



# Occupation and Resilience: An Interdisciplinary Critical Interpretive Synthesis

By

**Julie Anne van Veenendaal**

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Supervisors

Associate Professor Amshuda Sunday

Elvin Williams

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## Declaration

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*I have seen the task which God has given the sons of men with which to occupy themselves (Ecclesiastes 3:10)*

## Abstract

This research presents an interdisciplinary critical interpretive synthesis examining the constructs of occupation and resilience and how they are related. The construct of resilience, which is concerned with how people respond to adversity, has the potential to guide the development of more socially transformative praxis in both occupational therapy and occupational science. As theory and theorisation are the foundation of praxis, for resilience to be useful in the development of socially transformative praxis the theoretical relationship between resilience and occupation needs to be clarified.

**Aim:** The aim of this research was to critically explore and synthesise theoretical relationships between the construct of occupation and socio-ecological understandings of resilience.

**Methodology:** Given that resilience has been studied across many disciplines, and, that the study of occupation requires interdisciplinarity, this research was positioned within an interdisciplinary paradigm. The interpretive review methodology of critical interpretive synthesis was chosen as it is consistent with an interdisciplinary paradigm, adopts a critically reflexive stance, and can be used for the examination, synthesis, and generation of theory.

Occupation and resilience were first examined as separate constructs before theory on the relationship between occupation and resilience was developed. Through a hermeneutic and iterative process, a total of 131 papers were included in the review. Sixty-three of these papers were on occupation and 68 on resilience. Patterns of meaning including key concepts, relationships between concepts and critiques of current theory were analysed through a process of thematic analysis, data abstraction and memo writing. Insights from this process and interviews with subject matter experts formed the basis of theorisation about the relationship between occupation and resilience.

**Findings:** Occupation and resilience are best understood as overlapping constructs that describe everyday processes. Occupation describes what people do as the point of intersection between people, space, and time. As a concept, occupation can either be used as a noun to refer to specific things people do, or as a verb to refer to process of being occupied. Resilience is an overarching concept that includes understandings of available capacity, divergent processes and what people consider to be positive outcomes. Moreover, resilience can be understood as a pattern of occupational engagement that unfolds over time. As occupation is the mechanism for resilience, understanding occupation is key to understanding resilience.

**Conclusion:** Understanding the relationship between occupation and resilience creates unique opportunities for the development of socially transformative praxis, not only within occupational therapy and occupational science, but throughout resilience studies.

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## Definition of Terms

In critical interpretive synthesis methodology, constructs and terms are not defined *a priori* as the purpose of the review process is to explore, analyse and develop constructs and theories (Dixon-Woods et al., 2006). Although standard practice in other review methodologies, a definition of terms has not been included here as the key constructs will be explored throughout the thesis. Key constructs that will be discussed include occupation, resilience, theory, occupational therapy, occupational science, socially transformative praxis, and socio-ecological perspectives.

A glossary of terms can be found in Appendix A.

## Chapter One: Resilience and the Development of Socially Transformative Praxis

*Resilience is a process by which change is negotiated and contested in complex social-ecological situations to make up every day experiences*  
(Brown, 2021, p. 779)

This thesis explores how the constructs of occupation and resilience are theoretically related. Occupation and resilience are both complex constructs that have been defined in diverse ways. One description of occupation refers to the ordinary and extraordinary things that people do every day (Hocking, 2009). Similarly, resilience has been described as embedded in everyday experience as an 'ordinary magic' (Masten, 2001). However, despite the apparent synergy in the constructs, there is a paucity of research and theory on the relatedness or integration of resilience and occupation (Bowden et al., 2018; Matuska, 2014). The construct of resilience, which is concerned with how people respond to adversity (Luthar et al., 2000), has potential to guide the development of a more socially transformative praxis in occupational therapy and occupational science. Such praxis is concerned with responding to the socio-political factors that shape occupational engagement (Angell, 2014; Farias & Rudman, 2019; Richards & Galvaan, 2018). However, if the construct of resilience is to be applied in the development of such a praxis, it is important that its relation to the central construct of occupational therapy and occupational science – occupation – is established. This research is based on the premise that theorisation is an essential foundation for social transformation. The way in which we understand the world will determine how we act on it. How we understand resilience and how it relates to everyday life and the things that people do will determine our praxis.

There have been increasing calls in occupational therapy and occupational science for the development of socially transformative praxis that can respond to the politics of everyday occupation and meaningfully support health, wellbeing, participation, and justice (Angell, 2014; Farias & Rudman, 2019; Frank, 2012; Richards & Galvaan, 2018; Rudman, 2014, 2018). However, developing such praxis requires robust interdisciplinary theorisation and synthesis (Ramugondo et al., 2015; Rudman, 2014). This research seeks to meet this call by exploring and theorising about how the constructs of occupation and resilience might be linked through a critical interpretive synthesis (CIS). Critical interpretive synthesis is an interpretive review methodology applied through critical reflexivity that seeks to make the process of generating theory transparent (Dixon-Woods et al., 2006).

This thesis advances the practice of interdisciplinary theory generation in occupational science and encourages broader conceptualisations of both occupation and resilience. Through this, this research contributes to the development of resilience studies and the development of socially transformative praxis within and beyond the boundaries occupational therapy and occupational science as it helps us consider how to respond to the everyday nature of both occupation and resilience.

## Outline of Thesis

In the opening chapter of this thesis, the idea of socially transformative praxis is introduced, along with an exploration of how resilience can play a role in promoting socially transformative praxis in the fields of occupational therapy and occupational science. Further, Chapter One details the importance of theorisation in occupational therapy and occupational science and explains the orientation and approach of the research as theoretical, interdisciplinary, and reflexive.

Chapter Two presents a narrative review of the development of resilience studies and explores current understandings of how occupation and resilience might be linked. Arising from this, a case for further robust interdisciplinary theorisation is also made.

Chapter Three explores the importance of theory generation and interdisciplinarity in the study of human occupation, justifying the theoretical orientation of this research. The difference between theory and theorisation is presented, the importance of constructs is explored and considerations in theory synthesis are put forward. The chapter also introduces the paradigm of interdisciplinarity and some of the ontological and epistemological considerations within interdisciplinary theory generation. Additionally, the chapter outlines an interdisciplinary approach to knowledge synthesis.

Chapter Four describes the methodology of CIS. The processes of CIS are described as well as the subject matter expert consultations that augmented the review process. The literature included in the review is also discussed.

Chapter Five is a personal autoethnographic account of the theorising process which records and explores the questions I was posing during the review process and how my thinking evolved during the review.

The findings of this research are shared in Chapter Six which presents an integrated theory of occupation and resilience.

Chapter Seven explores how the research findings contribute to the development of socially transformative praxis in occupational therapy and occupational science and delves into the implications of this research for the development of resilience studies.

Concluding remarks, including the limitations of this research, and areas requiring further study and theorisation, are presented in Chapter Eight.

### Socially Transformative Praxis in Occupational Therapy and Occupational Science

In both occupational therapy and occupational science, it is recognised that human occupation is situated and political in nature (Galvaan, 2012; Ramugondo, 2015; Rudman, 2010, 2018). This recognition requires us to become conscious of the ways in which contextual factors and hegemonic structures shape everyday human occupation and requires us to become cognisant of the impact of this on health, wellbeing, participation, and justice (Angell, 2014; Ramugondo, 2015; Townsend, 1997).

In light of this recognition, there have been increasing calls in both occupational therapy and occupational science for the development of socially transformative praxis that is able to respond to the situated and political nature of human occupation (Angell, 2014; Farias & Rudman, 2019; Frank, 2012; Galheigo, 2011; Ramugondo et al., 2015; Richards & Galvaan, 2018; Rudman, 2014, 2018). In both occupational therapy and occupational science, such praxis is concerned with the socio-political factors that shape personal and collective engagement in occupations which either constrain or promote human flourishing (Angell, 2014; Farias & Rudman, 2019; Richards & Galvaan, 2018).

Praxis refers to a process of theorisation, practice, and reflection that is focused on transformative action for social change (Freire, 1970). The process of theorisation is of critical importance in the development of praxis and is itself a form of praxis (Teo, 2022). Theorisation as praxis refers to the process of making sense of everyday life. It takes sociopolitical factors into account and seeks to build understanding in order to create possibilities to transcend the status quo (Teo, 2022).

The construct of occupation, which is concerned with how people are occupied in everyday life through the things that they do (Townsend, 1997), has much to offer in considering how to enact social transformation (Farias & Laliberte Rudman, 2016; Farias & Rudman, 2019; Magalhães, 2012). Occupation can either be the site in which hegemonic social orders are perpetuated or the place of resistance and transformation (Angell, 2014; Ramugondo, 2015; Townsend, 1997). To exploit the transformative potential of occupation, greater attention needs to be given to the process of theorisation in occupational therapy and occupational science, particularly to robust interdisciplinary theorisation and synthesis (Ramugondo et al., 2015; Rudman, 2014; Rudman et al., 2008). The process of drawing together diverse disciplinary insights in novel ways through interdisciplinary methods within occupational therapy and occupational science has the potential to open new possibilities for thinking and practice (Rudman, 2014). This will allow occupational therapy and occupational science to fulfil their vision of supporting human flourishing through

occupation. However, to achieve this aim, a critical and transformative alliance between occupational therapy and occupational science is required (Rudman, 2018).

### *The Relationship Between Occupational Therapy and Occupational Science*

The relationship between occupational therapy and occupational science is complex and has been the subject of much debate (Carlson & Dunlea, 1995; Clark et al., 1993; Molke et al., 2004; Morley et al., 2011; Mosey, 1992, 1993). Broadly, occupational therapy and occupational science have been differentiated according to the difference between a profession and a discipline. Occupational therapy has been described as a profession that aims to support health, wellbeing, participation, and justice through occupation while occupational science has been described as a discipline concerned with the study of the human as an occupational being (Clark et al., 1991; Yerxa, 1993). While a profession is concerned with the provision of specialised services (Molke et al., 2004), a discipline is concerned with the generation and dissemination of knowledge (Rudman et al., 2008). Therefore, a simple explanation of the relationship between occupational therapy and occupational science would be that occupational therapy applies the research and principles of occupational science (Hammell, 2011; Mosey, 1992, 1993; Yerxa, 1990). Yet the relationship is more complex because the discipline of occupational science emerged from occupational therapy.

The formal discipline of occupational science was founded in 1989 at the University of Southern California (Clark et al., 1991; Yerxa, 1990) but its roots extend back to the founding of occupational therapy in the early 1900s (Lawlor, 2021; Morrison, 2021). Occupational Science is grounded in the values and traditions of occupational therapy, and they share a similar ideology regarding occupation (Imperatore et al., 2000; Rudman et al., 2008; Wilcock, 2001; Yerxa, 1993). Indeed, the founding of occupational science represented a resurgence of interest in the concept of occupation (Ilott & Mounter, 2000; G. Whiteford et al., 2000).

Because occupation had been studied and theorised about in the context of occupational therapy, it has been assumed that occupation is related to health and well-being (Hocking, 2000). Moreover, most research has concentrated on the concept of occupation as therapeutic (Hocking, 2000; Ilott & Mounter, 2000). Separating the study of occupation from the practice of occupational therapy has helped to advance knowledge about occupation by allowing for exploration of the contradictory nature of occupation as both fulfilling and alienating, health promoting and detrimental (Kiepek, Beagan, Laliberte Rudman, et al., 2019).

It was envisioned that occupational science would support the practice of occupational therapy by contributing to a deeper and richer understanding of occupation (Clark et al., 1993; Molke et al., 2004; Wilcock, 2001). As the discipline of occupational science developed, it became apparent that occupational science needed to attend to issues of power, diversity, temporality and

situatedness (G. Whiteford et al., 2000). Occupational Science has since become closely tied to the ideas of social commitment, justice, and transformation (Kiepek et al., 2014; Magalhães, 2012; Rudman et al., 2008).

Before the development of occupational science, within the global north, occupational therapy was often limited by the biomedical agenda (Pollard et al., 2010; Yerxa, 1993). As a deeper understanding of occupation emerged, the potential of occupational therapy practice has expanded. While occupational therapy, particularly in the global south, has a strong tradition of addressing social issues, theoretical advances in occupational science have helped to direct occupational therapy practice towards addressing complex social, economic, political, and health challenges in novel ways both within and beyond the healthcare system (Frank, 2012; Galheigo, 2011; Hocking & Wright-St. Clair, 2011; Morley et al., 2011; Richards & Galvaan, 2018).

Separating the study of occupation from the practice of occupational therapy has not only advanced the profession but creates opportunities to disseminate knowledge about occupation and expand occupational perspectives to new audiences (Rudman et al., 2008; Wilcock, 2001). One of the founding assumptions of occupational science was that the concept of occupation has relevance beyond the practice occupational therapy and beyond the scope of health and rehabilitation (A. D. Calhoun, 2021; Clark et al., 1991; Hocking et al., 2015; Molke et al., 2004; Pollard et al., 2010; Rudman et al., 2008; Wilcock, 2001; Yerxa, 1990, 1993). Separating occupational therapy and occupational science has advanced the study of occupation, yet occupational therapy and occupational science have remained tightly intertwined.

