituting the process model, through grouping together and explicit annotation. In doing so, the focal agents A and B, the environment, outcomes, and influence are core essential attributes, replacing attributes relationship and dependence in the framework.

Dependence is also rather captured as the core feature of sources emphasising that dependence as a state may be elected or constrained. This reflects how in the process model, sources, dependence, and Potential-influence are reconciled and captured. Through formal introduction of agents as an essential attribute in conjunction with power sources carrying the core feature of dependence, attribute relationship and its defining relations such as commitment, trust, communication, and so forth, is rendered the power *context* that is both integral to and a product of power. The core feature of agents being focal, reflects how it is necessary to anchor an account of power in a focal relationship between two defined agents A and B, as organised resources with goals. Foremost the two agents are individuals (process model) but through extension may be human based including a range of resources (groups, organisations).

Thereafter, first perspective is formalised as a classification attribute emphasising a *specific* power stands as delimited in some manner. Accordingly, original attribute scope is the core feature of perspective thereby signifying the extent to which the process *is* captured that is not necessarily a question of the number of comparable agents and types of behaviour that can be induced. Time is also embedded in attribute perspective as an important extension of scope reflecting the temporal nature of any adopted perspective as being emergent or regressive. Attribute perspective further embraces continuums through feature dimensions that may or may not be measurable.

Moreover, IOR-power is held immeasurable due to the obscurity, complexity, and scale of the process, rendering original attribute amount no longer essential to characterising IOR-power. Correspondingly the process model turns attention towards explaining *how* power may be rendered more efficient and effective. The possibility of quantification in part nonetheless remains qualified through operationalisation attribute measurement, where methodology remains the core feature.

Lastly, reflecting a DCR perspective, reality is formalised as a classification attribute replacing attribute objectivity thereby emphasising an existential commitment where the domain of the actual serves as the core feature. Reflecting ontological depth the core extends to include the domain of the possible and domain of the empirical, recognising the theory lies in the transfactual domain. Similar to attribute amount, objectivity retains significance within operationalisation attribute measures, as an extension to qualifying dimensions being determined as lying on an objective-subjective continuum.

In correspondingly aligning *definition* attributes, importantly the theory offers a *single* general definition of IOR-power (expression) that broadly captures the essence of IOR-power as an emergent (downwardly inclusive) social and natural process governing IOR-outcomes. Process, stands as the core feature, clearly signifying a move away from single state-based conceptions of power. Both extensions equally position IOR-power as being enacted, not exercised, and concerns broader outcomes, not merely behavioural. Retained is how IOR-power is multi-levelled (level) qualifying the significance of levels in IOR-power being downwardly inclusive but also relationships between and across levels from the individual-level through to any level in the environment (e.g. network, global) whereby the boundaries of IOR-power are in reality, blurred.

Corresponding with the general definition, the central variable is retained as influence qualified through extensions to be a psychological process consisting of discrete psychological forces. Concretely IOR-power is thereby positioned as being *grounded* in, albeit not limited to, the mind of the performer of behaviour, be that in inducing behaviour of the *self* (A power-to) to induce behaviour of others

(A means) or not (A effects), or as the *other* being induced to behave (A power-over, B effects). Significantly this shifts traditional descriptive emphasis away from the classic power holder towards greater account of the power subject (self/other). Notwithstanding, as captured by attribution, power remains relational between two agents A and B, where it is important to distinguish to what extent power is being attributed to the A-B relation, independent or dependent of the environment in which it is embedded.

Lastly, the core feature of attribute assumptions is that all assumptions be justifiable. Whilst limiting theoretical assumptions preventing integration of dominant and marginalised conceptions were formally removed, attention is drawn to two key justifiable assumptions that underpin the theory. First, that humans are indivisible, semi-autonomous beings with identities and goals, endowed with physical and behavioural resources, providing capabilities and liabilities to act. Second, that organisations are principally non-ideal, implicating the need to justify assumptions that rely on organisations being ideal, or to support claims to have obtained a meaningful *full* account of IOR-power.

Thereafter, *property* attributes remain largely unchanged but are extended to elaborate more clearly the significance and challenge each property represents. Specifically connectivity recognises a primary connection between A and B (power-over / power-to) as its core feature with feed-back/feed-forward rather than environment as an important extension alongside the interrelatedness of power sources that may serve as compound sources. The core feature of attribute reciprocity reflects the bi-directional flow of power emphasising that this is negotiated and relative. The core feature of attribute asymmetry, imbalance, recognises that power is both intrinsically imbalanced (absence of reaction) and may be reciprocally imbalanced (power advantage). Attribute dynamic captures that power is transient with emphasis on change rather than stability notably through balancing operations (power shifts) and as an emergent and regressive process thereby indeterminate. Attribute transparency to more reflect the reality of power is transposed into obscurity embracing component black box in addition to the absence of time lags as extensions to core feature, accessibility.

Lastly, *operationalisation* attributes remain unchanged but are extended in a manner consistent with all other characteristics reflecting key theoretical advancements. The core feature of attribute operational definition is perspective importantly committing to a *general* real definition and where determination of IOR-power stands invariably as an adopted perspective be that intensive (narrow) or extensive (broad) and always incomplete. Attribute measures and measurement have already been elaborated in accounting for removal of classification attributes, *amount*, and *objectivity*.

It remains important to note that the valid means of measurement remains to be established. Where attribute interpretation embraces evidence as the core feature, attention is drawn to the significance of evidence related to both the focal A-B relationship of interest and the context and is strongly related to attribute generalisation. Assumptions made about the A-B relationship and relationship context are central to both empirical and theoretical generalisations with focus oriented towards explanatory relevance rather than predictability.

This concludes presentation of the revised framework and leads to presenting the revised process model.

4.3.2 Revised process model

The revised process model is exposed in Figure 24 retaining the basic principles presented in Section 4.2.2 but incorporating theory re-descriptions made in the six-staged approach to advance theory intelligibility (Section 3.9). Tabulated definitions of components established at the basic building block level (individual psychological level) translated to the IOR-level, and detailed explanations of theory core qualities support the revised model. Explanation of the revised model is formulated around re-descriptions, commencing with model forward extension.

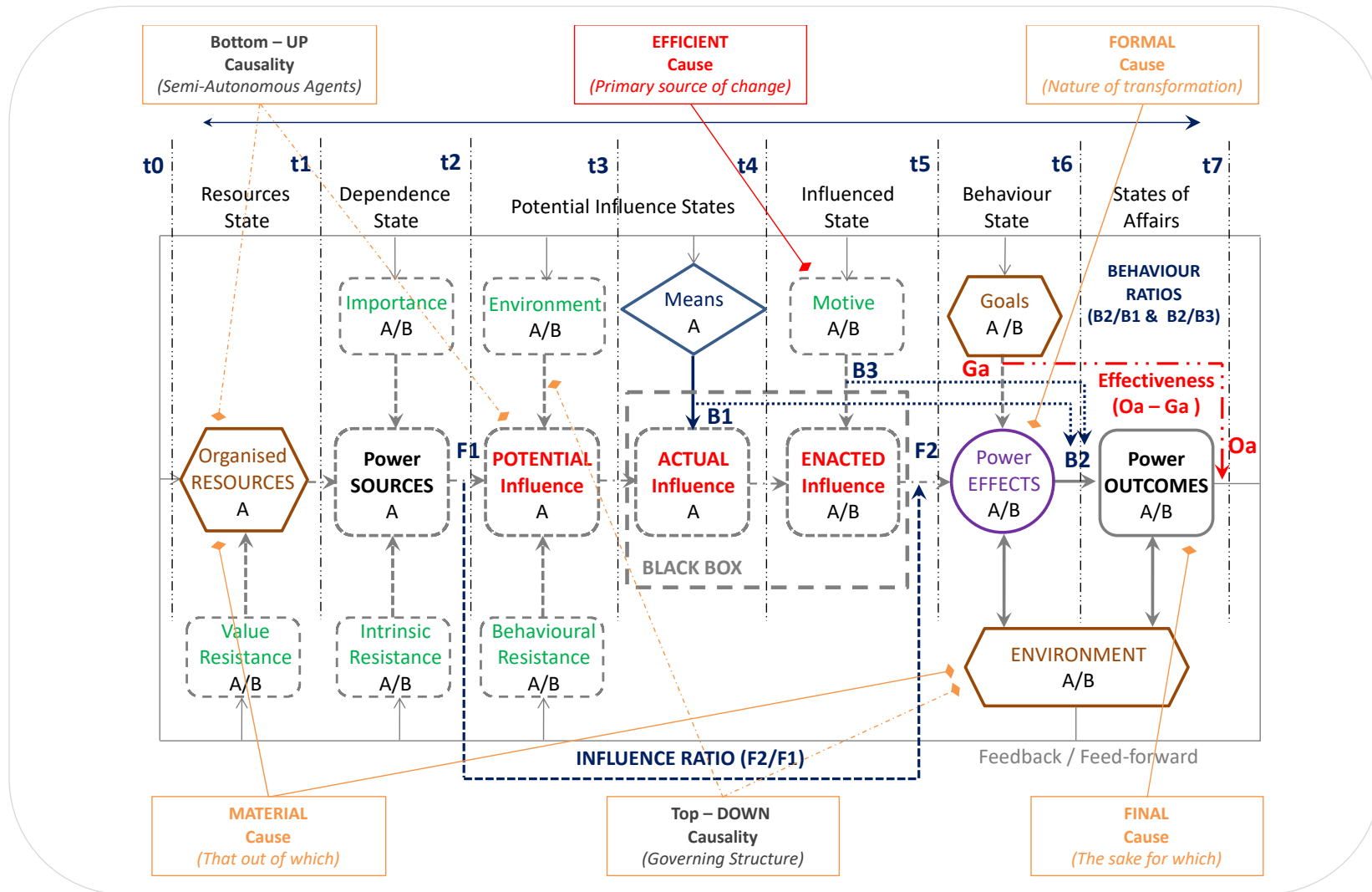


Figure 24. Theory development phase 2 revised process model

4.3.2.1 Model forward extension

Three components, outcomes, goals, and environment (social and natural) explicitly formalise that power outcomes extend beyond behaviour (effects), goals drive or lead the process, and the social and natural environment are materially and directly interrelated to both power effects and outcomes. All these components including power effects are attributed to both A and B, according greater emphasis to inter-dependence between power-over and power-to processes, and thereby joint working. Goals positioned as contributing to effects permits formalising the extent to which outcomes align with goals and whether an outcome of relevance is goal driven, or not.

4.3.2.2 Model backward extension

Addition of component organised resources formalises agent A as a real type of entity, and equally agent B in the mirror process. Realignment of all mechanisms representing types of psychological forces generating core states depicts that these mechanisms contribute to *transforming* the respective component into the next core component rather than generating the respective component as a core state. Organised resources stand as a *resource* state, contributing to generating sources as valued resources being thereby held in a *dependence* state, *specific* to the A-B relationship and equivalent to Potential-influence.

4.3.2.3 Model adjustments

Means is depicted as a *single* component, directly governing transformation of Actual-influence to Enacted-influence but where components black box and motive remain necessary to fully explain this complex transformation. Organised resources, environment, and goals, are formalised as real types of social and natural entities, populating the transfactual domain (Section 3.2, Figure 15). Power efficiency remains explained in the same manner however contributing force F1 (force ratio) representing A's Potential-influence (F1), is now correspondingly the input force to Potential-influence generated by the level of dependence on A's sources. Power effectiveness is more concretely captured in terms of goals and outcomes obtained given by equation power effectiveness (3).

$$P_e = (O_a - G_a) / O_a$$

power effectiveness (3)

Extended across the process are formalised states in time (t0 to t7) including a behaviour state and states of affairs, reinforced through the addition of a weighted arrow to bear the sense of the emergence of states, yet possibility of regression. Mental events (state formation, regression) are more readily recognisable as embedded in the process. The black box representing the *mental* engine of power, is also formalised as having three layers, perception (basic sense-making), mental stances (Actual-influence, identity, attitudes) and agentic (acting, absenting). The first two layers constitute a fluid mental framework, through which *covert* behaviour arises, and the third layer (agentic) is where overt behaviour emerges taking effect in both social and natural worlds (environment).

4.3.2.4 Power versus influence

A clear distinction yet inextricable link is made between influence and power. Influence is delimited and anchored in core components sources and effects, whereas power is anchored in organised resources and outcomes. Influence is the embedded central process of power through which behaviour is induced that may productively utilise resources (organised resources, environment) to generate outcomes. The direct connection between humans and Nature *at work*, over *time* (power) is forged at power effects and outcomes.

The power process is also more precisely defined in Aristotelian causal terms (Falcon, 2019). Where organised resources and the environment are both the *material* causes (that out of which), power effects, that is behaviour stands as the *formal* cause (nature of the transformation). Outcomes captures fully the *final* cause (the sake for which) encompassing all outcomes obtained, but if interest lies in what is *sought*, not necessarily what is *obtained*, goals may be deemed the final cause. Motive ultimately stands as the *efficient* cause (primary source of change) of power. Importantly, motive also stands as the efficient cause of influence. Thus what distinguishes influence from power are the remaining causes, where for influence, the material cause is power sources (valued resources), the formal cause is Enacted-influence, and the final cause, power effects (behaviour).

Thereafter, consistent with complexity theory (Benbya and McKelvey, 2006; McKelvey, 2004), both top-down and bottom-up causality is captured as taking effect at component Potential-influence. Top-down causality emanates from the environment as governing structures generating environmental psychological forces that interact with bottom-up causality (Potential-influence) emanating from semi-autonomous agents, A and B (mirror process). Governing structures therefore not only physically enable or constrain an individual's capacity to act to some extent, in addition these structures equally enable or constrain an individual's actual mental capacity to act (Actual-influence), subject to the extent to which they are recognised, embraced, or resisted.

Inclusion of top-down and bottom-up causality exposes a clear relationship between power, empowerment, and disempowerment, whereby governing structures (environment) through enabling, that is collective support and access to necessary resources, A and/or B may be empowered to act (Actual-influence) and obtain outcomes, or, through constraining, that is collective resistance and in-access to necessary resources, A and/or B may be disempowered to act (Actual-influence) and unable to obtain outcomes. Theoretically, this partially reflects the domain of the possible in Figure 15 (Chapter 3, Section 3.2) that may or may not become actualised (domain of the actual) in a concrete A-B relationship subject to levels of empowerment / disempowerment.

4.3.2.5 Revised Explanatory theory

Formal alignment of the conceptual framework and process model was described in Section 4.3.1. The posited theory stands as the revised process model and revised conceptual framework. Three specific models, *reality domains*, defining *perspective*, and qualifying *measurements*, formally complement the revised framework. A further three models, *embedded process*, *theoretical evaluation system*, and *empowerment-disempowerment continuum*, complement the process model.

4.4 Chapter summary

This chapter was dedicated to exposing the theory of IOR-power posited by this thesis developed in two discrete theory development phases. A provisional theory was presented followed by a revised theory that retained the basic principles but significantly enhanced theory explanatory power and plausibility. The theory was shown to comprise foremost a theoretical process building block, a transfactual model with existential commitment, characterising and grounding IOR-power at the IOR-embedded individual psychological level, that through extension and translation explains IOR-power, complemented by a static descriptive conceptual framework, jointly offering a comprehensive explanatory theory. This chapter provides the basis for understanding the significance of the analysis and findings of the three field studies undertaken presented next.

5 ANALYSIS AND FINDINGS

5.1 Chapter introduction

Chapter 4 presented two separate phases of theory development undertaken, supported by three field studies (Section 1.5, Figure 2). This chapter presents the findings from each field study in chronological order in sections 5.2 to 5.4. Findings related to the significance of IOR-power to cases are summarised drawing on evidence from across the three field studies in section 5.5. These findings were not expressly sought rather emerged from the studies and are relevant to indicating the utility of the posited IOR-power theory to practice.

5.2 Exploratory study (ES)

5.2.1 Section introduction

As detailed in Chapter 3 (Section 3.6) the exploratory study was the first step in understanding the level of alignment in academic and practitioner meanings attributed to power in partnerships primarily contributing to theory development phase 1. After summarising the context, insights beyond the initial theoretical frame (theme T9) supporting *tentative* propositions related to power definition, nature, distribution, and perspectives are presented. Lastly, findings concerning the utility of the initial theoretical frame are exposed.

5.2.2 Contextual summary

The context was *not* a concrete supply chain partnership, rather four practitioners profiled in Chapter 3 (Section 3.6.2) standing as individual cases, independent from each other and any organisation, each voicing freely experience and meaning attributed to power generally, and within supply chain partnerships. Notwithstanding, experiences were drawn from concrete supply chain partnerships spanning aerospace production and aftermarket domains including a multi-national joint venture, and other industries.

5.2.3 Definition of power

Related to defining power are four tentative propositions. The first proposition, that power is difficult to define, was founded on evidence that articulating or expressing what power is or represents generally not only in supply chain partnerships, was *difficult*. Whilst there was a sense of what power is, power was held a vaguely defined concept in the business context by Case-A. In the words of Case-C, power was like many words moreover learned and employed to represent something in principle understood without formal detailed reflection on the real substance of its meaning, that is, not necessarily fully understood:

‘I suppose it’s a word we all use. It’s like anything really, when you start to investigate something, it becomes more complex and philosophical than something we would just use in normal life, so it’s just, it was a bit of a challenging thought process.’
Case-C

Attempting to express power was thus challenging. Although in alignment with the academic literature in general terms, for example in the significance of authority, and the ability to influence, control or steer behaviour, as captured in proposition 2, there was a stronger sense that power related to obtaining something sought after, implicating intent with appropriate use as important features. This was identified, for example, in the following expressions of power:

‘... have the wherewithal to have control of the situation to get what you want.’
Case-D

Furthermore, qualified was how any power was held contingent on prevailing conditions including the power of others and of Nature.

‘...now that strong position, if you get a volcanic ash cloud, all of a sudden goes out of the window, something which is outside of your control, and going back to the JV then of course it was external influences like 9/11 [that] had a detrimental effect on the whole business.’
Case-A

Turning to proposition 3, that power is generally distinguished by type, instinctively attributed meanings of power were based on prominent features such as the origins of a given power, for example financial strength possibly further linked to outcome relevance, as in Case-A. This suggested one pathway

to how descriptive *types* of power may be conceived. Contextual roles and relationships may serve as an alternative typology, as captured by Case-B in distinguishing between, contractual, hierarchical, and relationship:

‘There’s, could I say contractual power, which is one where there is a formally documented relationship between two parties. There’s perhaps what I would call a hierarchical power such as that of a prime contractor and a supplier or an organisation that’s supplying information or, or something to somebody, and then probably relationship power, which is more about the perception of individuals about each other’s roles and therefore willingness to accept decisions, directions from one party or the other.’

Case-B

Further discernible power types nonetheless suggested the relationship between power and influence was not obvious and required clarity. Expressed initially by Case-D was a descriptive distinction between consensual (positive) and coercive (negative) power contrasting with the same distinction for Case-B more signifying the difference between power (coercive) and influence (consensual):

‘...exercising real power as opposed to influence the two being closely linked but one, you are making the final decision and directing things knowing there is some descent and the other being the same situation but knowing you’re making that decision in the general context of agreement.’

Case-B

This leads to the final proposition that the meaning attributed to power becomes clearer, if not extended, through reflection and discussion on how to describe or define power. For example, Case-B became more attuned to recognising consensual power and power as ubiquitous, and Case-C arrived at a deeper understanding of the practical significance of power:

‘...then I’m thinking more team, consensus, and things like that rather than power lying in one part, so power is evidenced in a relationship when it’s imbalanced. When it’s very balanced perhaps power isn’t so obvious but it, power still exists but it is shared. Maybe a different idea that I haven’t really thought about that perhaps, power is always there.’

Case-B

‘It made me think about it a bit more practically. It just brought back so many, so many unhappy memories. So, it probably has deepened rather than changed.’

Case-C

5.2.4 Nature of power

A further six tentative propositions related to the nature of power. First, power as manifest in both *strategic* and *operational* areas of partnerships was reflected across cases. For example, Case-A experienced power in strategic joint venture negotiations whilst Case-D recalled how operationally a supplier was more powerful in being able to obtain aftermarket share through leveraging its resources and know-how:

‘They have the resources. They are out there all the time at the customer. Somehow, they have the authority over us, I think because they are the ones with the know-how.’ *Case-D*

Second, a certain power may be held more or less *important* to the situation in hand than another power as expressed by Case-C. This is distinct from but connected to notions of amounts or *strength* of power in terms of the significance of the effect or outcome and likelihood or authority to obtain the effect (ultimate) as reflected by Case-B and Case-D:

‘So, I really should have taken more account of someone else’s power, I didn’t, [I] wasn’t sufficiently alert to the amounts of, to the power that other people had, and I didn’t take enough interest in it.’ *Case-C*

‘...the ultimate power to make a decision of that sort would be with Company A because of their position in the hierarchy of the product.’ *Case-B*

Third, given recognition that power is distributed across partnerships, how power may or may not be fairly *balanced*. Qualified further was how power is most likely visibly imbalanced when coercive and that power is never completely balanced:

‘I think in any relationship - it’s never actually equal, it, you know it can go like this {moving hands up and down, like a balance}. So there’s always, it is never quite, it’s never completely balanced.’ *Case-C*

Fourth, power being strongly associated with the ability to obtain desired outcomes is potentially an end in itself whereby power is sought out even negotiated or taken rather than being necessarily bestowed through formal structures and hierarchy (inherited). Notwithstanding, a lack of power may be inherited or thereby emerge through power struggles that arise:

‘...there were different power struggles going on. There were power struggles organisationally at every level in the organisation from the top down that set the scene for how difficult it was for us lower down the organisation to work constructively together.’ Case-C

Fifth, power can accumulate that is increases or conversely decrease immediately or over time (delayed), and may therefore not endure over the short-term or long-term evoking a temporal and provisional sense to power:

‘...all you can do is you build up, build up your power base. It can all be taken away in an instant by something outside of your control.’ Case-A

Lastly, corresponding with power being changeable over time, that power stands as a dynamic process based on capabilities and goals, thereafter changes, risks, and opportunities that emerge. Circumstantial changes may not even be foreseeable such as the 9/11 terrorist attacks noted earlier or more directly a supplier stopping work on a programme, as experienced by Case-D:

‘It was a risk for the programme that had to be mitigated, we had to, to make the development schedule fit at the other end but it was more the design teams or the delivery teams.’ Case-D

5.2.5 Distribution of power

According with propositions regarding what power is and its nature captured in the previous sections, a further five tentative propositions were evidenced concerning the distribution of power. Following on from power as a dynamic process, power deemed held by organisations (organisation level) may not be reflected at lower levels in individual relationships and interactions:

‘... it’s delivered through the individual relationships at different levels in that organisation that actually meet together. So one organisation technically speaking might have the upper hand but if, if the relationships between the individuals between the two organisations don’t reflect that then the balance in power will shift at different levels.’ Case-C

Moreover, that there are overlapping *power fields* where individuals effectively represent embedded power nodes (points of connection) of varying significance that is subject to personal characteristics, each acting based on interpretation of the overall field of power:

‘... I think sometimes arrogance in Company A puts Company A people, whether they be engineers or procurement or many different types of role, in a position where they feel they have authority to make decisions and instructions to another party [suppliers] without consultation.’ *Case-B*

As such, the second proposition was that partnership power (joint) especially in a joint venture, manifests itself as a resultant power emerging from a mix of power between that formed within the partnership and powers of each organisation directly operating or acting within the partnership, extending the complexity of power and range of relevant power perspectives:

‘... any organisation when it looks out to the outside world is a combination of everything that happens inside. All these internal kind of power things, it’s like an electric circuit, they create power that it presents to the outside world, a sort of physics analogy, different powers are working against each other and neutralising each other, then the expression of power it gives to the outside world is reduced, this is just talking about power generally.’

Case-C

‘... are we talking about joint power or single power?’

Case-D

It was also intelligible to consider power distribution as subject to the relationship environment. A proposition thus emerged that norms and expectations developed over time are an integral part of how power distributions arise and are sustained but does not preclude challenges that alter such power distributions over time:

‘Perhaps I didn’t say it before, but a lot of power is actually present because of expectations and acceptance of who has got control and I think in our industry, in aerospace up to now the perception has been that the prime contractor has control. I mean we call our suppliers Tier 1 and Tier 2 which tells you something about perceptions, it’s about hierarchy.’ *Case-B*

In addition, where acknowledged external powers for example regulatory authorities attribute ultimate responsibility to organisations, authoritative / hierarchical power is generated but equally liabilities that may lead to unwanted dependence:

‘It was a safety issue, the [prime manufacture] did not have the know-how [and] was forced into a co-operation. The [prime manufacturer] normally ends up having to [responsibility] support anyway.’ *Case-D*

Furthermore, an absence of power may reflect moreover a constraint where the power in question resides wholly or in part with other entities (individuals; organisations):

‘...because the balance of power or the absence of power prevented the parties achieving a common purpose. Had there been a unique power, they could have made a decision. Actually, what it points to is that the power wasn’t actually in the organisation [joint venture], it was in the shareholders.’

Case-B

5.2.6 Perspectives of power

Lastly, a further four tentative propositions informed theory development. The propositions specifically capture the significance of perspective that may delimit what constitutes power by definition or by virtue of an adopted viewpoint, evidenced as follows.

Although all cases recognised power as rational and coercive, not all cases fully embraced the respective continuums that gives credence to *consensual* power, and *non-rational* power. Correspondingly a tentative proposition was that non-rational power and consensual power may not be acknowledged or recognised:

‘I struggle with non-rational. I suppose in that respect I have experienced it in discussion, I mean from our side of the negotiating table, there was nothing non-rational about it, everything was rational, but it was obvious on the other side of the table that there were non-rational [agendas] without any particular, rational, hard facts to substantiate it.’

Case-A

‘If you achieve a result through consensus arguably in my interpretation you are not using your power. It’s perhaps not so clear in my mind just now.’

Case-B

The following two propositions complement Case-B’s observation of the saliency of perspective when establishing the rationality of a decision or approach, that being the decision maker versus other parties. Both propositions relate to the significance of the viewpoint or adopted perspective in obtaining a valid model to depict power in supply chain partnerships. Foremost, such partnerships are not held restricted to customer-supplier relationships rather includes other types of business-to-business relationships:

'...so it could be a joint venture partnership or merger of two suppliers [It] could also be a [Company A] and [Company B] [manufacturers].' *Case-D*

Thereafter, linked to tentative propositions on distribution of power, first was that power at the organisation partnership level or *micro* level to maintain validity at the *macro* level must capture the relationship embedded in its environment that may encompass complex combinations of partnerships:

'... the relationship was actually happening at so many levels. It wasn't all just [Company B] it was [Company X, Company Y], you know the whole raft, [Company Z], a whole raft of other firms involved. It wasn't single sourcing but there was this kind of umbrella.' *Case-C*

Second, that the model must also depict the complexity of power relations between each partner organisation and the partnership relationship formed (relational boundary) at different organisation levels, recognising individuals may be partly or fully embedded in the partnership:

'Yes, there is a Pi [power] in the middle [fully in relational boundary] dependent upon how the partners structure the management of the partnership.' *Case-A*

The final proposition relating to perspective concerned *context*. Power outside the formal business context may be viewed to be the same phenomenon as in Case-C, or may not be readily recognised, as in Case-A.

'Well you know I was talking about this, the power in relationship [X] so I suppose it still boils down to getting your own way I think really.' *Case-C*

Power may also in some manner be characterised differently, notably in the more immediate personal context of family as in Cases B and D. The distinction for Case-B lay in an acceptance of natural authority within the family unit, whilst for Case-D, more the willingness to bring to bear and resist external negative power.

'In my family situation I don't see power being exercised overtly but I guess if you asked other members of my family, you might get a different answer because they know who makes the final decisions, that's me {laughter}, but I don't consider that to be using my power. Perhaps what you said, you don't always know when you are using it. That was an interesting question and one that's got kind of a surprising answer!' *Case-B*

Notwithstanding, power was held imbued in roles and relationships by Case-B that are intrinsically context specific:

‘I guess I’ve observed power ever since I was born because it’s the natural part of the way people are without trivialising the discussion. I mean even when you are a child, parents have power over children who are not powerful so, you start with a real understanding of roles and relationships from a very early age.’ Case-B

Exposed was how links across features of power are salient in fully capturing what power is, that is, the perceived non-exercise of *overt* power in the specific family context by B was founded on power being held *coercive*, implicating *intent* but whereby also *perspectives* of concerned parties may be different on what is deemed coercive even legitimate, in a given context.

The final tentative proposition (proposition 20) that power is value laden relates to the *significance* of IOR-power to cases and is evidence in Section 5.5.

5.2.7 Utility of the preliminary conceptual framework and model

Utility of the framework and model was given in terms of form and function, thereafter validity. Commencing with form and function, whilst the framework was found to be useful as a reference point to aid describing power, the model was found less useful:

‘I couldn’t find the words I was looking for and when you put the list. I mean I said some of them or things that meant it, but when you put the list in front of me, I said of course it’s that.’ Case-D

The framework also demonstrated its utility in cases electing to reference the framework thereafter when trying to describe experience of power in a supply chain partnership.

‘... [Company A] then went to the supply chain and tried to explain it, I was going to use [the framework], in a way that I would say was a negative, coercive, visible, non-rational, illegitimate, objective, potential nature. Why do I say that; let me explain in detail...’ Case-B

In terms of validity, both were valid in not being erroneous albeit debatable (consensual, non-rational) but following views on form and function, where the

framework was found relatively comprehensive, the model was found too simplistic and less explicit:

‘Diagram 2 [model] isn’t wrong. I’m just wondering whether it’s not, it doesn’t, it’s too simplistic?’ Case-C

In conclusion, these findings were pivotal to pursuing development of a comprehensive conceptual framework of IOR-power as part of the systematic literature review (Chapter 2) and developing a more meaningful power model reflecting the complexity of power transcending levels of analysis (Chapter 4).

5.3 Confirmatory study (CS)

5.3.1 Section introduction

As detailed in Chapter 3 (Section 3.8), the confirmatory study involved a direct explanatory critique by four practitioners of the provisional theory developed in research phase 2 (Section 4.2). Further to providing a contextual summary, the findings are presented structured around the study specific research questions, commencing with levels of theory intelligibility in quantitative terms (CS-RQ1). This is followed by a synthesis of qualitative data explaining divergences identified including the significance of case conditions (CS-RQ2). Lastly, based on the critical synthesis of cross-case divergences and correspondence with the core IOR-power literature, re-descriptions found necessary to address under-explained aspects of IOR-power are presented (CS-RQ3).

5.3.2 Contextual summary

Similar to the exploratory study, the context was *not* a concrete IOR, rather four practitioners profiled in Chapter 3 (Section 3.8.2) standing as individual cases, independent from each other and any organisation, each voicing freely a critique of the provisional theory presented in detail albeit not exhaustively. Moreover, variation in case *conditions* reflected contextual differences *across* cases.

First, as presented in Figure 25 there were variations in case secondary conditions examined for relevance to intelligibility levels. In summary, although all cases voiced high deference, and Cases X, Y, and Z reasonable

understanding of IORs, case W had only moderate understanding of IORs and natural power and strongly did not identify with having male traits rather strong female traits. Contrasting with Case-W, Case-X strongly identified with male traits but limited female traits and held a sound understanding of natural power. Lastly, whilst case Y recognised strong male and female traits in their personality and sound understanding of natural power, case Z recognised more marginal levels in both traits and a lesser but reasonable understanding of natural power.

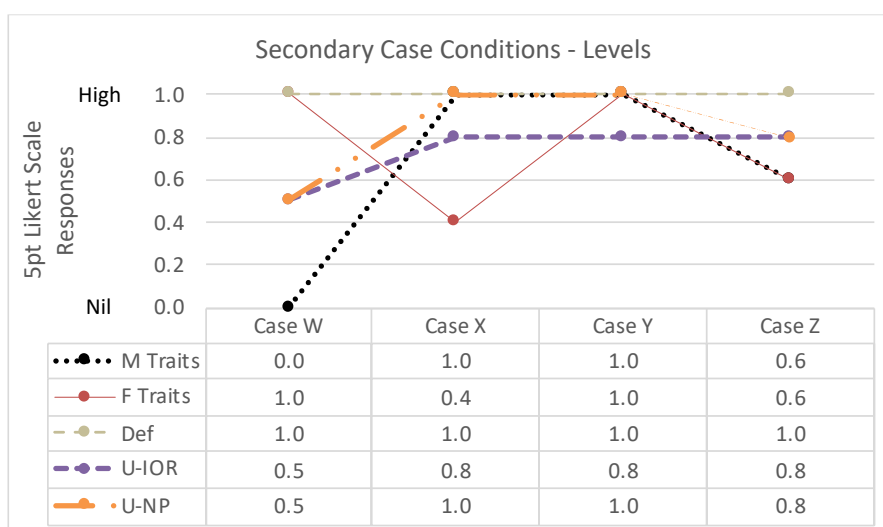


Figure 25. Variation in case secondary conditions

Second, synthesis of all 199 reflective note entries made during interviews and data analysis thematically distilled into explanatory critique *structure*, case *participation*, and case *ability / traits*, capturing factors across cases that contributed to interpreting perceived and actual theory intelligibility levels.

Commencing with structure, evident in 141 notes recorded across cases was the difficulty faced given the *complexity* of subject matter such as the level of abstraction associated with the construct power and *language* used to capture meaning given words often carry various meanings. Progressively digesting all characteristics was like doing a *jigsaw* in needing to recognise and progressively associate pieces of a puzzle and where the *sequence* laid down notably had advantages and disadvantages. In terms of *format*, a more finely grained scale to accord intelligibility levels may have been useful. Clearly the theory was not *self-explanatory*, requiring clarifications especially in meanings and theory

structure, and as a result, the process was thereby *time* consuming, especially given the level of commitment by cases.

Turning to participation, evident in 186 notes, was that cases were fully *engaged*, displaying, and expressing a desire to fully contribute, variably shifting adopted perspective of the theory from focus on specific features to a holistic view and overall representation. Markedly, means of *communication* varied from use of examples, drawing diagrams, to exhibiting different levels of ease in articulating thoughts, exhibiting at times clearly different *learning* processes from accepting theory specific language to translating theory to practice.

Importantly, all were *critical* in different ways from seeking theoretical exactness to seeking sufficient explanatory power. This led to *questioning* such things as the origins of the theory and *challenging* the theory using logical reasoning or intuition whereby for example ambiguities and explanatory gaps were tested. In this respect one case was noted to stand apart in drawing on semiotics (meaning creation and communication) and aesthetics (nature and appreciation of beauty). There was a focus on challenging as far as possible fuelled by a desire to add value and cases *reflected* heavily, sometimes consciously and sometimes through a sense of natural resonance with experience. In this respect one case at times constrained freedom to understand theory by emphasis on experience.

Lastly, there was a difference in case abilities / traits. In addition to different levels of *self-confidence* that shifted during the process and *mental agility* levels including aptitude for conceptual and lateral thinking, the most prominent feature was adopted *perspectives*. For example, IOR-power was viewed at times more from an agent A, agent B, or observer standpoint, and linked to mental agility was variation in consideration of concrete versus more abstract aspects of IOR-power.

Overall, cases exhibited reasonable variation in secondary conditions but also in abilities and approach. All found the process difficult in different ways although not beyond their capabilities. As captured in Figure 26, case intelligibility levels were judged driven mostly by theoretical analysis (TA) with some aspects predominantly life experience led through more innate verification / falsification (LE) and no evidence of intelligibility resting on education (ED).



Figure 26. Case participation profile exposing levels of theoretical analysis

This leads to presenting what meaning divergences arose.

5.3.3 CS-RQ1: What are the divergences in meaning?

Figure 27 exposes the *adjusted* cumulative level of divergence in intelligibility of conceptual framework definition, classification, properties, and operationalisation attributes (25) and process model components (15). Each divergence captured a quality not *fully* intelligible to at least one case. Proportionally, the model was found less intelligible exhibiting divergence on 7 components (47%) compared to the framework where divergence was evidenced on 8 attributes (32%) thus jointly on 15 qualities (38%). Correspondingly, level of *full* intelligibility was 62%.

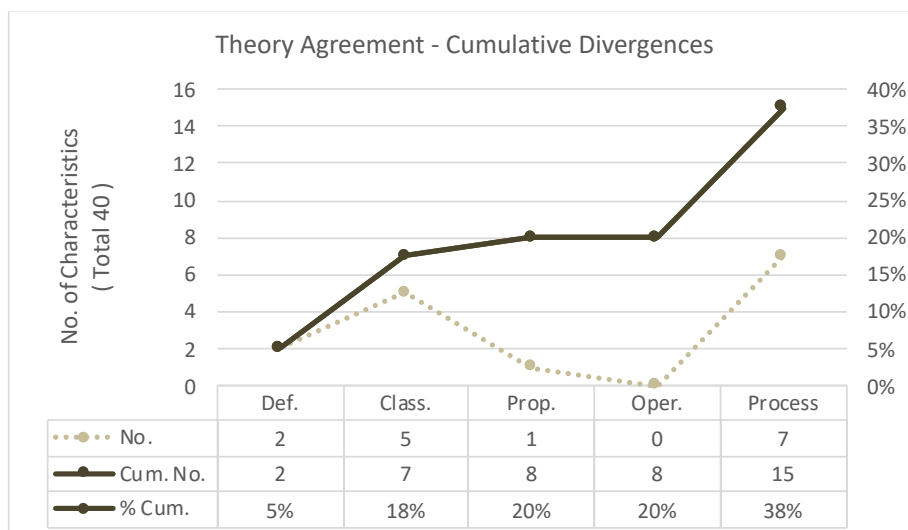


Figure 27. Cumulative divergences in intelligibility of qualities

Figure 28 exposes the level of divergence in intelligibility by case. Revealed was that one case (Case-X) found the theory fully intelligible despite efforts to find disagreement and thereby response variability (Chapter 3, Section 3.8.2) contrasting with case W exhibiting the highest level of divergence totalling 9 qualities. A total of 21 divergences (Figure 28) across cases relating to 15 qualities (Figure 27), indicates that divergences were mostly case unique (71%).

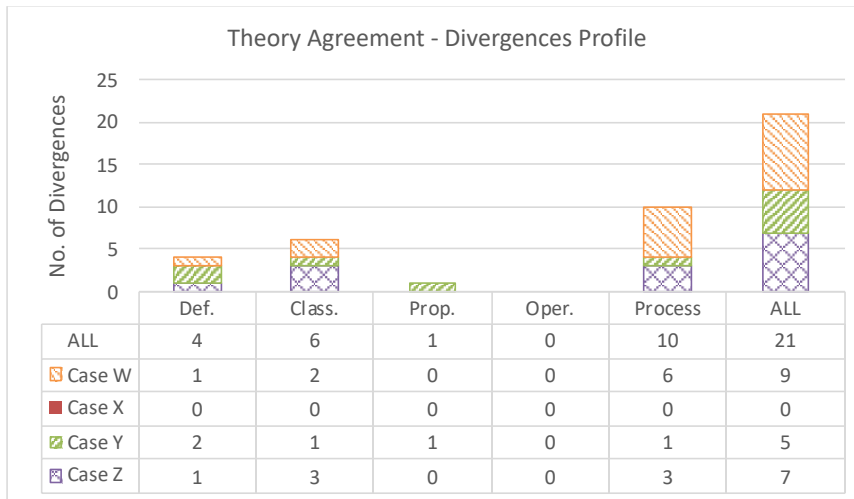


Figure 28. Profile of intelligibility divergences by case

Importantly, divergence levels overall were low across cases as shown in Figure 29, with each case on average more strongly in agreement (Likert scale 1) than strongly not in agreement (Likert scale 0). The mean level of agreement across cases was 0.94 and the lowest mean level of agreement was 0.9 (Case-W).

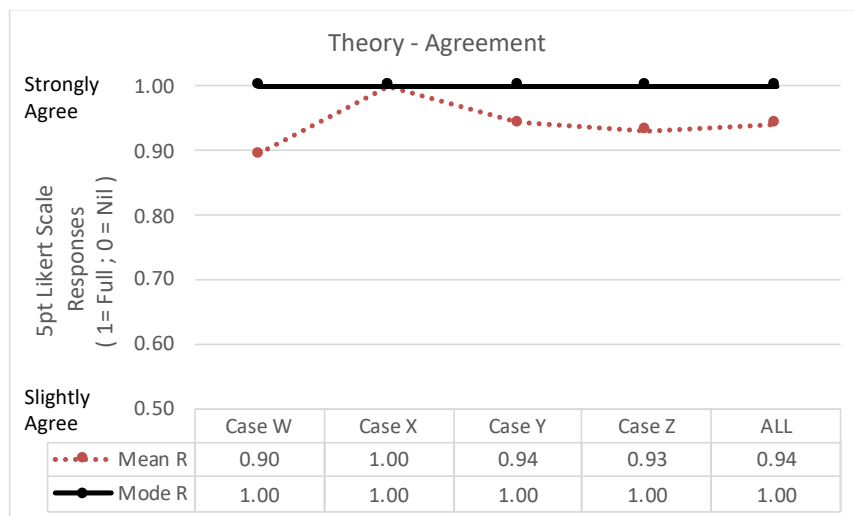


Figure 29. Degree of overall agreement across characteristics by case

Notwithstanding, as shown in Figure 30 there were instances of strong and slight disagreement on qualities for Case-W and Case-Y respectively. Thus, although a reasonable level of theory full convergence across qualities was indicated (62%), the data suggested an opportunity or need for further theory development.

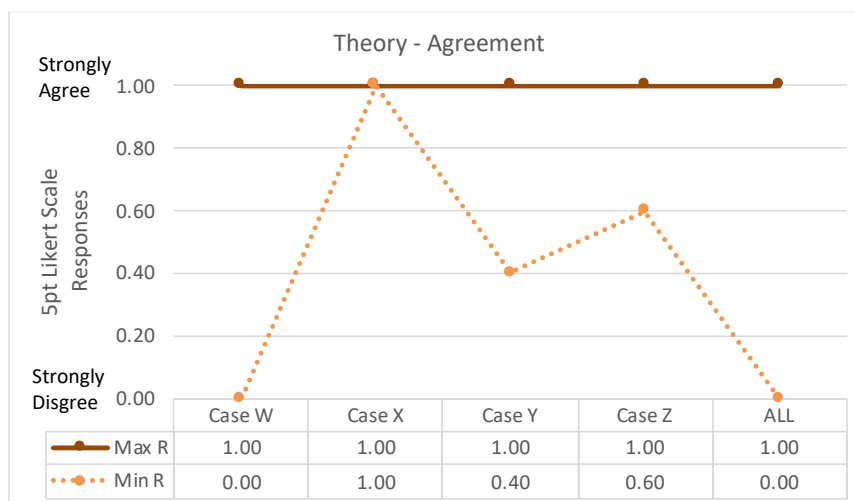


Figure 30. Range in agreement levels across characteristics by case

5.3.4 CS-RQ2: What generates specific divergences in meaning?

Secondary case conditions explored using fsQCA did not appear sufficient to explain intelligibility levels although understanding of natural power may have positively contributed to intelligibility and was supported by qualitative analysis. Factors exposed through reflective notes were however significant in crystallising aspects of the theory *presented* as being justifiably found difficult to grasp by cases or conversely salient, that is intelligibility gaps. The following exposes these intelligibility gaps categorised into 8 governing principles, 8 key concepts, 8 qualifications, and 3 core principles linked to specific power qualities, through a *selection* of case narrative data.

5.3.4.1 Governing principles

Governing principles that evidently required greater prominence commenced with the leading principle of *power-to* characterizing power, whereby power-over is integral to *power-to*, in conveying the saliency of goal attainment and how it is through utilising one’s own agency thereafter recruiting the agency of others as necessary or advantageous, that outcomes are obtained:

'I see Potential-influence having 2 states actually, one is freedom to act, which is what the second part's about, possible freedom to act, and then possible ability to influence another person, so they are 2 parts.' Case-Y

The second governing principle concerned *continuums*. The significance of emphasis on power-to yet levels of behavioural resistance required fuller acknowledgement of degrees of consensus (consensus - coercion) contrasting with traditional dichotomisation (consensus v coercion). Moreover, that continuums reside across power dimensions such as dependence (elected-constrained; secured-unsecured), and ultimately IOR-power (social-natural):

'[Dependence] I'm going back to this, so I'm kind of going back to this myriad. Are you saying that these are the only ways, it's either elected or relative, sought or not, so, there are like 4 ticks, there are four ways?'

Case-Z

The third governing principle concerned how the process model invariably grounded at the individual-level (psychological forces) effectively extends. In accommodating all types of relationships and collective effects thereby representing several different process levels and stages, intermediate and contributory outcomes required formal recognition. Inspiration for adopting the specific term *power-points* was given by Case-Y but lay also in power having been described as an 'electric circuit' by Case-C in the exploratory study:

'Well the power process that you've described is attempting to influence power points, so if you're going to do that as you've described earlier you either have to alter behaviour or you have to alter a decision somewhere.'

Case-Y

The fourth governing principle underlined the significance of both formal and importantly *informal* relations and relationships built on trust, friendships, commitment, and so forth, as conduits of influence through which multiple identities are shaped (self / others), and power emerges:

'Relationships [formal / informal] are the bedrock, it's only when relationships break down that the power of that organisation falls.'

Case-W

The fifth governing principle was emergence, a key feature in property characteristic dynamic, conveying how psychological states come into being, transform, and regress over time. Thereafter, linked to power-points, that *emergence* captures the process by which power grounded at the individual-level generates power at the IOR-level of analysis.

‘You see power as being this umbrella with everything going on underneath it like, like a brain with all its signals, and this signal goes here this signal goes there and this directs this, the whole-body links in order to function.’

Case-W

The sixth governing principle concerned explicit commitment to *DCR* as a philosophical perspective capturing the requisite ontological depth in terms of the domains of real, possible, actual, and empirical innately sensed by cases but also found necessary to accurately capture and render intelligible IOR-power:

‘Unless you take it that a baby born always has potential, but we don't know what it is yet [domain of the possible].’

Case-W

The seventh governing principle was that *alignment* between the conceptual framework and the process model be readily discernible offering clear distinctions between descriptive (adjectives / abstract) and real (nouns / exist) attributes whereby the framework descriptively complemented the model, adding clarity to the definition, classification, properties, and operationalisation attributes:

‘Is it an attribute of your outcome, your measurement of power? The ability to generalise from your specific measured situation is critical to what? Is an important attribute of what? of power or of this process? So, it's about that power that you measured in that relationship and not about power generically?’

Case-X

The eighth and final governing principal meriting emphasis was the saliency yet complexity of power *attribution* from qualifying and assigning relevant organised resources, through to quantifying influence, rendering establishing responsibility for outcomes problematic:

‘I mean ratios are ok in terms of reducing the units. You still have to have, as you said earlier, a measurement in units of some sort to do a ratio.’

Case-Y

The need to elaborate the preceding governing principles was also apparent in key embedded concepts found under-explained and in qualifications necessary to prominent attributes and components.

5.3.4.2 Key concepts

Eight embedded concepts found difficult to grasp by cases or conversely salient to cases required greater prominence: outcomes, environment, goals, organised resources, states, reality, perspective, identity. Commencing with *outcomes*, the significance of consequential effects through explicit account of outcomes as distinct from direct effects (behaviour) was necessary to capture the full meaning of power:

‘... but I also see power being useful in making decisions, which is related to behaviour, but some decisions are not behavioural at all... Power's got a role to play in determining or achieving outcomes. I'm involved in a deliverable based type process within our business, where we have to achieve things, where we make stuff, design stuff, deliver stuff to the customers, certify stuff. There's always something at the end of it that we're trying to achieve.’ Case-Y

Correspondingly first, *goals* standing as embedded in the concept of dependence was not self-evident in the process model under-emphasising the significant role of goals in driving behaviour towards outcomes, identifying outcomes, thereafter qualifying outcomes as intended, efficient and effective, or not:

‘An organisation has got its own desires but, but they might be different to an individual's desires; they probably are so, no one individual would have the same desires as an organisation might, as a whole.’ Case-Z

Second, encapsulating broader outcomes associated with the type of goals pursued by IORs implicated more clearly the social and natural *environment* in IOR-power both in being directly impacted and in *direct* conditioning of behaviour and outcomes beyond environmental influence (psychological force).

‘So, the rain wouldn't stop me playing football, but it may change or impact the outcome, that's all.’ Case-X

Furthermore, outcomes not being limited to human behaviour but incorporating resources attributed to focal agents, materially exploited, or consumed in the process including money, materials, and technology, required elaborating. Rendering *organised resources* visible in the process model and distinct from their significance as power sources embedded within mental processing and the influence process possibly generating Potential-influence, provided the requisite clarity:

‘We’re talking about power as part of an organisation. How does the organisation start? It has to be from a bank loan or self-wealth or whatever you want to call it [money] and then from there the power grows.’

Case-W

The three psychological *states* of influence that change over time and are central to the process model thereafter required explicit ontological grounding to convey a clear intelligible distinction between states that meaningfully connected with the physical world of overt behaviour and tangible outcomes:

‘I’m struggling with this will, the whole ‘actual’, ‘cos it’s kind of will, will produce specific, specified behaviour, it’s these three. It’s what happens in between here and here [AI and EI], and I don’t, and I just can’t grasp it.’

Case-Z

Thereafter, ontological grounding of psychological forces and core states required bringing to the foreground a rich and apprehensible account of *reality*. Although classification attribute objectivity signified a central aspect of reality, that being acknowledgement of an objective-subjective continuum drawing attention to the importance of perception; what constituted reality required expanding to formalise psychological forces as real, and account for the relation between these forces, agents as entities, events as behaviours and outcomes, and experience:

‘That plant out there and its green leaves. My personal model is that’s real. I’m not applying anything into that. My reaction to that is something of me but what it is, I’ve, I’ve decided that that’s it [exists] - you can’t argue about [that], if you argue about it, I’ll be really annoyed with you, well you know what I mean! It’s almost like art, that’s a fantastic piece of art, and that’s a piece of paper.’

Case-X

The existence of non-ideal organisations and the complexity of embedded power relations within and across organisation boundaries necessitated also that an account of reality permitted conceiving of power existing at the individual-level through to IOR-levels of analysis:

‘If individuals behave randomly and inconsistently and they have a clear purpose then X [Company] is a good [example] organisation, because it doesn't have strong consistency in the way that it behaves in relationships even with other single entities. So, for me the assumption that organisations behave as individuals with the additional explanation that you're assuming that organisations are perfect, and individuals are perfectly rational beings, doesn't fit X.’
Case-Y

This leads to *perspective* and two aspects that required reinforcing in a consistent manner. First, although definition attribute level recognised IOR-power as multi-levelled and definition attribute assumption recognised how only through vertical *extension* (aggregation or ideal) power was conceived to exist at the IOR-level, this was not fully captured by classification attributes that collectively defined a specific power. Second, and more fundamentally, whilst classification attribute scope signified the relevance of limits (magnitude) of a given power, that all other classification attributes contributed to defining such limits, was not self-evident. Importantly, that all classification attributes individually and collectively required a meaningful and practical classification system to be founded; how a given power may be established remained to be seen.

‘How would we classify all the different effects and behaviours, there's so many, [a] myriad [of] covert and overt behaviours.’
Case-Z

Lastly, and relatedly, component black box sought to represent reasoning and sense-making processes as underpinning motive formation, not merely that such processes are highly obscured. A deeper level of perspective was *identity* (raison d'être) that was *integral* to the process, if not its epicentre, contributing to explaining individual and collective behaviour, meriting formal recognition:

‘... and that way you bond, and you all feel part of an organisation which is becoming, because of the that you are, you feel involved you're not an outsider to the organisation you feel involved so that you are more prone, you're more likely to give rather [than] take.’
Case-W

Having elaborated and evidenced embedded key concepts that required greater prominence and clarity, the following section turns to important qualifications.

5.3.4.3 Qualifications

Eight power qualities were evidenced to require qualification, commencing with attribute *dependence* being readily discernible within the process model as distinct from sources and Potential-influence. A fuller account of the significance of constrained and mutual dependence to goal attainment was also required to qualify power as potentially coercive and/or consensual across any A-B relationship:

‘B is dependent on A... So we're not working as a partnership at the moment, after this, because it's only given A the Potential-influence. That's the only difference that I'm not sure of now, that dependence of B on A [no mutual dependence, A-B].’
Case-W

Central to explaining dependence and thereby Potential-influence was the distinction between value resistance (VR) in according a general value to something, and intrinsic resistance (IR) capturing the specific value of something to goal attainment. This included qualifying what constituted obscurity in evaluating the value of something and the different forms, notably inherent unobservability versus lack of knowledge that might occur in both types of evaluation. A more precise representation of both resistances within the process model that accentuated the significance of each emerged as important:

‘You mention those two in the same breath [Importance; IR], so it's almost as if those two [IR; VR] are acting on there [importance], together. I suppose it's quite difficult to see the subtle difference between the different types of resistance, and importance.’
Case-Z

Thereafter, integral to explaining the distinction between Potential-influence (PI) and Actual-influence (AI) was first clarity in the difference between *behavioural resistance* (BR) and intrinsic resistance. Second, qualification of the difference between the broader role of behavioural resistance in representing consideration of all demands and goals, and the narrower, driving force of Potential-influence(s) theoretically aligned to a focal goal in explaining a discrete behaviour, was important:

'Yeah, cos you're never you're never only trying to work your particular issue you're never in isolation are you, there's other things, transactions happening.'

Case-X

Establishing the significance of behavioural resistance accompanied by re-enforcing the relevance of the environment permitted qualifying further the need to account for two potential states of influence. Foremost that *Potential-influence* related to the influence generated by A and B within the A-B relationship whereas *Actual-influence* captures the net influence for both agents when the influence of all other agents and all goals are recognised:

'No, I don't understand the difference between potential ability and some ability [statements], I think they should be the same, that's only a matter of words.'

Case-W

Similarly, *Actual-influence* as an obscured and temporal yet real and meaningful state, distinct from *Enacted-influence*, was evidently also under-explained:

'What actually happens here [AI becomes EI]? Does anything actually happen or is it still just a theoretical thing? Because the enactment is actually an act, is it? This [AI] is the influence that's actually felt rather than enacted. It's kind of felt rather than enacted because enacted implies he's [A's] doing something, and actually nobody's actually done anything at all.'

Case-Z

Integral to explaining the distinction was first qualification that component *black box* (BB) foremost represents the human mental processing activity of reasoning and sense-making that grounded not only identity, but equally temporary and stable perceptions, mental stances, states of influence, and decisions formed by individuals. Requiring explicit recognition was how beyond representing the core human mental processing activity, the black box emerged metaphorically as a higher level 'junction box' representing events such as team and group joint decision-making processes and shared mental states, for example opinions:

'I agree it is difficult to access. I wonder also if there is something to think about in terms of what decision-making theory and analysis offers in terms of trying to break the black box? Because it's probably the only tool that exists. That is probably not capable of doing the sub-conscious part because there's nothing conscious to be able to talk about but given that the model can apply to both.'

Case-Y

According fuller explicit significance to the black box and formalised commitment to DCR was necessary to offer a deeper and meaningful explanation of Actual-influence as a latent, temporal ability to influence one's own and other's behaviour toward outcomes:

'I think my answer to 27 [AI] is linked to 38 [BB] because of the black box, and by your own admission of the BB. I'm struggling with the definition of actual [AI]. But what you're saying is that - what's the somebody's cat that's in a box which they shoot radio activity at, and you don't know until you open box whether the cat is dead or not [Schrodinger's paradox]. I'm telling you what's happening in this box that's what you're saying to me. I don't think you can know, unless you're telling me that you know.' *Case-Z*

A clearer representation of the role of acts (means) in inducing behaviour was required to further enhance the distinction between these states but also capture the significance of passive inducement, if not the transfer or destruction of Actual-influence:

'Yeah, you don't have to be consciously engaged in something to be having an impact on the situation do you.' *Case-X*

Relatedly, the position of motive in the process required re-enforcing through detailed explanation of its substance and pivotal relation to components Actual-influence, Enacted-influence, and black box. It was important to underline the significance of mental powers (capacity, orientation) and prevailing conditions (prominence, uncertainty) to motive formation in both the setting of goals and navigating a way (behaviour) towards goal attainment:

'My point I think is still that if motive is going to appear this late in the process it can't be a reason for blocking something here [AI] on the definition that you've got, which means that any negative motivation has got to be separated out into probably behavioural resistance.' *Case-Y*

Lastly, influence and power being recognised as highly interrelated, and power being expressed in behavioural terms thereby lacked evoking a clear distinction between the two concepts and related phenomena. The intended delineation of influence governing behaviour and power governing broader outcomes where influence is thus an integral part of power required qualification:

'Because really it's about this isn't it. It's about this definition of influence... It's such a complicated and complex thing and possibly large concept that you're talking about.' Case-Z

Moreover, power management implicating empowerment was aligned to, if not held synonymous with performance management, bearing moral, legal and sustainability implications that merited greater emphasis:

'Well I'm thinking that B2 could be much greater than B1 quite often... but in terms of power and want to mathematically view it, I'd want the output to be greater than the input because that's the whole point of using this, this complex lever process, to lever... So, I quite like that... this looks this feels to me much more like A, trying to drive a harmonic. So, this is my ability to get on the same frequency [influence ratio] and actually now I'm on the frequency a little input here [means] is going to cause him to do big things. So, it almost feels like generating harmony for this to actually to take place – influence, and then with this [influence ratio} oscillating greatly with little effort because he's, he's on a harmonic, that's how it feels.' Case-X

Qualifications identified thus had strong links to general principles and key concepts that required elaborating, all of which were underpinned by core principles as follows.

5.3.4.4 Core principles

Where governing principles relate to the specifics of explaining IOR-power, core principles of natural alignment, indeterminacy, and omnipresence, fundamentally and broadly underpin explaining IOR-power and warranted prominence.

Commencing with natural alignment, forged already was an implicit alignment between natural and social power given the core process (social influence) was held formed through mechanisms and core compound mechanisms (core states). This was comparable with natural power where *fundamental* mechanisms (gravitational, electromagnetic, nuclear strong, nuclear weak) and *derivative* mechanisms (e.g. electromotive, electrostatic) are held to explain natural based power types. Salient connections between types of natural power rooted in energy transfer was evidently meaningful to cases and readily extended to how social power was understood and expressed. Intelligibility of the posited theory was therefore likely enhanced through more explicit alignment and connection

between *all* types of power, especially noting the nature of relevant IOR-outcomes implicated natural power:

'[IOR-power] It's like a river, it flows and if it's under control it will be very powerful in the sense that it will, it will keep, keep the motion going to the top.'

Case-W

'[natural power] Well actually, I could encapsulate it, it all comes from the sun. Unless you want to go back to 'big bang', but it all comes from the sun. All energy and all that. [The] sun causes everything, the sun causes the wind, causes the weather, causes the sea to come into waves, causes the tides, causes heat, cold, causes everything. Everything on Earth, kind of happens because of the sun transfer of energy.'

Case-Z

The combination of social power and natural power was described as an obscured, complex power field within and across organisation boundaries governed by multiple motives. The multiplicity of influence processes somehow was held to combine as a flux whereby at any time, at any level of analysis, states of influence were indeterminate leading to discrete behavioural inducements as indeterminate. It followed IOR-power as a process was naturally indeterminate:

'... so, what about influencing B to do things that you don't actually expect or want. So, you do something, you've got influence, and you're trying to make B do something, and actually what you do and the way you exert your influence, makes them do something you neither expected or wanted. Is that on here as a bi-product, or is that covered?'

Case-Z

Lastly, that influence and thereby power was also omnipresence rendered adopting a perspective necessary. This might be a vertical perspective as a relatively broad account of a discrete element of a power process, logically anchored in organised resources or outcomes for relevance, or a horizontal perspective as a relatively narrow account of a discrete embedded process.

'It's a bit like if you look down a street at a bunch of restaurants and if I said to you that 90% of restaurants fail in their first year, you'd say that's ridiculous because all these restaurants have been here for ages. I'd say yeah but on that count they just count once, you see that place that keeps on opening and closing, opening and closing, opening and closing - that's your 90% of businesses that fail in the first year, 'cos that's when they fail, but your perception if you look at the high street is that restaurants are quite [stable; successful], because it's that one that just keeps flicking.'

Case-X

This concludes elaborating and evidencing in total 27 potentially under-explained power qualities and leads to capturing justification for seeking to address these explanatory shortfalls.

5.3.5 CS-RQ3: What divergences justify theory re-descriptions?

Four factors namely case conditions, reliability and validity of findings, complexity versus parsimony, and IOR literature support, contributed to concluding that all 27 under-explained power qualities justified theory re-description.

First, as noted, although understanding of natural power may have contributed to intelligibility, nothing suggested that case secondary conditions distorted or unduly biased findings, rather through being reflective and critical, cases offered fresh insights to the *explanatory power* of the theory.

Relatedly is case self-assessment of reliability and validity of contributions exposed in Figure 31.

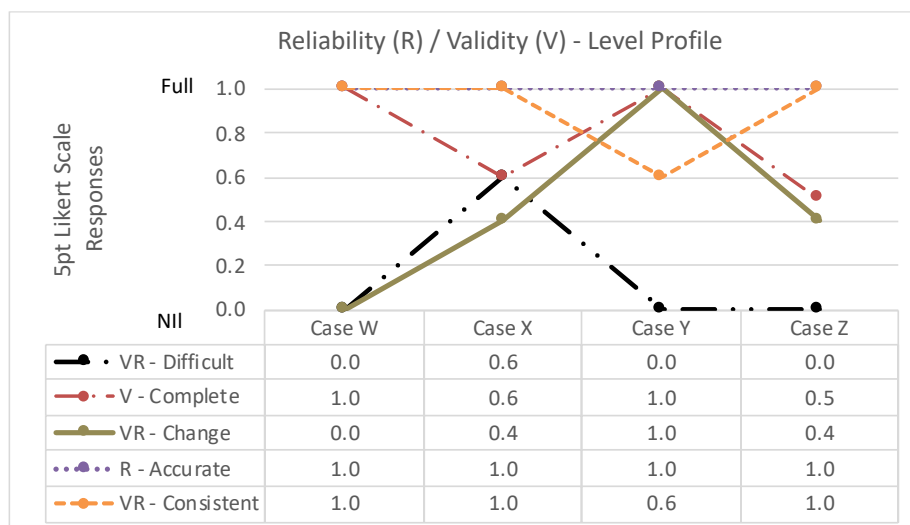


Figure 31. Case contribution validity and reliability profile

All cases strongly viewed their contributions to have been as accurate as possible, relatively stable in the short term (consistent), and apart from case Z who was unsure, cases felt they had expressed reasonably fully their understanding of IOR-power (complete). As indicated the most significant risk to reliability and validity related to the levels of difficulty (difficult) and in situ learning (change) with some cases scoring low (<0.5). Nevertheless, the challenging

approach adopted by all cases of different abilities, the very complexity of the subject matter, and absence of prior reflection, were all material factors. This suggested these indicators rather more justify re-descriptions to enhance intelligibility to the broadest spectrum of practitioners possible than threaten validity of the findings:

'I don't know where and how to express my difficulty, but it feels very clunky. I can't see any other way of, I can't see a different way of putting it, but I wondered if [as is] it's put in a way that really, really aids me to understand it? ... I haven't put much thought to it, to be honest, so I don't know what it [power] means.'

Case-Z

'So, you don't think about power, as really power is something up there, something up there to me, it was up there! I did change it slightly when I realised that there was a movement towards you know a team rather than one man sitting in a chair in a room. So, I could see that, but I never gave a thought to how that would come about and what would be the influences he would need to have, a group of people to influence, a group of people in order to fulfil his Goal. So in the end he actually became the power behind the chair, really, or I think that's the expression.'

Case-W

Turning to complexity versus parsimony, development of the provisional process model focused on capturing the essential and simplest building block of IOR-power that required replication and extension. Reliance was placed on attention given to descriptive details such as consequential effects extending beyond behaviour, thereafter the ability to imagine and think abstractly. In seeking the most parsimonious theoretical model, important losses in explanatory power had resulted:

'I can see a different way of reading the diagram, which might fit that model. Again, as I said earlier over simplified diagrams doesn't help a lot of people. Because I'm an engineer, I would look for a more transactional type of diagram that showed states, and actions, and constraints like your IDEF remark in a rather clearer fashion.'

Case-Y

Thus the theory as presented was not held incorrect, but could be rendered more self-explanatory and apprehensible, thereby of greater utility to practice.

Lastly, under-explained IOR-power qualities identified did not conflict with the literature (core or periphery) rather all but three were explicitly supported and/or

related to the synthesis (theory development). The remaining three qualities, *perspective*, *identity*, and *natural environment* were implicated and supported by the broader literature (Rainio, 2009; Simon and Oakes, 2006; Stannack, 1996). Qualifying or giving prominence to each under-explained power quality was thereby justified across academic-practitioner perspectives aligning with re-descriptions thereafter incorporated (Chapter 4, Section 4.3).

5.4 Test case study (TS)

5.4.1 Section introduction

Contrasting with the exploratory and confirmatory studies, the final case test study (TS) was a concrete IOR-Case (Chapter 3, Section 3.10). The primary aim of the study was to evidence how 10 theory *specific* qualities manifest in a focal significant but typical IOR. A brief IOR-Case introduction provides contextual background and framing noting the study did not relate to determining IOR-power. Thereafter, first quantitative then qualitative evidence across *embedded* cases is presented.

The secondary aim of the test case study was to broadly extend theory intelligibility testing. Presentation of the main findings follows the analysis process indicated in methodology Section 3.10.3 (stage 4). For clarity and evidencing purposes, analysis 1 main findings (raw data) are presented followed by the main findings of analysis 2 (adjusted data). Specifically for analysis 2, an intermediate sub-section is dedicated to exposing justifications for adjusting raw data scores. The overall findings of analysis 1 and 2 are summarised in Section 5.4.8.

5.4.2 Contextual summary

5.4.2.1 Partnership summary

Framed by the overview of the IOR-Case study provided in Section 3.10.1 (Table 15), the relationship of reasonably long duration was a partnership involving co-ordinated project activities between one group functional area of the large organisation, A (customer) that spanned functional areas in the supplier organisation, B (Lambert et al, 1999; Type 1). Both organisations recognised the

relationship to be essentially 'transactional'. Notwithstanding, the relationship was governed by a long-term framework agreement positioning Org-B as a preferred supplier with the possibility to move towards becoming 'a critical friend, that's a partnership' (Org-A representative).

The specific details of the relationship are confidential, but it can be stated that Org-B provides on a project basis, professional services to support Org-A maintain and develop facilities and infrastructure of differing scales, complexities, locations, and challenges. Services range from engineering specialist services such as quantity surveying through to strategic advisory services on major build programmes. The type of business is highly regulated from safety to commercial conduct through to environment sustainability and relies on complex supply chains to meet end customer demands whilst both organisations themselves are geographically spread, impeding regular face to face contact. Relationship mapping of participants (referenced only) exemplified how a myriad of embedded relationships underpin the partnership with two *dyadic* embedded relationships (Thompson and Walker, 1982) contributing to the findings.

At the time of the case study each organisation separately was undergoing significant organisation changes including re-structuring and open office working arrangements aimed at shedding legacy working practices and moving towards being increasingly customer focused, team-oriented, and cost efficient. People, performance, and integrity served as mantras in both organisations. The overall formal relationship was nevertheless in the process of being re-established after having been through a difficult phase.

5.4.2.2 Embedded cases

Corresponding with the overview of primary embedded case conditions in Section 3.10.1 (Figure 19), details of the profile obtained in commercial versus technical role, role centrality, mature perspective (experience), and management level, are displayed in Figure 32. Across all primary conditions there was reasonable variation albeit some weighting in profiles between organisations, most notably in mature perspective and management level. The number of cases 50 years old and above was 7 (64%) for Org-B compared to 3 (30%) for Org-A. Similarly within

respective organisations, 6 cases (55%) were upper-level management and above in Org-B including a senior non-executive board member (NED) compared to 2 cases (20%) for Org-A.



Figure 32. Profile of embedded case primary conditions

Org-B reported stronger role centrality based on formal role and contact frequency within the selected focal relationship, using the distinction high (weekly), medium (monthly) and low (>3 months) for levels of *direct* contact. In Org-B, 4 cases (36%) reported high levels of centrality compared to 1 case (10%) in Org-A. These direct relationships were complemented by a balance in indirect (no contact) and central roles (daily) where one Org-B case was performing a role fully embedded in Org-A. Overall there was also good balance of technical and commercial role representation with a marginal weighting towards commercial roles in Org-B.

Mature perspective based on *age* was ultimately employed to represent experience levels thereby accounting for the relevance of prior related roles and broader life experience evidently material to behaviour:

‘But for me, so I have a personal Christian faith, so my values are Christian, so honesty, integrity, treating people decently as human beings... I mean it comes from my childhood; it comes from my parents. I'm not terribly religious but yes, it comes deeply inculcated, family values, the work ethic, good Protestant work ethic, the be honest, do the right thing.’ Case-B3

‘In realistic terms, since I started university because I think the skills that you have, even just understanding people, and I even sat reflecting last night... I was actually thinking about how I used to work with people on my course. We'd both know what we were doing but until we actually sat together, and you have that element of bouncing off, it's the best way to work. So I think, even going right back to university, you do draw on experiences and things like that.’ Case-A5

Secondary case conditions subject to project leader selections, offered further case profiles of interest namely, gender (sex), reflection time, and generation as presented in Figure 33.