Occupational therapy and occupational science are tied together ideologically and institutionally (Rudman et al., 2008). Ideologically, occupational therapy and occupational science share the core concept of occupation and an occupational paradigm (A. D. Calhoun, 2021; Clark et al., 1991; Frank, 2012; Glover, 2009; Hocking, 2000). The construct of occupation has been explored within both occupational therapy and occupational science (Ramugondo & Kronenberg, 2015) and theories of occupation are used by occupational therapists and occupational scientists alike (Hammell, 2011). Institutionally, most occupational science research initiatives are housed within occupational therapy departments (Frank, 2012; Rudman et al., 2008). Additionally, studies on occupation are published within occupational therapy and occupational science journals (Glover, 2009; Molke et al., 2004). The development of the two fields is closely tied and the relationship between the two may best be described as symbiotic (Clark, 2006; Ilott & Mounter, 2000; Imperatore et al., 2000).

As this research is concerned with how occupation relates to resilience, it is positioned within the paradigm of occupational science. However, because the complexity of the relationship between occupational therapy and occupational science is recognised, I will refer to both occupational

therapy and occupational science throughout while appreciating that the study of occupation contributes to society beyond the practice of occupational therapy.

### *The Study of Occupation*

Broadly, occupation can be studied in three different ways (Hocking, 2000). The first is concerned with the essential elements of occupation, that is the substrates, form, function, meaning and context of human occupation (Clark et al., 1991; Hocking, 2000). The second pertains to how occupational processes unfold through time and how they are experienced subjectively while the third is about how occupation relates to other phenomena (Hocking, 2000). The challenge of studying occupation is its scope (Ilott & Mounter, 2000).

Because occupation describes all the ways in which humans occupy their lives (Townsend, 1997), occupation has been studied extensively across disciplines, yet it is seldom named or described using the term occupation (Pierce, 2012). For this reason, the study of occupation must be interdisciplinary (A. D. Calhoun, 2021; Clark, 2006; Clark et al., 1991, 1993; Rudman et al., 2008; Wilcock, 1991, 2001; Yerxa, 1990, 1993). Interdisciplinary scholarship has been important in occupational science to disrupt dominant thought patterns and open new ways of thinking about occupation (Angell, 2014).

While the study of occupation draws from many different disciplines, it is distinct because it organises this knowledge around the concept of occupation, a concept that is not studied directly by any other discipline (Clark et al., 1991; Glover, 2009). The concept of occupation contributes a fresh perspective that is helpful for interdisciplinary synthesis (Clark, 1993; G. Whiteford et al., 2000) and makes a unique contribution to the universe of knowledge (Clark, 2006).

The implementation of interdisciplinarity has been a challenge for occupational science (A. D. Calhoun, 2021; Rudman et al., 2008). If the study of occupation is interdisciplinary, it should both make contributions to and receive contributions from other fields (Glover, 2009). Yet, while occupational science has succeeded to an extent in drawing in diverse interdisciplinary perspectives, it has not always met the aim of disseminating knowledge about occupation (A. D. Calhoun, 2021). Moreover, while there is a strong tradition of drawing on the insight of other disciplines in occupational therapy and occupational science (Ramugondo et al., 2015; Rudman, 2014), both have been criticised as 'consumers' of theory (Pierce, 2009) and for a lack of rigor when it comes to attempting to examine and integrate complex bodies of literature from other fields with occupational theories (Pooley & Beagan, 2021).

Interdisciplinary synthesis that integrates diverse disciplinary insights about occupation is important in the development of socially transformative praxis. Moreover, relating the concept of occupation to other phenomena through integration and synthesis contributes something unique

to the larger realms of science and praxis by deepening out understanding of the everyday ways in which people occupy their lives (Glover, 2009).

### Resilience and Occupation

There is inherent promise in the construct of resilience when it comes to the development of socially transformative praxis as resilience describes the ways in which people adapt in the face of adversity (Atallah et al., 2021; Luthar & Cicchetti, 2000). The term resilience is being used more frequently across many disciplines and with many differing conceptualisations (Baggio et al., 2015; K. Brown, 2021; Ungar, 2021; Xu & Kajikawa, 2018). This demonstrates that resilience is theoretically and conceptually a rich subject of inquiry (K. Brown, 2021).

However, resilience is not just a concept but also a practice (Vale, 2014) as research into resilience has always been concerned with how to promote and support resilience (Wright et al., 2013). Because of this, the importance of coherent theoretical frameworks for resilience cannot be overstated (Fletcher & Sarkar, 2013; Kaplan, 2013; Luthar et al., 2000; Luthar & Cicchetti, 2000). Indeed, poor theoretical grounding has hampered both resilience research (Windle, 2011) and intervention design (Joyce et al., 2018). Therefore, if resilience is to contribute to socially transformative praxis in occupational therapy and occupational science, integrating theories of resilience with the construct of occupation is a necessary first step.

I began this research by questioning how the construct of resilience might be able to contribute to an occupational therapy practice that promotes health, wellbeing, participation, and justice. Yet, coming to understand the importance of theory in resilience and the need to ask what constructs mean before attempting to synthesise knowledge, this question evolved to ask: how are the constructs of occupation and resilience related?

Many authors have noted that human resilience is manifested in everyday life and everyday practices (Nguyen-Gillham et al., 2008; Ungar, 2008; Ziervogel et al., 2017). For this reason, resilience has been described as an 'ordinary magic' that is embedded in everyday experiences (Masten, 2015). While there is still a considerable body of research in the social and psychological fields as well as in occupational therapy and occupational science that views resilience as an individual trait (Avrech Bar et al., 2018; Connor & Davidson, 2003; Judkins & Bradley, 2017; McGarry et al., 2013; Seko et al., 2020; Tan et al., 2020), a socioecological perspective of resilience views resilience as the outcome of complex interactions between biological, psychological, social, and environmental systems in the face of stress that include processes of recovery, adaptation, and transformation (K. Brown, 2021; Ungar, 2012, 2018, 2021). This understanding of resilience shares many similarities with conceptualisations of occupation. Despite this apparent synergy, and the suggestion that the construct of resilience, although not named or recognised as such,

underlies much of occupational therapy (Matuska, 2014), there remains a paucity of research and theory on the relation of resilience and occupation.

Moreover, the construct of occupation has the potential to contribute to socio-ecological perspectives of resilience. Current challenges in the study of socio-ecological resilience include the need for further theorisation on how social and ecological systems interact with each other and the need to develop theory that can be applied across different levels of analysis (K. Brown, 2021; Wright et al., 2013). Human occupation describes the ways in which social and ecological systems interact through the things that people do and the ways in which they occupy their lives. Furthermore, occupation can be examined at an individual, group and population levels (Dickie, 2010). Evidently there is much to be gained from critical interrogation and synthesis with the central construct of occupational therapy and occupational science: occupation.

### Research Problem

While there is recognition of the need for a socially transformative praxis in occupational therapy and occupational science that responds to the political and situated nature of occupation in a meaningful way to promote health, wellbeing, participation and justice, there is also a need for further robust theorisation to guide the development of such praxis.

Simultaneously, there is a wealth of knowledge across disciplinary fields regarding resilience, a construct that has much potential in guiding the development of a socially transformative praxis. However, the theoretical relation of resilience to the central construct of occupation has not been explored. Moreover, the concept of occupation has much to contribute to the development of resilience studies in addressing some of the current debates in the field.

### Research Purpose

To explore on a conceptual level how the constructs of resilience and occupation are related, thereby advancing the development of a socially transformative praxis in occupational therapy and occupational science.

### Aim and Objectives

This research aimed to critically explore and synthesise theoretical relationships between occupation and socio-ecological understandings of resilience.

The objectives of the research were:

- To explore current socio-ecological conceptualisations of resilience.
- To explore current conceptualisations of occupation.
- To determine potential theoretical links between occupation and resilience.
- To generate an overarching theory on how occupation and resilience are related.

## Research Orientation

This research is concerned with understanding the constructs of resilience and occupation. For this reason, it has a strong theoretical orientation. I have used a critical interpretive synthesis review methodology which is explicitly orientated to reviewing and generating theory (Dixon-Woods et al., 2006). The theoretical orientation of this research is consistent with the understanding that theory is critical in shaping possibilities for seeing, understanding, and acting upon the world.

Critical Interpretive Synthesis is an iterative and interpretive approach to theory generation that seeks to acknowledge the authorial voice, while ensuring transparency and systematicity in the review process (Dixon-Woods et al., 2006). In order to acknowledge the active role I have played in theorising, I have written this thesis in the first person.

While it could be argued that theory on the links between occupation and resilience could be generated through primary research methods such as grounded theory or narrative inquiry, such an approach would not address the need for meaningful integration of diverse disciplinary insights. Because resilience has been studied across many different fields and the study of occupation requires interdisciplinarity, this thesis adopts an interdisciplinary stance. Interdisciplinary research seeks to draw upon the insights of different disciplines and synthesise this knowledge to expand perspectives and possibilities for action (Newell, 2006; Repko & Szostak, 2020). The emphasis on synthesis is a key characteristic of this thesis.

Another characteristic of this research is an emphasis on critical reflexivity. Here critical reflexivity does not only refer to critical social theory which as a lens, is primarily concerned with power relations (C. Calhoun, 1995), but rather refers to an attitude of questioning taken-for-granted assumptions to make room for new ways of knowing (Alvesson & Sandberg, 2020). Critical reflexivity has been foregrounded as crucial in occupational science (Farias & Rudman, 2019; Hammell, 2009a, 2011; Kiepek et al., 2014; Rudman et al., 2008) and is seen as a key aspect of CIS (Depraetere et al., 2021; Dixon-Woods et al., 2006).

With an emphasis on theory, interdisciplinarity and a critically reflexive stance, my intention with this thesis is an honest and transparent account of a process of making sense of the ordinary and extraordinary nature of both resilience and occupation.

## Conclusion

This chapter presented the call for the development of a more socially transformative praxis in occupational therapy and occupational science. I explored the importance of interdisciplinary theorisation and the process of relating the construct of occupation to other phenomena in the pursuit of such a praxis. I suggested that the construct of resilience has much to contribute to the

development of socially transformative praxis. Moreover, I proposed that occupational perspectives also have much to add to the development of resilience studies. I explained the purpose of this work as being the exploration of how the constructs of occupation and resilience are related on a conceptual level, based on the understanding that theory shapes possibilities for action. Finally, I presented the orientation of this research as theoretical, interdisciplinary, and critically reflexive. Next, the concept of resilience will be explored in more detail.

## Chapter Two: Conceptualising Resilience and the Rationale for Integration

Resilience is a ubiquitous term used across fields as diverse as engineering, politics, ecology, neuroscience, business management, socioecological systems, material sciences, psychology, and the social sciences (Baggio et al., 2015; K. Brown, 2021; Xu & Kajikawa, 2018). This popularity has however resulted in the term becoming somewhat ambiguous as the meaning of the term depends on the context in which it is being used (Baggio et al., 2015). Furthermore, resilience is often defined and explained without reference being made to how it is understood outside the context of that particular discipline (Alexander, 2013; Cutter, 2016). Therefore, any meaningful discussion of resilience requires a discussion of the term (Mittelmark, 2021; Vale, 2014). This chapter will start with a broad overview of the term followed by an exploration of how resilience studies have developed over time to demonstrate how resilience is a theoretically and conceptually rich topic of inquiry (K. Brown, 2021). Next, I will examine the existing literature on resilience within occupational therapy and occupational science to understand the ways in which resilience has been conceptualised in these fields. Finally, I will make an argument for further interdisciplinary study of the links between occupation and resilience.

### What is Resilience?

Resilience is complex, fluid and dynamic, and as such, an all-encompassing definition has remained elusive (Mcaslan, 2010). This elusiveness is partly due to the popularity of the term (Olsson et al., 2015). It has been argued that the lack of a precise definition fosters interdisciplinarity within resilience studies as it allows diverse fields to come together (Baggio et al., 2015; K. Brown, 2021; Xu & Kajikawa, 2018). By doing so, resilience has proven to be a useful concept in understanding problems such as sustainability, responses to natural disasters, security, trauma, poverty and other 'wicked problems' that require interdisciplinary insights (K. Brown, 2021; Masten, 2014; Ungar, 2021). Other useful qualities of resilience include its scalability as a concept in that it can be applied at many different levels of analysis; and its versatility in that it can be applied to many different types of systems from the biological to the technological as well as to describe the interaction between systems (Ungar, 2021).

Broadly, the term resilience describes processes of persistence, resistance, recovery, adaptation, and transformation in the face of adversity (Ungar, 2018, 2021). This broad description of resilience captures some of the apparently contradictory definitions of resilience evident in the literature. For example, resistance and adaptation can be seen as diametrically opposed. To further confuse the matter, resilience is used as a term not just to refer to processes, but also to differentially describe capacity and outcomes (Crane, 2021; Fletcher & Sarkar, 2013; Masten,

2021; Masten et al., 1990). Resilience as capacity is concerned with establishing the potential for positive outcomes should adversity arise (Crane, 2021). In contrast, resilience as an outcome refers to the observance of positive outcomes or the absence of negative outcomes after or during adversity (Crane, 2021). Resilience as capacity, process and outcome can be thought of as a continuum. However, these different conceptualisations have implications for understanding theorisation and research findings. Unfortunately, it is rare for authors to make these different conceptualisations of resilience explicit and often they confuse multiple meanings within the same paper (K. Brown, 2021).