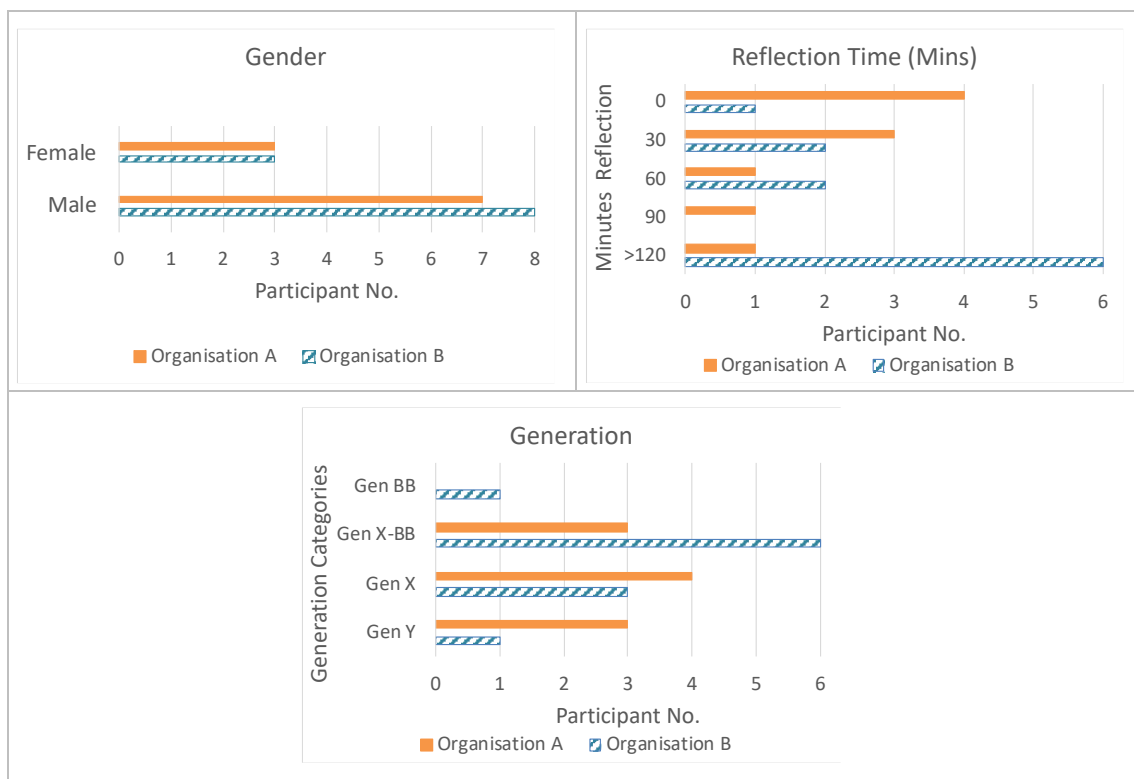


Figure 33. Profile of embedded case secondary conditions

For both organisations most cases were male (71%). A generation profile emerged albeit data on age did not permit full delineation between generations baby boom (age 55 to 73), and X (age 40 to 54), giving rise to an intermediate

generation X-BB (age 50 to 59). Generation X-BB stood the most populated category for Org-B (6; 55%) with generation X marginally the most populated by Org-A (4; 40%). There was also marked differences in reflection time weighted significantly towards Org-B. In Org-B, 6 cases (55%) had invested more than 2 hours (maximum 4 hours) preparing for the interview and only 1 case (10%) reported no prior reflection, compared to Org-A where conversely 1 case (10%) invested more than 2 hours and 4 case (40%) reported no prior reflection.

Material to interpretation of reflective time differences, was that one Org-A case participated as a last-minute replacement, thereafter case traits from an innate tendency to engage in *continuous* reflection to a belief that *in the moment* reflections carried greater bearing:

'I've probably taken an hour each time, but my mind generally works subconsciously. So actually in the background it's whirring away, processing stuff. I have the ability to process lots of stuff all at once, so it's been whirring away.'

Case-B3

'Not a lot, to be fair. About 30 minutes this morning, just had a quick scan through. Yes. I do think with things like researching and questions like this, it should be as you are and how you are feeling at that time. If you do a load of, make some notes on those things, is that relevant to now? It's not changing, so I don't deal like that, to be fair.'

Case-A6

Overall there was a reasonable variation across all conditions. Org-B exhibited some bias towards role centrality, mature perspective, senior management roles, generation X-BB, and Org-A towards lower prior reflection, and generation Y.

5.4.3 Levels of support for theory qualities

5.4.3.1 Data coverage

Integral to interpreting the data was the breadth of data obtained across the 21 embedded cases and across organisations Org-A and Org-B, that is coverage. In total 50 evidentiary data types had been sought from each embedded case from *either* general or specific process descriptions to test 10 theory specific qualities and 6 evidentiary general qualities. Although data gaps were generally more prevalent in process specific descriptions, for each organisation overall,

data gaps distilled down to an average of only 5% across embedded cases across specific propositions P1 to P10 with a maximum level of 10%. Data coverage was thus balanced and comparable across organisations reflecting findings as broadly supported by all cases across organisations, that is not biased towards either organisation or specific cases.

5.4.3.2 Theory specific qualities

Levels of support for propositions P1 through to P10 capturing the relevance of theory specific qualities in practice compared to theory general qualities is summarily displayed in Figure 34. Based on *all* general and specific process descriptive data the average support across cases (21) was 85% for all specific theory qualities, ranging from 68% for behavioural resistance to 100% for motive. As shown in Figure 35, where theory sub-propositions are displayed in numerical order, this translated into only 2 sub-propositions that certain cases neither supported nor refuted *across* descriptions.

The first sub-proposition (P2b) concerned Enacted-influence, positing that non-intentional or erroneous behaviour (deviant) is feasible whereby the primary motive of the performer of the behaviour does not explain the behaviour obtained nor does any direct intervention from a third party. This supported the general proposition that Enacted-influence is a discrete psychological force that *directly* induces and forms behaviour and is distinct from motive. Evidence of deviant behaviour was *not* given by 15 of the 21 cases, only by 6 cases (A2; A5; A6; A7; B1; B6).

The second sub-proposition (P8a), concerned means, positing that behaviour can be either intentionally or unintentionally induced by another agent, where focus lay in evidencing unintentional or passive behaviour inducement. This supported the general proposition that intentional and unintentional inducing acts are significant in governing behaviour albeit not always necessary. Evidence of passive inducement through acts devoid of intention or absence of any act was *not* given by 4 of the 21 cases (A3; A9; B2; B4). That there were cases supporting both sub-propositions (P2b and P8a) nonetheless means that all sub-propositions were supported to some extent.

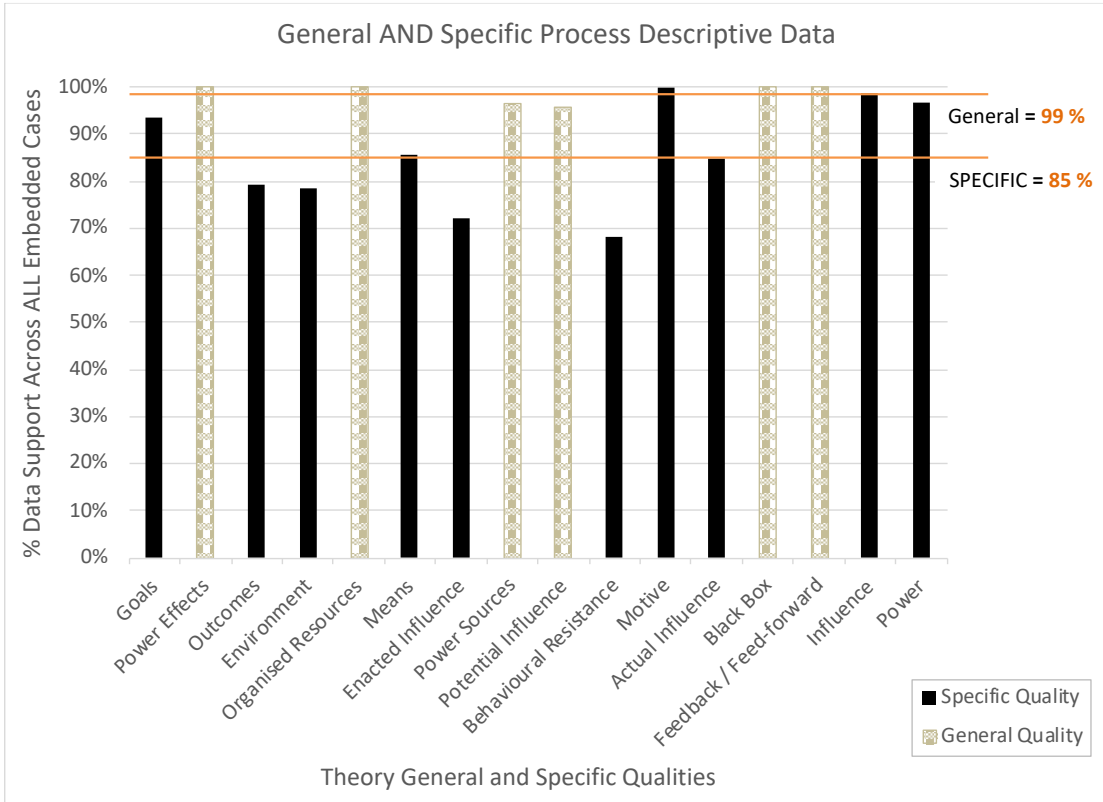


Figure 34. Levels of data supporting general and specific qualities

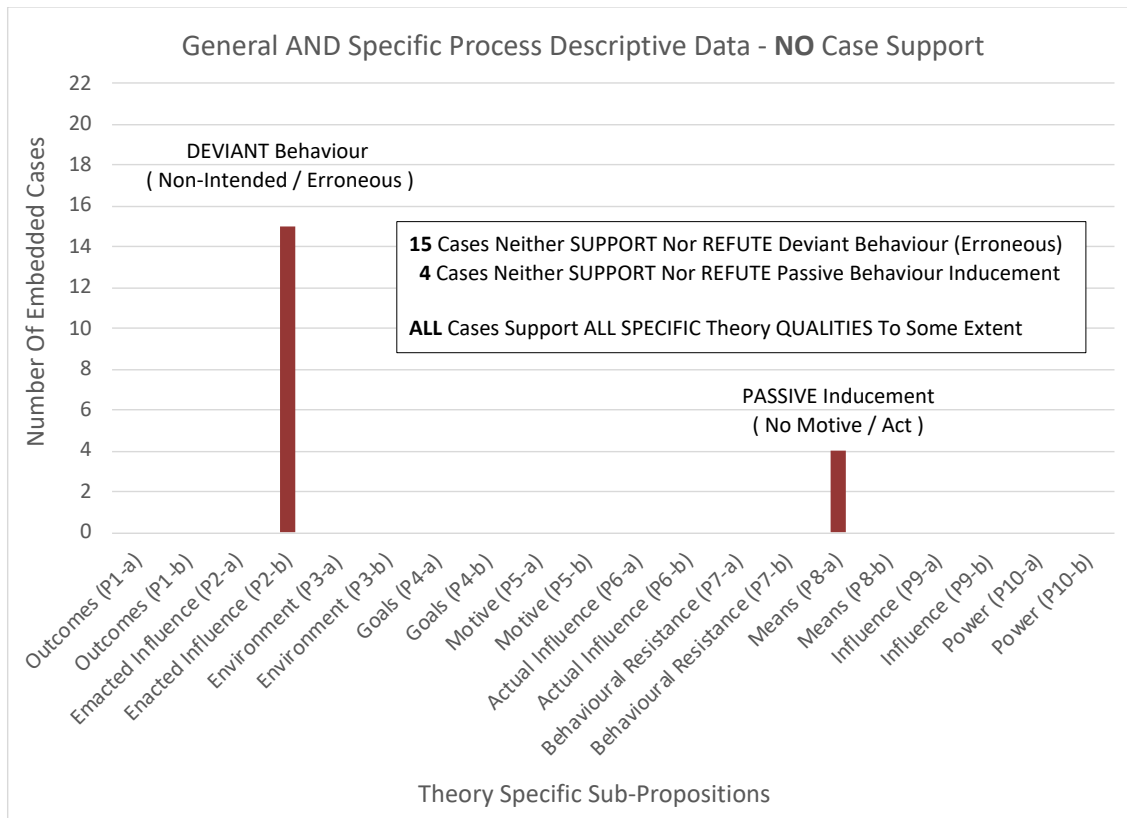


Figure 35. Theory specific sub-propositions unsupported by cases

5.4.3.3 Theory general qualities

Levels of support for the 6 theory general qualities standing as comparatively dominant and more established qualities were significantly higher across cases (38 data types). As displayed in Figure 36 an average level of 99% support for these evidentiary qualities was obtained, ranging from 96% to 100% where it was gaps in *specific* process tracing data that accounted for less than 100% data support for power sources and Potential-influence.

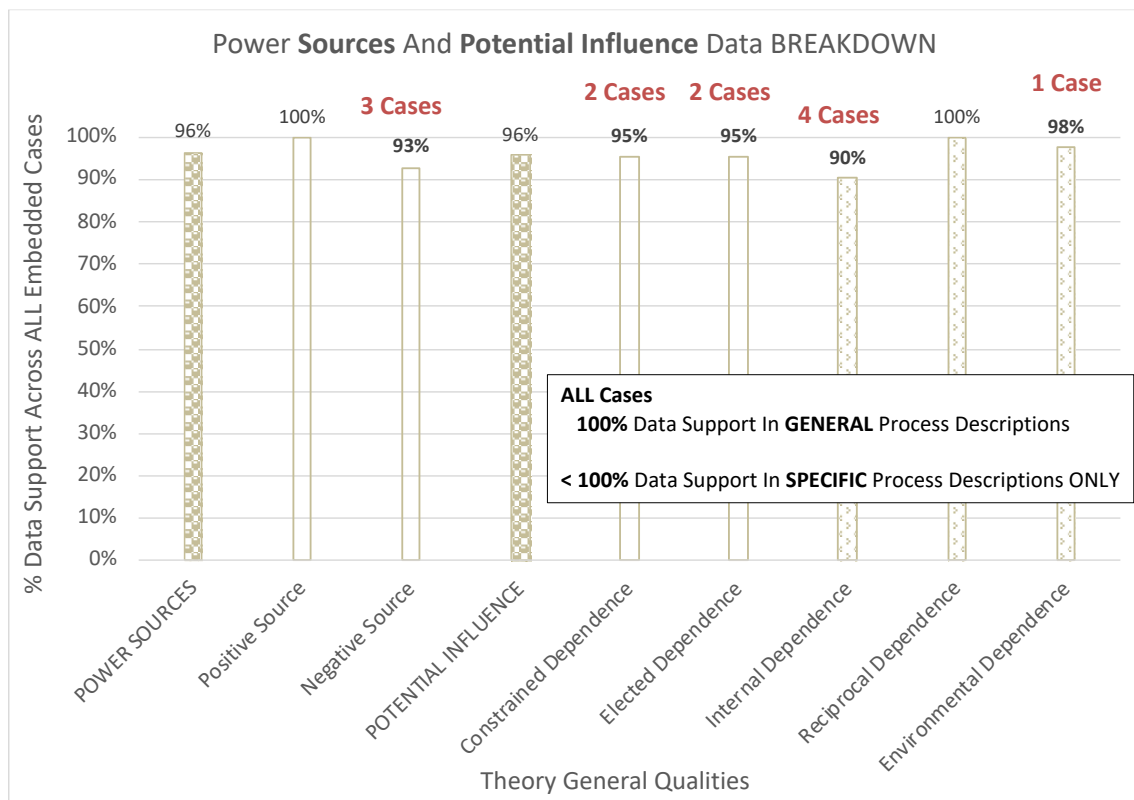


Figure 36. Power sources and Potential-influence data breakdown

As captured in Figure 36, data gaps for power sources, appeared in 3 cases (A7; B6; B8) that offered no clear evidence of the relevancy of negative sources or sinks in *specific* process descriptions. For Potential-influence where there were 5 data types being sought in evidence, only *reciprocal* dependence obtained 100% data support across process descriptions. Relatedly, only one case (A4) did not offer clear evidence of dependence being *environmental* whilst for *internal* dependence (self) there were 4 cases (B2; B9; A3; A10). Constrained and elected dependence each lacked support by the same 2 cases (A3; B11).

5.4.4 Theory qualities evidenced through qualitative data

Focus is given to qualitatively evidencing theory *specific* qualities through a cross-selection of case narrative data, privileging showing breadth of support across organisations and cases. Order of presentation follows the analytical sequence employed. Respective propositions and sub-propositions are used to lead presenting specific qualities thereby qualifying evidential significance.

5.4.4.1 Goals

P4: Goals guide rather than control behaviour and outcomes.

P4a: Behaviour is driven but not determined by goals.

Goal attainment was recognised to drive rather than determine behaviour for many reasons, not least given time constraints forcing prioritisation, but equally for more obscure reasons such as knowing what behaviour will lead to goal attainment. Clearly behaviour did not always follow goals rather was subject to judgement, alignment between formal and informal goals, and goals being realistic with goal conflicts preventing goal attainment prevalent within and across organisation boundaries where compromise or failure to agree arose:

‘I think as an organisation we are very good at setting, in my mind, sometimes quite unrealistic targets.’ *Case-A10*

‘That strategic high-level advice, and Person T’s grade in the organisation, has a value proposition above the average selling rate that exists on our rate cards for our normal framework. Let’s just say it’s 1.5 times X, if that’s X, Person B said, I’m sorry, I’ve got a framework with you at that rate card, and we said, yes, but the framework doesn’t include for the work that you’re asking for... we agreed to disagree.’ *Case-B4*

P4b: Not all relevant outcomes obtained are defined by goals.

Relevant outcomes were obtained that were clearly not captured by goals such as failure of equipment or failure to agree on pricing, which neither organisation sought. Moreover, not only might goals have been fundamentally unattainable, that outcomes were not necessarily set in concrete by fully defined goals rather subject to risks and negotiation thereby change, was recognised to be an integral part of organisational life:

'I think that's one thing that people outside of the construction industry don't understand, is that it's such a living and breathing process, where there's so much change all the way through. You're constantly managing assumptions and risks out, to try and deliver what you're trying to deliver.'

Case-A7

5.4.4.2 Outcomes

P1: Outcomes of relevance extend beyond human behaviour and includes the consequences of behaviour that may use or consume resources.

P1a: Outcomes of relevance extend beyond obtaining behaviour and can be downwardly inclusive consisting of identifiable sub-outcomes.

Relevant outcomes broader in content than behaviour, were readily identifiable and acknowledged. Albeit principally commercially oriented, outcomes of relevance manifestly extended beyond financial performance, expressed both in aspirational and practical terms. Delivery of multiple, complex, and often sensitive projects, from maintaining operation of lifts through to major land redevelopments all involving exploitation and consumption of material resources, were all relevant tangible outcomes. Referred to as a delivery machine (Case-A10), projects spanned organisations involving a range of milestones or sub-outcomes (power-points) including formal project gates.

Notwithstanding, behavioural outcomes were not irrelevant. One project was geared towards establishing more standardised working practices through implementation of a formal project delivery framework. The delivery of this project was clearly an enabling outcome to improve project performance and facilitate communication on the status of projects, especially risks. Broadly speaking, outcomes were rather more related to *making a difference*:

'So there's a whole conversation going on at the moment about, why are we in business, because it's not just for shareholder value or to make money. Actually, I think we're in business to make a difference.'

Case-B3

P1b: Individuals attribute the process governing outcomes of relevance to power.

Influence attributed to obtaining behaviour as distinct from power attributed to obtaining a relevant outcome is covered more specifically in Sections 5.4.4.1 and

5.4.4.10. Contributing to the findings was in general parlance how the distinction was somewhat blurred, difficult to articulate, whereby both influence and power were associated with outcomes. Power was clearly associated with decision-making rights such as awarding work, allocating tasks, where hierarchy was significant, but also in generally obtaining desired outcomes where determining who or what may be deemed powerful was dependent on the outcome. Attributing power to a project given the impact the project would have on delivery, was thereby held meaningful. Poignantly, in a simple expression of what it is to be powerful, the analogy of power resting in the person steering the car, effectively governing the behaviour of the car towards a destination, was drawn upon:

‘Person B I would consider to be powerful because I have respect for him in his position and how he operates. So, by respect I recognise, yeah, he’s, it’s a respect, whether that’s power I don’t know, but there’s a respect... Simplest, the power is who’s behind the steering wheel. Yeah, who is steering the car.’

Case-A3

5.4.4.3 Environment

P3: Environments of IORs includes material forces at work namely, Nature, human physical acts, and human creations, that are directly and indirectly relevant to IOR-behaviour and outcomes.

P3a: The natural and social environment, directly and indirectly impacts individual and collective behaviour and outcomes.

The social environment at different levels from internal population interests of not wanting to relocate site, to industry competition depressing margins, through to geopolitical pressures posing security threats, and the natural environment had influenced decisions such as resource levels and project goals and strategies. The social and natural environment from local to public disruptive actions, through to natural habitats and weather were also evidenced to have directly served as physical disruptions or constraints. This included uncontrollable weather events such as snow stopping site access to partially controllable events for example property theft and damage. Mostly, unplanned, additional, or adaptive actions were necessary with not least time and financial implications.

Although mostly accounts reflected the conditioning effects of the environment, the somewhat symbiotic relationship with the environment also emerged, where the physical environment was purposefully altered to foster more informal, flexible, and non-hierarchical behaviour:

‘I think the working environment is incredibly important. So if you don't want a hierarchical behaviour, then get rid of offices... So as we are working our way through our offices and tidying up our physical estate, all of it becomes much more flexible and much more informal, much more relaxed and none of it provides for people who feel they're important in an arrogant way.’

Case-B3

P3b: Individual and collective behaviour directly and indirectly impacts the natural and social environment.

There was further evidence of a symbiotic relationship with the environment driven by behaviour and projects. Within organisations was strong recognition of the extent to which behaviour breeds behaviour and collective decision-making fosters obtaining sound decisions and buy-in. Thereafter how behaviour and projects directly impact the social and natural environment, positively and negatively. Behaviour and projects generally were consciously directed towards mitigating negative environmental impact and generating positive change through formal engagement in volunteer work and seeking enduring socio-economic benefits. Environmental sustainability was evidently a key focus across projects:

‘We do sustainability appraisals for everything. Any significant activity we do, it comes with a sustainability appraisal as well that then has a number of commitments in it about how we will mitigate any of the impact. Indeed if we're doing particular pieces of work, let's say we're doing some work and it takes away some nesting ground for Brent geese or something like that, then we would do some compensatory works to make up for that. So from an environment perspective actually Org-A are pretty focused because of what we do and where we do it.’

Case-A9

Notwithstanding, environmental sustainability globally was considered under threat:

‘I have some weird views on it all. Well, we're destroying it, aren't we? We're outwardly destroying it. We're destroying the world.’

Case-A7

5.4.4.4 Means

P8: Means as intentional and unintentional inducing acts are significant in governing behaviour but not always necessary.

P8a: Behaviour can be either intentionally or unintentionally induced

Behaviour induced with intention was evident across cases from shifting directions in meetings to requests to undertake tasks, provide information, and so forth, in accordance with the dominant view of the significance of inducing acts as distinct from power effects. Notwithstanding, sometimes initial inducements failed due to misunderstandings such as the absolute requirement to fulfil certain types of training or simply *when* requested actions were to be completed:

‘I knew it needed to be done but it was just in my mind it didn't have to be done immediately... But I'd clearly missed the nuance.’ *Case-A10*

Albeit not clearly in evidence in four cases, captured in Figure 35 (Section 5.4.3.2) there was a cross-selection of evidence of how behaviour was passively and unintentionally induced. Exemplars included behavioural observations in a meeting that spurred intervention to change discussion focus, also introducing defibrillators for health and safety that unexpectedly generated levels of fear over responsibility for their correct use. That behaviour was induced without realisation or intent was recognised from the perspective of the performer of the induced behaviour and retrospectively by the inducer of the behaviour either on reflection or being informed later but clearly also through direct and immediate reactions:

‘The next thing I know, the procurement person said here are the prices. I said I didn't want to see that!’ *Case-B10*

Induced behaviour however only *might* have gone unnoticed by the inducer and be unintended in for example passing interactions where conversations were overheard triggering action or conversely where there was in-action that generated disappointment or frustration. Nothing evidential precluded there being a hidden intent in certain of these cases given intentions of others could only be assumed or surmised to the point that even for open direct interactions, what counts as directing, was sometimes difficult to discern:

'So there's a fine line between direction and influence I guess there but sometimes it doesn't even have to be said.' *Case-B10*

P8b: Self-induced behaviour can occur

Self-induced behaviour was nonetheless prevalent across all cases and explicitly linked to the sense of being semi-autonomous. Even where processes were relatively repetitive in nature from a general viewpoint, the detailed activities almost invariably required the use of individual initiative, judgement, and experience. Moreover, self-induced behaviour was integral to the nature and complexity of the business as noted earlier. Dealing with change such as late delivery on projects required assessing implications and taking measured action:

'No, you would take everyone's opinions or comments, how far you take them depends on what the comment is. If someone said something was one day late, that's different to something being 20 days late.' *Case-A8*

The degree of autonomy was variable, but empowerment was clearly desirable from a management perspective, sought after and relished by some but recognised to carry risk, if not guided. Thus, there were clearly levels of control over processes and practices with more formalised practices being introduced in certain areas of the business to enable further effective empowerment:

'We don't do anything consistently. We just rely on people to do it in the way that they think is right, which is fine if it works... So I'd like to get a level of consistency that empowers people to deliver projects in a consistent way and be accountable, have their own level of responsibility for certain things or be able to delegate responsibility for certain things and know that they're doing it in the right way.' *Case-A5*

5.4.4.5 Enacted-influence

P2: Enacted-influence directly induces behaviour, including abstention, that forms outcomes.

Evidencing Enacted-influence relied on logic and interrelations or distinctions between power qualities but also what behaviour cases described and how. As shown in Figure 34 and detailed in Figure 35, it was the second least evidenced quality (72%) driven by seeking data that evidenced deviant behaviour.

P2a: Behaviour of an individual is attributable to one or several cognitive *impulses* that *forms* behaviour at a given time, that is different from cognitive motives for behaviour.

Foremost that behaviour was broadly attributed to a psychological process of sense-making and reasoning or decision-making across all cases provided basic evidence of a link between the cognitive mind and behaviour. Examples included reasoning behind moving from a persuasive to an instructive management style, to explaining the rationale for having taken a specific decision, through to an interruption to a task that led to the task then being initially forgotten about, more directly signifying the relevance of the mind-behaviour link. The notion of mindset emerged on several cases in connection to driving behaviour:

‘So, I think the biggest thing to be able to achieve this is changing mindset, and I think it is happening, it’s happening very slowly.’ Case-A2

Behaviour more specifically attributed to being formed by a cognitive impulse more directly evidencing Enacted-influence, although not discernible across all cases, was reasonably implicated in explanations for behaviour involving such things as *gut feel*, something *springing to mind*, or having a *negative vibe*. Cases also described sudden realisations such as already having the answer to a problem in hand, and others strong uncontrollable, sometimes unexplainable emotions driving behaviours, that needed to be kept in check. The unexplainable urge to behave consistently in a certain way, as simple as never sitting in a room with the back to the door, offered possibly one of the clearest, direct forms of evidence of a cognitive impulse driving overt behaviour:

‘Just as a funny one, I can’t have my back to the door. No, I’m just mental I suppose. It just is - I just cannot have my back... I don’t even know what it is, I can’t even explain it. It’s been with me for 50-odd years!’ Case-A6

That the form of induced behaviour was different from an account given of the primary motive for the behaviour was also central to establishing that behaviour was not induced *directly* by motive. Across all cases, motives given for behaviour were more complex and broader in content than would be reasonably held directly responsible for the actual forming of the discrete behaviour explained. For example, the specific repeated act of surveying people’s views was more

specific than the motive behind engaging in soliciting these views that included synthesis of the views and use as evidence. Given the same repeated act might reasonably also have been purely for interest, tends to support that the behaviour was not directly formed by motive moreover guided and formed by a more specific mental act capable of forming the specific behaviour, that is Enacted-influence:

‘And to go and *talk to people and survey* what those points are, *so that we can say*, amongst our stakeholder community we were worried about this, but actually, having spoken to the following people and asked them the following questions, we now feel that they are comfortable, so it’s no longer an issue. So that’s been, where the data resources haven’t existed, we’ve gone away and done something innovative to try and harness them.’

Case-B5

Further examples included a verbal commitment to furnish drawings, a speech act, that was more specific and focused than the motive behind the behaviour that amongst other things incorporated a perspective of the broader business relationship. Translated to a collective behavioural level, similarly the motive behind the formal agreement of documented general terms and conditions (T&Cs) reflected not least the goal of accommodating project variability. Motive was thus broader than even the content of the agreement, and different further to what may reasonably be considered to have directly formed the *act of agreement* by the individuals involved.

P2b: Non-intentional behaviour (*deviant*) is feasible whereby the *primary* motive does not explain the behaviour obtained *nor* does any direct intervention from a third party.

Although limited evidence emerged of clear deviant behaviour that more concretely distinguished between motive and Enacted-influence in directly forming behaviour, there were nonetheless examples of recognising unintentional even unknowing improper behaviour, awareness that behaviour had deviated from normal behaviour, and experience of unwanted stress. That deviant behaviour was feasible was also implicated by safety measures introduced in projects. Clear evidence of actual deviant behaviour also did emerge perhaps offering the strongest support for recognising Enacted-influence given it might be

reasonably judged not unique to the case, that being the inadvertent sending of an email to the wrong recipient:

'I send emails to the wrong people, especially when two of my members of team both began with an R. Yes. So I sent one of our people in international an email that was meant for one of my staff. Luckily, he's at the same level I am, and I just rang him and I'm so sorry. It was an email to the team about mobile phone use, just the new rules and the new regulations... When your gut drops and you're like oh no, I didn't mean to do that. Especially email related, I'll always phone the person and just say just delete that one.'

Case-B1

5.4.4.6 Behavioural resistance

P7: Behavioural resistance is sustainable.

Although as shown in Figure 34 behavioural resistance was the least supported quality with a 68% coverage level, its relevance to behaviour and outcomes was nonetheless supported in some manner by all cases as detailed in Figure 35.

P7a: Behaviour conflicts can arise whereby not all demands can be satisfied.

There were accounts of behaviour demands (means) that had not been or would not be satisfied if the circumstances arose. Prevalent amongst accounts were such things as not being induced to change opinion or support a specific decision, both naturally emanating from different views about what was factually correct or the best course of action. In some instances this did not directly affect what happened given respect for difference of opinions and decision-making rights, as in the case of not allowing a project to proceed in a certain direction or in taking certain technical decisions:

'There were certain things value engineered out, not to Person B's agreement.'

Case-A1

In other instances, there was a clear impact such as in not agreeing to certain contracting terms as noted previously (Goals) or not agreeing to provide resources at no cost. Despite nothing precluding such behavioural resistance being judged destructive, evidence more pointed to it being integral to a clear sense of role and responsibility, from who is responsible for taking meeting

minutes to adhering to policy and procedures. In some instances elements of judgement were plainly relevant from how far to challenge information and responses, given experience and insights gained, through to what might constitute a health and safety issue, in attending to *all* goals:

‘So, I don't just throw something on the table and then wait for them to come back to me and then take it at face value... That's why I won't just accept it without a bit more challenge.’ Case-B11

‘But yes, I will disagree at times, and I will refuse to do things if I don't think it's right, usually from health and safety, risk, cost, anything like that. It's usually valid reasons why.’ Case-A5

Thus, where appropriate, there were limits to what behaviours were deemed acceptable and would be engaged in and generally with some sense of rationale, if not justification, including simply not having time to satisfy a demand. Behavioural resistance however judged was almost an accepted fact of the nature of the business. There were recognised conflicts in goals and differences of opinions to be negotiated thereby generally some resistance to overcome to achieve a positive outcome:

‘I don't get too worried about the no's any longer, because it's like, right well that's just a way, so I need to work around that in order to get to the yes.’ Case-B5

P7b: Individuals are willing to endure negative consequences of not satisfying a demand (*negative BR*) and endure not obtaining goals due to capability limits (*positive BR*)

Albeit tempered generally by a strong desire to find solutions and satisfy internal and external customers, willingness to endure negative consequences of not satisfying demands was demonstrated, from redressing how the cost and implications of change be managed fairly across organisation boundaries to undertaking services only when duly rewarded, There was also evidence of readiness to endure and withstand criticism:

‘So I was quite happy to take the criticism of a colleague because I knew that my then-boss would support me on it because he would also see the bigger picture and he was pragmatic about it...’ Case-B7

In certain cases, if faced with conflict related to something as fundamental as integrity, some cases were clear that they could not and would not work under such circumstances but rather leave an organisation. This captured how behavioural resistance not only conditioned Potential-influence but equally environmental influence. Conversely evidenced were how capability limits were sometimes given by practical environmental and physical limitations. What individuals innately felt able to do was also a factor:

‘Yes, but he knows that if I’m asking him to do it, and like anybody, if I’m asking them to look at something, they know that I know that I’m not comfortable in making it so shouldn’t put my name to it, shouldn’t make that decision because it’s not something that I’m confident with.’ *Case-B1*

5.4.4.7 Motive

P5: Individuals mentally negotiate reasons to behave consciously and subconsciously.

P5a: The impulse to behave in a certain manner that accounts for what behaviour was *formed* does not *fully* explain why (*purpose*), when and how an impulse came into being.

Across all cases at least one instance was evidenced where behaviour accounts were more comprehensive than the behaviour including such things as purpose (why), a time of forming (when), a rationale (how) and basis (what).

‘Okay, that would probably then be the example I gave earlier for looking at the bigger picture **[why]** and accepting that we will just provide the drawings they want for this particular project and be done with it **[Overt Behaviour]**. Yes, there was that influence brought to bear, but he probably had a fair idea what he was doing there anywhere by saying, oh it’s not going too well **[what]**. Clearly, I wasn’t there for my health **[what]**, I was there to market **[what]** what we were doing. But yeah, he got his way, and I got my way, so we both benefitted **[why]**... No, I’m thinking **[how]** about all the other things. I’m thinking about the bigger financial picture and how it might influence his thinking in the future **[what]**, I’m thinking **[how]** about being well thought of **[what]** and gaining a good reputation I suppose within Org-A as the client **[what]**, and really just looking at the bigger financial picture **[why]** and knowing that, if they’re happy with what I do with that, they’re more likely to come back to me for other things... Consciously. **[how]** *Case-B7*

Generally, as in the above example there was a clear history and Potential-influences contributing. In this case, project status and gaining a good reputation [what], often explicitly linked to an end goal, here the bigger picture and winning business [why], involved conscious thinking and some logic, such as customer satisfaction being key [how], and was set within some timeframe, here being a customer visit and, in the moment [when]:

Motive featured in accounting for behaviour such as requesting an overdue purchase order, seeking solutions to customer problems, collective task prioritisation or referrals to line management for task prioritisation. Motives were also clearly formed in advance of inducing behaviour a simple example being accepting a meeting invitation to physically attending at a later date.