### The Development of Resilience Studies

The term resilience has always carried multiple meanings (Olsson et al., 2015). The Latin root of the word is *resilire*, meaning to bounce. Consequently, resilience has come to mean ‘bouncing back’ (Alexander, 2013; Mcaslán, 2010). Initially however, the word *resilire* was used in Latin to describe leaping, jumping, or rebounding in the more literal sense. It is also interesting to note that the word resilience has not always carried positive connotations. When the term *résiler* was introduced to French, it meant to retract or rescind. This meaning was included in the first definition of resilience in English in Blout’s 1695 Glossographia where resilience was dually defined as rebounding or to go back on one’s word (Alexander, 2013).

The term resilience was initially used in an academic context in the 17th century to describe the properties of materials, such as wood and steel, to absorb shock and ‘rebound’ to their original form (Alexander, 2013). This definition has remained largely unchanged to this day in the field of materials science (Mcaslán, 2010). However, this definition has little in common with how the term is commonly understood outside of the field of material sciences today as “adaptation in the face of adversity”. And furthermore, the field of material sciences has had little interaction with other disciplines that investigate resilience (Xu & Kajikawa, 2018).

The idea of resilience describing the ability to recover from adversity was also first introduced in English in the 17th Century (Alexander, 2013). It is this conceptualisation that has dominated the development of resilience studies. That such diverse understandings of resilience date so far back suggests that confusion around what resilience refers to, is not a new conundrum. Curiously, much like these two distinct definitions of resilience, much of the development of resilience studies has occurred in two main but distinct streams. Resilience studies as we know it today developed simultaneously yet independently in both psychology and ecology in the 1970s (Masten, 2014; Olsson et al., 2015).<sup>1</sup> Next these two streams of psychological and ecological research will be

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<sup>1</sup> Some authors claim that resilience studies first emerged in ecology and was only later applied in the social sciences. These authors tend to be biased in that they only consider ecological conceptualisations of

discussed. This will be followed by an exploration the socio-ecological perspective of resilience, which synthesises diverse conceptualisations.

### *Human Resilience*

While the distinctions between different fields of research is always somewhat arbitrarily defined, it is possible to identify clusters of research. Within research on resilience, there is a distinct cluster focussed on understanding how people experience resilience. Within this cluster of research, resilience is commonly understood as positive adaptation in the face of adversity or trauma (Luthar et al., 2000). While resilience in humans is often described as psychological or social, it is nearly impossible to distinguish between research from the social sciences and research from psychology (Baggio et al., 2015; Xu & Kajikawa, 2018). Moreover, research on resilience in humans has always been influenced by multiple fields including biological sciences and preventative medicine (Masten, 2021). Rather than trying to describe psychological or social theories of resilience, this section will focus on the broad trends within research that has sought to understand how humans are able to flourish unexpectedly in the face of adversity.

One of the common ways of making sense of this diverse body of research is to divide the study of human resilience into waves. Masten describes four waves: the first wave was descriptive as researchers sought to identify factors and traits associated with resilient outcomes; a second wave focussed on understanding the process and mechanisms involved in resilience; the third wave that sought to examine theories of resilience through research on interventions while the fourth and current wave of resilience research is concerned with the integration of different disciplinary insights, examining resilience across different levels of analysis and understanding multisystem resilience (Masten, 2007, 2011, 2014, 2015, 2021). Similarly, Richardson (2002) as well as Atallah et al. (2021) describe three waves: the first as focussed on phenomenological description, a second wave exploring the processes involved in resilience and a third multidisciplinary wave. Atallah (2016) and Atallah et al. (2021) criticise the first wave of descriptive resilience research as simplistic in its understanding of risk, vulnerability, and resilience. They also criticise the focus on the individual as the unit of analysis. Furthermore, they offer credit to the second wave for the paradigm shift towards understandings of resilience as a process. Finally, they call for a third transdisciplinary wave.

While describing resilience research in waves does help to show how thinking around resilience has evolved, it can be misleading, as much of the first and second wave thinking has persisted

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resilience thus overlooking that resilience has been the subject of psychological inquiry for just as long. Similarly, authors from psychology often do not make mention of the early work of ecologists. This confusion and lack of cross-referencing between fields underscores the need for further interdisciplinary study.

rather than evolved. Thus, I would rather describe these waves as perspectives that persist in different spheres of research. Because the intention of resilience research has always been to inform policy and practice so as to promote positive outcomes in the face of adversity (Wright et al., 2013), I have not focussed on Masten's third wave of resilience interventions. Rather, I describe and critique the trait perspective of resilience, explain process-based understandings, and finally explore multisystem perspectives.

#### Resilience as a Trait

Research on resilience began in the 1970s when scholars such as Norman Garmezy, Irving Gottesman, Michael Rutter and Emmy Werner started questioning why some children who experienced high levels of risk for poor developmental outcomes were able to surpass expectations (Masten, 2014). Much of this early research sought to identify children who displayed what could be termed 'resilient outcomes' or 'manifested resilience' and then understand what the common individual characteristics amongst these children were (Masten, 2015). This represented a paradigm shift away from a deficits model towards a strength-based approach which has been hugely influential for policy and practice by allowing interventions to focus on building up strengths rather than focussing on risk (Masten, 2011; G. E. Richardson, 2002).

However, this focus on constellations of individual characteristics resulted in the conceptualisation of resilience as a trait or a grouping of individual psychosocial traits. For example, the Connor Davidson Resilience Scale (Connor & Davidson, 2003), which is frequently used in psychology and health sciences (Avrech Bar et al., 2018; Derakhshanrad et al., 2017b; Judkins & Bradley, 2017; McGarry et al., 2013; Seko et al., 2020; Tan et al., 2020), defines resilience as a combination of self-efficacy, optimism, humour, and an action orientated approach (Connor & Davidson, 2003). While it is theorised that such constellations of traits enable individuals to be able to adapt to circumstances and overcome adversity (Connor & Davidson, 2003), the measurement of traits assumed to support resilience is not the same thing as the measurement of resilience.

While the argument has been made that a trait perspective of resilience is advantageous as it allows for resilience to be measurable (Hu et al., 2015), I would argue that this perspective does not hold up to scrutiny. If resilience is to be understood as positive outcomes in the face of adversity (Luthar et al., 2000), it should be self-evident that we cannot measure resilience itself but can only infer resilience (Joyce et al., 2018; Luthar et al., 2006; Mittelmark, 2021). The issue with self-report measures like the Connor–Davidson Resilience Scale is that they claim to measure resilience itself when they are in fact measuring what could be better conceptualised as resources for resilience. Thus, while defining resilience as an outcome, much of this research is focused on

researching the potential capacity for resilience. Moreover, as most of this research is cross-sectional in design rather than longitudinal, it is uncertain whether these questionnaires provide a strong and reliable predictor of positive outcomes in the face of adversity (Kalisch & Kampa, 2021).

Beyond the issues of measurement, a trait perspective of resilience carries with it many implications for intervention and practice. One of the dangers of the trait perspective is the implication that an individual is either resilient or is not resilient (Fletcher & Sarkar, 2013; Luthar & Cicchetti, 2000; Mahdiani & Ungar, 2021; Wright et al., 2013). This perspective privileges the idea that individual differences account for differing responses to adversity and can lead to shaming individuals for not being resilient in the face of adversity. Moreover, this perspective can absolve those with power from the responsibility of addressing and minimising experiences of adversity (Luthar & Cicchetti, 2000; Mahdiani & Ungar, 2021; Ungar & Theron, 2020). The irony in this is that the study of resilience began with the recognition that when faced with adversity, poor outcomes are expected (Masten, 2014). If the intent of resilience research, to promote positive adaptation in the face of adversity, is to be realised, it is vital that our conceptualisation of resilience supports this aim. Considering the limitations of the trait perspective of resilience, I have largely excluded this perspective from further analysis and integration in the review process.

Perhaps some of the confusion around resilience research, particularly within psychology, stems from a lack of differentiation from related constructs such as hardiness and ego-resilience or resiliency. Both hardiness and ego-resilience refer to stable individual personality characteristics (Windle, 2011). Like resilience, hardiness is concerned with the ability to respond to stressors but unlike resilience, only three dispositions are credited accounting for differential responses to adversity. These are: commitment, the ability to find meaning, challenge, welcoming change, and control, a belief in individual agency (Luthar, 2015; Windle, 2011). In contrast to the study of resilience, ego-resiliency does not presuppose exposure to adversity but is concerned with adaptation to everyday change (Luthar et al., 2000). Ego-resilience refers to the development of impulse control which supports human adaptability (Kaplan, 2013; Windle, 2011). Someone with good ego-resilience may be resilient in the face of adversity but it cannot be assumed as ego-resiliency is conceptualised and examined outside the experience of adversity (Luthar, 2015). Despite these conceptual differences, ego-resilience has been included in meta-analyses of resilience and the terms hardiness and resilience have been treated interchangeably (Hu et al., 2015). It is therefore evident that greater conceptual clarity is needed.

A further issue of conceptual clarity is related to the nature of these so-called traits. Even if resilience is determined by collections of individual traits such as self-efficacy and optimism for example, it is well established that these traits are developed in relation to the environment

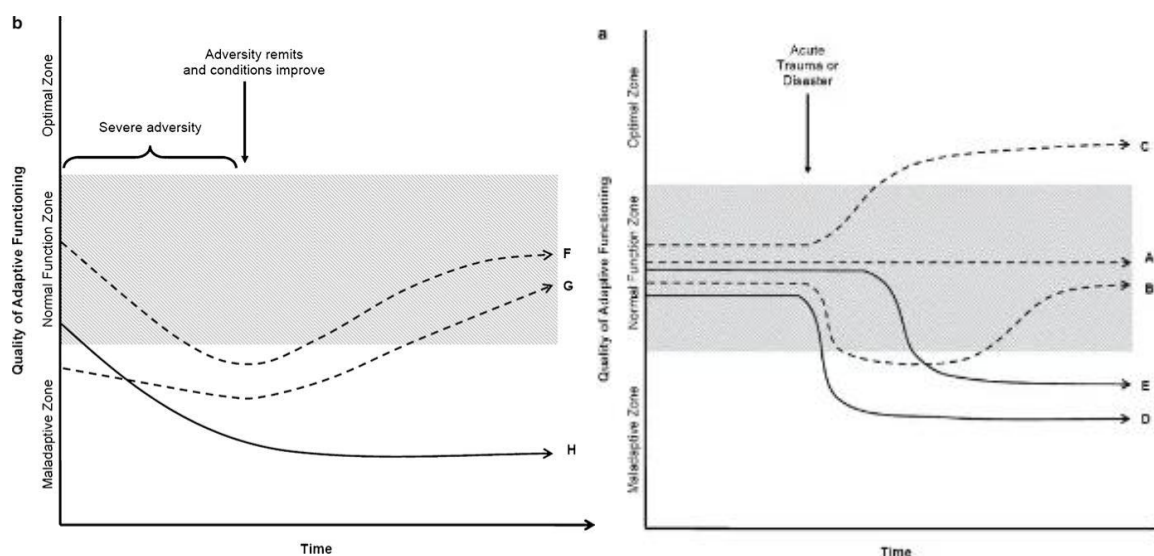
(Luthar, 2015). Indeed, this trait perspective has evolved to consider these individual traits as malleable to change in order to allow for interventions. However, interventions based on this approach still tend to overemphasise individual skills development and often fail to take into consideration the influence of the environment (Ungar, 2012). Luthar and Cicchetti (2000) argue that skill development is meaningless in the absence of a supportive environment. There is also little point in being able to identify common factors that promote resilience in humans without understanding the processes through which these factors develop and how they facilitate resilience.

### *Resilient Pathways and Processes*

The second wave of resilience research as described by Masten, or what could now be termed a process-based perspective, represented a move beyond merely describing factors associated with resilience, to trying to understand the processes and mechanisms that underly it (Masten, 2021). This shift began in the 1990s with the recognition that resilience is not a static state (Fletcher & Sarkar, 2013; Luthar & Cicchetti, 2000). The impact of this thinking is evidenced in the many definitions that describe resilience as a process (Fletcher & Sarkar, 2013; Luthar & Cicchetti, 2000; Masten, 2014; Olsson et al., 2015; G. E. Richardson, 2002; Ungar, 2021). When it comes to understanding the processes involved in resilience, there have been two main approaches: the person focussed model and variable focussed models (Masten, 2011; Wright et al., 2013).

### *Person Focussed Models*

The person focused model adopts a life course perspective, plotting functioning over time in response to adversity (Masten, 2011). Figure 1.a illustrates some of the process possible in the case of exposure to acute trauma. Resilient pathways might present as stress resistance (the maintenance of normal function), breakdown and recovery (where normal function is achieved after a period) or post-traumatic growth (where function improves). Figure 1.b illustrates how resilience may only become evident when conditions improve for those who experienced chronic adversity (Masten, 2021). One of the most important contributions of person focused models is to show that there are many pathways to resilience. This introduces two important constructs to the study of resilience from developmental systems theory: equifinality and multifinality. Equifinality refers to the idea that there are multiple pathways to the same outcomes. Multifinality, conveys the idea that there are multiple pathways to reach multiple different outcomes, all of which could be considered resilient (Masten, 2021; Schoon, 2021; Wright et al., 2013).



**Figure 1: Pathways to Resilience Adapted from Masten (2021)**

### *Variable Focussed Models*

While person focused models plot functioning over time, variable focussed models make use of multivariate analysis techniques to explore the associations between variables thought to impact resilience (Masten, 2011). These factors may be characteristics of the individual, or the broader environment, and they may modify risk in a simple additive manner or through more complex interactive ways (Luthar & Cicchetti, 2000).

Differentiation is often made between promotive and protective factors. Factors that promote positive outcomes in a broad range of contexts and not only in the context of adversity are termed promotive factors as they promote positive development generally. Promotive factors are of benefit to almost everyone in most situations. Promotive factors operate by what is termed a main effect (Masten, 2021; Wright et al., 2013). On the other hand, there are factors that appear to be more salient in the context of adversity. These are often termed protective factors as they have a protective effect for those exposed to adversity. Protective factors operate via moderating effects where there is an interaction between vulnerability and protective factors (Masten, 2021; Wright et al., 2013).

Some common promotive factors include social connectedness, a sense of belonging, optimism, meaning making, agency, self-efficacy, problem solving skill and executive function (Masten, 2021). Because these processes are embedded in everyday life, Masten terms them 'ordinary magic' (Masten, 2007). Yet while there may be common processes, the saliency of these factors is context dependent. Some factors may be important in a particular context but less so in another (Luthar, 2015). Moreover, skills or characteristics that might promote resilience in one context at one point in time might conceivably in another context cause vulnerability (Schoon, 2021).

Therefore, both promotive and protective factors should always be considered in terms of function and context (Masten, 2014).

While it is recognised that the effect of promotive and protective effects on mitigating vulnerabilities will depend on context (Fletcher & Sarkar, 2013), one of the limitations of the process-based approach is that most of the research in this area has been focussed only on psychological processes (Luthar, 2015; Masten, 2014). Some limited attention has been paid to biological processes (Kalisch & Kampa, 2021) yet overall, the idea that individual processes are at the core of explaining resilience, has prevailed. The role of context in shaping the effect of promotive and protective factors has typically been glossed over. Moreover, particularly within psychology, research has tended to remain focussed on individual level coping with most studies inadequately exploring broader systems (Ungar & Theron, 2020).

Recognising this shortcoming, in research that aimed to understand how resilience might be better conceptualised in culturally and contextually appropriate ways, Ungar (2008) offered a definition of resilience as the provision of resources in culturally meaningful ways and the ability of individuals to both navigate towards and negotiate for these resources. This definition of resilience places clear emphasis on the interaction between multiple systems.

#### System Perspectives

There was recognition as early as the 1980s that resilience is affected by factors outside of the individual, particularly by the family and the broader social environment (Luthar et al., 2000). This tridactic approach of considering the individual, the family context and the broader community is evident in much of the prevailing research on resilience since the beginning of resilience studies till now (Luthar et al., 2000; Masten, 2014; Schoon, 2021). While research on individual resilience in children and youth is the most developed area of resilience research focusing on people (Masten, 2015), human life, and therefore human resilience, is dependent on the resilience of many systems including biological, ecological, and geopolitical systems (Masten, 2007). This recognition led to a definition of resilience that is applicable across diverse systems where resilience is defined as the “capacity of a dynamic system to withstand or recover from significant challenges that threaten its stability, viability, or development” (Masten, 2011, p. 494).

The process perspective of resilience showed that merely being able to identify factors associated with resilience was insufficient and that processes and mechanisms needed to be understood. Following this thought process, merely studying resilience in diverse systems does not advance the study of resilience. Rather, what is needed is an understanding of how resilience is shaped by the interaction between systems (Masten, 2007, 2011; Wright et al., 2013). It is not enough to just recognise that there are multiple influences for resilience, but the dynamic interplay between these influences needs to be explored (Windle, 2011).

The systems perspective of resilience was strongly influenced by developmental systems theory which recognises that human development and adaptation result from the interaction of many systems ranging from the biological to the social-ecological (Masten, 2015). The main contribution of the developmental systems perspective was to highlight the role of context in human development and adaptation (Masten, 2021). This has driven the shift away from thinking of resilience as individual coping towards a conceptualisation of resilience as the result of complex interactions between the person and their environment (Schoon, 2021).

Part of the impetus for a systems approach to understanding resilience has stemmed from concern about the impact of mass trauma (Masten, 2011, 2014, 2021; Masten & Narayan, 2012). In the context of such complex issues, where traditional individual treatment approaches are insufficient, conceptual development has been driven by the need for effective interventions that are easily scalable. If resilience is only understood as an issue of individual coping, the logical intervention would be individual therapy. This perspective limits the opportunities for intervention. However, if resilience is understood as the result of dynamic interplay between multiple systems, the opportunities for intervention become much broader. Approaching resilience from this broader perspective requires the integration of previously separate disciplinary insights through multidisciplinary, interdisciplinary, and transdisciplinary study (Atallah et al., 2021; G. E. Richardson, 2002; Ungar, 2018; Wright et al., 2013). One of the challenges to such integration are the conceptual differences between the way in which resilience has been conceptualised within the psychological and social sciences and the ecological sciences.

### *Ecological Resilience*

The study of resilience within the context of ecological sciences represents a distinct stream of enquiry (Alexander, 2013). Because the study of ecological resilience is rooted within the natural sciences, there are a fundamentally different set of starting assumptions that have shaped the development of ecological resilience theories (Olsson et al., 2015).

Firstly, where in the study of human resilience the unit of analysis is an individual or group, in the study of ecological resilience, the unit of analysis is a system (Olsson et al., 2015). A system is often described as a set of interrelated elements that form a unified whole that exists to serve a particular function (Bousquet et al., 2021). It is interesting to observe, however, that the interconnected nature of the real world means that system boundaries are arbitrarily constructed by the observer (Bousquet et al., 2021; Olsson et al., 2015). Depending on the level of analysis, systems can be defined in different ways. Moreover, within the study of ecological resilience, complex adaptive systems are generally the focus. Complex adaptive systems are complex in the sense that the whole system is not only greater than the sum of its parts, but also the behaviour of the whole system cannot be predicated on the behaviour of the components of the system.

Rather, the behaviour of the system emerges because of the interrelation of components (K. Brown, 2021). Furthermore, in complex adaptive systems the interaction between components, or, the emergent behaviour of a system, results in self-organisation whereby there is increasing order as the system adapts to the context (B. H. Walker et al., 2006). Thus, complex adaptive systems are assumed to be continuously reorganising while undergoing change (Bousquet et al., 2021).

Secondly, given the nature of systems, the question of whether resilience is a trait, or a process, has never been the subject of debate within the study of ecological resilience. It has always been assumed that resilience is a dynamic process that is influenced by the interaction between a system and its context. Moreover, in contrast to psychological studies of resilience, the idea that systems are interconnected is well accepted in the study of ecological resilience. Likewise, there is an appreciation that resilience needs to be investigated and understood as operating across different levels and scales.

Thirdly, the study of ecological resilience is concerned with how systems respond to change rather than how they respond to adversity per se. Given that complex adaptive systems are dynamic and self-organising, constant change is a fundamental characteristic of these systems. Change may be gradual or sudden, expected, or unexpected, and is often termed a perturbation or disturbance. The question that resilience research therefore asks is how systems adapt or transform in the context of change (Bousquet et al., 2021).

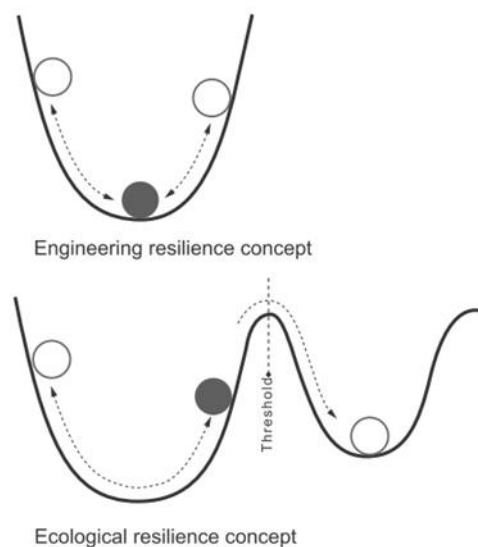
#### Basins of Attraction

The concept of resilience was brought to prominence in ecological studies by the Canadian ecologist Crawford Stanley Holling (Alexander, 2013; Folke, 2016). Prior to the work of Holling, ecologists had been focussed on the idea of equilibrium, that is the maintenance of a system in the same state. Within this paradigm, resilience refers to a return to equilibrium after a disturbance or perturbation. This conceptualisation of resilience has been termed *engineering resilience* as it shares characteristics with the definitions and conceptualisations of resilience found within fields such as material sciences, computer science and engineering (Holling & Gunderson, 2002).

Challenging this idea, Holling put forward the idea that there are multiple potential equilibria for systems. In other words, for any given system, there are different states that the system may tend towards depending on the surrounding conditions or context. Because contexts are ever shifting, and complex adaptive systems are always changing, the term equilibrium may be slightly misleading. Equilibrium can be thought of as the goal of self-organisation or as an attractor. Attractors are positioned within a basin of attraction, which is the conditions or context that supports the system existing in that state. Based on this understanding of systems having multiple

attractors, Holling introduced the idea of *ecological resilience* which is concerned with how much disturbance a system can adapt to before shifting to another state (Holling & Gunderson, 2002).

Engineering and ecological resilience are often explained using the ball and cup metaphor (Bousquet et al., 2021; Olsson et al., 2015). The ball represents the system of interest and the line, the context in which the system exists. An undulating line with multiple concave shapes represents the multiple equilibria possible or the many basins of attraction. Should the disturbance be large enough or should the wall of the cup be lowered (i.e., the context has changed), the system will overcome the threshold for change shifting into a new basin of attraction where either the form or the function of the system will change. Within ecology, this shift is termed a regime change. These concepts are illustrated in figure 2.



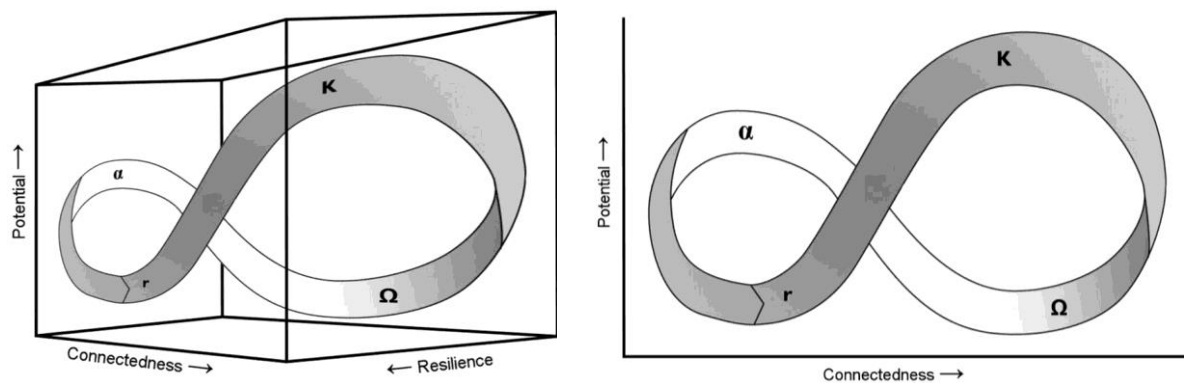
**Figure 2 The Ball and Cup Metaphor Adapted from Bousquet et al. (2021)**

One particularly important debate within ecological perspectives of resilience is around this tension of stability, adaptability, and transformation. The ability of a system to remain stable requires a certain resistance to disturbances and this conceptualisation of resilience as resistance to change is ubiquitous in the literature (Olsson et al., 2015). Adaptability refers to the ability of the system to reorganise in the face of disturbances but still maintain the same structure and functions (Holling, 1973). Finally, transformation refers to a change in the structure and function of the system in response to a changing context (B. H. Walker et al., 2004). To which process does resilience refer? In his seminal work, Holling (1973) defined resilience as adaptation. Yet over time, the concept of resilience has also come to incorporate the idea of transformation (Bousquet et al., 2021). Thus, within ecological understandings of resilience there is a tension between dynamic conceptualisations of resilience, where the system adapts or transforms, and static conceptualisations of resilience where the system resists change (Olsson et al., 2015).

Understanding how and when dynamic processes occur is important for understanding ecological resilience (Bousquet et al., 2021). The concepts of adaptive cycles and panarchy are helpful for this.

### Adaptive Cycles and Panarchy

The model of an adaptive cycle is a conceptual tool for understanding the process of change within complex adaptive systems (Sundstrom & Allen, 2019). Adaptive cycles describe the movement of a system through different phases in terms of potential, connectedness, and resilience (Holling & Gunderson, 2002). Potential is concerned with the possibility of different responses to change. Connectedness refers to the relationships between elements of a system and how these are influenced by external and internal variables. Finally, within the adaptive cycle framework, resilience is defined as the amount of disturbance a system can adapt to without shifting to another basin of attraction or undergoing a regime change (Sundstrom & Allen, 2019).