P5b: Behaviour is subject to situated evaluations that includes judgements about consequences and reactions.

The preceding excerpt exposed how judgements concerning consequences and reactions framed behaviour. Further examples included assessment of debtor risk, likelihood of enabling someone else to advance a project, and what might be the best course of action in a project. Whilst these examples point to consequences, anticipating reactions of others were also integral to judgements:

‘So there is the interaction as well as email. We do like to try and speak to people rather than do everything by email. Emails can be read in so many different ways, and given the relationship that we have, he doesn’t like to be over-chased for payments.’ *Case-B2*

Perspective was relevant across accounts where for example it was an individual viewpoint on whether rates offered for services rendered were realistic or effectively buying work that may generate quality issues. Adopted perspectives also related to taking short or long-term views through to considering specific versus general aspects of the business:

‘Intuitively I would accept that we need to reduce the utilisation levels of our consultancy teams to make sure that we can meet the resourcing demands of this particular contract... However, we're now on point to deliver a set of [financial] results that we have to deliver... In order for us to do that, the utilisation levels need to stay high.’ *Case-B11*

Cases also recognised the relevancy if not the contribution of the subconscious mind to motives and behaviour:

‘I think subconsciously, yes. I'm probably not really always aware of that. Even silly things like how tired you are can influence opinions, subconsciously. But if you're feeling really tired or low, or just no energy whatsoever, your opinions generally come a bit more negative.’ Case-A5

5.4.4.8 Actual-influence

P6: Actual-influence is a contingent and temporal ability to induce behaviour of the self and others (attributed), at will.

P6a: An individual's ability to perform a specified behaviour is subject to temporally formed motives of the individual that are subject to change.

Abilities to perform certain behaviours evidently changed or would have changed subject to motive. Expressed in general terms across several cases was how individual formed opinions on matters could be changed by others but only with sound reason, how acceptance of emergent authoritative decisions of others including the imposing of budget limitations alters or frames motives that drives certain actions and solutions, precluding others. Cases supported such temporal shifts in motive and thereby Actual-influence. Further discrete examples of when and how motives shifted in the moment included, first, an authoritative decision on a project, second, a demand for financial information, and lastly an unforeseen event. Each temporally or permanently suspending the ability to perform certain behaviours or take certain courses of action.

The example of responding to a specific demand for financial information rather than focus on the subject matter previously in hand typified how motives and thereby real Actual-influence was dynamically conditioned. The notion of *at will*, necessary to sustain a real ability to behave in a certain way at a given moment in time, was conditioned by circumstances and natural limits of multi-tasking. The need to make regular behaviour choices arose based on what demands and priorities were in prominence at the time. Furthermore what may or may not be a viable course of action was not always black or white:

'I thrive on nothing being black and white and because things aren't black and white, you're able to develop a case, and you need to convince the people on the constraints side that everything's a balance, and in this particular case, I would say as with all the projects I work on, the balance is tipped in favour of going ahead.'

Case-B8

Further demonstrated were how motives formed were susceptible to change in advance of actual inducement of behaviour whereby the ability or will to perform a specific behaviour effectively dissipated. Examples ranged from such things as a premature boiler failure that not only triggered unplanned phone calls but disrupted planned work thereafter, to not progressing an issue via email with somebody specific as planned, through to prior commitments to attend events that lacked will thereafter, succinctly captured by the classic turn of phrase, it seemed a good idea at the time.

That many interactions unfolded moreover negotiated than predetermined, pointed further to the temporal nature of motives and Actual-influence in terms of power-to that was subject to reactions and power-over in soliciting desired responses:

'Quite often in that sort of conversation it becomes like a negotiation. So you put something on the table and it's not your final answer, it's your first answer. So you put something on the table, and you see what the reaction to that is... So actually it's about what you're trying to do or what I was trying to do was measure the distance between us.'

Case-B3

Conversely, evidence also pointed to how abilities associated with engrained practices *persisted* given mindsets or motives had *not* yet made the step change to naturally alter abilities to follow new practices. Thus, real abilities were not necessarily wholly unpredictable or changeable rather more simply temporally bound by motives, broadly governed by role and responsibility. Several examples of motive change being due to changes in environmental conditions leads to evidencing the second sub-proposition.

P6b: Non-intentional behaviour (deviant) is feasible whereby enabling conditions do not prevail.

Where Enacted-influence was in part evidenced through induced behaviour being deviant without any direct intervention from a third party, that third party intervention or more broadly enabling conditions were relevant to what behaviour could and would be induced nevertheless arose. Several cases revealed how not least the behaviour of others was relevant to such things as abilities to solicit clear information or have one's advice accepted or fulfil an action based on certain assumptions being the case. Not for the first time, what could and would be done was subject to adopted perspective and likened to a game of chess:

So, it's a bit like a game of chess. It's one thing moving the pawn to rook four, but has that person thought about the move I'm going to make in response and what their next move is? Have I got the confidence level that they're actually judging the direction that the game is going, as well as just telling me about the move they're about to make? *Case-B11*

Thus, sometimes contingencies related to the motives and behaviour of others, in other cases it was contingent on the innate capability of someone such as not being able to endure enclosed spaces. Equally some abilities, for example maintaining appealing gardens were inherently conditioned by the forces of Nature. These examples supported *real* Actual-influence as being temporal and contingent at the individual and collective level. Not only were projects recognised to be never strictly ever black or white; circumstances were widely acknowledged to be changeable. Real abilities to deliver specific projects especially of long duration rather entailed planning responses to foreseeable change, even then, evidently projects suffered unwanted deviations.:

'This is a plan for X years so we can't possibly know the outcome of everything, and so we need a plan that can respond to changes in circumstances and people who we may not even be aware of at the moment coming and saying, we want to do this.' *Case-A4*

Whether or not ability to deliver (Actual-influence) had been *presumed* to be the case, or recognised to be temporal and contingent, or not, did not however alter the fact that certain abilities existed given behaviours were induced and outcomes obtained whether or not fully aligned to goals.

5.4.4.9 IOR-influence

P9: IOR-influence is a complex, emergent, regressive, and obscured flux of discrete influence processes.

P9a: A Motive that *fully* explains behaviour is not always evident to the individual and cannot be directly observed.

Motives that *fully* explained behaviour were difficult to provide even for the self from not knowing why one person had been felt more engaging than another, to explaining the reason for having felt a certain way. Prevalent was not fully knowing the motives of others where explicitly if not implicitly, assumptions had been made. In other cases it was acknowledged that aspects of a motive were unclear, for example a customer's motive or whether an issue had been resolved that would determine whether a motive to obtain legal clarification would then emerge. Captured metaphorically in the following example was how motives of others through observed behaviour was typically hidden and might therefore be perceived and explained differently:

'He's either doing the swan impression where they glide along and they're peddling like mad underneath, he's either doing that or he really is coping with it... you feel like they're all about to crumble not through any inability of their own but just because of pressure of work and lack of another person, pair of hands.'

Case-A2

There was also a level of acceptance that at times, it was the case that individuals had to live in ignorance about certain motives of others for good and bad reasons but that equally it may be a question of asking why. Relatedly, several cases recognised that their own motive for behaviour had been misunderstood by others. The extent to which cases typically sought to understand motives appeared to depend on the case, but clearly rested on how important it was to know, and whether it was knowable, especially looking to the future given motives were understood to possibly change, if not unfold over time:

'No, I don't think we would necessarily resist it. I think in the relationship with Org-A, it's rather more of a... I would say we are still in the process of actually seeing that it's a two-way street... So I think the proof of the pudding in that will now be to see what happens in our shared goals going forward.'

Case-B4

P9b: Multiple, influence processes rooted in individual motives interact at any given time and are not necessarily fully aligned towards all goals.

That behaviour contradicted or conflicted with the behaviour of others was supported foremost by accounts of sustained behavioural resistance, signifying that *all* motives were not always necessarily fully aligned to *all* goals. Further examples pointed to actual conflicting behaviour ranging from behaviours associated with how organisation facilities were used by people on site, unplanned activities forcing scheduled deliveries to be deferred, solutions deemed over-designed, to accepting from experience of partnerships that at some point somebody will let you down. These examples further pointed to the multiplicity of individual horizontal influence processes that were occurring at any given time within and across organisation boundaries. An example of when motives interacted vertically and were held clearly misaligned was on presenting a view of the way forward for a project:

‘We present what we believe to be a positive and upbeat message, only to receive mixed messaging from the strategic leadership of the business.’

Case-A4

Furthermore, goal conflicts had also been in evidence. A further example was a recognised ongoing conflict between according time to delivering projects versus securing payment. Some goals were also obscured or not recognised, or even valued differently. For example, that an architect when designing a building may not have given sufficient thought or weight to maintenance implications was clearly noted, and a view that on project work there was disconnect between financial and delivery team goals. The following captures how a goal of proactively managing the supplier base and fostering partnerships to facilitate engaging quality services may not have been recognised or valued differently:

‘... well we’ve got these people already aligned to know how to do the service. So if someone engaged with a non-Org-B or a completely new designer that we’ve never heard of and got so far down the process and they say, can you place an order with this person? Well, if you’d have talked to Org-B maybe a month ago, we wouldn’t be in the position that we are now, sort of up against it.’

Case-A8

This example draws attention to the levels of self-induced behaviour across organisations. Relatively high levels of autonomy meant that motive formation and behaviour was not pre-ordained rather situation-based laden with judgements. Furthermore, that cases resoundingly referred to being busy and not therefore having time to do everything, behaviours were inherently dynamic and moved between activities subject to perspective and what issues moved in and out of focus, but also required negotiating to seek alignment in direction, as the following selected excerpts captured:

‘All these different issues, they come and go, they’re sort of flying around and sometimes they’ll be close up and then they’ll go off into the distance, and then they’ll come back again later into focus.’ *Case-B8*

‘So, okay, moving along this spectrum, we need to cover off a number of points at which all of the stakeholders have said yes. So let’s try and predict what those questions are and then let’s find ways in which to answer them so that they can say yes. So it’s all about progressive steps to secure that buy-in and that engagement, so that we get closer to the mouth of the funnel, in a sense.’ *Case-B5*

5.4.4.10 IOR-power

P10: IOR-power is a contingent and indeterminate process.

P10a: Outcomes (what and when) depend on the combination of collective, indeterminate behaviours.

Evidencing IOR-power as a contingent and indeterminate phenomenon rested primarily on having established *outcomes* of relevance as being dependent on collective human behaviour albeit not limited to behaviour, thereafter that human behaviour was unpredictable. Already evidenced was how certain induced behaviour had been unintentional and deviant. Furthermore that self-induced behaviour was also prevalent where motives driving behaviour were obscured and abilities to perform behaviour contingent and temporal. These power qualities all inferred behaviour was unpredictable and was supported by further evidence of behaviour and thereby outcomes being unpredictable.

Unpredictable individual behaviour included such things as cancelling meetings, not responding to emails and phone calls when expected, and how individuals

reacted to problems. There were nevertheless views on how collective behaviour would emerge such as working together to understand how a problem arose. Notably there was a clear distinction drawn between the degree to which behaviour might be deemed predictable within a military versus business context, where in the business context it was generally recognised there was more freedom to make behaviour choices rendering behaviour far less predictable. Certain business decisions were also complex and not self-evident where for example even with key facts and recommendations on which supplier to engage on a project, the actual decision to follow the recommendation was not a given.

Outcomes were also confirmed to have not been as planned despite best efforts in sometimes being found unachievable, sometimes events occurred that changed the course of direction whereby the outcome was not obtained, and sometimes things simply did not go to plan because of challenges faced or errors made where an outcome was achieved, but not necessarily on time, on cost, or to the original design or planned state.

The following exemplifies the link between unpredictable behaviour and outcomes in terms of decision-making on supplier selection and evaluation of supplier performance with implications for supplier reputation, that when lost, metaphorically was likened to having to refill a bucket with a dripping tap; it takes a long time to restore and thereby secure future business:

'I said well you can employ whoever you want. If you say you want to use someone, go and use them. Hopefully you'll want to use Org-B but if you don't then it's your gift. That's the approach that I take with Org-A. So it is a bit of, if we are doing a good job, we will get work for them. If we do not do a good job, the bucket is kicked over, and the dripping tap starts filling it up again.'

Case-B9

Acknowledgement of the degree of outcome unpredictably was captured by one case in performance terms. To achieve 80% of a goal was suggested to be a good outcome, reflecting the complexity of the business, unforeseeable events, and importantly the significance of people, not as machines rather as semi-autonomous, thinking, goal driven human beings:

‘If I get 80% of the way to where I want to get to, I’ve probably done pretty well. Life is never straight forward. The thing is, it is always more complex, and it always takes longer and there are always things that pop out the woodwork and you just have to deal with that. It’s never as simple as command and control, I say, you do. It doesn’t work like that and not in a people business.’ *Case-B3*

P10b: Outcomes are conditioned directly and indirectly by an unpredictable social and natural environment

The relevance of the social and natural environment was established in Section 5.4.4.3. Examples provided suggested that both were unpredictable, and this was further supported in terms of the immediate social environment. The relationship status or atmosphere framing ongoing engagements had undergone three notable phases and changing customer requirements presented continued risk to advancing projects. Further afield, influential feedback from across the supply base to customers was also unpredictable. More broadly, the dynamics of the economic environment from access and cost of key resources to financial crises all being tightly connected to the dynamic political landscape at the international level through to local government level, were all relevant. Relevancy was not only in general terms such as security and demand for services but equally in daily activities from securing payments from companies in financial difficulty through to securing specific planning permissions when political interests shift:

‘There are other boroughs where the balance of power is so finely balanced it only takes a death or a resignation and then the whole balance of power’s changed to the political polar opposite. That’s the problem you have with planning.’ *Case-B6*

Lastly, further recognised was unpredictability of when and how man-made physical structures may fail and the state of the natural environment from disasters through to local weather conditions, impacting business performance:

‘So natural disasters, a government going to war suddenly means they need more defence contractors, so that would have an environmental impact. Weather does. We do lots of trials that if the weather... and we’ve got lots of remote locations... so if the weather’s bad we can’t do it and then we can’t trade.’ *Case-A3*

This concludes presenting excerpts of qualitative data that collectively evidenced how theory specific qualities were manifest within a focal significant IOR-Case. Presentation now turns to the findings of intelligibility testing including relevance of embedded case primary and secondary conditions exposed in Section 5.4.2.2.

5.4.5 Theory intelligibility and relevant case conditions – Analysis 1

The profile of perceived (raw) intelligibility accorded by cases to the succinct influence and power definitions, are shown in Figure 37. The profile traces power from the highest to lowest level of accorded agreement, showing a range from 9 through to 2 with the majority (71%) according a level of agreement of 5 or greater. In contrast, a range of 10 through to 4 in level of agreement for influence was accorded with all but one case according a level of 5 or above (95%).

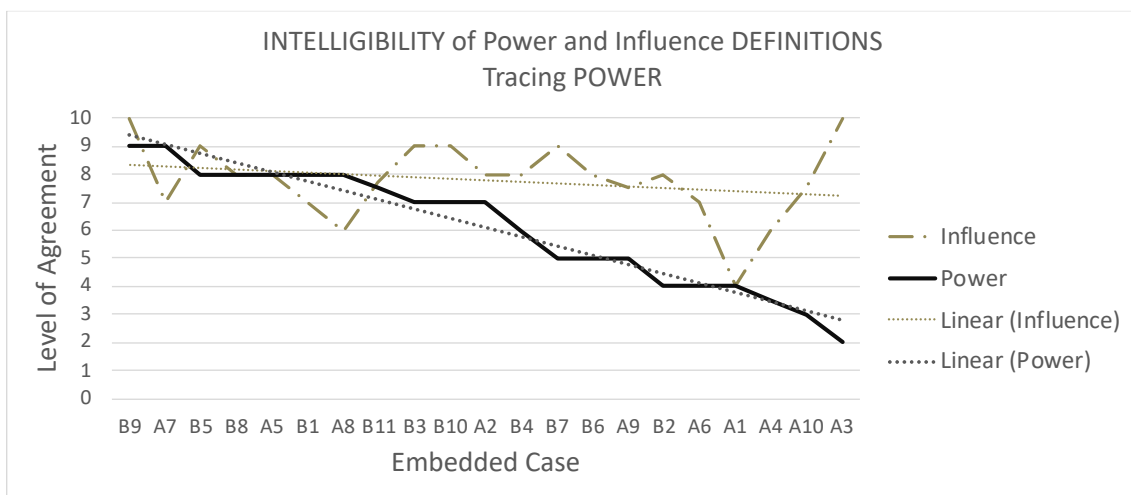


Figure 37. Perceived definition intelligibility tracing power

An empirically grounded model (E-Mp) was obtained (fsQCA) showing relevancy of conditions tested to perceived intelligibility. In summary, case *primary* conditions only (centrality, commercial, management level, maturity) were found tentatively relevant to intelligibility of power but not generation (core values) or evaluation (female, prior reflection) conditions. Similarly, case primary conditions only were tentatively relevant to intelligibility of influence. A distinction lay in intelligibility of power having bearing on the intelligibility of influence, but not vice versa.

5.4.6 Qualitative data supporting adjusted intelligibility levels

5.4.6.1 Profile of adjustments

Accorded influence and/or power intelligibility scores were subject to adjustment across all cases as depicted respectively in Figure 38 and Figure 39. For influence, the mean score for Org-A rose by 1.8 (18%) from 7.1 to 8.8 compared to Org-B where the mean score increased by 0.6 (6%) from 8.4 to 9. Thus, Org-A adjustments were proportionally higher (12%) overall and led to actual intelligibility of both organisations being highly comparable. The maximum adjustment made was a change of 5 (50%) from 4 to 9 for Case-A1.

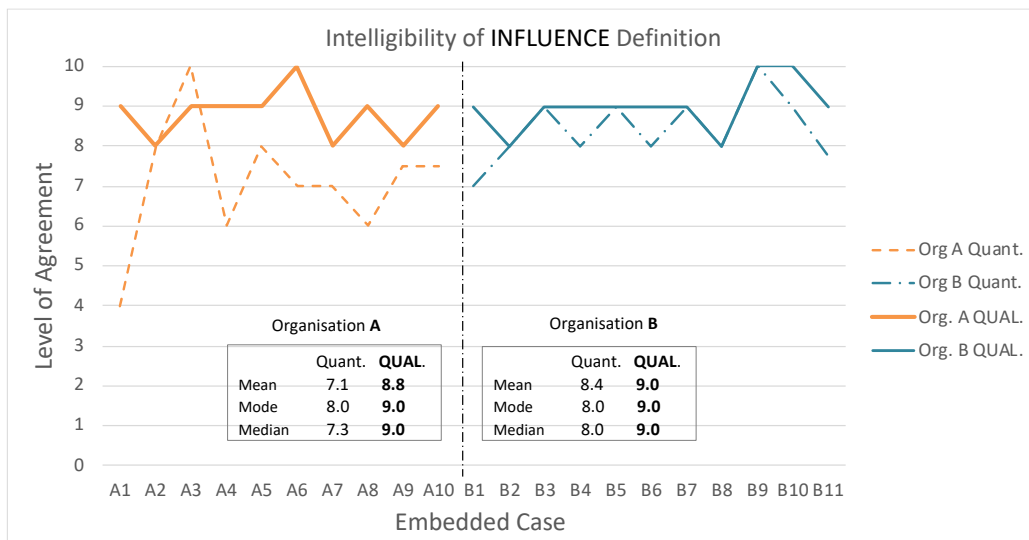


Figure 38. Profile of adjusted influence intelligibility levels ordered by case

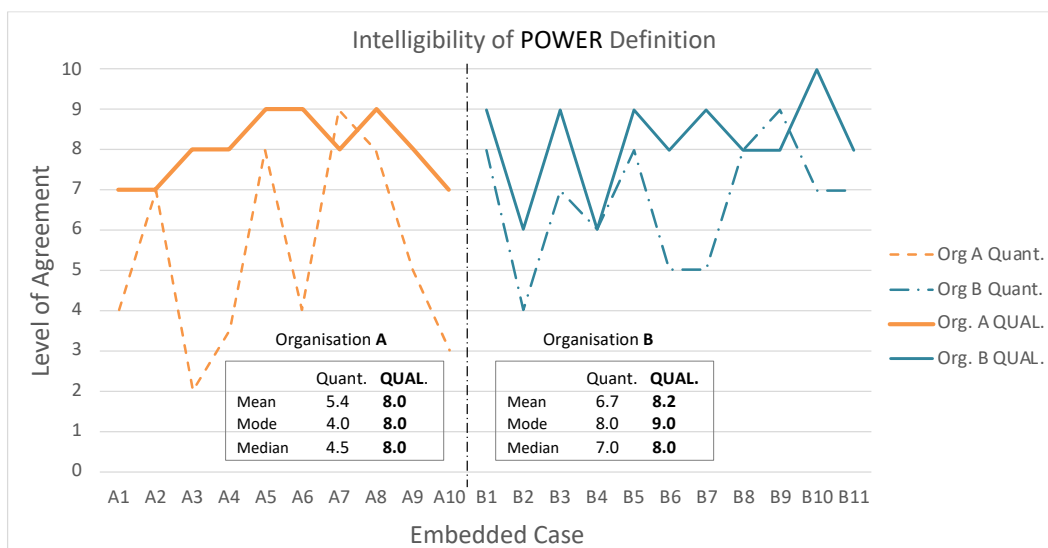


Figure 39. Profile of adjusted power intelligibility levels ordered by case

The pattern was the same but more exaggerated for power intelligibility where the mean score for Org-A rose by 2.6 (26%) from 5.4 to 8.0 compared to Org-B where the mean score increased by 1.5 (15%) from 6.7 to 8.2. Thus, Org-A adjustments were again proportionally higher overall (12%) and led to actual intelligibility across organisations being highly comparable. The maximum adjustment made was a change of 6 (60%) from 2 to 8 for Case-A3. The profiles of actual intelligibility levels retained some variability across cases but far less marked than for perceived intelligibility.

Justification for the significant adjustments made that led to a distinction between perceived and actual intelligibility levels, thematically classified were as follows.

5.4.6.2 Emotive and interpretation factors contributing to intelligibility

Recalling the two high level definitions under direct evaluation were that *influence* is the process that governs behaviour, and *power* is the process that governs outcomes, evident was how emotive and interpretation factors contributed to explaining case intelligibility scores as depicted in Figure 40. There were three prominent interpretation factors, the meaning of two terms embedded in the definitions, govern and process, thereafter confidence in views held. There were a further three emotive factors discernible related to judgements about effectiveness of influence versus power, distain for misuse or abuse of power, and lastly core values related to being human and society generally

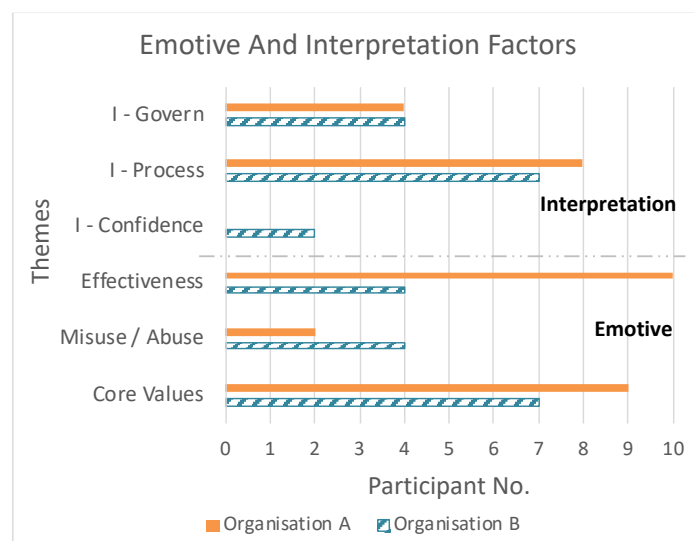


Figure 40. Thematic profile of factors contributing to perceived intelligibility

Whilst these themes were largely common across organisations, there were differences in significance to intelligibility. The most marked difference was in emotive factor, effectiveness. Effectiveness was manifestly relevant to 10 cases from Org-A compared to 4 in Org-B. Furthermore, confidence in views was only judged a contributing factor in 2 cases from Org-B. Thereafter, for each factor the number of cases across organisations ranged from 2 up to 9 cases.

Commencing with interpretation factors, first meaning accorded to *govern* was clearly weighted towards it being synonymous with absolute control and a sense of determining behaviour or outcomes. That *govern* includes conducting or managing or leading with a level of authority where behaviour and/or outcomes may remain indeterminate was not self-evident to cases. There was clear evidence that rejection of such absolute control contributed to reducing intelligibility levels, as the following selected case excerpt shows:

‘They are not easy questions. They look very easy, don’t they, but they are not easy questions to answer. Oh heck. The influence is a process that governs an individual’s behaviour. I don’t like the word governs there.... It doesn’t govern, it can’t govern. You can only try to influence it. How can you govern someone’s behaviour? I don’t think you can, unless they’re a puppet.’
Case-B6

Furthermore, exposed by Case-A8 and Case- B8 was how interpretation of *govern* was strongly linked to what *process* was being captured by each definition. This was rarely directly questioned by cases to the extent that the rationale for a lower level of intelligibility more often supported rather than contested the definition. One such case was Case-A1 and largely explains the significant adjustment made to influence intelligibility (Section 5.4.6.1). The process was interpreted as an *influence-over* process attributed to the *influencer* (A) rather than the *influencee* (B) performing the behaviour:

‘I don't think I agree with those. I don't think influence is the process that governs an individual's behaviour. I think you govern your own behaviours. I fondly do believe that. I don't think that... that's effectively making an excuse for people who are going down disciplinary routes for doing something untoward at work. No one has influenced them to do that, they've done that themselves. So, I struggle to agree with that.’
Case-A1

'I'm influenced by absolutely everybody on this site and so are my team. I'm influenced by my team to keep going... I'm influenced by my children. I get up every morning and I come to work. I come to work for them. So, when we're talking about influences, I think it's quite a broad question. I really wouldn't know where you'd want me to start.'

Case-A1

The process is grounded in the psychological process of the influencee (B) as an influence-*under* process (others, self) such that the behaviour and thereby responsibility for behaviour foremost lies with the influencee (B) as explained by Case-A1, without denying the relevance of being influenced *by* others, also explained by Case-A1. Thus, Case-A1 in this sense moreover supported definitions. The relationship yet distinction between power and influence processes, further complicated interpretation:

'Yes. It's the process bit and the govern bit... I'm going to give that a four, because power's not a process, power is something that you achieve when you've achieved something... I think that's what gives you the power and makes you powerful, rather than being powerful, banging the table, being strong upfront, I think you have to influence the others to get the decision that you want at the end. That then makes you the powerful, but it's not the power that governs that process. But then I suppose you could say that that person is more powerful, because they're gearing it in that direction, therefore it may be the process, but that's not how I think. So that's why I'm only giving it a four, because there's a bit in the middle.'

Case-A6

All cases had not thought deeply or necessarily logically about the meaning of influence and power previously such that no case offered categorical responses cases rather more engaged in theoretical analysis. Although not generally evident, lack of confidence in understanding the definition or own views did partially impede analysis in two cases. It nevertheless remained possible to unearth a reasonably accurate assessment of actual agreement in both cases:

'But the decisions could be bad decisions, and if you've got the power to make those decisions, if you've got the team and an organisation, they can overturn the decision, if you've got enough people within the organisation, you can't say the power being one person. Potentially one person or a board, the power would... if you've got an organisation to overturn the decision, it would contest, be contentious against the power. Does that make sense? You're going to listen to this back and think, what a load of rubbish! It's very thought-provoking.'

Case-B2

Turning to *emotive factors*, commencing with *effectiveness* thereafter misuse or abuse of power, and lastly core values, all of which were interconnected, there were strong views that being effective was important. Generally, it was held more effective to lead and manage through consensus and reasoned argument, both associated with influence, and sometimes necessary where there is no clear authority:

‘Yes, because if I go back to this, the chief executive of end customer in this context has a reasonable level of power and ability to influence in this own organisation, but his ability or her ability to influence in that broader construct is more driven by behaviour than it is power, because they're having to behave with others who are equally powerful, particularly in that environment. In a relationship where you're all effectively equal and you're not accountable to that other person, my belief is it's more your behaviour that influences as opposed to power... By your ability to influence, so how effective are you at changing people's views to your own? You don't do it through power often... So, it becomes much more of a behavioural piece. That's why if you are in that multi-nodal environment, it becomes behaviours, I think.’

Case-B4

In certain cases, power was strongly associated with the military command-control based structure and viewed a rather negative, ineffective, and blunt management approach in business practice. It was clearly, experience of the *abuse or misuse* of such power that tainted views of what power constitutes, and largely explains the significant adjustment made to the power intelligibility score for some cases:

Yeah, what's the difference? Influence, to me, feels like a really sophisticated way of getting an outcome. Power feels like a really, when I hear the word power... Barrack Obama, right, there's a guy who's got power, that terrific influence. Tony Blair, politically do I share? No, I don't, but has got terrific influence, just the way he speaks and reasoned arguments. That's influence... There's a reasoned argument in influencing, where power is an army thing. I'm your Sergeant Major, drink that coffee. I'm not in the army, so why would I drink that coffee?... The reason I'm scoring that high... can I write on that or not? Is because of that word, and the reason I'm scoring that low is because of that word. That might be wrong and that's just my lens on things. I hate bullies. I hate bullies and people of a bullying way of management and a bullying way of treating people. I hate power and bullying, fairly close to me.’

Case-A3

In the above case and others albeit *not* all, power was emotively disassociated from its equally productive and positive role and reduced to a dictatorial, largely *negative* means of obtaining outcomes. Core values embraced across cases from accepting personal responsibility, working hard, and doing the right thing through to respecting others, collaboration, and empowerment, did not logically explain such a reduction. These values had more become imbued *into* what influence is, as a form of stance against abuse/misuse of power and/or a means to clearly distinguish and promote such values under a different label:

‘So power is the absolute authority to do something if you can but how you use that is about wisdom. So, I actually think wisdom, in most cases, is about influencing because actually, if you can get people to come with you and see, from where you are, why you’re asking what you want them to do, then because they’re involved and engaged and intelligent about the matter, you’re going to get a much better result than if you just say go and do. So, I’ve always disliked authority. The idea that you might give me an order. So, it’s my rebellious hate of authority that means I edge towards a power that’s negative. Also too, I’m often seeing power used, in its absolute sense, well.’

Case-B3

Having exposed interpretation and emotive factors, this leads to presenting actual intelligibility gaps whereby all such factors were given due consideration.

5.4.6.3 Actual intelligibility gaps

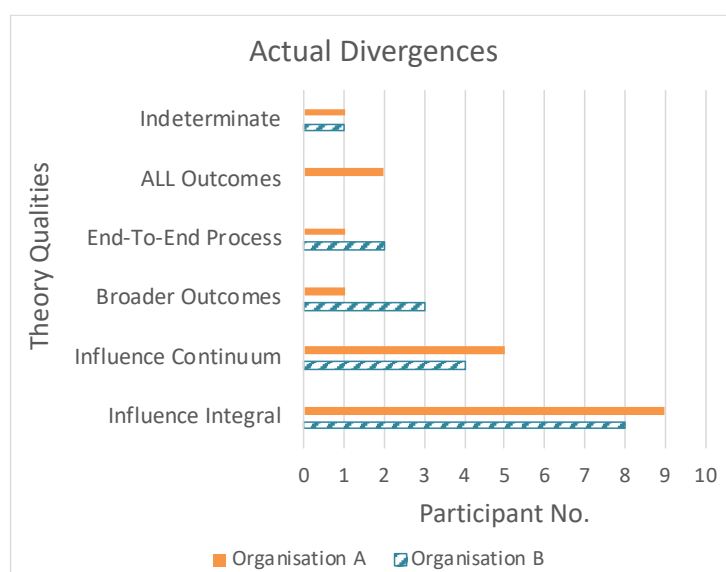


Figure 41. Profile of actual intelligibility gaps

Holistic evaluation of each case unearthed more concretely 6 intelligibility gaps, summarily displayed in Figure 41. Interpreting intelligibility through a power lens, the main reason for not according full agreement to power across 17 cases (81%) lay in not readily or clearly conceiving of *influence* as being fully *integral* to *power*. Influence being integral to power was however inferred by some cases as evident in the earlier excerpt (Case-A6) where it was sensed that something was missing in viewing power as a capacity state that thereby determines outcomes. The following is a more explicit example:

‘Drives the outcome, would that fit in there as well, drives a process that drives the outcome?... Yes, I'd actually quite agree with that because it does. It could be a negative or a positive way. It could be through fear, or it could be, I don't know, it could just be through empowerment, who knows. But yes, it does govern the outcome. So, let's go back to the other one. Okay, I'm going to agree with that as well and I don't know why I've put eight rather than ten. Actually, because I'm challenging the word, that's why.’

Case-A5

Relatedly, few cases offered explicit recognition of a coercive-consensual *influence continuum*. Several cases (9; 43%) rather dichotomised coercion and consensus, emotively ladening power with coercion and reserving consensus and reasoned argument to influence. Other cases more distinguished between power and influence on the basis that power carries authority and influence does not, rather relying on credibility. Importantly some cases did support the intelligibility of an influence continuum. For example, after reflection it became clear how consensual influence does not in practice infer that the motive is good, and the outcome is positive somewhat dispelling with power as coercive and bad versus influence as consensual and good. The line rather is blurred as to where consensual influence ends and coercive influence starts even conceived as concentric circles:

‘But actually, both of those processes [Influence, Power] need not be positive, rosy, happy in their motives, or in their results. Because I'm wired the way I am, I'm always looking for the positive outcome, but cognisant that there are many examples of highly debilitating and highly negative outcomes as well, and behaviours.’

Case-B5

Yes, I mean it's concentric circles. It's where does one start and one stop? It's not black and white. I absolutely agree it's on a continuum [coercive-consensual] and it varies from person to person and a lot of it comes from what baggage they bring with them.' Case-B3

There were 4 cases (19%) where power was strongly possibly limited to decision-making and appeared linked to interpretation of terms govern and process. Nonetheless, there was clear acknowledgement that relevant outcomes lay beyond decision-making (Section 5.4.4.2). Correspondingly, most cases associated power with *broader outcomes* and some cases recognised power-points and the importance of defining the outcome of interest:

'I think I agree with that, but I disagree with that because, sorry for the tape, in terms of A [influence] I think yes, I agree with you, but I don't think power's the process that governs outcomes because outcomes... it depends which outcome. The process that determines, do I go Option A, Option B then yes, but actually that's the start of another process, you still haven't got the outcomes and the outputs at that stage probably. Not in this context at [Location].' Case-B6

Primarily driven by influence not being embraced as integral to power, some cases (3; 14%) did not thereby fully demonstrate support to power as an *end-to-end process* rather more as a *capability state* founded on authority inhered in hierarchical structures. Furthermore, some cases (2; 10%) did not explicitly recognise that all outcomes were attributable to power (or influence), whether desired or otherwise, good, or bad. Many cases however did not delimit power to a state or notions of successful outcomes given recognition of the *indeterminate* nature of relevant outcomes:

'I suppose ultimately yes, it does but I think the vague reason might be in terms of identifying, and again, I think it comes back to individual's subjective views as to where the power sits and who has the power, because it goes back to every individual has power in their own way. So, we traditionally see the people at the top have the power to make decisions and direct/influence all the people below them, but as we teased out before, ultimately, if the individual at the bottom has got the power to refuse to do something, that may prevent the chief exec's desired outcome from happening. Another military analogy, for want of a nail, the war was lost. The guy at the bottom forgets to shoe the horse properly.' Case-B10

Having exposed actual intelligibility gaps, this leads to presenting the findings of analysis 2 that examined the relevance of case conditions to actual intelligibility.

5.4.7 Theory intelligibility and relevant case conditions – Analysis 2

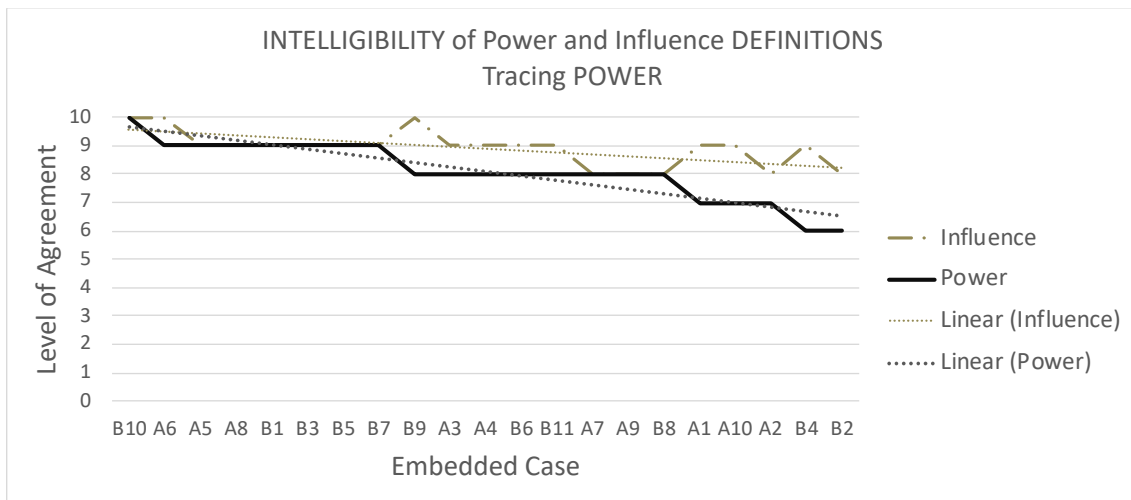


Figure 42. Actual definition intelligibility tracing power

Analysis 2 was identical to analysis 1 (Section 5.4.5) in being based on the same case conditions but tested for relevance to actual (adjusted) rather than perceived (raw) intelligibility levels. Figure 42 shows the revised profile of actual (adjusted) intelligibility of the influence and power definitions offered after appropriately translating bias and/or misinterpretations into a more faithful representation of intelligibility levels. The profile again is presented tracing power from the highest to lowest level of accorded agreement, showing a range from 10 through to 6, and corresponding levels of agreement for influence that range from 10 through to 8. Thus, where all cases (100%) accorded at least an actual intelligibility level of 80% for influence, the number of cases were again lower (76%) for power intelligibility, but both signified greater alignments. Influence intelligibility was also consistently at least as good as power intelligibility across cases.

A plausible but highly *tentative* empirically grounded model (E-Ma) was further obtained (fsQCA) showing relevancy of conditions tested to actual intelligibility. In summary, all primary case *selection* conditions (centrality, commercial, senior management level, maturity) were found jointly relevant to influence and power intelligibility through various conjunctural relationships where maturity appeared

most relevant. Reflection time (RTime) and generation X (GenX) were also found causally relevant contrary to their posited theoretical significance. Remaining generations (core values) and evaluation conditions (female) were found irrelevant to intelligibility. As indicated by Figure 42 evident was a relationship *between* according agreement to power and influence, where intelligibility of influence was necessary and sufficient to according intelligibility to power, and conversely according intelligibility to power was sufficient and necessary to according intelligibility to influence.

5.4.8 Theory intelligibility synthesis

On final analysis, posited theoretical grounds for causality (case conditions-intelligibility) were acknowledged to have been weak. Empirically grounded models (E-Mp and E-Ma) generated through extensive fsQCA analyses were equally weak. Overall, the relevancy of case conditions to intelligibility were thus found highly tentative. Qualitative analysis more provided two notable insights relevant to fostering alignment between academic (theory) and practice conceptualisations of IOR-power.

First, that the high-level definitions provided were inadequate if not misleading in conveying the meaning and inter-relation between power and influence, and crucially required clarity on what constitutes the process in both definitions. Second, it was further clear that perceptions were laden with emotive factors, language preferences if not practices, but not insurmountable based on how readily certain cases logically moved towards closing actual intelligibility gaps listed in Figure 41.

‘I really do, I do. You’ve actually helped me to get to somewhere in my thinking that I hadn’t really been before. Because I started off in this section of the discussion talking about influence being something which was positive and consensual, as opposed to power, which was bad. I suppose that’s my more traditional response to it.’ *Case-B5*

5.5 Significance of IOR-power to practitioners

5.5.1 Section introduction

The findings of all three field studies have been presented from the exploratory study (ES) where 4 cases (A, B, C, and D) primarily sought to express what power is, to 4 confirmatory study (CS) wherein cases W, X, Y, and Z challenged intelligibility of the provisional theory, through to the 21 embedded cases A1-A10 and B1-B11 in the test case study (TS) that evaluated intelligibility of high-level definitions of influence and power. Although visible across the chapter, re-enforced here through further extracts, is the significance accorded across field studies to the role, value, and distribution of power, thereafter performance.

5.5.2 Role, value, and distribution

Whether IOR-power was viewed predominantly as a state or process, its *relevancy* to *outcomes* through access and use of physical and man-made resources including money and decision-authority thereafter collective behaviour, was largely acknowledged. Importantly IOR-power was also recognised to be conditioned by the broader social and natural worlds:

‘Often, they are in quite dangerous situations on occasion, certainly from the people that I have working for me... The biggest worry bead for me is that I don’t get a phone call at some stage to say we've had someone involved in an accident, or there's been a security flare-up on one of our overseas projects.’
Case-B4 (TS)

Turning to the *role* of IOR-power, indicated across studies was that although cases readily used the terms power, influence, authority, and control, the substance and relationship between these terms and thereby role of IOR-power was less than clear even contested. Notably, the relationship between power and influence ranged from resources or position strength coupled with influence generating power, to influence being an important part of power but not power in itself, contrasting with power inhering in organisation structures as role authority and rights used to control behaviour as distinct from influence that bears no connotation of instruction rather involves such things as advising, ultimately fostering self-governed behaviour.

As captured by the following excerpt, overall, it can be said that there was a link between power and influence but quite what the link was varied and thereby the role attributed to power.

‘Well, it’s definitely not possible to understand or talk about power, without understanding or talking about influence.’ Case-Z (CS)

Turning to the *value* of IOR-power, across studies power was found value laden being judged in specific instances as either appropriately used and positive, or misused and negative. Importantly, such judgements were evidenced to possibly lead to rejecting IOR-power as bad for practice:

‘I don’t like power, think power is a horrible word.’ Case-A10 (TS)

Generally, for cases conveying distain for IOR-power it was more about rejecting the misuse or abuse of power given some degree of hierarchy was generally accepted as an integral and necessary part of the functioning of organisations, especially large organisations. Continuing with the analogy previously drawn by Case-A3 (TS) of power resting in the person steering the car, this translates to being a passenger, co-pilot, or mechanic, and about ceding or giving power to a qualified driver to drive appropriately, not just any driver, and not under duress or though being hijacked. There was a right versus wrong type of power, that is, reasoned and consensual versus dictatorial and coercive, where it was the use of the wrong type of power that provoked behavioural resistance.

Correspondingly, in terms of power *distribution*, this was related strongly to decision-making rights and/or capabilities, that is the state of Potential-influence held by individuals / organisations. In principle IOR-power advantage of some form was recognised as inevitable, *ultimately* resting in a customer’s power to award contracts, but not ignoring a supplier’s power to deliver quality services, be indispensable, and the only real customer choice:

‘So, could we, Org-B, find ourselves in a position that we weren’t having work placed by Org-A? It’s entirely possible, but we have a role in influencing that not happening, by producing quality work and being a good quality partner of choice, or supplier of choice, and that’s entirely within our gift.’ Case-B5 (TS)

There was a strong preference for collaborative relationships, but given this was not always the reality, IOR-power advantage was generally judged problematic, potentially unfair, and thereby undesirable given risk of misuse and its significance to performance, as the following section exposes. More broadly power distribution across the supply network was also relevant, especially that of the end customer.

5.5.3 Performance

The significance of IOR-power to performance in some manner was undisputed across studies where efficiency, effectiveness, empowerment, and learning emerged as central themes. Commencing with *efficiency* and *effectiveness*, power was efficient or inefficient, effective or ineffective, and possibly any combination in obtaining outcomes subject to how it was managed and employed in the face of uncertainty, but more fundamentally how it was conceived. Conceived as incorporating influence, power thereby was directly related to *all* outcomes and thereby *all* performance whereas power restricted to being a coercive-based phenomenon delimited its contribution. However distinguished, consensual influence was held generally to be more effective than coercion that potentially diminishes performance.

‘... because you can do a job, someone comes in and says, file those five things please and anybody and everybody can file those five things but if you’ve got a relationship whereby their behaviour has influenced you to want to perform, you’d do that task better than somebody who doesn’t care and is throwing it in the wrong file because they’re just doing what they’re told.’
Case-A2 (TS)

However, where consensus was recognised to be unobtainable under prevailing circumstances, possibly given time constraints or lack of knowledge, it became almost necessarily a question of responsibility and authority, and thereby associated with power more than influence but expected to be used with integrity:

‘So power is probably not a word that I would want to use in the way in which I perceive it that often. There are times in business where, because of particular circumstances, you have got to say, I’m sorry but we’ve just got to do this, but it’s certainly not preferred way of operating to use power. I’d much rather influence to get people on the same page as me.’
Case-A9 (TS)

Turning to *empowerment*, more in accordance with power viewed neutrally, some cases recognised that performance management entailed if not required power management *through* empowerment. This emerged more strongly in the test case study but was recognised across studies in such things as not having the requisite authority in a negotiation, and more subtly, through recognising intense, efficient communication throughout an organisation fosters consistency in approach and unity. At all levels of management delegating responsibility and importantly rendering support available, if necessary, was an important source of motivation to some albeit not all, mobilising and enabling a stronger collective power to perform within and across boundaries:

‘So, people are both the enablers and the constrainers. My ability to empower them I think is the major influence I have on whether we can achieve the goal or not.’
Case-B3 (TS)

‘So, you’re going to work together to say, there’s no point giving us a fee quote for £100,000 when we’ve only got £50,000 to spend. So, let’s work together on it to make sure that we actually get what we need, but for a price that’s palatable.’
Case-A8 (TS)

Lastly but importantly, *learning* through engagement in reflecting on what IOR-power is, revealed itself in different ways across studies, from recognising that there was a lack of clarity on what power is and how difficult it is to capture its meaning and true significance, to shedding almost indoctrinated negative bias towards its very existence and use, through to gaining a deepened understanding of life experience and thereby awareness of one’s own and others’ power in the social world, positive and negative.

In the test case study, at the end of interviews, several cases requested visibility of the process model and a brief descriptive overview that when provided gave clear relevance to their participation in the study and generated enthusiasm for understanding more about the subject.

‘I’ll put an hour. I spent 20 minutes just now going through it all and I probably had a bit of time thinking about it last night as well, but before that, in my head it was I don’t see why I’m doing this because none of its applicable, so I had a blocker in my head before that point.... Case-A5 (TS)

I love stuff like this. It makes the cogs whirl, I like it. Is this published? I'd love to read up on it. So actually, without even realising it, everything that I do and the processes that I write, all of that stuff has been completely relevant in a way?' *Case-A5 (TS)*

For a different case, it justified a level of discomfort in how views on power had been articulated recognising a general tendency to think of power only in negative terms rather than performative terms. Generally, cases readily drew from other contexts, from teacher-pupil relationships through to comparative analysis between football and rugby fans, indicating a tendency to attribute meaning to power as a generalised phenomenon albeit rendered context specific based on the specific agents involved and specific outcomes of relevance.

'Another level of that analogy is that 95% of football fans can do the rugby bit, but it's the 5% that rule the roost and the 95% aren't willing to stand up to them because they're worried about the consequences... I'm building this analogy more and more as I think about the different layers. It's amazingly relevant to the journey we've got to go on.' *Case-B9 (TS)*

That a shared understanding would be useful, was also found:

'Well, you are trying to influence their thinking. You're trying to home it down to something, into a system and a taxonomy and an understanding because that's really useful.' *Case-X (CS)*

5.6 Chapter summary

This chapter has presented quantitatively and qualitatively the findings of three independent, but theoretically linked field research studies undertaken for which case profiles were elaborated accordingly. Links between the findings of each study and IOR-power theory development work undertaken were established. The Intelligibility of the proposed IOR-power theory to cases was exposed including plausible case conditions that contributed to intelligibility. Finally, the importance of IOR-power to cases was captured.

6 DISCUSSION

6.1 Introduction

This chapter focuses on discussing research contributions this thesis offers towards resolving the central research problem identified in Chapter 2, re-stated below for ease of reference. Discussions relate to theory development and field research work presented in Chapters 4 and 5 respectively, using Chapter 2 as an anchor wherein theoretical foundations were laid:

RQ: What are the essential qualities that describe, characterize, and explain power in inter-organisation relationships?

The aim was to advance three central inter-related propositions, TP, EP, and IP specified in Chapter 1 (Figure 1; Section 1.3.2). As outlined in the research overview provided in Chapter 1 (Figure 2; Section 1.5) and detailed in Chapter 3, the overarching research methodology adopted was an explanatory critique directed at critical synthesis of academic and practitioner conceptualisations of IOR-power. The theory was formally developed advancing proposition TP in research phase 2 based on a systematically identified theoretical origins and developments in the IOR-field of study, informed by practitioner insights. The theory was also then revised based on practitioner critical evaluations. In research phase 3, the theory was tested in the field of practice (EP).

Section 6.2 attends to three themes, state-process, philosophical grounding, and integration that jointly explain advancement of proposition TP1 towards reconciling the theoretical origins of IOR-power conceptualisation. Section 6.3 highlights a further three general themes, power-to, negotiated, and performance, each salient to embracing perspectives across the IOR-field of study thereby advancing proposition TP2. Section 6.4 initially considers theory plausibility based on general advancement of proposition EP, then through ten themes ranging from sustainability through to perspective, each linked to propositions P1 to P10 and theory *specific* qualities, focuses on significant advancements and implications of embracing marginalised IOR-power perspectives. Section 6.5 aligns to proposition TP3 and the revised and final theory put forth and deliberates three significant themes power-influence, natural power, and relational power.

Establishing theory intelligibility to practitioners and advancing proposition IP was integral to both evidencing theory plausibility and justifying practice contributions and theory development. A secondary research aim was to expose why theory misalignments may exist in practice. In Section 6.6 corresponding with proposition IP1, practical insights, mental agility, necessity-sufficiency, are themes deliberated. This is followed in Section 6.7 by a further three themes, interpretation factors, emotive factors, and reflective learning, brought into focus in advancing proposition IP2 in research phase 3.

Table 16 summarises in logical order the key discussion themes of this chapter, each associated principally with propositions advanced, TP1 through to IP2, restated for ease of reference. The extent to which each theme of discussion had been advanced *by core-studies* is indicated by a cross, as being either nil, limited, or progress, where: 'nil' reflects at best a theme may have been referred to but not formally addressed; 'limited' means limited formal advancement of the theme by few studies; and 'progress' signals themes that have been advanced and readily identifiable in the IOR-power literature. The main aim is to consider the extent to which this research advances each theme and thereby contributes to resolving the research problem, duly noting research limitations and personal reflections. Overall this is deliberated in Section 6.8 where the implications and thereby significance of the theory are captured.

Where progressively qualitative and quantitative data has been built and presented in discrete chapters and sections in a linear sense, thematic discussion draws from across the range of data sources. For brevity and not to distract from the flow of the discussion, referencing to corresponding sections in this chapter and other chapters are mostly provided in brackets.

	Proposition	Theme	Nil	Limited	Progress
TP1	The different conceptualisations of power laid down by the origin studies represent different perspectives of power that are fully reconcilable to form a unified explanatory theory of power.	State or Process			X
		Philosophical Grounding	X		
		Integration		X	
TP2	A unified explanatory theory of power reconciling power origin perspectives can accommodate dominant and marginalised IOR-power perspectives.	Power-To		X	
		Negotiated			X
		Performance			X
P4	Goals guide rather than control behaviour and outcomes.	Uncertainty		X	
P1	Outcomes of relevance extend beyond human behaviour and includes the consequences of behaviour that may use or consume resources.	Sustainability		X	
P3	Environments of IORs includes material forces at work namely, Nature, human physical acts, and human creations, that are directly and indirectly relevant to IOR-behaviour and outcomes.	Contingency	X		
P8	Means as intentional and unintentional inducing acts are significant in governing behaviour but not always necessary	Agency – Empowerment Connection	X		
P2	Enacted-influence directly induces behaviour, including abstention, that forms outcomes.	Mind-body Relationship	X		
P7	Behavioural resistance is sustainable.	Continuums		X	
P5	Individuals mentally negotiate reasons to behave consciously and subconsciously.	Situated Evaluation			X
P6	Actual-influence is a contingent and temporal ability to induce behaviour of the self and others (attributed), at will.	Probabilistic States			X
P9	IOR-influence is a complex, emergent, regressive, and obscured flux of discrete influence processes.	Downwardly Inclusive		X	
P10	IOR-power is a contingent and indeterminate process.	Perspectives		X	
TP3	Under-explained power qualities can be resolved through theory re-descriptions that are supported by the literature. (Figure 23 Figure 24)	Power versus Influence		X	
		Natural power	X		
		Relational power		X	
IP1	The provisional theory of IOR-power is reasonably intelligible to practitioners. (Figure 27 Figure 28)	Practical Insights		X	
		Mental Agility	X		
		Necessity - Sufficiency	X		
IP2	The distinction between power as the process governing outcomes and influence as the process governing behaviour, is reasonably intelligible to practitioners. (Figure 39 Figure 40)	Interpretation Factors			X
		Emotive Factors		X	
		Reflective Learning	X		

Table 16. Summary of key discussion themes

6.2 TP1: Unifying theoretical origins

Four IOR-power theory origin studies underpinning theory development in the IOR-field of study were methodically identified in Chapter 2 (Section 2.4.2.5) and specified (Section 2.4.3.3) as Simon (1953), Dahl (1957), French and Raven (1959), and Emerson (1962), thereafter referred to as Simon, F&R, Emerson, and Dahl, and collectively the Origins. Introduced in Chapter 2 (Section 2.5.3) and formally presented as Figure 14 (Section 2.5.4) was a preliminary conceptual framework capturing 25 common attributes grouped by functional characteristics used across the Origins to describe, characterize, and explain power. The three themes listed in Table 16, state-process, philosophical grounding, integration, were central to reconciling conceptual differences across the Origins.

6.2.1 IOR-power – State or Process?

Establishing that power is a *state or process*, corresponds with the first of 11 fundamental questions surfaced by the Origins that persisted into IOR-power studies. Power was conceived in three discernible states of potential, actual, and exercised, with an embedded actual state signifying overcoming resistance that distinguished power *from* influence (Emerson). Of the discernible states it was exercised power (Simon) that first implicated power as a process rather than a capacity state. The significance of power as a process was embraced and *progressed* thereafter by several IOR-power scholars, from Heskett et al (1970) through to Akpinar and Zettinig (2008) and continues to follow this trajectory (Chapter 2, Section 2.6.1.7).

Practitioner perspectives did not deny the relevance of IOR-power as a state strongly associated with authority and prevailing hierarchical structures, but equally IOR-power was recognised as a dynamic process. Exploratory study insights led to a tentative proposition to formalise IOR-power as a dynamic process (Chapter 5, Section 5.2.4), was re-enforced and elaborated in the confirmatory study (Chapter 5, Section 5.3.3) and further supported by the test case study based on actual intelligibility of power broadly defined as a process (Chapter 5, Section 5.4.6.1). Empirical evidence substantiating theory specific qualities in Section 6.4 adds further credence to a state-process inter-link.

Notwithstanding, conspicuous amongst academic portrayals of IOR-power as a process was inconsistency in treatment of the relationship between power and influence (Section 6.5). Models offered stood as unique with no two models including the same components or depicting the process in the same manner, and the four discernible states across the Origins were consistently reduced into two states, potential and exercised. Overall models in following the Origins emphasised IOR-power as power-over the *behaviour* of others, marginalising power-to (Section 6.3) and broader outcomes (Section 6.4).

The posited theory formally qualifies IOR-power as a process with discernible, interrelated, and relevant core states, traceable back to the Origins.

6.2.2 IOR-power – Philosophical grounding?

Across the Origins (Chapter 2) there was no explicit commitment to a philosophical perspective albeit power was treated as an objectively real and quantifiable phenomenon (Section 2.5.3.2). Yet, in also being attributed to relations between agents (Section 2.5.3.1), subject to non-observable perceptions, anticipated reactions, and expectations (Section 2.5.3.3), and only directly observable through behaviour, the Origins drew attention to the problems faced in determining power (Section 2.5.3.4). Unresolved challenges to IOR-power operationalisation attempts (Section 2.5.4.3) thereafter pointed to lack of conceptual precision in the ontological status of IOR-power (Etgar, 1976; Gaski, 1994) with *nil* attempt to formally ground IOR-power ontologically.

Practitioner perspectives solicited across field studies (Chapter 5) re-enforced perceptions as central to IOR-power. In the exploratory study perceptions were integral to making sense of power types (Section 5.2.3) and power distribution (Section 5.2.5), and in the test case study when according significance to organised resources, behaviours, and events, in the forming of motives (Section 5.4.4.7). The confirmatory study also exposed the importance of an explicit and clear portrayal of *reality* to *explaining* IOR-power to the extent that it emerged (Section 5.3.4.1) as one of 8 governing principles requiring elaboration.

As detailed in Chapter 3 (Section 3.2), DCR provides the requisite ontological depth to meaningfully account for IOR-power (Archer, M. et al., 1998; Bhaskar, 2008; Danermark et al., 2002; Elder-Vass, 2004), noting the only core-study explicitly committing to a philosophical perspective, embraced critical realism (Meehan and Wright, 2012).

The posited theory explicitly and meaningfully qualifies the ontological status of IOR-power within a dialectical critical realism (DCR) perspective.

6.2.3 IOR-power – Integration?

The last theme of discussion is *integration*. The purpose of the research has been to synthesise IOR-power perspectives developed over 50 years by IOR-power scholars into a unified, comprehensive explanatory theory of IOR-power. Formal synthesis of the Origins alone had received very *limited* attention with concern essentially lying in reconciling formulations of sources and dependence, deemed conceptually inseparable (Frazier, 1983b; Gaski, 1984a). The more fundamental differences appear to have gone largely undetected or marginalised. Examination of IOR-power theory (Chapter 2) overall revealed a rugged conceptual landscape with dominant and marginalised perspectives across all power attributes that had not been formally resolved or integrated (Section 2.5.4). In part this reflected the rather moderate level of cohesion between core-studies based on reference patterns exposing under-exploited significant claims.

There was however nothing to suggest that one Origin theory was more valid than another or that any IOR-power perspective should be privileged. Unifying conceptions was not a question of merely acknowledging all perspectives adding breadth and depth to the concept (Risjord, 2009; Wacker, 2004). A structured and formal integration was necessary to *resolve* 11 specific theoretical questions rooted in the Origins to obtain conceptual coherence, meaningfulness, and applicability across IOR-contexts (Section 2.5.4.5).

Structured integration required developing a methodology suited to the theoretical task. It was important to develop a logical approach that might be subjected to critical appraisal and enable continuous theoretical development. Indispensable in developing the methodology was F&R's formulation of power as

a resultant psychological force and DCR as a philosophical perspective. In combination, the logic of obtaining integration foremost in terms of *types* of psychological forces using value as a reasonably credible theoretical standard unit of force emerged (Chapter 3, Section 3.7).

IOR-power foremost has been ontologically grounded in the psychological processing of the minds of individuals that inverts the classic formulation of A power-over B to be moreover B power-*under* A. Correspondingly, IOR-power *core* states are *mental states* whereby for example, capacity state Potential-influence, that is the potential ability to induce the behaviour of an individual, although possibly attributed to others (power-under), nevertheless explicitly occurs in the mind of the individual whose behaviour is thereby potentially induced. More correctly individual B is potentially influenced *by* individual A, rather than A potentially influences B (reciprocal); A and B are also potentially influenced *by* themselves (internal), all of which is conditioned *by* other external Potential-influences (environment). This formulation offers greater clarity to the mechanisms that may reasonably be held to explain how behaviours of individuals are *actually* induced.

Grounding IOR-power in the mental processing of individuals permits a fuller account of the saliency of perceptions, mental powers, sense-making, and meaning to IOR-power in the literature (Chapter 2, Section 2.6.1.7), according with practitioner accounts (Section 6.2.2). This does not thereby limit IOR-power to this core process rather formalises an essential *theoretical building block* of IOR-power that embraces the role and reality of the non-observable mind connecting with the observable, objectively real aspects of the body, thereafter the social and material world, in an ongoing process. Relatedly, individual agency is given due recognition without undermining the significance of social and natural structures. The building block stands as a neutral interface between structure and agency in accounting for IOR-power, a core issue in the broader power literature (Chapter 2, Section 2.3.4) not least in the works of Foucault (1982, 1995), Giddens (2002), and Bourdieu (1989) linking with Section 6.4.4 (agency-empowerment) and Section 6.5.2 (natural power).

The posited theory explicitly and meaningfully integrates perspectives of IOR-power at the embedded individual psychological level.

6.3 TP2: Accommodating IOR perspectives?

How the identified critical theoretical questions were methodically resolved to permit integration of the Origins and accommodate IOR perspectives was outlined (Chapter 3, Section 3.7) and the resultant theory presented (Chapter 4, Section 4.2) as an elaborated provisional conceptual framework (Figure 21) and process model (Figure 22). The three central themes listed in Table 16, power-to, negotiated, and effectiveness capture important shifts in accommodating theoretical development in the field of IOR-power.

6.3.1 IOR-power – Power-To?

The first theme *power-to* stands as a key advancement and is central to the posited theory. The Origins had clearly framed power in a *power-over* sense, limiting its role to one of controlling as far as possible the behaviour of others. This is clear in the expressions of power used to promulgate its essential meaning (Chapter 2, Section 2.5.3.1) and to some extent in how power was portrayed as attributed to an A-B relation. Notwithstanding the relevance of *power-over* or rather *power-under* (Section 6.2.3), the perspective was first clearly enlarged by Stannack (1996) in notions of *freedom-from* and *freedom-to* drawn from the broader power literature (Berlin, 1957; Lasswell and Kaplan, 1950), that following Barnes (1988), also shifted focus towards achieving outcomes of relevance to practice (Section 6.4.2).

The *power-over* perspective nonetheless remained dominant in the core-studies up to 2011 driven by the Origins. Acknowledgement of *power-to* is *limited* and lacks formal theoretical representation (mathematical or model) to advance this perspective. Increased attention towards mutual dependence has emerged (Chapter 2, Section 2.6.1.7) pointing further to the importance of formalising *power-to* (Section 6.5.3).

The theory was purposefully constructed (Chapter 4, Section 4.2.2) positioning A's *power-to* as the primary power process with A's *power-over* B integral, to

strongly signify IOR-power first, as a productive force that *produces* and alters rather than maintains the state of affairs, and second, as being foremost through the self thereafter others. Integration and portrayal in the single process model (Figure 22) is optimised for *explanatory* purposes to capture both senses, but as explained in practical terms is met with the mirror process arising in respect of B's power-to and B's power-over A. Tailored process models are constructable to reflect more closely a specific IOR-power process including orientation towards a predominantly power-to or power-over process being accorded to parties (A and B). Examples were developed in stage 6 of phase 2 theory development and specifically employed in the test case study to compile evidence of general quality, feedback-feedforward.

Practitioner perspectives (Chapter 5) supported both senses albeit not always consciously, explicitly, or in an inter-connected manner. Support rather followed more the line of thinking at a given juncture in the interview. In the exploratory study (Section 5.2) across the 19 tentative propositions that emerged, descriptions moved readily between the two representations. More concretely it was the confirmatory study (Section 5.3) that evidenced recognition and saliency of both senses through the levels of support for the theory in which both are explicitly captured (Figure 29; Section 5.3.3) and there being no explicit rejection of either (5.3.4). That power-to was to be recognised as the *primary* process nevertheless required formalising as a governing principle.

The posited theory captures IOR-power-over as integral to IOR-power-to signifying its productive capacity.

6.3.2 IOR-power – Negotiation?

The second theme, *negotiation*, was detectable in Simon's account of power (Chapter 2) in specifying the importance of anticipated reactions that surfaced reciprocity as a power attribute (Section 2.5.3.3) thereafter in the IOR-field of study through emphasis on strategy in the use of IOR-power and being implicated in several process models for example Frazier (1984). A clear and explicit call for embracing negotiation in its fullest and formal sense was by Marshall and Rollinson (2004) in direct criticism of Dahl arguing A's power-over B is

inseparable from B's power-over A, rather interwoven in a negotiated process (Section 2.5.4.2). Thus, there has been and continues to be *progress* in accounting for IOR-power as negotiated, as depicted in Table 16.

Within the posited theory, that IOR-power is a negotiated process is captured foremost in specific quality, motive, but also generally in how the process model is constructed to portray IOR-power (Chapter 4, Section 4.2.2.7). Not least, the notion of enacted rather than Exercised-influence is adopted reflecting an inter-play between agents A and B (Marshall and Rollinson, 2004). Moreover, individuals are explicitly assumed to be semi-autonomous, goal oriented, thinking individuals, endowed with identities, capabilities, and liabilities to act (Archer, M. et al., 1998; Deci and Ryan, 2000; Simon and Oakes, 2006) negotiating a way forward in the face of uncertainty. There is no evidence to undermine this fundamental assumption adopted rather an abundance of supporting evidence in observations of daily human life and across theories exposed across Chapter 2, notably organisational economy theories (Section 2.3.1.1) and agency theory (Section 2.3.2.2). These factors jointly call for behaviour inducement and thereby IOR-power to be held essentially negotiated.

Practitioner perspectives again were in accordance generally through accounts of behaviour across field studies in Chapter 5. In the exploratory study that negotiation occurs is integral to tentative propositions (5, 8) related to the nature of power (Section 5.2.4), thereafter evidently reflected as the nature of organisation life in the test case study (Section 6.4.7). In the confirmatory study, motive signifying negotiation within the process was not challenged rather its positioning required re-enforcing (Section 5.3.4.3).

The posited theory captures IOR-power as a negotiated process wherein the perspective of the performer of productive behaviour is primordial (A or B).

6.3.3 IOR-power – Performance?

The last theme, *performance*, follows from embracing IOR-power as power-to and negotiated. Two key aspects are readily associated with performance, effectiveness and efficiency, across the literature (Chapter 2) from being integral to sustained competitive advantage (Barney, 1991; Ma, 2000), the relational view

(Dyer and Singh, 1998), through to IOR-power (Cox, 1999; Frazier, 1984; Kasulis and Spekman, 1980; Stannack, 1996; Wilkinson, 1996) and power generally (Lukes, 2005; Morriss, 2002; Simon and Oakes, 2006). Effectiveness appears to dominate power discourse, but efficiency is formally recognised as central to related performance theories of agency (Section 2.3.2.2), commitment-trust (Section 2.3.2.2), and partnerships (Section 2.3.2.3). Both gain relevancy when embracing consensual and productive aspect of power, and explicitly in appeals to shared identity being the most efficient face of power (Simon and Oakes, 2006).

Effectiveness relates to propositions P1 and P4 (Section 6.4) given it presupposes a goal for intelligibility but not necessarily intentions. Although for some scholars, power is laden with intentions, following F&R, A's intention is held sufficient but not necessary in A's power-over B, that is A may be passive (Chapter 2; Section 2.5.3.2). In the theory (Chapter 4), this extends to power-to, that also embraces the reality of deviant behaviour and in-action, and the saliency of outcomes. As such, although IOR-power effectiveness was initially anchored in motive and effects in the provisional theory (Figure 22; Section 4.2.2), it became more appropriately anchored in goals and outcomes through model adjustments (Section 4.3.2.1) when these essential explanatory components were introduced in the revised theory (Figure 24; Section 4.3.2).

Efficiency more relates to IOR-power across the process whereby it translates directly to *performance* not least in levels of consumption of organised resources and time-taken to obtain an outcome. Time is fundamental to natural science notions of power (Section 6.5), but equally in such things as lead times, on-time delivery, and more generally *process* times integral to supply chain integration strategies (Chapter 2, Section 2.3.1.4). Embracing the broadest definition of supply chains this involves a fully extended process across contributing organisations and IORs, involving *all* embedded individuals (Mentzer et al., 2001; Stock and Boyer, 2009).

Arguably there are several measures of IOR-power efficiency that may be applied, and the posited theory offers a measure (Chapter 4, Section 4.2.2) that

carries theoretical import to lingering debates surrounding the judicious use of IOR-power (Brown and Frazier, 1978; Cox, 1999; Cox, Sanderson and Watson, 2001; Morgan and Hunt, 1994; Reimann and Ketchen Jr., 2017; Stannack, 1996; Wilkinson, 1996). Purposefully, the measure offered does *not* directly evoke value judgement (use / misuse) rather purely aligns to natural power formulations. That judgements may be made thereafter is not precluded rather it is not a foregone conclusion that IOR-power is good or bad for practice. In doing so, rendered intelligible is the intuitive notion alluded to by Simon (1953), that is, the greater the IOR-outcome achieved over a given time the greater the IOR-power, that extends to recognising that the faster an IOR-outcome is realised with fewer resources, the greater the IOR-power. The question then becomes whether the given IOR-power is efficient but also effective (goals).