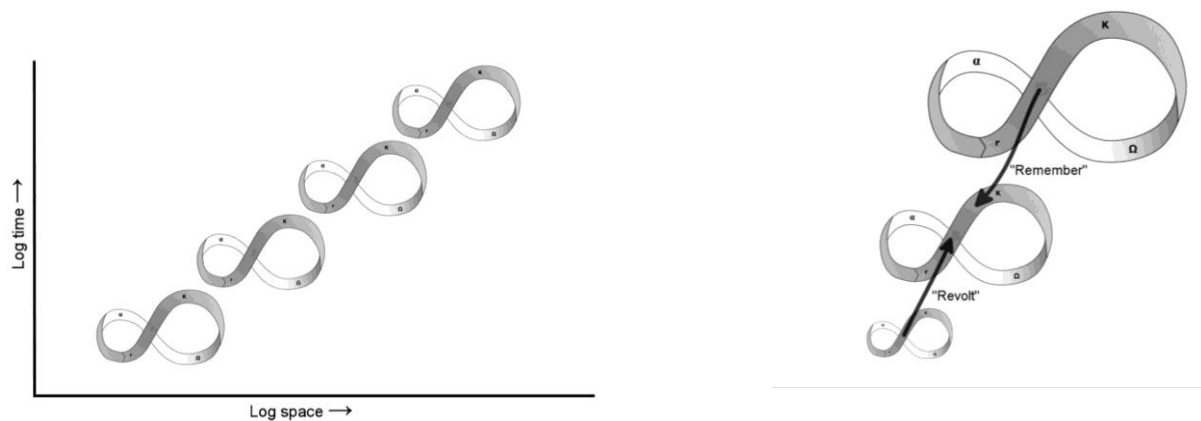


**Figure 3** The Adaptive Cycle from Gunderson & Holling (2002)

The adaptive cycle describes a system as moving through four phases: growth & exploitation ( $r$ ), conservation ( $K$ ), collapse and release ( $\Omega$ ) and reorganisation ( $\alpha$ ) (Holling & Gunderson, 2002). The front loop phases of growth and conservation describe the slower and more predictable system dynamics. As the system self-organises, the system becomes more rigid, resilience declines and the system becomes more susceptible to perturbations. Should the resilience of the system be overcome, the system will move into the faster and less predictable backwards loop. During the collapse phase, energy and potential which had accumulated are released which is then followed by reorganisation. It is during this phase of reorganisation that a system might move into another basin of attraction or undergo a regime shift.

Complex adaptive systems are shaped by multiple drivers of change, reciprocal feedback patterns and the interaction between social and ecological components. Given the complexity of the drivers, it follows that systems do not move through the model sequentially and predictably. Rather, systems move between phases both forward and backward (Bousquet et al., 2021). Moreover, adaptive cycles are driven by a combination of both slow and fast variables. Regime

shifts tend to be triggered by larger and faster occurring variables, yet it is often the gradual accumulation of change resulting from slow variables that brings a system to a place where a regime shift may occur (Holling & Gunderson, 2002).



**Figure 4 Adaptive Cycles and Panarchy Adapted from Gunderson & Holling (2002)**

While an adaptive cycle describes the process of systems adapting to change, *panarchy* introduces the idea of nested adaptive cycles as a way of explaining cross-scale dynamics (Holling & Gunderson, 2002). The term panarchy is based on the name of the unpredictable Greek god Pan as the concept of panarchy is concerned with making sense of the unpredictable behaviour of complex adaptive systems in relation to each other. Within a panarchy, different adaptive cycles occur at varying speeds. The smaller and faster cycles may drive revolt or change in the higher slower moving adaptive cycles while the memory of these slower moving cycles may maintain and contain the faster moving cycles (Holling & Gunderson, 2002). Thus, the concept of panarchy represents a conceptual framework for considering the interactions between multiple systems and the cascading effects of resilience between systems. While the concept of panarchy can be applied to all forms of systems, it is most commonly applied to socio-ecological systems, to which we will now turn.

### *Socio-ecological Resilience*

As this chapter has shown, resilience is understood in varying ways across different fields of inquiry (Baggio et al., 2015; K. Brown, 2021; Xu & Kajikawa, 2018). As the systems approach has been adopted, there are increasing calls for interdisciplinary study as it is now recognised that ecological and human systems interact in ways that influence resilience (K. Brown, 2021). Network citation analyses of resilience research have found that research on resilience remains siloed, but it is within the context of socio-ecological research that there has been the greatest amount of interdisciplinarity (Baggio et al., 2015; Xu & Kajikawa, 2018). This is perhaps because the study of socio-ecological systems is concerned with phenomenon that involve ecological and social components thus requiring the insights of diverse fields of inquiry (K. Brown, 2021).

So, what is a socio-ecological system? Socio-ecological perspectives see the social and the natural world as interconnected and mutually independent (K. Brown, 2021). Indeed, attempting to differentiate between social and natural systems is almost impossible (Olsson et al., 2015). A socio-ecological system refers to more than just the interactions between the social and the ecological systems but rather refers to the open intertwined system of humans and the environment (K. Brown, 2021). Therefore, socio-ecological systems are complex adaptive systems that represent more than the sum of their parts (Folke, 2016). The same can be said for socio-ecological resilience which not only combines the insights from social and ecological resilience but represents a more nuanced understanding of multisystem resilience (K. Brown, 2021).

Essentially, a socioecological perspective of resilience views resilience as the outcome of complex interactions between biological, psychological, social, and environmental systems in the face of stress (Ungar, 2012). Socioecological perspectives evolved from both psychological studies with the social ecologies' perspective (eg. Bronfenbrenner, 1979) and the socio-ecological perspective that emerged from ecological studies in the late 1980s (Folke, 2016). The socioecological perspective as we know it today began emerging when researchers and policy makers in the late 2000s started to try and understand how to analyse and respond to major disasters which threaten multiple systems at the same time (Masten, 2011).

The key idea of the socioecological perspective is that resilience is co-facilitated by co-occurring human and non-human systems (Kalisch & Kampa, 2021; Theron, 2021). Moreover, there are similarities in the pathways to resilience for both social and ecological systems, suggesting that a common understanding of resilience is indeed possible (Masten, 2011). However, there remain several issues in the study of socio-ecological resilience relating to conceptual clarity.

Because research on socioecological resilience emerged from two different streams of research, there remain unresolved tensions around normative and descriptive understandings of resilience (K. Brown, 2021). Research on human resilience tends to see resilience as normative in the context of significant adversity whereas ecological research approaches resilience as a descriptive term in the context of normal stress. Yet the similarities in pathways to resilience that have been conceptualised and studied from the social sciences and in ecological sciences do suggest that an integrative understanding of resilience in socio-ecological systems is possible (Masten, 2011). However, greater interdisciplinary synthesis is required if the potential of the concept of resilience is to be realised (Ungar, 2018). Interdisciplinary synthesis could provide a more integrated understanding of resilience that is grounded in disciplinary research and theory that has already been developed.

Further challenges to the study of socio-ecological resilience include insufficient theorisation around how social and ecological systems interact with each other and the challenge of

developing theory that can be applied across levels of analysis, from the individual level to groups, communities, and populations or across various systems and scales (K. Brown, 2021; Mittelmark, 2021; Wright et al., 2013). The construct of occupation has much to add to the discussion of socio-ecological resilience in this regard as it captures the complexity of the interplay between individual biological and psychological characteristics, the environment, and complex cultural influences, and can be examined from an individual level to a population level (Dickie, 2010). Clearly, occupational perspectives have a great deal of relevance for understanding resilience. Despite these challenges in the study of socio-ecological resilience, this perspective of resilience shares the most similarities with an occupational perspective and is the perspective that is prioritised in the rest of the review.

### Resilience in Occupational Therapy and Occupational Science<sup>2</sup>

Given the diverse ways in which resilience has been conceptualised across different fields, it is important to understand the ways in which resilience has been conceptualised within occupational therapy and occupational science. While there is a growing body of literature in occupational therapy and occupational science that uses the term resilience, and there are tentative conclusions that can be drawn regarding the relationship between occupation and resilience, there is still a need for further theorisation (Vaughan-Horrocks et al., 2021).

Within occupational therapy and occupational science literature, resilience is often mentioned without a definition being offered. This suggests that the term is used more as a part of general lexicon than it is used as a theoretical construct. Supporting this idea, it is also common for occupational therapy and occupational science literature to make little or no reference to resilience literature, even though there is a great deal of similarity between occupational and resilience concepts (J. Turner et al., 2022).

Concerningly, where a definition or conceptualisation of resilience is offered, these tend to be individualistic in nature (T. Brown et al., 2020, 2021; Falk-Kessler et al., 2012; Lopez, 2011; Santoso et al., 2015; S. Williams & Murray, 2013). Moreover, resilience is often described as a characteristic or trait (Fang et al., 2022; Kinsley et al., 2022; Price et al., 2012). This is particularly evident in the frequent use of the Connor Davidson Resilience Scale which operationalises resilience as a constellation of personal traits (Beck et al., 2012; Cruyt et al., 2021; Derakhshanrad et al., 2017a, 2017b; Ghoochani et al., 2022; Gómez-Trinidad et al., 2021; Lee et al., 2015; Rasa et al., 2017, 2018; Rodríguez-Bailón et al., 2023; Rodríguez-Martínez et al., 2021; Tao et al., 2023).

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<sup>2</sup> This portion of the chapter was developed through a literature search based on scoping review methodology. Further details about the search strategy can be found in Appendix B.

The limitations of the trait perspective and such approaches to measuring resilience have already been highlighted.

Outside of reductionistic measures, it is well recognised that resilience arises from the interaction between both internal and external factors. This understanding of resilience shows synergy with an occupational perspective which calls attention to the way in which human doing results from the interaction between multiple systems (Usaite & Cameron, 2016). The lack of integration of multisystem perspectives of resilience within occupational therapy and occupational science points to a need for further interdisciplinary theorisation.

### *Resilience in Occupational Therapy*

Resilience is a term that has been used to describe the profession of occupational therapy (Clemson, 2022; Walder et al., 2022). However, it is more commonly spoken of in relation to the resilience of occupational therapy students or practitioners and in relation to occupational therapy interventions. Fine (1991) argued that because occupational therapists work with people who are experiencing adversity, it is important that they understand resilience. This sentiment has been echoed by others (Lopez, 2011; Matuska, 2014; Rothman & Lynch, 2023). It has also been pointed out that the concept of resilience stems from a core belief in occupational therapy, the ability of humans to adapt (Dennis et al., 2015). Yet if occupational therapists are to foster the resilience of those they work with, they need to foster their own (Price et al., 2012).

### *The Resilience of Occupational Therapy Students and Professionals*

Our understanding of professional resilience is significant not just when considering the wellbeing of occupational therapists, but because it will influence the way in which we conceptualise resilience for those we work with. Moreover, there are insights to be drawn from discussion surrounding professional resilience about the nature of the interaction between occupational engagement and resilience.

It is a common assertion that the practice of occupational therapy requires resilience (Allen-McHugh, 2022; Apostol et al., 2021; Bolding et al., 2021; Clouston, 2019; Friedman & Banta, 2023; Huffman, 2023; Popova et al., 2023; Pozzi et al., 2022; Y. Thomas & Judd, 2015; Walder et al., 2022). Indeed, some authors write about resilience considering it to be a required professional competency (T. Brown et al., 2022) and something that supports the development of professionalism (George et al., 2022). As such, it has been suggested that occupational therapy educators should consider ways to support the development of resilience (T. Brown et al., 2021; Davies et al., 2017). Yet, while occupational therapy practice might require resilience, it can also help develop resilience (Davies et al., 2017; Rodríguez-Martínez et al., 2021). This points to a

complexity in the relationship between occupational engagement and resilience as the same occupation might either require or develop resilience.

When it comes to the development of resilience, it is generally suggested that self-care is important in developing professional resilience (Ashby et al., 2013; de Witt et al., 2019; Hildenbrand, 2019; Scanlan et al., 2017; Scanlan & Still, 2013; Stephenson, 2019). This raises an important question: why is it that some forms of occupational engagement (in this case the practice of occupational therapy) require resilience, while others (such as self-care occupations) promote resilience? Expanding upon this question, it seems that the manner in which occupations are engaged in might play a role. Ashby et al. (2013) found that the way in which occupational therapists practice is important when it comes to professional resilience as occupation-based practice (as opposed to a biomedical model) supported professional resilience. Similarly, professional resilience is supported when mentorship is available (Jackson et al., 2023; Stephenson, 2019; Struwig & van Stormbroek, 2023).

Despite the importance of these contextual features, and foundational occupational theory emphasising the importance of context, professional resilience in occupational therapy continues to be described individualistically as a personal resource (Stephenson, 2019) or characteristic (Rodríguez-Martínez et al., 2021). Interestingly, traditional resilience interventions which view resilience individualistically do not seem to improve the resilience of occupational therapists (Allen-McHugh, 2022). The limitations of traditional resilience trainings in promoting professional resilience are now recognised and it is well established in the research that professional resilience is contingent on the professional environment and not just intrapersonal qualities (Crane, 2021). This individualisation of professional resilience is significant as it may result in individualistic conceptualisations of resilience when it comes to occupational therapy interventions.

#### Resilience and Occupational Therapy Interventions

As with the common assertion that resilience is a necessary professional trait, there is a common idea that resilience underpins much of occupational therapy clinical practice (Matuska, 2014; J. Turner et al., 2022). It is assumed that occupational therapy practitioners should foster the resilience of their clients (Christiansen, 2007; De Koker et al., 2019; Guy et al., 2020; Kuhaneck et al., 2015; Lange & Grajo, 2021; Payne & Ward, 2020; Wachspress et al., 2019; Zwicker et al., 2018). Moreover, there is an assertion that participation in occupational therapy interventions can improve resilience (Champagne, 2018; Heard et al., 2022; Helitzer et al., 2002; Lee et al., 2015). Indeed, there is some evidence to show that occupational therapy interventions can support the development of resilience (Falk-Kessler et al., 2012; Murphy et al., 2019a, 2019b; Wachspress et al., 2020). For example, Falk-Kessler et al. (2012) found that within the context of

multidisciplinary intervention for patients with multiple sclerosis, occupational therapy intervention was found to positively affect resilience in patients by enabling improved daily occupational participation. Moreover, it has been suggested that resilience ought to be considered an outcome of interest in occupational therapy intervention (Sprange et al., 2013).

Yet despite this commonly held assertion and some evidence to support it, there has been little discussion of how resilience thinking and theory can be incorporated into clinical practice. More theory is needed to support resilience orientated practice (Vaughan-Horrocks et al., 2021). Some authors have pointed to the similarity between traditional resilience interventions and occupational therapy intervention and have suggested that resilience training would be an appropriate occupational therapy intervention (Haracz & Roberts, 2016). This suggestion however points to the need for further robust theorisation regarding occupation and resilience. The main limitation of traditional resilience interventions is that they are overwhelmingly individualistic, particularly those drawn from psychology (with whom occupational therapy shares close ties particularly in the field of mental health). The problem with occupational therapists drawing from these resilience interventions uncritically is that an individualistic approach to understanding resilience is at odds with conceptualisations of occupation that foreground the significance of the environment in shaping occupational engagement.

In research on the potential role of occupational therapy in supporting American army veterans, the complex interplay between occupational engagement and resilience is illustrated. Drawing from resilience theory, two studies examined social support, meaningful occupational engagement, and self-efficacy as protective psychosocial factors (Eakman et al., 2016; Kinney et al., 2020). The complexity lies in that occupational engagement can facilitate the development of social support and self-efficacy, but can also be negatively impacted by a lack of social support and self-efficacy (Eakman et al., 2016; Kinney et al., 2020). The complexity of the relationship between occupation and resilience has been examined in more depth in occupational science, to which I now turn.

### *Resilience in Occupational Science*

In occupational science, resilience is a common term used to describe people's occupational experiences. It has been used to describe role transitions (Armstrong-Heimsoth et al., 2021; Voss et al., 2018) processes of recovery or adaptation following injury (Price et al., 2012; Shamrock et al., 2016), experiences of mental illness (L. Craig et al., 2017; Hall et al., 2016), developmental disorders (Missiuna et al., 2008; Munambah et al., 2020; Zwicker et al., 2018), living with disability (Hughes et al., 2020), poverty (Duncan et al., 2011), homelessness (Marshall et al., 2020; Salsi et al., 2017), and immigration (Fang et al., 2022; Muriithi & Muriithi, 2020). Clearly, adversity, resilience and occupation are related.

Resilience is also used to describe other dimensions of occupational experiences such as occupational choices (Makhata et al., 2021), occupational adaptation (Abelenda & Helfrich, 2003), and the quality of occupational engagement (Bundy et al., 2008; Dean et al., 2018). More commonly, literature in occupational science that uses the term resilience points to a relationship between occupational engagement and resilience and the significance of occupational disruption. Some conceptualisations of occupational resilience have been offered and there have been links drawn between ecological theories of resilience and occupational science. Yet there is still need for further robust interdisciplinary theorisation.

### Resilience and Occupational Engagement

Despite there being very little theoretical exploration of the relationship between occupation and resilience, a suggestion of a relationship between occupational engagement and resilience can be found in the literature. In research looking at the bereavement phase of a caregiver's journey, Silver Seidle (2022) found that experiences of resilience were deeply rooted in everyday contexts including everyday occupation.

Links have been made particularly between social and leisure occupations and resilience (Hunt et al., 2016; Santoso et al., 2015; Usaite & Cameron, 2016; Wegner et al., 2022). This is not unexpected given the acknowledgment of the importance of social networks in resilience literature (Masten, 2021). Based on this, it might be reasonable to conclude that occupational engagement supports the development of resilience (Falk-Kessler et al., 2012; Helitzer et al., 2002; Salsi et al., 2017). One proposed mechanism is that occupational engagement promotes the development of skills or characteristics commonly associated with resilience such as self-esteem and self-efficacy (Eakman et al., 2016; Usaite & Cameron, 2016).

In describing how occupational engagement might support the development of resilience, two pieces of research stand out. Price et al. (2012) analysed the post stroke recovery process and occupational engagement through the lens of resilience theory using a qualitative case study design. They found that resilient characteristics – such as social support, spirituality, an internal locus of control, a commitment to succeed and having future goals – were developed and displayed through various forms of occupational engagement (Price et al., 2012). Bowden et al. (2018) explored children's perspectives on how occupational engagement contributes to their resilience using a qualitative descriptive design. Participation in leisure and social occupations were found to build resilience through the provision of social support, positive emotional experiences and opportunities for distraction or expression (Bowden et al., 2018).

Yet a unidirectional assumption that occupation enables resilience obscures some of the complexity surrounding occupation and resilience. In research into the experiences of caregivers of people living with dementia, engagement in self-care occupations predicted resilience levels

(Gómez-Trinidad et al., 2021). Occupational engagement might support resilience or equally, it might require it. In another example, in research on dating in Irish young women, it was observed that the occupation of dating could have a negative effect on emotional wellbeing which required participants in the study to develop strategies for resilience (McCarthy & Jackson, 2022). Similarly, in their research, Gibbs et al. (2016) found that the acquisition of parenting occupations in the overwhelming context of a Neonatal Intensive Care Unit (NICU) required resilience.

Occupational engagement might support the development of resilience or require it, but to further complicate matters, resilience might shape occupational engagement. A correlation has been found between resilience and occupational competence (Tan et al., 2020). Resilience levels can predict participation in occupation (Mohler & Miller, 2020; Tao et al., 2023) and facilitating resilience might promote occupational engagement (Beck et al., 2012; Gómez-Trinidad et al., 2021; Price et al., 2012; Santoso et al., 2015). Clearly conceptual clarity regarding the relationship between resilience and occupational engagement is needed (Vaughan-Horrocks et al., 2021).

### Occupational Disruption

Part of the burgeoning interest in resilience in the past few years might be explained by the global experience of occupational disruption relating to the Covid-19 pandemic. Within occupational science, resilience is frequently mentioned in relation to Covid (Cruyt et al., 2021; de Vries et al., 2023; Hatzikiriakidis et al., 2022; G. Richardson et al., 2022; Rodríguez-Martínez et al., 2021; Sangster Jokić & Jokić-Begić, 2022; Vesnaver et al., 2023). Research on occupational engagement during lockdowns associated with the pandemic highlighted that continued occupational engagement or re-engagement in occupation in the face of occupational disruption requires resilience (Del Gallo & Rice, 2022; Segev-Jacobovski & Fogel, 2022; Wegner et al., 2022). This idea is supported by research on acquired brain injuries (Jacobs-Nzuzi Khuabi et al., 2022; Kelly et al., 2022) and is captured in some definitions of occupational resilience.

### Occupational Resilience

A few divergent definitions of the term occupational resilience have been offered (T. Brown, 2021; Jacobs-Nzuzi Khuabi et al., 2022; Muriithi & Muriithi, 2020; Wegner et al., 2022). What draws these definitions together, however, is that they all consider the resilience of occupational engagement. That is, they focus on continued occupational engagement in the face of disruption or challenge, the adaptation of occupational engagement or re-engagement post disruption. Occupational engagement is the outcome of resilience.

Upon reflecting on the impact of Covid-19 and the related lockdowns, T. Brown (2021) defined occupational resilience as the ability to navigate changes and modifications to daily occupational participation. Similarly, Wegner et al. (2022) speak about occupational resilience in the face of

Covid-19 restrictions as a process of “adjusting, re-establishing connections, re-prioritising, modifying, and finding alternative occupations to address the things they did not have access to or were unable to do” (Wegner et al., 2022, p. 332). Outside of the context of Covid, based on their research observing the continued engagement of survivors of forced displacement in performing music, Muriithi and Muriithi (2020) describe occupational resilience as the continuation of occupational engagement in the face of obstacles. What these definitions propose, is that continued occupational engagement often requires resiliency, be that in the form of perseverance or adaptation.

Jacobs-Nzuzi Khuabi et al. (2022) offer the most comprehensive conceptualisation of occupational resilience based on research on the experiences of adolescents with acquired brain injuries. More than other authors, they draw upon resilience theories that emphasis the necessity of resources in facilitating resilience. They define occupational resilience as “the transactional relationship between personal, environmental and occupational resources that increases a person’s capacity to adapt positively to occupational challenges in the midst of adversity and facilitates his/her participation in valued occupations” (Jacobs-Nzuzi Khuabi et al., 2022, p. 476). Again, occupational engagement is the outcome of interest.

While these definitions and conceptualisations of occupational resilience show that the concept of resilience has much to offer in extending our understanding of occupational processes, they fail to capture the idea that occupational engagement might also be a resource for resilience. By focusing narrowly on occupation, these conceptualisations fail to capture the full breadth of what occupation as a concept might have to offer resilience studies.

### Occupation and Ecology

Understandably, given the traditional scope of occupational therapy and occupational science, much of what I have discussed here regarding resilience centres on human resilience. Some links have however been made between occupational thinking and ecological perspectives of resilience. Within ecology, talk of resilience is often paired with discussions of environmental sustainability. It has been pointed out that human occupation is both the cause and potential remedy for the current ecological crisis (Rushford & Thomas, 2016). Rushford and Thomas (2016) propose that occupation should be considered as a “transformative tool and a conduit for adaptability, inclusivity, and resilience” (p. 305). One of the challenges of sustainability science is understanding how social and ecological systems interact (Bousquet et al., 2021). Occupation may represent the missing theoretical link (Rushford & Thomas, 2016). Occupational theories which describe the interplay between people, environments, and occupation has much to offer the understanding of resilience (J. Turner et al., 2022). For this potential to be realised, further integration of occupational theories and resilience thinking is required.

## The Case for Integration

Rather than providing a comprehensive synthesis of all research on resilience, the intention of this chapter was to demonstrate how conceptually rich the concept of resilience is. Conceptual understandings of resilience vary by field of inquiry, and it is only in the last decade that the two streams of resilience research, human resilience, and ecological resilience, have been brought together with the study of socio-ecological resilience. With regards to human resilience, I have critiqued the trait perspective of resilience; discussed some of the processes involved in human resilience; and reviewed why it is important to understand how human resilience is intertwined with the resilience of other systems. Next, I presented some broad theories of ecological resilience that provide a conceptual framework for understanding the development of systems over time and how systems interact. After this I described how socio-ecological perspectives have been advanced through interdisciplinary study. Challenges however remain, including the need for enhanced conceptual clarity, the need for scalable theory and greater attention to be paid to the interactions between social and ecological systems. While the concept of occupation has potential to guide the further development of socio-ecological theories of resilience, and there is some evidence for a link between occupational engagement and resilience, current definitions of occupational resilience do not capture the complexity of resilience or adequately explain the relationship between occupation and resilience. Further robust interdisciplinary theorisation could address the need for greater conceptual clarity within resilience studies and the concept of occupation might address some of the current challenges in theorising about socio-ecological resilience.

## Chapter Three: Interdisciplinary Theory Generation

If the study of resilience can benefit from further interdisciplinary theorisation, it is important to address what the terms ‘interdisciplinary’ and ‘theorisation’ mean. This is important as the terms ‘theory’, ‘theorising’ and ‘theoretical’ are ubiquitous but poorly understood and open to varying interpretations (Abend, 2008; Hammond, 2018). The way in which theory and theorisation are conceptualised have important implications for the methodology of research that seeks to contribute to theoretical perspectives.

This chapter clarifies what I mean when I state that this research has a strong theoretical orientation. I explore the relationship between theory and theorisation, explain the significance of constructs, and present important considerations for the process of generating and synthesising theory. Furthermore, this chapter positions this research within an interdisciplinary paradigm and unpacks the implications of this positioning for the process of theorisation in terms of ontological and epistemological pluralism as well as the approach to knowledge synthesis and theory generation. The chapter concludes with a section on the importance of critical reflexivity as a basic requirement for this type of research.

### Understanding Theory

For a piece of research that is concerned with ‘conceptual and theoretical’ understandings of occupation and resilience, it is important to address the question: what is theory and why does it matter?

Theory is significant because practice and theory are closely related (Wallis, 2010). Poor theory leads to narrow understandings and poor research (Ungar, 2021). Poor research leads to poor interventions. Conversely, interventions that are explicitly grounded in a coherent theory tend to be more effective (Glanz & Bishop, 2010). Moreover, solid theoretical foundations and robust theoretical synthesis plays an important role in the development of interventions that address complex issues (Bonell et al., 2013).

However, little attention has been paid to what is meant by the terms ‘theory’ and ‘theoretical’ (Abend, 2008). Even less attention has been paid to the process through which theory is generated (Wallis, 2010). Most of what has been written about theory and theorisation comes from the field of sociology. Occupational therapy and occupational science have a strong tradition of drawing on sociology (Imperatore et al., 2000; Ramugondo et al., 2015; Yerxa, 1990). As I see no reason to break with tradition, the following sections draw heavily from the field of sociology. I address different perspectives on what is meant by the term theory and explain the different levels of theory. Thereafter, I introduce theorisation as a scholarly practice and some of the processes involved in developing theory. This is followed by an explanation of the significance of constructs

in theory and theorisation. I then introduce the idea of theoretical synthesis, also known as metatheory. Finally, I end this section with a discussion of theory, theorisation, and theory synthesis in occupational therapy and occupational science.