Practitioners across studies (Chapter 5) accord relevance to both in IOR-power, both indirectly in notions of the misuse of IOR-power that may evoke behavioural resistance and/or ineffective working, and more directly (Section 5.5.3). In the exploratory study although IOR-power was strongly associated with obtaining goals this was qualified as being contingent on prevailing conditions, including the power of others and of Nature, thereby recognising an inherent distinction between goals and outcomes (Section 5.2.3). In the confirmatory study, both effectiveness and efficiency as defined were not only held intelligible qualities attributed to IOR-power in principle but central to understanding the role and use of IOR-power (Section 5.3.4.3) where power management was associated with performance management. In the test case study, evidence across specific qualities frequently pointed to the importance of effectiveness to practitioners and was a key emotive factor in perceptions of the distinction between power and influence (Section 5.4.6.2).

IOR-power is thus defined by *the* process governing *the* outcome of significance. Emphasis is shifted towards process improvement through *understanding* and leveraging all that renders the process more effective and efficient such as goal structures and organised resources (behavioural, social, political, and economic), but also human factors such as trust, identity, and satisfaction. The important

relationship between power and influence (Section 6.5) yet distinction in what might be viewed practically as being effective and efficient in IOR-power terms (Chapter 5, Section 5.5.3), contributed to justifying extending the process model to clearly identify broader outcomes beyond behaviour. That is, what might be viewed as abuse or ineffective in behavioural terms (influence) may not be viewed as such in outcome terms (power), and vice-versa.

Although as depicted in Table 16 there has been *progress* in recognising effectiveness aligned to progress in accounting for IOR-power as negotiated, there has been limited attention given to efficiency and formal and full alignment of IOR-power management with IOR-performance management. The need to do so most notably has been advocated albeit framed by a strong economic perspective of IOR-power (Cox et al., 2005; Cox, Sanderson and Watson, 2000).

The posited theory embraces efficiency and effectiveness as key IOR-power qualities, aligning IOR-power management to IOR-performance management.

6.4 P1 to P10: Theory specific qualities

The test case study following the tailored methodology developed (Chapter 3, Section 3.10) evidenced how theory specific qualities formalised in Chapter 3 (Section 3.9.5) and theory general qualities were manifest in a concrete IOR-Case (Chapter 5, Section 5.4.2). The findings presented in Chapter 5 (Section 5.4.3) expose how across the 21 embedded cases, data coverage for theory specific qualities was 85% and for theory general qualities 99% (Figure 34), balanced and comparable across organisations reflecting findings as broadly supported by all cases across organisations and every quality to some extent evidenced (Figure 35).

The marked difference in levels of supporting evidence (98%; 85%) may reflect greater prominence of general qualities and to some extent explain their dominance in extant power theories. However, embedded case descriptions were guided but not directed or controlled towards evidencing non-observable theory qualities, rather case led. The level of data coverage obtained is therefore held to be reasonably good in standing as the evidence sought, but no further

inferences may reasonably be drawn. An important contribution is that in a concrete IOR-Case, the theory has been demonstrated to align to descriptions and explanations of behaviour towards obtaining IOR-outcomes in practice by a cross-selection of individual practitioners as displayed in Figure 32 and Figure 33 (Chapter 5, Section 5.4.2) supporting proposition EP (Table 16).

Theory plausibility however predominantly rests in the theory being first grounded in the most relevant scholarly work wherein empirical support for qualities, especially general qualities, had been *progressed*. Second, in being reasonably intelligible to practitioners on detailed evaluation with 62% of qualities found to be fully intelligibility (Figure 27; Section 5.3.3) and an average accorded level of 94% across qualities (Figure 29, Section 5.3.3). This was also before significant improvements in explanatory power were introduced (Chapter 3, Section 3.9), to some extent corroborated by the test case study (Figure 42, Section 5.4.7).

The posited theory is plausible based on IOR-power core studies, level of intelligibility to practitioners, and evidence of alignment to practice.

Drawing on the literature and pointing to intelligibility testing where salient, the following turns to discussing how and why theory specific qualities are essential to describing, characterising, and explaining IOR-power, focusing on each key theme in Table 16.

6.4.1 P4: Goals and uncertainty?

Goals as the driving force behind IOR-power where they are recognised to be highly complex, essentially, and structurally (interrelations). Goal attainment is further held subject to highly complex dependence relations that can only be explained in principle, and as will be noted in Section 6.4.3 conditioned directly by the dynamic social and natural worlds in which all IORs are embedded (Chapter 2, Section 2.3.1.3).

Moreover, *uncertainty* as a feature of organisational life is acknowledged across the literature (Chapter 2), not least as the central problem in agency theory explicitly related to both behaviour and outcomes (Section 2.3.2.2). To not conceive of goal attainment as tentative in IOR-power is therefore arguably

unrealistic rather goals carry uncertainty and risk that requires embracing, not ignoring. The difference between goals and outcomes obtained emerged as an important IOR-power quality (Section 6.3).

The Origins were nevertheless divided if not ambiguous on this point aligned to assumptions (Chapter 2, Section 2.5.3.1). For example, French and Raven (1959) explicitly delimited IOR-power to be that which is predictable behaviour, yet Dahl (1957) speaks in terms of probability, not certainty, contrary to criticism of Dahl's alleged mechanistic formulation. The ambiguity therein, largely ignored by the core-studies, became more absorbed into debates on the role of influence strategies and tactics in managing goal incongruency (Brown and Frazier, 1978; Marshall and Rollinson, 2004; Stannack, 1996), increasing IOR-power (Akpinar and Zettinig, 2008), and leveraging IOR-power to appropriate value (Cox, 1999). To some extent the ontological status of Actual-influence as an ability further masked the realities of goal uncertainty as discussed in Section 6.4.8. Generally IOR-power is treated *not* necessarily predictable in any state, either by definition or in practice due to its complexity, obscurity and/or uncertainty but with *limited* explicit association with the nature of goals (Chapter 2, Section 2.5.4).

The confirmatory study surfaced the need to formalise goals as a key component in the process model to enhance explanatory power (Chapter 5, Section 5.3.4.2). This facilitated underscoring goals formally as aspirational whereby if interest lies in only what is *sought*, not necessarily what is *obtained*, goals may be treated as the *final* cause (the sake for which) of IOR-power. Notwithstanding, goals being realistically held to guide not determine behaviour or outcomes logically renders all outcomes realised by IORs, desired or otherwise, strictly the product of IOR-power and thereby ultimately its *final* cause (Section 6.4.2).

The posited theory recognises goals guide rather than control behaviour and outcomes given uncertainty and associated risks and liabilities.

6.4.2 P1: Outcomes and sustainability?

Following Dahl, a claim to *holding power* is meaningless unless it captures the outcomes to which such power relates. In the IOR-context the outcomes of relevance are largely the *consequences* of organisation collective behaviours, not

merely behaviours, the nature and scope of which is indicated by the content of organisation formal goals (Stannack, 1996). As exposed in Chapter 5, obtaining such outcomes was strongly associated with IOR-power in both the exploratory study (Sections 5.2.3 and 5.2.4) and confirmatory study (Section 5.3.4.2).

Outcomes realised are however not logically or practically given by formal goals. As established (Section 6.4.1) goals guide but cannot be held to determine in themselves outcomes. Across field studies this was fully acknowledged in practice not least in outcomes being the product of a dynamic and negotiated process, and the complexity and scale of relevant outcomes from financial results such as profits through to producing aircraft and major land developments, on time, cost, and to specification (Section 6.3). Outcomes are further conditioned by the environment (Section 6.4.3). That IOR-power be unnecessarily laden with intentions or limited to formal goals, would lead to under-explaining in power terms a great deal of what IORs contribute to the state of affairs. In what IOR-power is held to capture thus far *across* core-studies, lies a much fuller account of the state of affairs (Chapter 2, Section 2.5.4).

The underlying principle embraced therefore is that IOR-power concerns *all* outcomes including broader *sustainability* (environment, social, economic) outcomes for which an IOR is reasonably held to contribute towards, intended or otherwise. Any attributed outcome is thereby understood in terms of responsibility, if not accountability, of which *desired* outcomes may be further understood in terms of effectiveness. This positions clearly the role of IOR-power in sustainability endeavours (Chapter 2) in respect of corporate social responsibility (Section 2.3.1.1) and supply chain management strategies (Section 2.3.1.4), where IORs stand as pivotal (Section 2.3.2).

Connecting IOR-power to sustainability has thus far been *limited* (Lister, 2000) but more recently has gained momentum (Kraus and Strömsten, 2016; O'Brien and Evans, 2017). The theoretical connection was formally established after the confirmatory study (Chapter 4, Section 4.3.2.1) but practitioners across field studies demonstrated clear sensitivity to the impact of IOR-behaviour and outcomes on the natural environment. The test case study most notably further

provided evidence to the importance accorded to social and economic sustainability (Chapter 5, Section 5.4.4.3).

Correspondingly, in Chapter 4 (Section 4.3.1) it is explained that given the scope and scale of IOR-power, it is necessary to anchor accounts of IOR-power in an outcome of interest. It is also appropriate to conceive of outcomes metaphorically as power-points, that is discrete outcomes that combine to serve obtaining more significant outcomes or stand as the basis on which future outcomes are realised. Outcomes are no less complex essentially or structurally, than goals (Section 6.4.1). Attribution of outcomes to organisational forms (organisation, IOR, supply chain) equally held complex in themselves (Chapter 2, Section 2.3.1.3) may therefore be problematic and highly subject to the perspective adopted (Section 6.4.10). It is nevertheless a necessary undertaking for performance management purposes, especially *if* sustainability is to be pursued with real intent and effect.

The posited theory embraces IOR-outcomes of relevance beyond human behaviour and encompasses all that contributes to sustainability.

6.4.3 P3: Environment (social and natural) and contingency?

The saliency of the environment to IOR-power as presented in Chapter 4 reflects its saliency to IORs generally recognised across the supply chain management (Chapter 2, Section 2.3.1) and IOR literature (Chapter 2, Section 2.3.2). Most notably in accounts of supply networks as complex adaptive systems (CAS) the interdependency between participating agents (individuals, groups, organisations) and their environments is emphasised (Section 2.3.1.3).

The saliency of the environment was recognised by the Origins in Chapter 2 where attention was drawn to its significance in attributing power to an agent (Section 2.5.3.1) and the embedded nature of power relationships (Section 2.5.3.2) albeit F&R assumed it to be stable in their power formulation. The importance of the environment persisted into the accounts of IOR-power captured (Section 2.5.4) including direct criticism of F&R's formulation (Gaski, 1986) held to ignore manipulative and ecological types of IOR-power that work indirectly through the environment (Section 2.5.4.2).

Although limited formal account was accorded in IOR-power process models developed, several scholars sought to establish means to capture the significance of the environment both quantitatively and qualitatively. Recognising *contingency* on the environment was nonetheless limited to social aspects with *nil* formal account of contingency on the natural forces at work, that is Nature including human creations that perform similar work to Nature having indirect and direct impact on IOR-behaviour and outcomes.

Practitioner perspectives however emphasised relevance of both the social and natural dynamic environments in directly and indirectly conditioning IOR-power (Chapter 5). In the exploratory study clearly the impact of natural disasters and terrorist attacks on IOR-power was recognised in defining IOR-power to be subject to prevailing conditions (Section 5.2.3) and re-enforced by the confirmatory study (Sections 5.3.4.2 and 5.3.4.4). Introduction of components environment and organised resources through extending the process model forward and backward in the revised theory permitted rendering explicit the important role of the natural world in IOR-power (Chapter 3, Section 3.9.4). Furthermore, recognising fully contingency on the interconnected social and natural environment, it becomes intelligible to consider a given IOR-power being more efficient when fully supported by the relevant environment.

The posited theory recognises IORs are embedded in a broader dynamic social and natural environment that directly and indirectly conditions IOR-outcomes.

6.4.4 P8: Means and agency-empowerment connection?

Generally across the IOR-power literature the term, means, is employed following Dahl to capture a mediating activity or act by an agent A intentionally serving to induce the behaviour of another through drawing on A's power bases. The main theme of discussion is how such acts being generally laden with intention and focused on inducing discrete behaviour of others, under-represents the agency-empowerment qualities of IOR-power.

Foremost means, such as a leader's instruction to a team member, are principally behaviours and a sub-set of power effects that carry significance in *directly*

inducing the behaviour of another. More specifically, acts that may contribute to activating Actual-influence-*under* in the mind of the performer of the induced behaviour, such as a team member (Section 6.2). This inducing behaviour is held distinct from power effects that *indirectly* through the power process may *alter* Actual-influence whereby appeals to manipulative and ecological or environmental IOR-power types are accommodated (Chapter 2, Section 2.5.4.2). Means employed intentionally by an agent A, that is *actively* to induce behaviour of an agent B is integral to explaining A's motive for A's behaviour and is strongly linked to strategies and tactics adopted in pursuit of goal attainment (Chapter 2, Section 2.5.4.2).

Following F&R, means nevertheless may emerge without intention, that is *passively* by the performer of the inducing behaviour (agent A), but nonetheless contributes to explaining motive for a discrete behaviour thereby induced (Agent B). Attention is drawn to how assigning responsibility for behaviours and outcomes for explanatory purposes may therefore not be readily discernible for it requires accessing the black box of sense-making and reasoning processes of the performer of the induced behaviour (Agent B). There may also be a time-lag between behaviours (Simon) that whilst supports distinguishing both behaviours conversely weakens establishing the causal link (Stannack, 1996) whereby the perspective adopted in terms of elapsed time (longitudinal) becomes salient (Section 6.4.10).

Building on this sense of degrees of causal linkages and thereby degrees of freedom-to or freedom-from (Stannack, 1996) the need to accommodate IOR-power-to emerged and the theory was positioned as a neutral interface between agency and structure. In the second phase of theory development (Chapter 4, Section 4.3.2.4) this interface became more fully characterized in terms of empowerment and disempowerment. Captured are how governing structures (social and natural) not only physically enable or constrain an individual's capacity to act to some extent, but equally enable or constrain an individual's mental capacity to act (Actual-influence) subject to the extent to which structures as environmental influence are recognised, embraced, or resisted. This is significant

to explaining how IOR-power emerges from semi-autonomous individual organisation members that may be enabled through empowerment or impeded through disempowerment in terms of rights and resources rendered available.

Furthermore, the connection between these important concepts largely employed independently is formalised whereby empowerment / disempowerment becomes embedded in IOR-power. This accords with developing tailored successful partnerships (Chapter 2, Section 2.3.2.3). Dispelled are notions that empowerment or disempowerment is necessarily positive or negative rather a question of managing opportunities to exploit agency but equally the risks and potential liabilities of doing so (Eisenhardt, 1989).

Practitioners across field studies and explicitly in the test case study were attuned to the link between empowerment and performance (Chapter 5, Section 5.5.3). The intentional active management of behaviour is not thereby undermined rather complemented by the inherent agency of empowered organisation members in IORs in more fully explaining IOR-power. Forging these connections permits informing better through a power lens the debate concerning power-shifts (Enders, 2009; Sparaco, 2009), standing as the practical driving force behind this thesis as outlined in Chapter 1 (Sections 1.2 and 1.4). As noted in Table 16, thus far there has been *nil* attempt by core-studies to form a theoretical bridge between power and empowerment.

The posited theory fully recognises connectivity between all IOR-behaviour, intentional or otherwise, and embraces empowerment and disempowerment.

6.4.5 P2: Enacted-influence and mind-body relationship?

As presented in Chapter 4 (Section 4.2.2.7) the *direct* products of Enacted-influence are IOR-power effects, that is overt and covert behaviours. All behaviour, deviant or otherwise, including abstention, is held to contribute to the realisation of outcomes and are thereby *integral* to IOR-power. Enacted-influence as the mechanism that directly induces and thereby forms behaviour is thus a central mechanism of IOR-power. It is nevertheless meaningful to distinguish between types of covert behaviour contributing to forming overt behaviour. Three levels of Enacted-influence are discernible, the most fundamental being the

forming of basic perceptions, thereafter the forming of opinions or stances including the forming or internalisation of goals, both of which underpin the third level in the forming of behaviour in *pursuit* of goal attainment. It is the third level, descriptively formalised as the agentic level, that is found dominant in accounts of IOR-power but corresponding with increasing emphasis on the saliency of strategy and negotiation (Section 6.3), all levels warrant prominence (Section 6.2).

Prominence at the intricate psychological level naturally points to the *mind-body relationship*. Thus far although F&R's formulation of power has been the most recognised across core-studies, as reflected in Figure 12 (Chapter 2, Section 2.4.3.3), focus has been on using the formulation to identify power sources. This has marginalised the underlying significance of the formulation given by its theoretical roots, Lewin's (1938) non-material *field* of *psychological* forces at work, held to offer a contemporary explanatory framework for the mind-body relationship (Chapter 2; Section 2.3.4). Extending F&R's formulation across the Origins (Chapter 4, Section 4.2) positions more precisely Enacted-influence as *the* psychological force forging the mind-body *causal* relationship. The remaining psychological forces and states thereby constitute a meaningful representation of the non-material field of the mind at work, a fluid framework serving as the mental powers of individuals.

Thus far there has been *nil* formal attempt by the core-studies to capture the significance of the link between mental *power* and IOR-power. Embracing the link explains more fully the nature of individual agency and speaks directly to human mental models advocated relevant (Chapter 2) to pursuit of sustained competitive advantage (Sections 2.3.1.1 and 2.3.1.3) and conflict management (Section 2.3.2.2), and the significance of perceptions, identity, sense-making, and meaning (Section 6.2.2) supporting the need for a more comprehensive account of the mind-body relationship (Chapter 2, Section 2.3.4).

The posited theory surfaces the relevance of individual mental power to IOR-power offering a meaningful representation of the mind-body relationship.

6.4.6 P7: Behavioural resistance and continuums?

Across the Origins, Emerson alone explicitly renders negative resistance of B to demands by A, a prerequisite of power in Chapter 2 (Section 2.5.3.1). There are several IOR-power scholars however that explicitly do not concur, embracing consensual power, as power, to the point that coercion may be held to signify the breakdown of power (Section 2.5.4.2). The extent to which IOR-power scholars actually subscribe to Emerson's formulation is not always clear, but unless specified, when adopting F&R's formulation implicitly resistance is not a prerequisite. In part, ambiguity is linked to the relation, yet distinction drawn between power and influence (Section 6.5) but also in how resistance is conceived to arise, and leads to the main theme of discussion, *continuums*.

IOR-power is recognised as a multi-dimensional phenomenon by IOR-power scholars. The term continuum was specifically employed by Stannack (1996) to characterize IOR-power types as discrete methods moving from coercion through to activation of commitments that to some extent aligns with the notion of a coercive-consensual continuum put forth in the broader power literature (Simon and Oakes, 2006). The theory formally embraces more the latter notion of continuums to capture explicitly the sense of progression and variation in minute degrees across IOR-power dimensions, for example dependence. This emerged as a governing principle warranting emphasis based on the confirmatory study (Chapter 5, Section 5.3.4.1).

Importantly embracing continuums permits recognising the theoretical and practical importance of Emerson's resistance, but not as a pre-requisite or as simply present or absent, overcome or not. The significant role Emerson's resistance is argued to have in IOR-power is formalised as *behavioural* resistance (Chapter 4, Section 4.2.2.9) and clearly distinguished from other types of resistance namely, value and intrinsic (Chapter 3, Section 3.7.4.2) central to explaining power sources that generate Potential-influence.

Recognising foremost goal complexity (Section 6.4.1) and how there are multiple goals of relevance at any one time; where Potential-influence explains a state of readiness to possibly induce a specific behaviour towards attaining a *specific*

goal, behavioural resistance explains what might impede or facilitate such behaviour based on contribution to *all* goals. Furthermore, realistically individuals cannot engage in all behaviours all of time or at the same time. Goal conflicts and behaviour conflicts arise whereby reasoned behavioural choices are necessary to navigate a way towards moreover *optimising* goal attainment. In focusing on any single goal therefore in terms of potentially inducing behaviour towards this focal goal, individuals to varying degrees do not thereby ignore other goals rather seek to protect other goals as far as possible. Behavioural resistance captures degrees of any such resistance in attending to *all* goals, on a continuum, from *complete* resistance through *no* resistance to *positive* resistance rather than in a binary sense, resistance versus no resistance.

Correspondingly, it is not strictly a question of coercive versus consensual IOR-power rather more degrees of coercion or degrees of consensus on a coercive-consensual continuum bearing significance to what behaviour is thereby induced in a specific situation. Importantly, any negative resistance, as a psychological force is realistically sustainable to varying levels having an effect on the motive of the performer of the induced behaviour, thereby the behaviour. A key role of behavioural resistance is to fundamentally distinguish Potential-influence from Actual-influence rather than distinguish power from influence (Section 6.5).

Thus far there has been *limited* attention or rigorous detailed account given to the saliency of continuums across IOR dimensions (Chapter 2, Section 2.5.4) including the more nuanced, progressive relevance of Emerson's resistance. The reality of continuums generally signals IOR-power does not manifest itself by type rather always stands as unique albeit possibly comparable on specific continuums of significance, notably the coercive-consensual continuum.

It also becomes further intelligible to consider IOR-power being most efficient when fully supported by the environment *and* subject to positive behavioural resistance (full goal alignment) whereby a simple request and immediate behaviour response may thereby ensue. It is also the case that where both environmental and behavioural resistance forces either do not exist, neutralise each other, or are inactive, yields the condition of unique alignment between

power states where Potential-influence is equivalent to Actual-influence that may be activated, at will, and when activated yields an equivalent Enacted-influence.

The posited theory dispels with dichotomised characterisations of IOR-power rather embraces continuums and significantly a coercive-consensual continuum.

6.4.7 P5: Motive and situated evaluation?

Motive is posited to be formed through idiosyncratic cognitive processes and is the compound *reason* (why? what? how? and when?) for a specific discrete behaviour, at a given time, standing as the *efficient* cause (primary source of change) of IOR-influence and IOR-power. The related theme surfaced for discussion is *situated evaluation* that as indicated in Table 16 has been *progressed* by the core-studies. Progress is reflected in IOR-power being recognised as negotiated, involving strategies and tactics (Section 6.3) and through a move towards a process view (Section 6.2). Preceding discussions thus largely underpin the relevance of situated evaluation to IOR-power.

Notwithstanding, integration foremost at the individual psychological process level clearly positions IOR-power as founded on multiple *localised* and *situated* encounters between individuals in which individuals mentally negotiate how to behave, in the interest of goal attainment. Motive, at this level, is thus not a given at any time rather highly contingent on all aspects of the psychological process from which it is formed, not least all relevant Potential-influences at a given time, that realistically may change or have more or less prominence at any moment in time. Most notably Marshall and Rollinson (2004) promoted this highly nuanced and contingent perspective but did not thereby offer a formal explanatory theory.

One implication generally under-explained in accounts of IOR-power follows. Motive once formed may not have immediate causal effect given it may relate to some future planned behaviour that weakens establishing causal links (Section 6.4.4). Equally, a motive once formed may be superseded by other events and thereby become dormant or obsolete not ever inducing Enacted-influence to form behaviour (Section 6.4.5). The significance of time and timing is rendered more apparent and largely explains why motive stands as the efficient cause, being that which ultimately determines if and *when* Enacted-influence is induced to form

behaviour. Motive appropriately viewed as emerging from individual situated evaluations, both contingent and temporal in nature, is thus highly significant in explaining IOR-power.

The posited theory recognises motives emerge from situated evaluations and are thereby contingent, temporal, and not necessarily causally efficient.

6.4.8 P6: Actual-influence and probabilistic states?

Actual-influence exists as an *actual* ability of an individual (A or B) to mentally induce the self, at will, to perform a specified behaviour. According with a type of compound *mechanism* in the ontological framework adopted in this research, Figure 15 (Chapter 3, Section 3.2), it is grounded in the mind of the respective individual *when* it comes into being (domain of the actual). This applies to all core influence states that are similarly *resultant* or compound psychological forces and thereby mechanisms (Section 6.2), re-emphasised here in positioning the discussion on *probabilistic states*.

That *progress* by core-studies in recognising probabilistic states has been made, similar to motive (Section 6.4.7), lies in recognising IOR-power as a negotiated process and thereby uncertain but also in recognising IOR-power to be highly obscured (Chapter 2, Section 2.5.3.3). The dominant perspective of IOR-power has been what is captured in the posited theory as Actual-influence, the most obscured and embedded core state. Attempts to determine this state have been highly problematic (Chapter 2, Section 2.5.4.3) and has led to confusing, if not contradictory representation of what Actual-influence represents, that is, is Actual-influence a real ability to be drawn upon, at will, and only a probabilistic state because it cannot be observed and thereby not known? Or is Actual-influence moreover a potential state corresponding with Potential-influence in the posited theory carrying uncertainty and thereby probabilistic in nature?

Although Gaski (1994) was explicit in rendering IOR-power's dominant state clearly as the former (real ability) qualifying prior challenges to IOR-power operationalisation attempts (Chapter 2, Section 2.5.4.3) and process models offered, there has been limited account of how this is fully reconcilable and meaningful within conceptualisations of IOR-power as a dynamic and negotiated

process. Chapter 4 overall captures how Gaski's (1994) position has been reconciled, that is, through qualifying the notion of 'at will' to be the obtaining and maintaining of an *efficient* motive, recognising moreover motive itself to be the contingent and temporal factor (Section 6.4.7).

Importantly, whilst Actual-influence is a real ability at a given time but only estimable due to obscurity *and* dependence on an efficient motive, this does not render it superfluous to explaining IOR-power. It carries explanatory significance in the IOR-power process first as the theoretical bridge between all that *may* induce behaviour (Potential-influence) and that which *does* induce behaviour (Enacted-influence), as all that *can* induce behaviour (Actual-influence) at a given time (when), given efficient motive (why, what, how). It further carries explanatory significance as something that may be *perceived* to exist. This points to the heart of why perceptions are so important to IOR-power (Section 6.2). In both power-to and power-over (power-under), perception of the actual abilities of the self and others to perform behaviour and obtain outcomes is central to *forming* motives in negotiating a way towards obtaining goals.

The requirement to explicitly qualify the ontology of core states for theory comprehension in the confirmatory study (Section 6.2) was strongly linked to establishing more clearly the explanatory significance of Actual-influence and distinguishing it from the other states.

The posited theory qualifies probabilistic states adding clarity and weight to the theoretical distinction drawn between Potential, Actual, and Enacted-influence.

6.4.9 P9: IOR-influence as downwardly inclusive?

An important theme advanced in the theory that has only received *limited* recognition by core-studies is understanding IOR-influence as a *downwardly inclusive* phenomenon. This is necessarily the case when IORs are realistically assumed to exhibit varying levels of homogeneity, heterogeneity, and independence across all entity levels from individuals through groups and organisations to the IOR-level (Klein, Dansereau and Hall, 1994). This was inferred albeit generally marginalised in IOR-power theory.

Influence is foremost defined in Chapter 4 as a complex, emergent, regressive, and obscured psychological process that governs *individual* behaviours towards goal attainment. Importantly by this definition, emphasis is turned to *being* influenced *by* rather than influence *over* others (Section 6.2) albeit does not preclude such attempts (Section 6.4.4). It captures the continuous *process* of sense-making and reasoning occurring in the *minds* of individuals, thereby essentially also the *mental powers* of individuals. As outlined, the theory establishes as the *essential theoretical* building block of IOR-influence, an explanation of the *reciprocal* influence process occurring in a relationship between two individuals *embedded* in an IOR (Section 6.2). Individuals are members of organisations and not organisations and it follows that the theoretical building block does not thereby capture IOR-influence.

The theoretical building block nevertheless intelligibly translates to the IOR-level (Chapter 3, Section 3.7.4.6). This is partially supported across field studies in how practitioners readily shifted perspectives between individual, group, and organisation levels in accounts of IOR-power, for example in interpretations of the black box (Chapter 5, Section 5.3.4.3). The theoretical building block is a process held to replicate in fit, form, and function across individual members and reciprocal relationships. It may thus be used to construct multiple partial accounts of IOR-influence and thereby build perspectives of IOR-influence drawing on the concept of emergence from within a DCR perspective for intelligibility (Chapter 3, Section 3.2).

Notwithstanding, an account of IOR-influence capturing collectively the behaviour of all organisation members requires constructing a *fully* downwardly inclusive combination of influence processes across *all* embedded A-B relationships (horizontal and vertical extension) through time (longitudinal extension). This is a myriad of interwoven processes, too complex to establish, not least given it is highly obscured and dynamic, but given *all* themes thus far discussed from uncertainty through to probabilistic states (Table 16). IOR-influence is moreover a *flux* of discrete influence processes that combine in a continuous process to generate discrete and downwardly inclusive IOR-behaviour.

Justifiable criticism of appeals to organisations as entities that can be directly influenced (Chapter 2, Section 2.6.1.7) has been resolved, however, necessarily replaced with increased complexity. Following Simon's logic, this reflects the reality of the phenomenon of interest, IOR-power, and is thereby unavoidable. It is this complexity that explains the saliency of the theme addressed next, perspective.

The posited theory recognises influence arises in individual minds whereby IOR-influence is an influence flux yielding downwardly inclusive IOR-behaviour.

6.4.10 P10: IOR-power and perspectives?

Following the discussion on IOR-influence, formalised in Chapter 4, IOR-power is correspondingly theorised to exist as a flux of power processes *grounded* at the embedded individual-level that emerges more as a power mix at the IOR-level. This leads to the theme *perspective*, that has attracted *limited* attention thus far by core-studies.

That the complexity of IOR-power may “defy analysis” (Heskett, Stern and Beier, 1970 p.90) or at least *full* analysis has been surfaced to be the reality of the phenomenon, based on critical synthesis of perspectives unearthed in this research. Obtaining *full* or extended access across the process at the IOR-level is prohibited by the complex, emergent, and temporal nature of IOR-power as a continuous process generating equally complex outcomes. IOR-power is essentially indeterminate in nature and beyond full analysis. All themes thus far discussed from uncertainty through to probabilistic states (Table 16) point to this fact, and it is marginalised perspectives that drew attention to this reality (Section 6.3).

Close examination of attempts to determine IOR-power (Chapter 2, Section 2.5.4.3) reveals that no single core-study has captured a holistic and/or compelling representation of IOR-power. Where Heskett et al (1970) raised the warning, Gaski (Gaski, 1996 [1988]) notably shone a critical light on this reality (Chapter 2, Section 2.5.4.3). Crucially any analysis of IOR-power becomes a question of perspective and attribution (Section 6.4.2).

Perspectives of IOR-power may nevertheless *contribute* to *explaining* a given IOR-power regime and how performance may be improved but is necessarily theory laden. That is, a robust and comprehensive explanatory theory of IOR-power in which to anchor any adopted perspective is necessary for meaningfulness and significance in IOR-power terms. Thus, nothing precludes for example seeking to generate an inventory of an organisation's resources (organised resources) in an A-B relationship, as simply that, an inventory. To speak meaningfully in IOR-power terms however relies on according relevance of the resources, that is how, why, and when the resources contribute to behaviour and IOR-outcomes. The theory primarily seeks to stand as such, a reasonably robust yet flexible explanatory lens through which the realities of IOR-power, as identifiable perspectives, may be understood and explored. Importantly, in applying the lens attention is thereby also drawn to all that remains unexplored, unexplained or is being assumed in any specific power analysis.

In not having had recourse to deny the relevance of any theoretical perspective unearthed across core-studies, the theory thus directly responds to Heskett et al's (1970) call for a conceptual structure to assimilate evidence (database) and guide analysis of IOR-power. The comprehensive process model of key components from goals through to organised resources oriented towards sustainability (environmental, economic, social), complemented by a theoretical framework, facilitates gathering all that is already known about power in the context of specific IORs and IORs generally in a coherent and structured manner, and in turn focus future analyses.

The posited theory further permits, in a structured manner, drawing on theories from across other fields of study, that may not yet have entered IOR-power debates as exemplified by theory importations thus far. For example, Thibaut and Kelley (1959), classified as a level 4 socio-psychology study in Figure 11 (Chapter 2, Section 2.4.3.2) was initially drawn upon by Beier and Stern (1969) in support of the concept of uncertainty absorption (Chapter 2, Section 2.5.4.4). Thereafter, Stannack (1996) embraced their distinction between active behaviour control (effects) and fate control (outcomes) and Gaski (1984a, 1986, 1994) the saliency

of perceptions. Most recently, Reimann and Ketchen (2017) drew attention to the implications of *mutual* dependence to social exchange theories categorising Thibaut and Kelley (1959) in this domain alongside Emerson (1962).

The explanatory theory aims to accommodate such perspectives however categorised, and in the above case (Thibaut and Kelley, 1959), information control (Beier and Stern, 1969) aligns to information being a valued resource (organised resource) and thereby a power source, behaviour (effects) and fate (outcomes) are key theory components (Stannack, 1996), and the role of perceptions (Gaski, 1984b, 1986, 1994) is fully embraced (black box). This exemplifies how recognised theories and perspectives beyond IOR-power conceptualisation *should* be translatable *into* or *connect* with the theory, if the theory is robust, and if not, may generate a requirement for further theory development.

The posited theory establishes IOR-power as highly complex and indeterminate in nature and beyond full analysis, whereby only perspectives are discernible.

Having discussed theory specific qualities, the following section moves to discuss broader themes related to the theory as a whole.

6.5 TP3: A contemporary explanatory theory of IOR-power?

The provisional theory developed was subjected to direct explanatory critique by practitioners in the confirmatory study. The findings of this study (Chapter 5, Section 5.3) led to significant theory re-descriptions incorporated in a second phase of theory development. Enhancements to the theory to improve explanatory power generated a revised process model (Figure 24, Section 4.3.2) and conceptual framework (Figure 23, Section 4.3.1) presented in Chapter 4. The three central themes listed in Table 16, power-influence, natural power, and relational power, reflect important characterizations of IOR-power evidently under-explained.

6.5.1 IOR-power – Influence versus power?

As the quotes by the Origins in introductory Chapter 1 (Section 1.3) alluded to, the distinction yet relationship between power and influence was vague and

unclear or contested in the literature. Overall in the IOR-context *limited* advancement has been made in resolving the *power-influence* relationship.

The Origins sought to establish a rigorous concept of power generally and thereby clarity not only between power and influence, but other related concepts sometimes used synonymously, notably authority and control. The IOR-field of study sought to establish theoretical clarity, and as noted in Chapter 2 (Section 2.5.2) adopted different theoretical perspectives across a reasonable range of types of supply chain IORs, across industries. Lack of overall cohesion nonetheless left the important distinction between influence and power unresolved, if not more ambiguous across process-based conceptualisation of IOR-power.