### *What is Theory?*

Theory, like resilience, is difficult to define as the term has multiple meanings and is used to refer to many different descriptions of thought (Neuman, 2011; Sutton & Straw, 1995). In its broadest sense, theory is concerned with an abstract understanding of the world that seeks to explain the world as we experience it (Hammond, 2018; Neuman, 2011). Theory is more than mere description; theory is conceptualisation.

If the purpose of theory is explanation, it follows that explanation can take different forms, for example, causal or narrative explanations (Krause, 2016). However, this is not a commonly accepted principle and there is animosity between those who believe that theory should be concerned with causality and those who adopt the perspective that theory should be concerned with description and sensemaking. Adopting a position of epistemological and ontological pluralism (which will be discussed in more detail below) is helpful when examining the multivariate meanings of the term 'theory' (Abend, 2008). Adopting a position of pluralism allows the meaning of the term to be established without debating which form of theory is superior (J. H. Turner, 1991). Understanding the type and level of theory is the first step in being able to meaningfully integrate and synthesise theory.

Abend (2008) describes seven different types of theory. Theory<sub>1</sub> according to Abend (2008) is concerned with universal propositions that establish a relationship between variables. Theory<sub>2</sub> is a more specific explanation of the causality of a particular phenomenon that has been contextualised to a particular time and place. It is often the specific application of a theory<sub>1</sub>. Theory<sub>3</sub> is less concerned with causality but rather focuses on meaning and interpretation. Theory<sub>4</sub> refers to the works of preeminent scholars such as Marx or Bourdieu and analyses of their work. When one uses the term theory in the sense of theory<sub>5</sub>, the term theory refers to *a priori* frameworks that are used to guide the interpretation of the world such as 'critical theory' or 'postmodern theory'. Synonyms of theory when theory is used in the theory<sub>5</sub> sense, would be the term paradigm or worldview. Theory<sub>6</sub> has some overlap with theory<sub>5</sub>. It describes the use of the term theory when referring to normative perspectives, particularly those that are concerned with power relations or politics, for example 'feminist theory'. In other words, theory<sub>6</sub> refers to a political and moral viewpoint that often criticises differing perspectives. Lastly, theory<sub>7</sub> according to Abend (2008) refers to the philosophical conceptualisation of issues that come up repeatedly in the study of sociology that require reflection on the nature of knowledge, language, and reality.

In other words, theory<sub>7</sub> is concerned with issues of ontology and epistemology. Noticeably there are significant differences between these different conceptualisations.

**Table 1 Types of Theory (Abend, 2008)**

Theory <sub>1</sub>	Universal propositions
Theory <sub>2</sub>	Contextualised causality
Theory <sub>3</sub>	Meaning and interpretation
Theory <sub>4</sub>	Analyses of preeminent scholars
Theory <sub>5</sub>	<i>A priori</i> frameworks
Theory <sub>6</sub>	Normative explorations
Theory <sub>7</sub>	Ontology and epistemology

Knowing that the term theory can be used to describe both supposedly value-free assertions and descriptions, and explanations of the world that are profoundly normative, is important in reducing confusion and preventing unnecessary debate if authors are clear about the way in which they use the term (Abend, 2008). Theory<sub>1</sub> and theory<sub>2</sub>, which can be termed the empirical-theoretic, are particularly useful for understanding causality, making predictions, generating and testable hypotheses. These theories are also often easily falsifiable. This type of theory, however, is unable to guide action or praxis as it cannot answer the question: 'what ought we to do?'. To answer this type of question, one must turn to normative reasoning (Reus-Smit, 2013). Normative theories, or theory<sub>6</sub>, are concerned not only with understanding the world, but often with emancipatory changes (Reus-Smit, 2013). Yet, relying solely on normative theories is also insufficient for guiding praxis, as these theories do not provide structure and reasoning to understand which interventions or actions will achieve desired results (Reus-Smit, 2013). A synthesis of empirical-theoretic and normative inquiry is required if theory is indeed to guide praxis (Reus-Smit, 2013).

This research synthesises a broad range of theories and thus I do not adopt one particular definition of the term. Rather, a reflexive and pluralistic perspective is adopted, acknowledging that the different types of theory can all contribute to our understanding of resilience and occupation. However, when I use the term theory, I am generally referring to theory in the theory<sub>3</sub> sense. I do not hold to the perspective that theory should be concerned with general laws about the nature of reality (if x then y for example) as is generally believed in the more positivist sciences. Nor do I believe that that the term should only refer to classical sociological theories or

overarching all-encompassing explanations of human life, as is sometimes believed in the social sciences. Rather, I hold to the view that theory is about making sense of the world and our experiences realising that such a description will always be an approximation and generalisation (Weick, 1995). Based on this understanding of theory, it is easy to see how all research and all practice is linked to theory. All practice is informed by theory and all practice shapes theory (L. O. Walker & Avant, 2005). Moreover, all knowledge involves theory (Wallis, 2010). However, this does not mean that everything is theory.

Theory can be differentiated from non-theory in that theory consists of interconnected abstract ideas that provide an explanation of the world (Hammond, 2018; Neuman, 2011; L. O. Walker & Avant, 2005). While concepts form an important aspect of theory (which will be discussed in more detail below), it is not enough to merely present or define concepts. Instead, theory must explain the connections between different concepts and phenomena (Neuman, 2011; Sutton & Straw, 1995; L. O. Walker & Avant, 2005). Similarly, data, diagrams, hypotheses and lists of variables on their own do not constitute theory. Rather, theory requires a presentation of logic (Sutton & Straw, 1995). Theory is, in essence, an abstraction (Hammond, 2018). This means that there will always be trade-offs between simplicity, generality, and accuracy (Wallis, 2010). These trade-offs depend, in part, on the level of theory.

### *Levels of Theory*

If theory is about abstraction, one can differentiate different levels of theory by their degree of abstraction. Theory can be separated into empirical, middle range and grand levels. The further one moves away from empirical research, the greater the level of abstraction (Neuman, 2011; L. O. Walker & Avant, 2005).

***Table 2 Levels of Theory Adapted from Neuman (2011)***

Grand
Middle Range
Empirical

### Empirical

Empirical research may or may not contain theoretical insights. This depends in part on the methodology, but most empirical methodologies are not well suited to developing theory (Swedberg, 2016). When empirical research does include theoretical insights, these are typically descriptive statements that generalise by only a small degree (Neuman, 2011). There are some who argue that that theory should only consist of the aggregation of empirical research, a position

known as the empiricist conception. In contrast post empiricist conceptions argue that conceptualisation often precedes observation in empirical work (Carleheden, 2016). Thus, the relationship between theory and empirical research is not simply about abstraction and it would be mistaken to assume that the practice of empirical research is free from the broader questions of ontology and epistemology. Ontological and epistemological considerations (in other words theory<sub>7</sub>) dictate the subject and methods of empirical investigation (Neuman, 2011). Therefore, if theory is built from empirical research and empirical facts are interpreted through theory, theory and empirical research cannot be separated (Wallis, 2010).

### Middle Range

Middle range theories exist between the general and the altogether particular (Merton, 1949). They are limited both in terms of the number of variables and their scope (L. O. Walker & Avant, 2005). Generally, middle range theories are constructed around a particular concept (Merton, 1949). Middle range theories are developed in the context of empirical data but include a greater degree of abstraction and generalisation (Neuman, 2011). They do, however, retain a great deal of specificity, and for this reason middle range theories are generally considered to be the most useful type of theory for guiding practice (Reus-Smit, 2013; L. O. Walker & Avant, 2005). This is partly because some theorists believe that more complicated questions of ontology and epistemology can be avoided in middle range theories. This assertion however should be questioned.

Middle range theories can either be substantive or formal (Neuman, 2011). Substantive theories are focused on a narrow range of enquiry or are bounded by a particular context, whereas formal theories are concerned with processes that operate across multiple topic areas (Neuman, 2011). While substantive theory lies closer to the empirical, formal theory tends towards the level of grand theory (see table 3). While substantive theory is limited in its scope of application to specifics, formal theories are intended to be applicable across a range of contexts (Neuman, 2011).

***Table 3 Levels of Theory Adapted from Neuman (2011)***

Grand
Formal
Substantive
Empirical

### Grand Theory

At the highest level of abstraction, there are grand theories. These theories provide coherent worldviews that contain assumptions, concepts, and other forms of explanation (Neuman, 2011). Grand theories tend to differ from lower levels of theory in that they often make more ideological and normative claims (Ritzer, 1990). Grand theories are particularly useful in that they provide principles that can guide enquiry and practice (L. O. Walker & Avant, 2005). Grand theories can also be referred to as paradigms, worldviews, frameworks, conceptual models, or metatheories (Neuman, 2011; L. O. Walker & Avant, 2005). Grand theories are sometimes developed *a priori* to empirical research and this form of grand theory has been much critiqued (Ritzer, 1990). However, this is not the only way to generate grand theory. Grand theory can also result from the synthesis and logical progression of lower levels of theory (Ritzer, 1990).

The challenge of understanding the linkages between occupation and resilience is that this requires the integration of not only different types, but also different levels of theory. This type of integration is challenging (Clegg, 2012). Theories of occupation and resilience exist mostly (although not exclusively) in theories of the middle range as both substantive and formal theories. Indeed, a focus on middle range theory has been advocated within resilience studies (K. Brown, 2021). Yet to synthesise middle range theory and theorise about the linkages between occupation and resilience, it is necessary to transcend middle range theory. According to Merton (1949) and his seminal work on theories of the middle range, the unification of middle range theories through synthesis is a natural progression of the study on a topic area. This does not mean that this research is aiming to generate grand theory, but it does certainly aim towards greater levels of abstraction and generalisability than most middle range theory. Thus, the aim of this research could be considered and described as formal theory. Any attempt to integrate theory requires theorisation, the topic to which I will now turn.

### *Theorisation as Scholarship*

If theory is an attempt at explanation, theorising refers to the process through which explanations are developed (Swedberg, 2012). While the term theory refers to the product, theorising refers to the process through which theory is developed (Swedberg, 2012, 2017; Weick, 1995). In one sense, theorising precedes theory (Swedberg, 2012). Yet the relationship is more complex than this as there can be no theorising without theory (Krause, 2016; Swedberg, 2012). The argument appears circular but is in reality simple. All thought contains theoretical considerations whether explicit or not, and these pre-existing ways of understanding the world influence how we continue to make sense of the world. Thus, theorising is the application of theory that further refines and develops more theory (Carleheden, 2016).

How theory is conceptualised has important implications for how the process of theorising is understood (Krause, 2016). If theory is only understood to refer to the works of pre-eminent scholars (as in the theory<sub>4</sub> sense), to theorise means to debate and discuss what these scholars meant or to apply their concepts in different contexts (Krause, 2016). This can result in a stagnation of theoretical development as theorisation becomes merely the reapplication of existing theory (Swedberg, 2012).

If theory is understood as being concerned with causal mechanisms, to theorise is to generate testable hypotheses (Krause, 2016). This perspective also limits theoretical advancement as it assumes a particular epistemological and ontological position about what constitutes knowledge and how this knowledge may be produced. An alternative view on theorising, based on the understanding of theory as being concerned with description and understanding but not necessarily predication, would be to view theorising as a process through which new concepts are developed and through which concepts are related to one another (Krause, 2016). In this view, theorising becomes a search for meaning and understanding (Hammond, 2018). While I recognise the value of the other types of theorising, I hold to the latter viewpoint. I view theorising as a personal commitment to making sense of the world (Hammond, 2018; Swedberg, 2012; Weick, 1989).

### The Process of Theorising

The challenge of understanding the theorising process is that it is seldom written about (Hammond, 2018; Swedberg, 2012, 2016). Typically, academic writing focuses on theory (the output) rather than the process of theorising (Hammond, 2018; Weick, 1989). Yet it is vital that we pay attention to the way that theory is developed (Swedberg, 2012).

Accounting for the iterative thinking process of theorising is a challenge. It is only by giving a clear account of the process that the quality of theorising can be assessed (Teo, 2022). To assess the quality of theorising and ascertain if this process has done justice to the topic of enquiry, the reader needs to be able to participate fully in the work and follow the process of discovery rather than just be presented with the conclusions (Clegg, 2012; Swedberg, 2012). Because theorising is deeply personal, the subjectivity of the theoriser must be clearly accounted for (Teo, 2022). For this reason, auto-ethnographic analysis is helpful (Swedberg, 2012). Chapter Five contains my personal reflexive and auto-ethnographic account of theorising about occupation and resilience.

Perhaps the reason why theorisation processes are often not accounted for is because we are uncomfortable with the idea that theory development is often serendipitous (Hammond, 2018; Weick, 1989), iterative (Swedberg, 2012), complex, and messy (Clegg, 2012). Theorising is a deeply personal endeavour which draws upon the individual's experiences and ideas (Hammond, 2018; Swedberg, 2012), some of which are often subconscious (Swedberg, 2017). Because

theorising is concerned with sensemaking, it is not procedural and flexibility of thought is required (Clegg, 2012). While personal, iterative, and serendipitous, the result of inspiration and creativity, theorising is simultaneously the result of rigorous and systematic work and logical progression (Hammond, 2018; Swedberg, 2012), a 'disciplined imagination' (Weick, 1989).