As outlined across discussions (Sections 6.2 and 6.3) most notably under theme integration, the posited theory renders influence *wholly* integral to what is generally referred to as *social* power, and thereby IOR-power, as a continuous process. In doing so, influence became *the* field of mechanisms constituting *social* power whereby Enacted-influence (Section 6.4.5) represented the core mechanism forming behaviour towards generating outcomes. Notwithstanding, to some extent the relationship between power and influence in the theory remained ambiguous in having sought to establish the most parsimonious representation of IOR-power. One interpretation was feasible, that IOR-power *is* IOR-influence, rendering one or other of these concepts superfluous. This became apparent through the confirmatory study where precisely what power effects signified was under the microscope (Chapter 5, Section 5.3.4.2). This led to extending the process model (forward extension) to incorporate outcomes as a distinct IOR-power quality (Chapter 4, Section 4.3.2.1).

As presented in Chapter 4 (Section 4.3) including outcomes permitted introducing a range of re-descriptions that further addressed explanatory shortfalls identified across the provisional theory. The opportunity to fully portray the intended clear distinction between power and influence as general concepts emerged (Chapter 3, Section 3.9.4.4). As the revised process model presented in Figure 24 (Section 4.3.2) depicts, the distinction between these two concepts is expressed in

Aristotelian causes (material, final, formal, efficient). Where influence is anchored in power sources and power effects, power is anchored in organised resources and outcomes. Where influence is a psychological process leading to behaviour, power is a productive process exploiting resources and behaviour to produce outcomes. Complemented by complexity theory causes (bottom-up, top-down), IOR-power as a multi-levelled phenomenon is qualified whereby links to empowerment-disempowerment became crystallised. This resolution and formulation as discussed in the following section also renders intelligible the inter-relationship between *social* power and *natural* power, critical to a comprehensive and meaningful account of IOR-power.

The posited theory establishes IOR-influence as wholly integral to IOR-power, yet fully distinguishable.

6.5.2 IOR-power – Natural power?

In the broader power literature (Chapter 2, Section 2.3.4) established was a distinction drawn between social power and natural power, and debates in social sciences revolve around social power with a strong behavioural focus, where generally only partial, if any relevancy is given to natural power. This is mirrored in the IOR-power core-studies where only Stannack (1996) was noted to have explicitly acknowledged physical power but turned attention to social power only embracing natural power through recognising outcomes that rely on natural power of humans and human creations (Chapter 2, Section 2.5.4.4). The relevance of IOR-power to broader outcomes of sustainability is nonetheless recognised (Section 6.4.2), but again without any formal attempt to establish a theoretical connection between social and natural power.

It can be stated therefore that power conceptualisation in the IOR-field is limited to consideration of social power that focuses on behaviour and behavioural outcomes such as formal policies, decisions, and so forth, offering *nil* account of the significance of *natural power*. Yet, the outcomes of relevance across the academic literature more generally (Chapter 2), in industry literature, exemplified by the aerospace and defence industry (Chapter 2, Section 2.3.3), and across accounts by practitioners contributing to this research, depend on natural power

and are conditioned by natural power (Chapter 5, Section 5.5). It is reasonable to argue that a conceptualisation of IOR-power limited to that based on social power focused on behavioural outcomes, is thereby inadequate to explain IOR-outcomes. Furthermore, there have been several notable references made to natural power in formulations of social power, as follows.

Not least, Russell (Russell, 2004) in 1938 drew a parallel between the *significance* of energy in the natural world and the *significance* of power in the social world. F&R referred to power as Potential-influence (stored; position) based on psychological forces and influence as kinetic power (used; motion). Clegg (1989) employed the concept of circuits of power metaphorically (electrical power) to capture the continuous flow and distribution of social power. Several IOR scholars have also drawn close parallels between natural and social power. Most notably Gaski (1984b, 1994) drew the analogy between potential energy and potential power and similarly kinetic energy and exercised power. Stannack (1996) argued that natural (physical) and social power only differed by level of obscurity in modern societies and whilst the former has become less relevant it has not disappeared moreover power exists on a social-natural continuum. Power has also been recognised as the DNA of supply chains (Cox, Sanderson and Watson, 2000) and the atomic particle of relationships (Dapiran and Hogarth-Scott, 2003). Across field studies, practitioners notably drew analogies between natural and social power.

Rather than maintain or force an unnatural distinction between power in the social sciences and natural sciences, the theory embraces the inherent natural connection between the two. Essentially psychological forces do work over time (mental power) to generate behaviour that does physical work over time (physical power) to generate outcomes, in the same manner as natural forces do work in natural power. Notably, as further outlined in Chapter 2 (Section 2.3.4), that the psychological process is captured as emergent *states* permits appealing to quantum physics notions of energy to connect the mind to the physical body discussed in Section 6.4.5.

A formalised alignment is thus established whilst not ignoring that each *type* of power is by *nature* different and given by the *type* of force or mechanisms at work. The inextricable relation between all that is social (political, legal, economic etc.) based power and natural based power is forged *throughout* the process. Recognised is a continuous inter-play between the social and natural *worlds* *directly* or physically, and *indirectly* or psychologically through influence.

An important contribution of this research is to integrate social and natural power without destroying the distinction and essential meaning attributed to each to establish a more comprehensive account of IOR-power, necessary and sufficient to explain outcomes of relevance in this context (Section 6.4.2). Through forging a direct relationship between IOR-power and performance (Section 6.3.3), it becomes possible to relate to IOR-power consistently and holistically especially in terms of effectiveness and efficiency that applies to humans, human creations including technology and machines that harness the power of Nature, and Nature itself. IOR-power discourse and analysis may thereby turn fruitfully and coherently to attending to the social and natural challenges faced (Chapter 1, Section 1.2), as pivotal links in supply chains (Chapter 2, Section 2.3.1.3 and 2.3.1.4).

Dispelled further are notions that IOR-power *is* necessarily either, effective or ineffective, efficient or inefficient, or that IOR-power *is* necessarily destructive or constructive. IOR-power is thereby not the antithesis of anything other than powerlessness or impotency whereby empowerment and disempowerment readily constitute the bridge between. IOR-power is nevertheless also essentially dialectical in that outcomes are realised through action *and* in-action, intentional or otherwise. Thus, recognised further in explaining desired outcomes or goal attainment is how IOR-power is *mediated* by impotency and prevailing conditions, and it is possible to be powerful (Actual-influence) yet both ineffective and inefficient if such power is not used wisely or judged misused (Section 6.7)

The posited theory establishes IOR-power as an essentially social and natural power phenomenon.

6.5.3 IOR-power – Relational power?

The final point of discussion is *relational power* and to some extent rests on the discussion thus far. Although the literature (Chapter 2) infers saliency of relational power, most notably through the relational view (Section 2.3.1.1), partnerships (Section 2.3.2.3), and emphasis on mutuality (Section 2.6.1.7) there has been *limited*, if any formal acknowledgement of *relational power* in the *joint-to* productive sense.

The notion that IOR-power emerges from a ‘power mix’ within and across organisation boundaries both in the literature (Section 2.5.4.4) and practitioner accounts (Chapter 5), where one case (Case-D) explicitly referred to ‘joint-power’, supports (Section 5.2.5) embracing relational power in this sense. The confirmatory study thereafter prompted re-descriptions to render more apparent mutuality (Section 5.3.4.3) and collective working (Section 5.3.4.2) and give greater prominence to joint power-to (Chapter 4, Section 4.3.2.1). IOR-power held to be fundamentally relational from the Origins (Section 2.5.3.1) throughout developments in the IOR-field (Section 2.5.4.4), more completely is foremost power-to consisting of power-over *and* joint-power (Section 6.3.1). This has implications in theoretical debates in Chapter 2 on how IOR-power is positioned in relation to commitment-trust theory, conflict theory (Section 2.3.2.2), and partnerships (2.3.2.3).

IOR-power rather than being the antithesis of partnership relationship success moreover aligns to the prominent partnership model (Chapter 2, Section 2.3.2.3). In forming partnerships what generally enables or constrains the process (facilitators) corresponds with full recognition given to the environment and environmental influence. The purpose or expectation accorded to the relationship (drivers) corresponds with goals. In the first instance this leads to decision to form a partnership (decision) that corresponds with an outcome serving as a power-point (Section 6.4.2) governed by motives of both parties. Outcomes related to drivers for the partnerships (outcomes) are performance outcomes that may be assessed to have been efficiently and effectively obtained, or not, by each party. Outcome performance severely and jointly depends on what constitutes the

partnership relationship (components) corresponding to organised resources and exploitation thereafter governed by motives, *that is* IOR-power. The relationship, that is drivers, facilitators, and components through feedback (feedback) may alter or be altered through time, corresponding with feedback / feedforward.

IOR-power is also grounded at the individual-level whereby commitment and trust are *intelligible* mental stances adopted by individuals that contribute to forming motives. Commitment and trust, notable identified *relationship* components (Figure 6), and all other relationship qualities do not exist juxtaposed to IOR-power, operating independently or against IOR-power rather are integral to IOR-power most evidently in qualifying the state of *dependence*, *independence*, and levels of *inter-dependence*. As noted in the confirmatory study (Case-Z), a myriad of qualities may be held to define a relationship where full classification may not be feasible (Chapter 5, Section 5.3.4.1). The same is the case for states of dependence and perceptions thereof, levels of trust and commitment, and so forth. Similarly conflicts may exist inherently such as in goals (Section 6.4.1), be a product of outcome performance (Section 6.3.3), and be resolved through IOR-power in negotiating a way forward, or not (Section 6.3.2).

In summary, all relationship qualities contribute to generating IOR-power, and on an ongoing basis are shaped by IOR-power, as products of IOR-power through feedback / feedforward. The posited contemporary theory of IOR-power thereby accords with Cox et al (2000) rendering IOR-power the DNA of IORs, but explicitly that IORs are not thereby pre-destined, programmed or structured to perform in any particular manner rather importantly depend on the DNA of individuals. It is how individual members evolve psychologically and socially within prevailing but dynamic social and natural structures, especially as membership changes (individuals change roles, leave, or join organisations), that continuously alters the DNA of an IOR. IOR-power is further not limited to what outcomes each party obtains from the other party (power-over) but also independently (freedom-to) or achieved jointly however apportioned or attributed to either party (joint power-to).

The posited theory recognises relational power that includes joint power-to whereby IOR-power stands as the dynamic DNA of IORs.

This concludes the discussion of theoretical contributions in which theory intelligibility levels have been noted.

Overall, the discussion has pointed to several key IOR-power characteristics that remained under-represented and under-theorised in the IOR-power literature. As unearthed in the Chapter 2 (Sections 2.5 and 2.6), although accounts offered by the Origins jointly provided useful foundations on which to build a theory of IOR-power and remain identifiable within the posited theory (Chapter 4, Section 4.2.2, Figure 22), these accounts did not fully accord or resonate with the IOR-context (Section 2.5.4.2) or more recent advancements in the broader power literature (Avelino, 2021).

In contemporary supply chain relationships (Section 2.6.1.7), and notably in the aerospace and defence industry (Section 2.3.3), not least collaborative long-term relationships between large corporations involving high-investment and high-risk, points strongly to the significance of empowerment and relational power in delivering sustainability, not merely power-over the behaviour of others. Resonance with emerging supply chain *paradigms, practices, and conditions* is essential to retaining relevancy. For example, the paradigm that the “Environment is free; but not a gift” (Zokaei, Manikas and Lovins, 2017), where productive waste (*all* outcomes) is as important as productive value (*desired* outcomes). In recognising innovation and the realities of Industry 4.0 technologies bringing the digital, physical, and biological worlds closer together (Philbeck and Davis, 2019). In speaking to the changing and challenging conditions or dynamics of supply chain environments from possible further deregulation of the China airline industry to the fall-out of the COVID-19 pandemic and the Ukraine-Russia conflict (Kilpatrick, 2022; Koliouisis, 2019; Koliouisis, Wilding and Bernon, 2022).

This leads to more specifically discussing theory intelligibility noting formal evaluation of the relevance of case conditions to intelligibility levels using fsQCA (Chapter 3, Section 3.5.6) in the confirmatory study and test case study was informative but highly tentative (Chapter 5, Sections 5.3.4, 5.4.5, 5.4.7, and 5.4.8). The following two sections thus focus on insights gained from detailed qualitative analyses across field studies.

6.6 IP1: Theory detailed intelligibility to practitioners

This section focuses on proposition IP1 in Table 16 where three themes, practical insights, mental agility, necessity-sufficiency, are each deliberated primarily through the detailed lens of the confirmatory study (Chapter 5, Section 5.3), but also visible through the broader lenses of the exploratory and test case studies. As noted, a reasonable level of agreement with the theory was obtained in the explanatory study even prior to introducing theory enhancements (Section 6.4).

6.6.1 Practical insights through direct explanatory critique

The core-studies underpinning (Chapter 2) this research evidenced a move back towards qualitative based methodology (Section 2.5.2) and obtaining *practical insights* (Section 2.6.1.7). The number of studies is nevertheless *limited* with no study offering a theory to practitioners for *direct* critical assessment. It might be argued that engaging practitioners in this manner is impractical and fruitless given practitioners are not necessarily fully conversant with scientific research practice or theory. Insights as follows however suggest the contrary.

Engagement in an explanatory critique was evidently challenging as exposed in excerpts across the exploratory study (Section 5.2), test case study (Section 5.4.6), and notably in the confirmatory study (Section 5.3.2). Critical practical insights nonetheless proved invaluable in developing the theory to enhance explanatory power and exposing a need for greater concept clarity. The revised theory incorporates significant re-descriptions. This is not to suggest that scrutiny by academics would not have generated the same theory re-descriptions but practitioner insights advances obtaining judicious alignment between academic and practitioner perspectives, thereby relevance of theory to practice.

One clear example was recognising the saliency and nature of goals and outcomes in practice for proper interpretation. Even if theoretical gaps prove irresolvable, appreciation of such gaps itself is valuable knowledge to academics interested in informing practice. Not least surfaced has been clear evidence of the implications of using either the term influence or power in field research (Section 6.7). These terms alone risk evoking different thought processes and

thereby responses to questions put to practitioners especially when employing *indirect* approaches.

All participants demonstrated engagement even interest in understanding more about the theory (Chapter 5 Section 5.5.3). Nonetheless, exposed in the confirmatory study was that engagement would depend not least in being able to communicate in a meaningful language. This led to seeking greater alignment of the theory to a reasonably well-known process-language used in practice (Chapter 3, Section 3.9.4.3) and links to the second theme of discussion, mental agility.

Practitioner engagement in direct explanatory critique of theory is challenging but feasible and invaluable in developing scientific theory to inform practice.

6.6.2 Mental agility as a limitation

Exposed clearly by the confirmatory study was variability in *mental agility* of cases (Chapter 5, Section 5.3.2). There was *nil* explicit account given to its relevancy to research outputs by core-studies. It was nevertheless an important and at times limiting factor for practitioners when trying to apprehend in detail the complex and abstract nature of the subject matter being scrutinised. Mostly evaluation required theoretical analysis (TA) and was less a question of verifying based solely on life experience (LE), or simply being indoctrinated (ED) (Chapter 5 Section 5.3.2). Thus, mental agility required attention when judging critical comments and theory plausibility. Obtaining clear stated intelligibility was positive but not an absolute indicator of plausibility, and lack of intelligibility did not necessarily render the theory implausible. Explanations warranted careful consideration.

An explanatory critique may also be an iterative, reflective, and potential learning process for participants (Section 6.7.3) where mental agility is equally relevant. More broadly it points to the importance of soliciting explanations from practitioners for accounts of practice. Accounts also rely on intelligibility and thereby mental agility that may significantly alter relevance of such accounts.

Throughout the research, careful holistic interpretation of rich qualitative data was necessary to mitigate any evident limitations in mental agility. This required

developing an understanding of communication styles and language use by practitioners. Notwithstanding, attention given to mental agility offered useful insights to what is necessary and sufficient to capture and convey the theory to practitioners (Section 6.6.3).

Practitioner engagement in direct explanatory critique of theory requires sensitivity to mental agility and close attention to grounds for intelligibility.

6.6.3 Necessity-Sufficiency

The last theme of discussion in this section is the *necessity-sufficiency* of theory for use in practice. Across core-studies any such evaluation was conducted with *nil* explicit *direct* contribution from practitioners. The approach to developing the provisional theory was to extend F&R's concept of a resultant psychological force to encompass other psychological forces *necessary* to embrace formulations of power (Chapter 3, Section 3.7.3). In seeking a parsimonious explanatory theory, the essential and simplest theoretical building block was established as a process model. The theory was judged sufficient to portray IOR-power and reflect outcomes through replication and extension.

Critical assessment by practitioners revealed the process model to be only marginally sufficient albeit one case (Case-X) found the theory fully intelligible (Chapter 5, Section 5.3.5). The theory needed to more self-explanatory to be *sufficient* and across cases. This in part reflected an over-reliance on mental agility for apprehension but not completely. As discussed across the theory specific qualities (Section 6.4) and more broadly (Section 6.5) relatively simple extensions and adjustments fundamentally enhanced explanatory power and relevance to practice.

It is not implied that theory, especially complex theory, be necessarily fully intelligible to all practitioners rather that engaging practitioners offers an opportunity to enhance apprehensibility without necessarily sacrificing scientific quality. It is a question of judicious alignment. Not least, irreconcilable intelligibility gaps may then assist translating theory for application in practice.

Practitioner engagement in direct explanatory critique of theory facilitates exposing theoretical sufficiency for apprehension and utility in practice.

6.7 IP3: Theory broad intelligibility to practitioners

Aligned to proposition IP2 in Table 16, are a further three themes relevant across field studies but brought into sharper focus through the broader lens of the test case study. The themes are interpretation factors, emotive factors, and reflective learning.

6.7.1 Interpretation factors

Managing appropriately the significance of interpretation in research practice and outputs has been *progressed* by core-studies (Chapter 2, Sections 2.5.4.3 and 2.6.1.7). There have been calls for greater focus on data quality to capture more realistically situated practice and the voice of the practitioner (Ford, 1980; Marshall and Rollinson, 2004; Meehan and Wright, 2012). Interpretation was critical to this research reflected in adopting IPA as a methodology across field studies (Chapter 3, Section 3.5.4).

Theory intelligibility testing undertaken where quantitative levels of intelligibility were obtained, provided anchor points to expose the significance of interpretation factors. Several interpretation factors in combination were material to critiques offered in the confirmatory study ranging from adopted perspective, engagement, through to complexity of the subject matter (Chapter 5, Section 5.3.2). As noted, these contributed to 18 quantitative adjustments (Chapter 3, Section 3.5.4). This led to formalising a difference between perceived (raw scores) and actual intelligibility (adjusted scores), where actual intelligibility was held the arbiter of theory plausibility. To some extent all the interpretative factors formally captured, including themes noted in Section 6.6, were discernible across field studies, but the test case study readily exposed the significance of language.

In the test case study it was the meaning attributed to two terms, govern and process, embedded in the succinct definitions of influence and power under evaluation that generated *mis*-interpretation independently and jointly, of the definitions tabled (Chapter 5, Section 5.4.6.2). Language including specifically intended *word* meanings were significant to interpretation and establishing actual intelligibility levels. It was only through engaged practitioners *thinking out loud*

and trying to explain even justify quantitative scores, that not only language, but self-confidence and other factors were identified as relevant.

Furthermore, the test case study supported the argument for ensuring theory sufficiency. Exposed clearly is the risk of relying on succinct, broad expressions of power and influence alone in IOR-power studies to convey and promulgate meaning. Such definitions are likely insufficient to obtain communicative validity between researcher and practitioner (Chapter 3, Section 3.5.4) or between researchers (Chapter 2, Section 2.5.4). It has significance for key words employed to capture IOR-power, notably *influence*, in both quantitative survey instruments (Lusch and Ross, 1985) and qualitative inquiries (Meehan and Wright, 2012).

Practitioner direct explanatory critique of theory and definitions requires due consideration of interpretation factors to establish actual intelligibility levels.

6.7.2 Emotive Factors

Interpretation factors as a general theme was used to capture rational factors relevant to interpretation. In the test case study *emotive factors*, discernible in the exploratory study that influenced design of the confirmatory study (Chapter 3, Section 3.8.1) demonstrably re-emerged (Chapter 5, Section 5.4.6.2). Recognition of the role of emotive factors in situated practice in part explains the call for conducting qualitative studies of IOR-power in realistic situations (Section 6.7.1) Account for emotive factors in IOR studies has nonetheless been *limited* and has not focused specifically on language use.

It was clear that for some practitioners in the test case study IOR-power was emotively viewed as negative, ineffective, and a blunt management approach in business practice. Experience of the judged *abuse or misuse* of IOR-power rather than wise and appropriate use had tainted views to the point that perceived intelligibility levels were explicitly marked low as a result (Chapter 5, Section 5.4.6.2). Again, access to explanations for intelligibility scores and descriptions of IOR-power by these practitioners permitted accounting for such emotive factors in establishing actual intelligibility levels. The contribution is thus

evidencing the importance of emotive factors not only *in practice*, but in according intelligibility to IOR-power theory and definitions used in research.

Practitioner direct explanatory critique of theory and definitions requires due consideration of emotive factors to establish actual intelligibility levels.

6.7.3 Reflective Learning

Learning in practice is generally recognised in the literature, not least in Chapter 2 in relevance to sustained competitive advantage (Section 2.3.1.1), conflict management (Section 2.3.2.2), and in IOR-power (Section 2.5.4.2). It is further implicitly embedded in notions of feedback (Chapter 4, Section 4.2.2.10) formally recognised in the theory and re-enforced by practitioners in the confirmatory study (Chapter 5, Section 5.3.4) and test case study. The last theme *reflective learning*, that is reflecting on learning experiences may have been held integral to general references to learning in the literature, but *nil* account was apparent in core-studies of its significance to engaging practitioners in an explanatory critique of IOR-power theory or definitions.

The significance of reflective learning in the context of conducting an explanatory critique was highlighted in the confirmatory study pilot case (Chapter 3, Section 3.3.4) but also evidenced across studies (Chapter 5, Section 5.5.3). For some practitioners it generated an awareness of the lack of clarity in what IOR-power is and how difficult it was to fully capture, yet how useful that might be. For some it led to formulating a clearer view including shedding of negative biases even deepening understanding of life experience through becoming more cognizant of one's own and others' power. As captured in the test case study (Chapter 5, Section 5.4.6.3) deliberating only high-level definitions without the benefit of an exposed theory, actual intelligibility gaps between the posited theory and practitioner perspectives at this level, lay in 6 key theoretical points (Figure 41). The most prominent gap was recognising influence as being fully integral to power, closely connected to recognising an influence coercive-consensual continuum. Through engaging in logical reflective thinking, it was nonetheless evidenced how each gap may equally be readily closed.

In summary, across the population of 27 practitioners participating in this research, IOR-power bore an imbued significance weighted towards being coercive in nature, but it was neither clearly understood nor logically fixed. Evidenced was how engaging in a direct explanatory critique of theory or definitions may be a useful approach to obtaining alignment between academic and practitioner perspectives of IOR-power. Moreover, achieving alignment may not be insurmountable despite practical challenges surrounding mental agility, interpretation, and emotive factors.

Practitioner direct explanatory critique of theory and definitions through reflective learning in situ may facilitate obtaining alignment in perspectives of IOR-power.

This concludes discussing contributions to knowledge related to theory intelligibility. Discussion now proceeds to considering the overall contribution and implication of this research given acknowledged limitations and reflections.

6.8 Research limitations, reflections, and implications

First, important research limitations are discussed. This is followed by reflections on the research undertaken including implications of limitations and challenges faced in the process. Both frame deliberation overall of the main research implication, the significance of the posited theory of IOR-power.

6.8.1 Research limitations

Theory plausibility rests first in the theory being grounded in the most relevant scholarly work spanning 50 years, systematically identified. These core-studies offer a clear and tractable basis for the theory. A systematic literature search however relies on search strings and terms employed and was conducted using a single database source (ABI/Inform). It may be the case that not every relevant study was thereby successfully sourced. This was in part mitigated by including all referenced studies in the evaluation process. Nonetheless, it is acknowledged that there may be other useful insights and theories from obscured studies and furthermore level 1 studies (Chapter 2, Section 2.4.2.2), that have not been given due consideration. The theory is thus limited to standing as a synthesis of identified core-studies informed by the broader literature (Chapter 2, Sections

2.4.3.2 Section 2.4.3.3) but readily and systematically extendable to embrace any relevant study and new findings thereof.

Theory plausibility also stands on data gathered from a noted small sample size of practitioner cases in each study, having privileged depth over breadth of inquiry. In particular, the use of a single IOR-Case study from the aerospace and defence industry to test the theory (Chapter 3, Section 3.10.1), whilst justifiable in evidencing a largely obscured and complex phenomenon (Section 3.3.1), imposes certain limitations noted by scholars (Koliouisis et al., 2022; Selviaridis et al., 2016; Spence and Bourlakis, 2009; Zokaei and Manikas, 2014).

Foremost, whilst the test case study benefited from obtaining data from both customer and supplier, there are contextual factors that mark the aerospace and defence industry and its supply chains, distinguishing this industry from others (Chapter 2, Section 2.3.3). The specific test case relationship (Chapter 5, Section 5.4.2) also is not wholly comparable to any other relationship within the industry. Although, *theoretically* such contextual factors constitute explanatory details or specifics of IOR-power in a given case, such as whether price or product/service reliability (organised resources) is held more important (intrinsic resistance) in the specific relationship (Potential-influence), or, if behavioural resistance to demands of either party is prevalent due to limited mutual dependence or highly mis-aligned goals, or, the type of contract between parties being a flexible framework, or not (environmental), industry and relationship specific contextual factors nonetheless may have been more fundamentally significant to how the core process of IOR-power under test manifested itself.

Thus, the findings presented in Chapter 5 (Section 5.4) may only be embraced as evidence of the core process within the specific aerospace and defence industry relationship tested. Empirical scrutiny has thus been fruitfully but only marginally advanced. The study requires replicating across different relationship types within the aerospace and defence industry, especially highly collaborative relationships involving high asset specific investments of *both* parties, and in other industries, to build evidence of the theory's generalisability across IORs and industries.

The third limitation is that albeit guided as a researcher by supervisors and a review panel, the research rests on the interpretative work of a single researcher from evaluating broad relevancy and detailed interpretative analysis of the content of academic studies to interpretative analysis of practitioner accounts and theoretical decisions. In counterpart the theory is grounded in identified literature in the public domain. Supporting information has also been provided within the accompanying volume of appendices and extensive supplementary appendices are available thereby offering full transparency. As noted in Chapter 3 (Sections 3.3 and 3.3.5), interpretative aspects of the research were consciously levered but also controlled for unwarranted bias.

The final important limitation is the theory's reliance on the philosophical perspective of DCR (Chapter 3, Section 3.2) and the plausibility of psychological forces (Chapter 3, Section 3.7.3) acting as real generative mechanisms in the minds of individuals. Although both have grounding in the literature and are justifiable, in resting fundamentally assumptions about the world, stand as theoretical limitations to scholars that reject the validity of such assumptions. Notwithstanding, DCR embraces ontological depth that promotes drawing on theory across domains of reality, be that the empirical domain or actual domain (Chapter 3, Section 3.2) and the theory does not *preclude* appealing to constant conjunctions of events or regularities. In this respect the theory may still be *partially* embraced and applied within alternative philosophical perspectives.

6.8.2 Research reflections

Commencing with noted limitations and first use of a single databases to source core-studies. On reflection, sourcing from multiple-databases may have been manageable given in principle study numbers would have dramatically reduced relatively early in the process through eliminating database duplicates. This may not have changed the research output but would have avoided accepting the limitation. Second, undertaking the research largely physically remote from Cranfield was circumstantial and limited working more closely with fellow researchers. In a positive sense this fostered a level of independence as a researcher. Lastly, privileging qualitative depth over quantitative breadth and

selecting DCR as a philosophical perspective however remains considered justified and most appropriate to comprehensively address the research problem.

The research methodology nevertheless required commitment and endurance generally as a researcher and for several practitioners that contributed. A degree of flexibility, tenacity, and patience was also necessary to gain access to practitioners on what emerged to be a sensitive organisation topic. It was necessary to accommodate practitioner schedules, locations, and participant changes albeit practitioners tried to be accommodating. Most important was adapting appropriately to the personality and style of each participant. All interviews are judged to have produced quality data reflecting effectiveness of the field study methodology and ultimately levels of practitioner willing engagement. The methodology also permitted adaptations to fully exploit valuable data accessed, for example use of pilot data and unsolicited theoretical analyses offered by cases.

I had no personal interest in the findings unearthed other than to contribute as an under-labourer to knowledge by doing justice to the body of extant academic work and practitioner contributions on which the theory ultimately stands. My only bias but one I argue served as a positive force was a belief that a general definition of IOR-power was obtainable and that alignment to natural power was feasible, if not necessary and beneficial. Nevertheless, as evidenced in Chapter 4, seeking explicit alignment to natural power was purposefully resisted, until justifiable.

Ultimately the greatest challenge was managing the large volume of data used to construct and test the theory, that is 65 academic studies, and 84 hours 38 minutes of transcribed data. The unfortunate break in the research also required revisiting work to become fully re-emersed again in the data and process. From a personal standpoint, although I am readily able to take a strategic or high-level perspective, I am also driven by detail and when possible, making sure no stone is left unturned. Having unturned the academic stones and uncovered complexity, abstractness, and contestations surrounding power as a concept, this could not thereafter be ignored. The devil was in the detail and required detailed attention.

A key learning point was how contested and adapted concepts are in the social sciences. This leads to a further reflection.

Given the complexity of the concept and the requisite investment in pure theory development in addition to the requisite field research, the research was highly demanding in time, energy, and resilience. Finding a way to organise, make sense of, digest, synthesise, and re-construct data into a plausible and digestible theory, emerged a larger endeavour than anticipated. It has been difficult to distil the overall research project into a single thesis and to do so required marginalising some informative, invested, but less critical elements of the research, most notably in exposing more fully fsQCA analyses and findings. Adopting a systematic approach nonetheless permitted comprehensively addressing the research question.

Lastly, having learned about scientific research methodologies, philosophical perspectives, and addressed specifically the concept of power, it has sharpened and attuned my thinking towards my immediate world and the world around me. I now visualise and sense power everywhere and more critically question data and arguments put forth, and more than ever motives. Arguably enlightenment and a blessing but also a curse if allowed to overshadow the simple enjoyments of life. Awareness of the *potential* impact on my life of having engaged in extensive theoretical research of such a fundamental concept, is perhaps my deepest and most enduring reflection.

6.8.3 Research implications

The main contribution discussed across this chapter has been the contemporary theory of IOR-power developed and fully exposed in Chapter 4. The discussion has focused on key qualities that mark the distinction between the theory and extant theories and definitions found in the core-studies, but also aligned to debates in the literature. Theory intelligibility levels to practitioners and alignment of the theory to practice have also been discussed. In doing so, all three central propositions TP, EP, and IP outlined in Chapter 1 (Figure 1, Section 1.3.2) have been advanced in a complementary manner. Specific key implications of the research have been highlighted, limitations acknowledged and reflections stated.

In deliberating overall the research, the central implication may be summarised as follows.

The contemporary theory has been constructed from *core-studies* and thus each essential quality has a level of support from the literature. The theory stands in principle in partial conflict with extant theory however more precisely, the conflict is held to be one of perspective. Incorporating practitioner perspectives, the argument is compelling for IOR-power to be recognised as the phenomenon that explains IOR-outcomes. If not IOR-power, what other concept or theory is more suited to carry the burden? Extant definitions and theories generally imply this significance, but in pursuit of determining IOR-power have under-explained and under-valued IOR-power, emphasising and relying on social power formulations focused on inducing discrete behaviour and decisions that over-simplify the phenomenon and do not alone explain IOR-power and IOR-outcomes of interest.

Advancing alignment with natural-based power, IOR-power is more comprehensively a combination of *embedded* individual behaviour, human creations, and Nature, at work exploiting resources in pursuit of goal attainment – an emergent, downwardly inclusive social and natural-based process governing IOR-outcomes, that are negotiated, situated, and indeterminate. IOR-power is not the antithesis of anything other than powerlessness or impotency moreover standing as the dynamic DNA of IORs. IOR-power analysis and discourse are a question of an *adopted perspective*, anchored in an outcome of interest and focal organised resources, A and/or B. Emphasis is shifted towards *understanding* and leveraging all that renders IOR-power more effective and efficient rather than seeking to *fully* measure IOR-power, that is immeasurable. It further draws attention to all that remains unexplained in any account given!

Importantly, the theory aligns to embracing the realities of contemporary supply chains through to the most basic human level, that is, how the fourth industrial revolution (4IR) will “alter behaviour and relationships” (Philbeck and Davis, 2019 p.18) given envisaged is “a fundamental set of shifts in human identity and the way in which we experience the world” and correspondingly “shifts in entire systems of power” (Philbeck and Davis, 2019 p.19).

Whether IOR-power be confined in practice or scientific accounts, to potential, actual, or enacted power, the meaningfulness, significance, and *explanation* of any such narrower perspective is nevertheless given by the fuller IOR-power process inarguably contingent on Nature.

Notwithstanding, IOR-power delimited by rendering behavioural resistance a prerequisite, stands as a fundamental distinction some scholars and practitioners may view appropriate. This is not a question of state versus process rather cuts through the process. This distinction may appear a simple delineation but in counterargument masks the reality and associated nuances of *degrees* of behavioural resistance that may be sustainable and obscured yet having immediate or long-term implications for behaviour and outcomes. Discerning IOR-power from IOR-influence based on resistance positions IOR-influence and IOR-power precariously sharing the burden of explaining behaviour and outcomes. Furthermore, this is untenable when accepting it is collective behaviour that generates IOR-outcomes. Discrete individual behaviours may not *all* carry resistance, or *all* be resistance free.

It is rather posited that IOR-influence governs behaviour and IOR-power governs outcomes whereby IOR-influence is *wholly* integral to IOR-power. Importantly a coercive-consensual continuum underpins IOR-influence pointing to the saliency of *addressing* behavioural resistance that may serve a constructive not merely destructive role. Avoided is IOR-power being rendered the blunt command-control over others of increasingly less significance in contemporary IORs. More appropriately, a clear logical alignment and integration with natural power is achieved. The theory captures IOR-power bearing its full weight, theoretically and practically, warranting attention by researchers informing practice and due diligence by *all* practitioners in IOR-power management including matters of empowerment and disempowerment.

In accordance with the method applied to judge the significance of claims contributing to the theory (Chapter 2; Section 2.5.1), the significance of the theory put forth is evaluated to be medium (8) based on the theory testing being of high

reliability (3) and medium internal validity (2) thereby medium certainty (2) but low established generalisability (1), albeit in principle, *potentially* highly generalisable.

The theory stands as a reasonably plausible and significant IOR-power lens explaining IOR-performance.

6.9 Chapter summary

This chapter has discussed foremost the main contribution of this thesis, a contemporary *theory* of IOR-power within a DCR philosophical perspective. The aim has been to consider clear advances made towards establishing the essential qualities that describe, characterize, and explain IOR-power. Summarily captured in introductory Table 16, the discussion has focused on theoretical and empirical propositions advanced. This included the implications of seeking theory intelligibility and alignment across academic and practitioner perspectives of IOR-power. Discussion has been grounded in the literature presented in Chapter 2 wherein the foundations for theory development were laid, the posited theory presented in Chapter 4, and field research findings presented in Chapter 5. The key theoretical implications and overall significance of the theory have been deliberated, giving due consideration to research limitations.

7 CONCLUSIONS AND CONTRIBUTIONS

7.1 Introduction

This chapter presents the conclusions of the research and claimed contributions to knowledge. To position conclusions and contributions, the background and substance of the research undertaken is first summarised. Future research opportunities are suggested in closing this chapter and thesis.

7.2 Research overview

Research broad interests lay in advancing better management of supply chain partnerships to improve supply chain performance in the commercial aerospace industry. Outsourcing and risk-sharing strategies (Bettis, Bradley and Hamel, 1992; Christopher, 2011; Collis, 1991; Cox, 1999; Gulati and Kletter, 2005; Jap, 2001; Prahalad and Hamel, 1990) largely mark evolution in this industry since the early 1900s. These strategies explain the emergence of major aircraft manufacturers leading highly integrated, global, political supply chains on their complex aircraft programmes (Bales, Maull and Radnor, 2004; Rose-Anderssen et al., 2008, 2009). It has however been debated whether outsourcing strategies have transferred too much power to major suppliers, adversely impacting supply chain performance? (Enders, 2009; Sparaco, 2009).

In the supply chain literature it is not disputed that IOR management is pivotal to organisation and supply chain performance (Christopher, 2011; Cox, 1999; Cox, Sanderson and Watson, 2000; Defee and Stank, 2005; Lambert, Emmelhainz and Gardner, 1996; Maheshwari, Kumar and Kumar, 2006; Vitasek and Ledyard, 2009; Wilding, 2006; Wong et al., 2012). Rather disputed are central theories explaining IORs. Questioning the implications of power distribution in the aerospace industry (Enders, 2009; Sparaco, 2009) resonated strongly with unresolved academic debates as to whether power is the antithesis to trust in fostering effective and positive IORs or a fundamental property requiring appropriate management? (Belaya and Hanf, 2009; Cox, 2001b; Cox et al., 2004; Hingley, 2005; Kumar, 1996; Morgan and Hunt, 1994).

Positioned as the most fundamental concept in social sciences carrying the same sense as Energy in physics (Russell, 2004), the broader power literature confirms power as highly contested ontologically and epistemologically (Avelino, 2021; Clegg, 1989; Haugaard, 2002a, 2010). Analogies and parallels between social power and the relatively robust concept of natural power persist across the literature (Clegg, 1989; French and Raven, 1959) and specifically in the IOR-context (Cox, Sanderson and Watson, 2000; Dapiran and Hogarth-Scott, 2003; Gaski, 1984a, 1994; Stannack, 1996). However, no formal and explicit scientific alignment of social and of natural power was identified.

A systematic review of the IOR literature identified 61 core IOR-studies revealing more clearly why IOR-power was contested and established theoretical origins of IOR-power theory, four general power studies, Simon (1953), Dahl (1957), French and Raven (1959), and Emerson (1962), collectively referred to as the Origins. The Origins had sought to establish a robust power concept to permit determining social power. Through detailed analysis, a preliminary conceptual framework emerged consisting of 25 power attributes uniting conceptualisation across the Origins but also exposing fundamental theoretical contestations.

In principle, although the preliminary conceptual framework held and became enriched in the IOR-context, triggered by Beier and Stern (1969), fundamental contestations across the Origins lay largely undetected or marginalised, and permeated into IOR-power theory albeit increasingly exposed (Belaya, Gagalyuk and Hanf, 2009; Brown, Johnson and Koenig, 1995; El-Ansary, 1975; Frazier, 1983b; Gaski, 1984a, 1986; Lane and Bachmann, 1997; Marshall and Rollinson, 2004; Stannack, 1996; Zhuang and Zhou, 2004). Dominant and marginalised concepts of IOR-power replete with ambiguities were discernible – a rugged conceptual landscape rather than a clear IOR-power concept sufficiently robust to address the implications of asymmetry and distribution.

Arguably attention turned too quickly to the pursuit of determining IOR-power (El-Ansary and Stern, 1972) rather than first attending to pure and rigorous theory development. Conversely, it has been through attempts to determine IOR-power that has shed light on the complexity and obscurity of the phenomenon (Cronin

Jr., Baker and Hawes, 1994; Etgar, 1976; Ford, 1980; Frazier, 1983b; Kasulis and Spekman, 1980; Lusch, 1977; Lusch and Brown, 1982; Phillips, 1981) and futility of endeavours (Gaski, 1996). Behind the important question of supply chain performance and management implications of power distribution, lay a more fundamental question that needed first to be resolved, what is power? More specifically the research problem was:

RQ: What are the essential qualities that describe, characterize, and explain power in inter-organisation relationships?

The research background largely positions but also underpins the research undertaken. Nothing suggested that any one IOR-power concept promulgated by core-studies should be privileged or rejected rather that each conception constituted a *perspective* of the phenomenon, IOR-power (Belaya, Gagalyuk and Hanf, 2009; Belaya and Hanf, 2009). Moreover, IOR-power had been under-theorised and thereby under-valued. The rich preliminary IOR-power conceptual framework provided a sound starting point to formally construct a unifying theory of IOR-power, coherent, meaningful, and applicable across IOR-contexts to comprehensively establish the essential role of IOR-power.

Indispensable to the theoretical task was the narrowest concept of power put forth by French and Raven (1959), a resultant psychological force, based on Lewin's (1938) notion of the mind as a non-material field of psychological forces at work, and DCR as a philosophical perspective. A contemporary view of the mind-body relationship, appealing to quantum physics and probabilistic states thereafter supported the logic of obtaining integration, foremost in terms of *types* of psychological forces necessary and sufficient to accommodate all perspectives using value as a reasonably credible theoretical standard unit of force.

Following an explanatory critique methodology (Chapter 3), indispensable to theory plausibility was empirical scrutiny. Accordingly, three central propositions were advanced (Figure 1, Chapter 1) in three discrete research phases (Figure 2, Chapter 1) through extensive theory development work (Chapter 4) fully grounded in the literature complimented by three field studies (Chapter 5), comprehensively supporting claimed contributions, as discussed in Chapter 6.

Before moving to contributions of this research, it merits note that social and environmental sustainability pressures are gaining pace with 2020 having been dubbed the year of sustainability for the aerospace industry (EASA, 2019; Shay, 2020). The impact of the current COVID-19 pandemic has further heightened pressures across all three dimensions: environmental, social, and economic, driving major structural changes across the industry to manage economic recovery whilst retaining focus on developing eco-technologies such as electrical and hydrogen power, and flow deflectors to abate noise pollution (Airlines UK, 2020; Bruno, 2020b, 2020c; Massy-Beresford, 2021a; Norris, 2020; Parliament, 2020). Recovery of the industry and “the quest for the ideal supply chain” (Sutton and Cook, 2001) reportedly will rely on government and industry working closely together and may take several years (Bruno, 2020d, 2020a; Massy-Beresford, 2021b; Timm, 2020).

The practical driving force behind this research is as valid now, if not more so, that is what are the performance and thus management implications of power-distribution between manufacturers and major suppliers in the aerospace industry? The stated contributions that follow not only apply to the aerospace industry rather across industries given by the pivotal role of IORs in supply chains, the “veins of an economy” (Lopes de Sousa Jabbour *et al.*, 2020 p.5) and sustainability (Choi, Rogers and Vakil, 2020; Lopes de Sousa Jabbour *et al.*, 2020; Wilding, 2020).

7.3 Contribution to theory

The main conclusion and contribution is a plausible contemporary theory of IOR-power underpinned by a DCR philosophical perspective explaining IOR-performance. Advancing alignment with natural-based power, IOR-power is more comprehensively claimed to be the combination of *embedded* individual behaviour, human creations, and Nature, at work exploiting resources in pursuit of goal attainment – an emergent, downwardly inclusive social and natural-based process governing IOR-outcomes. Discussion of the specific implications of the theory in Chapter 6, are summarised in Table 17, complimented by theoretical principles integral the theory (Chapter 5, Section 5.3.4) summarised in Table 18.

Implications	
The posited theory:	
1	Formally qualifies IOR-power as a process with discernible, interrelated, and relevant core states, traceable back to the Origins.
2	Explicitly and meaningfully qualifies the ontological status of IOR-power within a DCR perspective.
3	Meaningfully integrates perspectives of IOR-power at the embedded individual psychological level.
4	Captures IOR-power-over as integral to IOR-power- to signifying its productive capacity.
5	<i>The posited theory captures IOR-power as a negotiated process wherein the perspective of the performer of productive behaviour is primordial (A or B).</i>
6	Embraces efficiency and effectiveness as key IOR-power qualities, aligning IOR- power management to IOR- performance management.
7	Recognises goals guide rather than control behaviour and outcomes given uncertainty and associated risks and liabilities.
8	Embraces IOR-outcomes of relevance beyond human behaviour and encompasses all that contributes to sustainability .
9	Recognises IORs are embedded in a broader dynamic social and natural environment that directly and indirectly conditions IOR-outcomes.
10	Fully recognises connectivity between all IOR-behaviour, intentional or otherwise, and embraces empowerment and disempowerment .
11	Surfaces the relevance of individual mental power to IOR-power offering a meaningful representation of the mind-body relationship.
12	Dispels with dichotomised characterisations of IOR-power rather embraces continuums and significantly a coercive-consensual continuum .
13	Recognises motives emerge from situated evaluations and are thereby contingent, temporal, and not necessarily causally efficient.
14	Clarifies probabilistic states adding clarity and weight to the theoretical distinction drawn between Potential, Actual, and Enacted-influence.
15	Recognises influence arises in individual minds whereby IOR-influence is an influence flux yielding downwardly inclusive IOR-behaviour.
16	Establishes IOR-power as highly complex and indeterminate in nature and beyond full analysis, whereby only perspectives are discernible.
17	Establishes IOR- influence as wholly integral to IOR- power , yet fully distinguishable.
18	Establishes IOR-power as an essentially social and natural power phenomenon.
19	Recognises relational power that includes joint power-to whereby IOR-power stands as the dynamic DNA of IORs.
20	Is plausible based on IOR-power core studies , level of intelligibility to practitioners, and evidence of alignment to practice .
Theory Intelligibility:	
1	<p>Practitioner engagement in direct explanatory critique of theory:</p> <ul style="list-style-type: none"> ▪ Is challenging but feasible and invaluable in developing scientific theory to inform practice. ▪ Requires sensitivity to mental agility and close attention to grounds for intelligibility. ▪ Facilitates exposing theoretical sufficiency for apprehension and utility in practice.
2	<p>Establishing actual intelligibility:</p> <ul style="list-style-type: none"> ▪ Requires due consideration of interpretation factors. ▪ Requires due consideration of emotive factors. ▪ Reflective learning in situ may facilitate obtaining alignment in perspectives of IOR-power.

Table 17. Summary of theory and intelligibility implications

Type	No.	Theoretical Principles
Governing	1	Power-Over is integral to Power-To.
	2	Power is characterised by continuums or dimensions; a consensual continuum lies between full coercion and full consensus in inducing behaviour.
	3	Intermediate / contributory outcomes are metaphorical power-points within a broader continuous process.
	4	All formal and informal relations / relationships between humans and their respective environments serve as conduits of influence.
	5	Emergence fundamentally characterises power at the individual psychological process level thereafter extension through to collective behaviour and outcomes.
	6	Ontological depth unearths the complexity of power.
	7	Conceptual framework descriptively complements the process model that is a real definition with existential commitment.
	8	Attributing power and thereby responsibility for outcomes is problematic.
Fundamental	1	Social power and natural power align and connect.
	2	Obscurity and temporal contingency of complex power fields renders power states and outcomes indeterminate.
	3	IOR-power is omnipresent rendering adopted perspective fundamentally significant.

Table 18. Governing and fundamental theoretical principle

Initially explained and presented in Chapter 4 (Section 4.3), and discussed in Chapter 6 (Table 16), summarily re-presented here foremost in Figure 43, is the posited contemporary theory in the form of a process model grounded at the individual psychological level representing the most fundamental *building block* of IOR-power. Accompanying succinct definitions capturing explanations of components developed and exposed in the thesis at the individual level extending to the IOR-level, are provided (Appendix D2).

Designations A and B are embedded individual organisation members; semi-autonomous social agents in a focal A-B relationship. Component definitions are tailored to explain primarily A's power-to that incorporates A's power-over B or more accurately B's power-under A. The process as depicted, in reality, is met by a mirror process portraying B's power-to and B's power-over A. It is the combination of both processes that more fully captures the realities of IOR-power being situated and negotiated lying on a coercive-consensual continuum, where the *performer* of productive behaviour is primordial.

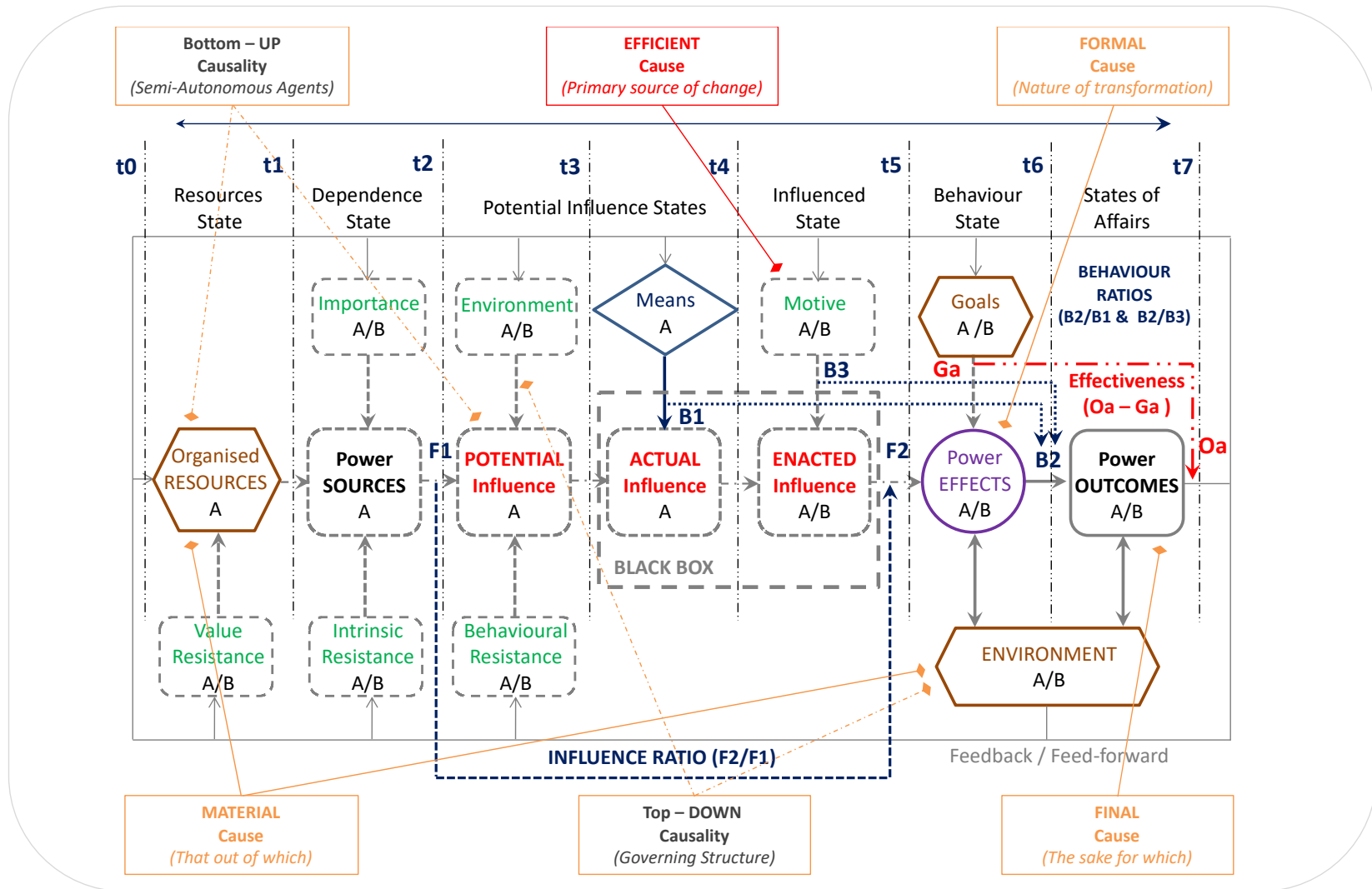


Figure 43. An explanatory theory of IOR-power [Figure 24]

There are several permutations in how the building block captures the complexity of the A power-to and A power-over B process at this microscopic level but the simplest reading of the A power-to process is as follows, where agent A, endowed (innate, acquired, assigned) with a range of resources (A organised resources) defining A, is focused on attainment of Goal-G.

Based on A's evaluation of A's own resources (A organised resources), A has a sense of A's *general* self-worth that may or may not reflect A's full worth (A value resistance) standing as A's power sources (A sources). Thereafter, driven by the importance of A's goals (A goals), evaluation *specifically* of how important A's power sources are in attaining A's goals (A importance) and whether or not A has access to alternative resources (A intrinsic resistance), A recognises A's *self*-dependency and dependence on others (including B) in attaining A's goals. Self-dependency generates mentally A's potential to act in several ways (Potential-influence) including engaging in Act-E exploiting or consuming A's own relevant resources (A organised resources) towards attainment of Goal-G. Recognising demands, constraints, or enablers from other agents (A environmental influence) and in consideration of the impact of different behaviours on other goals (A behaviour resistance), A reasons (A black box) that specific act, Act-E (A effects) is the optimum act towards attaining Goal G (A motive) at a given time whereby A mentally establishes an ability to perform Act-E (A Actual-influence). Nothing materially changes and *when* A decides to actually perform Act-E, A becomes fully motivated (A Motive) to engage in Act-E, mentally engages in performing Act-E (A Enacted-influence) and performs Act-E as intended (A effect) unimpeded by the physical environment (Environment). Act-E generates an outcome (A outcome) that accords with A's Goal-G.

Similarly, the simplest reading of the process reflecting power-over, is that Agent B forms a comparable evaluation of A's general worth (B value resistance) as A's power sources and A's specific worth (B importance, B intrinsic resistance) to B's attainment of goals (B goals) as B's dependency on A, whereby Agent B mentally recognises A has the potential to influence B (B motive) to act not only towards B's own goal attainment but A's goal attainment to protect or secure A's support

to B's goal attainment. Accordingly B *attributes* to A the potential to influence B (A Potential-influence) in several ways including performing Act-Y in support of A's goals. Recognising demands, constraints, or enablers from other agents (B environmental influence) and in consideration of the impact of Act-Y on other goals (B behaviour resistance), B reasons (B black box) at a given time that performing Act-Y (B effects) if demanded is the optimum course of action to attain / protect B's goals (B motive) whereby B mentally *attributes* an ability to A to induce B to perform Act-Y at A's will (A Actual-influence). Nothing materially changes and A decides to demand B to perform Act-Y (A means) in support of A's Goal-G because A is otherwise engaged pursuing another goal (A Motive). B thereby becomes fully motivated (B motive) to engage in the Act-Y and mentally engages (B Enacted-influence) performing Act-Y and performs Act-Y as intended (B effect) unimpeded by the physical environment (B Environment). Act-Y generates an outcome on behalf of A (A outcome) according with A's Goal-G.

The process is translatable and intelligible for explanatory purposes at the IOR-level, where A and B may be human based groups or organisations. At the IOR-level, psychological forces translate into the formal basis of collective *evaluations* such as strategies (motive) and *understandings* such as policies and rules (environment). Entities, namely resources, goals, and the environment and events, namely effects and outcomes, translate more strictly as temporally downwardly inclusive albeit not fully obtainable empirically. Perspective and reality are thus central descriptive attributes as captured within a complementary descriptive conceptual framework presented in Figure 44, similarly accompanied by succinct attribute definitions (Appendix D1). The complexity of IOR-power even at the individual level more fully exposed in Chapter 4, supported by detailed explanations of core components (Appendix D3), renders IOR-power more correctly and meaningfully understood as an emergent, situated, indeterminate social and natural process, governing complex IOR-outcomes. IOR-influence as the process governing human behaviour accordingly is wholly integral to IOR-power with motive serving as the efficient cause of both. The antithesis of IOR-power is IOR-powerlessness wherein structural (top down) mental and physical, empowerment and disempowerment, stand as theoretical bridges (Figure 43).

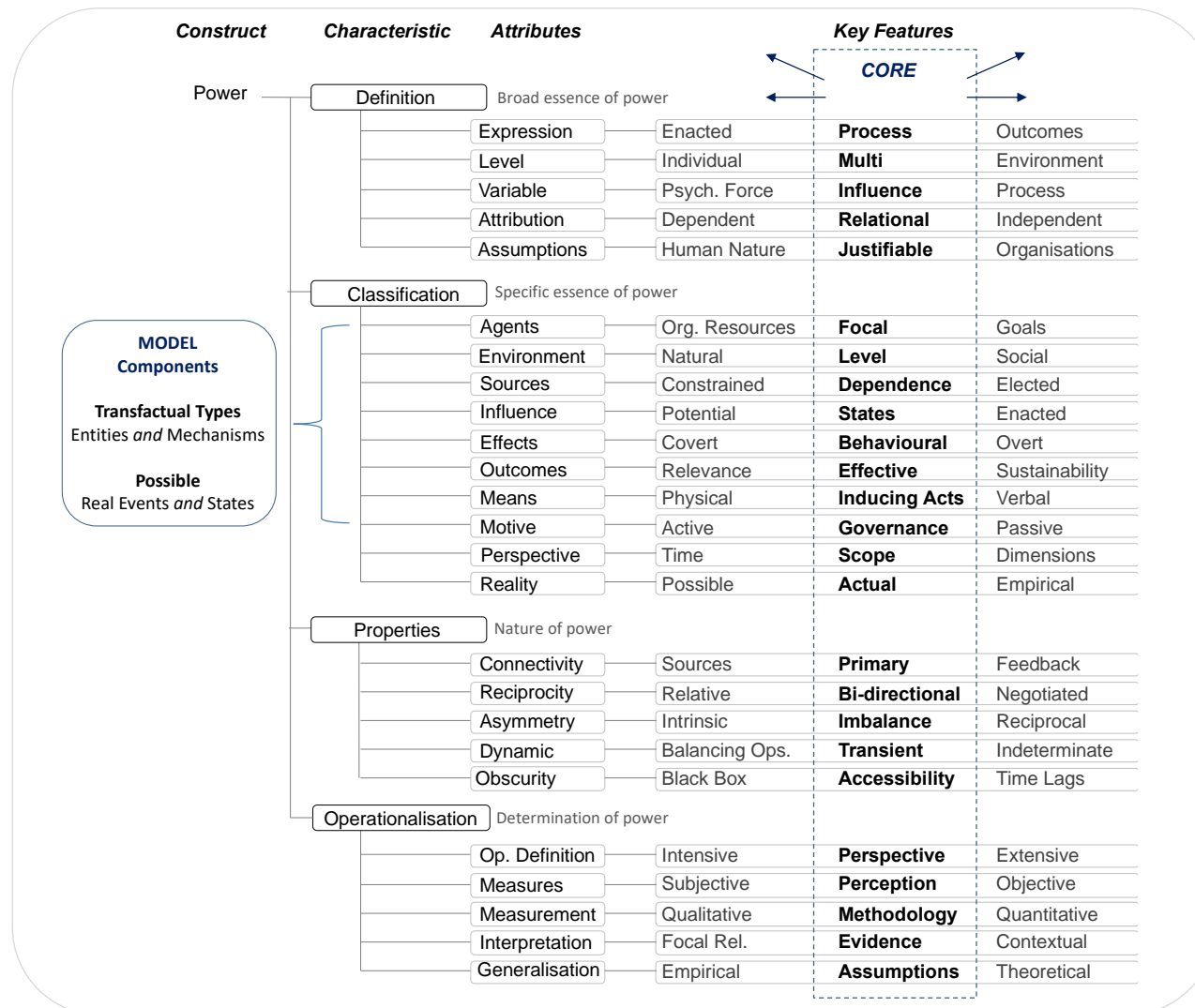


Figure 44. A complementary theoretical conceptual framework [Figure 23]

In advancing the three central propositions TP, EP, and IP outlined in Chapter 1 (Figure 1, Section 1.3.2), importantly the theory stands as a structured synthesis of extant IOR-power theory capturing the full range of perspectives and qualities unearthed into a coherent theory without recourse to deny the saliency of any perspective or quality be that the viable states of Potential-influence and Enacted-influence (not merely Actual-influence) or such things as passive and indirect power (TP). Recognised more fully is the significance of that which is relevant to IOR-power whether directly observable or not. Moreover, the explanatory theory brings into sharper focus essential and significant qualities marginalised or ignored to date such as perceived versus real Actual-influence, enacted versus exercised power, *joint* power-to as relational power, and not least that outcomes of interest are not merely behavioural rather significant material outcomes including things produced (buildings, aircraft etc.).

Explained as a continuous *process*, clarity is also given to the seemingly paradoxical relation between *relationships* and IOR-power in *how* relationships *both* condition IOR-power (quality of power) and are fundamentally conditioned by power (quality of relationship), such that prominent relationship qualities namely commitment and trust are both integral to IOR-power yet shaped by IOR-power. Crucially IOR-power explains IOR-performance whereby leveraging all that renders IOR-power more effective and efficient, drives IOR-performance. That a *full* explanation of an outcome of significance may not be obtainable especially for complex outcomes does not render the explanatory theory developed redundant or inutile rather it provides a *power lens* to properly analyse IOR-power, including measuring that which *is* measurable, to understand better *how* such outcomes are being realised or may be realisable. Focusing on the realisation of power-points that are discrete outcomes *erving* to obtain the more significant outcomes offers a less complex and narrower perspective of IOR-power, but a *process* perspective nonetheless of value in identifying enablers and constraints, strengths and weaknesses, and opportunities and threats.

Notably, Actual-influence is generally conceived of as power in the IOR-field of study and is the most central but most obscured state in the process, conditioned

and temporally bound by the process of which it is an integral part. It cannot serve a priori to specify any definitive future behaviour much less any outcome, only be inferred or implicated to exist and even then, is not necessarily drawn upon. Whether IOR-power be confined in any language (practice or scientific) to potential, actual, or enacted power, the significance and importantly *explanation* of any such narrower perspective is given by the fuller power process that embraces rather than ignores the saliency of natural power, in this context. That the theory aligns to practice accounts of behaviour and outcomes in a concrete IOR-Case (EP) and is reasonably intelligible to some practitioners (IP), also supports the feasibility of moving towards academic-practitioner conceptual alignment and embracing the more comprehensive perspective of IOR-power.

Lastly, given the systematically derived theoretical Origins are maintained and all identified advancements in the IOR-field of study are meaningfully incorporated, extant theory is not rendered obsolete rather retained as important and identifiable embedded perspectives. The implicit conflict in theory is thus one of sufficiency where extant theories independently are held necessary but insufficient to explain IOR-power. The posited theory through structured integration advances towards a necessary and sufficient theory of IOR-power. It provides the theoretical framework to anchor, capture, and thereby qualify a perspective adopted in IOR-power analysis and discourse. In doing so, attention is drawn not only to that which is explained, but equally the *relevance* of all that remains unexplained. Narrow perspectives are more readily identifiable and correctly interpreted when contributing to management theory and practice.

The contemporary theory thus contributes directly to answering the stated research problem (Chapter 1, Section 1.3). The theory posits the essential qualities that describe, characterize, and explain IOR-power whereby key theoretical advances are made, summarised as follows:

- (1) IOR-power is ontologically grounded as real transfactual types of entities and mechanisms that are generalisable types across IORs aligning to IOR-power conceived as a family concept yet having real essence when instantiated as actual IOR-power giving rise to events, states, and experiences.

- (2) The important distinction yet inextricable link between social power and social influence is resolved through recognising influence as *fully* integral to power whilst rendering clear what distinguishes the two phenomena, dispelling untenable notions that power *is* coercive, and influence *is* consensual.
- (3) Alignment rather than distance between social power and natural power more appropriately captures relations and parallels between the social and natural *worlds* existing as one world, where various forms of power from mental power through to the power of Nature, contribute to IOR-power.
- (4) IOR-power management corresponds with IOR-performance management whereby the theory provides an explanatory lens to evaluate implications of IOR-power asymmetry, distribution, empowerment, and disempowerment to IOR-performance, more fully, and in sustainability terms.

7.4 Contribution to research

It has been evidenced that largely undetected, various definitions and theories relied on by researchers to promulgate the meaning of IOR-power in the core-studies capture perspectives that under-explain the realities of the phenomenon of interest, fuelling controversy in the role and implications of IOR-power. The unifying comprehensive theory permits moving away from broad, ambiguous, and inadequate definitions to a comprehensive theory establishing a fuller and proper meaning of IOR-power. The theory stands as a sound baseline against which adopted theoretical stances or research lenses may be made more explicit.

The primary contribution to research endeavours is thus answering the long outstanding call for a conceptual structure to assimilate evidence and guide analysis of IOR-power (Heskett, Stern and Beier, 1970) that may be retrospectively applied, enabling synthesis of empirical data gathered over the past 50 years. IOR-power analysis nevertheless is necessarily redirected towards adopting useful perspectives using the theory as an explanatory lens to unearth performance limitations and improvement opportunities rather than seeking to *fully* measure IOR-power, that is held immeasurable. Notwithstanding, nothing precludes measuring that which is measurable to support research inquiries. In

principle also, nothing precludes drawing on a range of complementary theories such as commitment-trust theories *provided* requisite adjustments are made to embrace the full weight of IOR-power, such as recognising not denying consensual IOR-power.

The secondary contribution relates to demonstrating the challenges but benefits of engaging practitioners in *direct explanatory critiques* of IOR-power definitions and theory, summarised as follows commencing with salient challenges that require due attention:

- (1) Interpretation and emotive factors require careful attention in establishing actual intelligibility levels where for the complex concept of IOR-power, mental agility may be an underlying factor, such that there may be differences between perceived and actual intelligibility levels.
- (2) Provides an invaluable source of intellectual and practical data that rests largely untapped by *indirect* methods for researchers but also practitioners, whereby engaging in reflective thinking can lead to critical reflection including shedding preconceived notions and negative biases towards IOR-power.
- (3) Fostering alignment of academic and practice conceptualisation of IOR-power or at least understanding differences accorded to this fundamental concept, supports advancing research to inform practice appropriately and effectively.

7.5 Contribution to practice

Evidenced across practitioners interviewed was a general difficulty in articulating what IOR-power is and in reconciling the relationship between IOR-power and IOR-influence. There was variability in understanding and meanings accorded, weighted towards a disconnect between IOR-influence and IOR-power with evidently some barriers to embracing IOR-power as a productive force whereby even use of the term was found distasteful and avoided. Although the role, value, and distribution of IOR-power was evidenced to be lacking clarity, the significance of IOR-power to IOR-performance in some manner was undisputed.

The contribution to practice of the contemporary explanatory theory of IOR-power is correspondingly through:

- (1) Providing an explanatory IOR-power lens through which practitioner debates about the significance of IOR-power, including relational power and power distribution across IORs, may be more fruitfully held.
- (2) Drawing attention not merely to the potential destructive and restrictive nature of IOR-power but equally its enabling and productive role to inform contemporary management practice in matters of empowerment, enhancing performance, and sustainability.
- (3) Sensitising management to the saliency of understanding perspectives, the role and significance of behavioural resistance, dispelling with notions of power-holders and absolute control of behaviours or outcomes rather emphasising the power of leadership and being influential.

There merits a cautionary note however given the complexity and role of IOR-power. Engaging in comprehensively understanding IOR-power can significantly deepen understanding and awareness of one's own and others' power in IORs and more broadly, the social and natural world. In principle the human emancipatory potential is significant but equally potentially burdening in terms of responsibility and perspective gained that all individuals not necessarily wish to bear or hold. In other words, for some, it may be that ignorance is truly bliss. In addition, once recognised, IOR-power is thereby also subject to misuse and abuse. A clearer view of IOR-power whereby consensual IOR-power is brought to the forefront however in part negates such concern. Nevertheless, engaging in IOR-power analysis and discourse requires considered management to capitalize on harnessing the benefits of understanding IOR-power to improve IOR-performance whilst avoiding unwanted liabilities or harm.

7.6 Future research

Based on the research contributions, noted research limitations and reflections (Chapter 6, Section 6.8), the most fruitful avenue of *theoretical* research in the near term is to systematically identify core-studies from across relevant databases not considered in this research and scrutinise if the theory encompasses these perspectives. It is further beneficial to review IOR-power studies drawing on IOR-power theory (level 1) to explore if any fresh perspectives have emerged from these studies. Analysing in detail a broader range of IOR studies, if not leading to re-descriptions, offers further the possibility of adding depth to the theory. For example, it would be beneficial to develop a consolidated, coherent list of the prevalent types of power sources and sinks, and similarly, to establish a consolidated list of complementary theories employed to focus on specific perspectives of IOR-power including any conflicting assumptions.

Further field research in the near term is also necessary to strengthen theory plausibility. Replicating the confirmatory study across a broader range of practitioners with the revised theory to re-enforce detailed intelligibility testing would also provide an opportunity to enhance explanatory power, including refining and aligning terminology. To retain identification with theoretical roots original terminology was maintained as far as possible but moving forward explanatory power may be improved through using more self-explanatory terms. Conducting the same type of study with IOR-power scholars would also serve to forge closer alignment between academic and practitioner perspectives. Replicating the test case study in other IOR-contexts across industries is also required to advance theory plausibility and importantly generalisability. It may be beneficial to formally assess if perceived and actual intelligibility divergences detected in the test case study are evidenced further, in addition to surfacing any other potential barriers to obtaining alignment.

In the longer term, of relevance is how the theory is grounded. The theory is based on core-studies that drew from other contexts and from general power theory. In principle there is no reason why the theory would not hold across contexts given all posited entities and mechanisms are specifically *types*,

grounded at the embedded individual-level (A and B). Thus, although outside the scope of this thesis, nothing precludes extending evaluation of the theory in other contexts and for example establishing alignment with contemporary leadership thinking (Ladkin and Probert, 2021). It may be possible to advance two further propositions:

TP4: The contemporary explanatory theory of IOR-power captures the essential qualities that describe, characterize, and explain power in other contexts.

IP3: The contemporary theory of IOR-power is intelligibility to individuals in other contexts.

7.7 Chapter summary

This chapter has positioned and outlined the contributions of this thesis, the most important being a plausible contemporary theory of IOR-power that is argued to significantly advance resolving the focal research problem, satisfying the primary aim of the research. Future research suggestions have also been provided that centres on advancing theory plausibility, thereafter generalisability.

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