When theories are presented, the emphasis is placed on justification: linear and logical arguments that explain how phenomena or concepts are related (Teo, 2022). This context of justification is helpful for communicating theories, but it does not assist in developing understanding about the process through which theories were generated (Swedberg, 2012). To develop theory, a context of discovery is required (Swedberg, 2012). Theorising requires that we understand the gestalt and only once this has been understood, attempt to capture this in more linear propositions (Weick, 1995). Discovery often depends on unstructured exploration of a topic rather than sequential thinking (Weick, 1989).

The process of theorising often begins with a surprising observation or an intuitive understanding (Hammond, 2018; Wallis, 2010). While at a later stage, this understanding is often justified as a gap in the literature or the need for an alternative explanation (Hammond, 2018), the process of theorising begins before these arguments are formed. For myself, this research began based on an intuitive idea that resilience must be related to the things we do everyday: occupation. From this point onward, the aim of theorising is to do justice to the topic of enquiry (Teo, 2022). To do this, all possibilities should be explored (Teo, 2022). While theorising with pre-existing models is possible, this substantially limits the scope of exploration, limiting the disciplined imagination and thereby reducing the capacity for interesting insights (Swedberg, 2016). In contrast, loosening disciplinary boundaries and expanding frames of reference invite new ways of seeing (Hammond, 2018). For this reason, I chose not to merely re-examine the literature on resilience using a model of human occupation or through an 'occupational lens' but rather chose to engage in interdisciplinary inquiry.

Just as little has been written about theorisation as a process, methodologies for theorisation have been underdeveloped (Swedberg, 2012; Wallis, 2010). There are many tools that can be used in building theory, for example: observation, description, abstraction, generalisation, creating propositions, clarifying the meaning of key terms, describing the domain of applicability, and determining units of analysis (Swedberg, 2017; Wallis, 2010; Weick, 1995). To apply these tools effectively, one must draw on different ways of thinking or different forms of logic (Swedberg, 2012).

*Logic in Theorisation*

Theorisation requires the use of inductive, deductive, and abductive logic (Swedberg, 2017). Induction and deduction are commonly presented as opposites. Induction refers to the process of establishing general rules (generalisations) from observations of the data, while deduction begins with a premise and then applies this to a more specific instance (Neuman, 2011; Swedberg, 2017; Wallis, 2010). It is not possible, however, to simplify the relationship between data and theory to merely inductive or deductive logic, as there is constant movement between data and theory (Clegg, 2012) as well as between induction and deduction (L. O. Walker & Avant, 2005).

A third form of logic that is imperative in theorising is that of abduction. While induction uses observations of reality to generalise rules and deduction shows that an idea can be practically applied, abduction is the way in which new and unexpected ideas are generated more spontaneously (Swedberg, 2017). In abduction, potential ideas are 'tried on' to understand their implications (Neuman, 2011). Differing explanatory frameworks are compared and contrasted to each other so that interesting insights can be developed (Neuman, 2011). Theorising often begins with abduction, then progresses to deduction and finally ends with induction where ideas are evaluated against data (Swedberg, 2017). Yet within this general progression, the ability to move between these different ways of thinking is paramount (Swedberg, 2017; L. O. Walker & Avant, 2005).

*The Significance of Constructs*

If theorising is the process through which theories are developed, concepts are the heuristic (Slaney & Racine, 2011, 2013). Concepts are fundamental to how we see the world and it is therefore vital that we draw attention to conceptualisation if we wish to generate interesting and novel theoretical insights (Carleheden, 2016). Theorisation is contingent on conceptualisation.

Broadly speaking, concepts help us to make sense of experience (Teo, 2022). They are approximations or discrete abstractions of reality that help summarise what we know about the world (Slaney & Racine, 2011). Concepts are mental representations that group phenomena or items that have similar features (Slaney & Racine, 2011; Swedberg, 2017). As approximations or loose groupings, concepts are often easier to use than they are to explain or define (Neuman, 2011). Nevertheless, the language of concepts is of critical importance as concepts cannot be separated from the terms used to express them (Slaney & Racine, 2011). Concepts not only describe, but also create reality thereby shaping opportunities for praxis (Teo, 2022).

The terms concept and construct are often used interchangeably as approximate synonyms (Markus, 2008; Slaney & Racine, 2013) yet there are subtle differences. Constructs can be thought of as theoretical concepts (Slaney & Racine, 2013). Constructs generally contain a greater degree

of abstraction about human behaviour. They link phenomena by describing processes or ideas that are not directly measurable (Slaney & Racine, 2013). In this sense, constructs refer to ideas that do not actually exist. While they are used to capture and convey the complexity of what is known about phenomena, constructs only exist as the result of mental synthesis (Slaney & Racine, 2013). While I use the terms concept and construct as loose synonyms (a construct is a type of concept, after all), occupation and resilience are best understood as constructs. Both terms convey information about groups of related phenomena and contain a great deal of abstraction. Therefore, I believe that the term construct better captures their complexity. Because constructs are conceptual, they cannot be clarified through empirical research but instead must be understood in relation to theory.

Concepts or constructs are the basic unit of theorising (Neuman, 2011; Swedberg, 2012, 2016; Teo, 2022). As such, it is important that concepts are clearly understood. For this reason, understanding current conceptualisations of both occupation and resilience are important objectives of this research. Critical re-examination of concepts is an important aspect of theorising that can lead to new insights (Hammond, 2018; Swedberg, 2012).

In theory and theorising, concepts are useful in that they draw attention to similarities between apparently unrelated phenomena and bring order to the presentation of ideas (Swedberg, 2012, 2017). Yet the aims of this research do not end with conceptual analysis. Concepts, or definitions of concepts, on their own do not constitute theory (Sutton & Straw, 1995; Weick, 1989). Theory extends beyond a singular concept to explain how concepts are related (Neuman, 2011; Sutton & Straw, 1995; Swedberg, 2012; Weick, 1989). By aiming to understand how occupation and resilience are related, the focus of this work shifts from conceptual analysis to metatheorising.

### *Metatheory*

Metatheory is theory about theory. Like just about every other term I have introduced, the term metatheory has multiple meanings (J. H. Turner, 1990). The term metatheory can be used to describe theories that are concerned with questions of epistemology and ontology. This understanding of metatheory is consistent with Abend's (2008) theory<sup>7</sup>. Yet metatheory can also refer to analyses of theories (Wallis, 2010) or to refer to grand overarching theories (Ritzer, 1990). While perusing metatheory for the sake of metatheory is of questionable value, metatheory is important because it allows for the development of better theories (Ritzer, 1990; J. H. Turner, 1990). Metatheory allows for the clarification of concepts, the analysis of convergence and divergence between theories, the testing of theories against existing theoretical data and the synthesis of theory (J. H. Turner, 1990).

Just as theorising is distinct from theory, metatheorising is distinct from metatheory. Metatheorising refers to the systematic study of theory, theorising about theory, to which there are three main approaches:  $M_U$ ,  $M_P$  and  $M_O$  (Ritzer, 1990). Although there is overlap between these approaches, these types can be differentiated based on their aims (Ritzer, 1990). The aim of  $M_U$  is to understand theory better. In  $M_P$ , metatheorising serves as a prelude to the development of theory.  $M_O$  metatheorising is concerned with creating overarching or universal theories. The aims of this research include understanding current conceptualisations of occupation and resilience in order to generate theory about how the two constructs are related. Therefore, this research can be understood as a combination of  $M_U$  &  $M_P$ .

### Theory Synthesis

Theory synthesis refers to a specific form of metatheorising where related theories are analysed and useful aspects integrated (Pound & Campbell, 2015; J. H. Turner, 1990). By broadening understandings, theory synthesis, especially synthesis that involves the integration of theory across disciplinary boundaries, allows for new insights and thus new opportunities for practice (Wallis, 2010). For this reason, theory synthesis is key in the development of robust theories that are practically relevant (Pound & Campbell, 2015; J. H. Turner, 1991). While the aggregation of research through reviews is valuable for informing practice and policy, the summation of research in this way can only be applied in similar contexts. The development of theory through theory synthesis (or metatheorising) is of value for informing practice and policy because it provides principles and ways of thinking that can be applied across a range of contexts.

The process of theory synthesis, and more broadly, metatheorisation, is essentially the same as theorisation (Ritzer, 1990; Wallis, 2010). Instead of theorising about empirical data, theories themselves become the data for theorising. There are, however, a few additional considerations.

In theory synthesis, a general progression from critique to reconstruction and then creation is followed (Teo, 2022). Integration is contingent upon deconstruction and deconstruction requires that implicit assumptions are made explicit (Wallis, 2010). Thus, theory synthesis involves examination of the sources, assumptions, and contexts of development for the theories under examination (Wallis, 2010). Moreover, key concepts that form the basis of theories must be clarified (J. H. Turner, 1990; L. O. Walker & Avant, 2005) and theories should be examined for their points of convergence and divergence (Pound & Campbell, 2015; J. H. Turner, 1990, 1991). Following a systematic approach to theory synthesis is important in deepening insight (Pound & Campbell, 2015; Ritzer, 1990). Although academics have always engaged in theory synthesis (Pound & Campbell, 2015), sound and appropriate methodologies for theory synthesis have been lacking. This has hampered the practice of theorisation and metatheorising in many fields, occupational therapy and occupational science included.

*Theory, Theorisation and Theory Synthesis in Occupational Therapy and Occupational Science*

As is evident from the preceding sections, how theory is understood is important for understanding the process of theorisation, theory synthesis, and the overall advancement of theory development, something that is critical for innovation in praxis.

There appear to be two main forms of theory in occupational therapy and occupational science. The first is theory relating to the central construct of occupation. Theories of occupation are unique to the domain of occupational therapy and occupational science (Clark et al., 1991; Glover, 2009). While focussed on occupation as a central construct, they can be considered theories because they offer explanations of the mechanisms of occupation. These models of human occupation are typically grand or formal theories.

The second understanding of theory that is common in occupational therapy and occupational science is what Abend (2008) refers to as theory<sub>4</sub>, the study and reapplication of the work of great sociologists. If theory is only understood in this way, it stands to reason that much of the work of theorisation in occupational therapy and occupational science has been the reapplication of sociological theory through an occupational lens. Examples of this can be found in the theorisation on occupational choice (Galvaan, 2012), occupational possibilities (Rudman, 2010), and occupational consciousness (Ramugondo, 2015). 'Borrowing' concepts from other disciplines is an accepted practice in occupational therapy and occupational science but the result of this is that we may not even have our own theories (Ramugondo et al., 2015). While the re-examination of sociological theory through an occupational lens has resulted in new insights into occupational processes, if this remains the predominant form of theorisation in occupational therapy and occupational science then we risk limiting opportunities for innovation. The reapplication of existing theory limits opportunity for developing novel insights (Carleheden, 2016).

The importance of theorising in occupational science and occupational therapy is broadly recognised (Clark et al., 1993; Ramugondo, 2015; Ramugondo et al., 2015; Ramugondo & Kronenberg, 2015). Still, the unfortunate implication of only understanding theory as theory<sub>4</sub> is that it undermines the confidence of occupational therapists and scientists to theorise about occupation without drawing on the works of others. Yet there is hope. If we understand that there are multiple valid understandings of theory, and thus, there are various ways to approach theorisation, the opportunity for innovative theorisation about human occupation may yet be realised. Interdisciplinary theory synthesis offers unique opportunities for the development of occupational science.

## Interdisciplinarity

Interdisciplinary research is born out of a recognition that the problems we want to understand and solve are undisciplined (Bruhn, 1995). By drawing on the insights of multiple disciplines, interdisciplinary research provides opportunity for developing unique insights into ‘wicked problems’ (Repko & Szostak, 2020). Interdisciplinary research is distinguishable from multidisciplinary and transdisciplinary research by its emphasis on the integration of disciplinary insights through theory synthesis (Bruhn, 1995; Newell, 2006; Repko & Szostak, 2020).

In multidisciplinary research, insights from different disciplines are placed side by side but not integrated (Repko & Szostak, 2020). There is a strong tradition of multidisciplinary research in resilience studies, but for theoretical advancement more integration is required than what is possible with multidisciplinary research. Indeed, advancements in resilience theories have been greatest when interdisciplinary research methods have been used (Bush & Roubinov, 2021).

There are different interpretations of the term transdisciplinary, some emphasising that transdisciplinary research involves communities outside of academia (Miller et al., 2008; Repko & Szostak, 2020) while other definitions state that transdisciplinary research develops new completely synthesised theoretical perspectives (CohenMiller & Pate, 2019; Pye, 2019). Interdisciplinary and transdisciplinary research are closely linked as transdisciplinary insights are often the result of interdisciplinary research (Morse, 2015). The defining characteristic of interdisciplinary research is that it draws explicitly from disciplinary perspectives (Repko & Szostak, 2020), while transdisciplinary research does not necessarily do so.

To examine the linkages between occupation and resilience it is necessary to build an understanding of both constructs, a process that requires drawing extensively from disciplinary insights. I therefore position this research within an interdisciplinary paradigm. This positioning is further justified by the calls for interdisciplinarity in occupational science and resilience studies. Both resilience and occupation, due to their complexity, invite interdisciplinarity. Thus, an examination of their overlaps unequivocally requires an interdisciplinary approach. Next, I discuss interdisciplinarity in the context of occupational science and resilience studies. After this, I present the core considerations of the interdisciplinary paradigm.

### *Occupational Science and Interdisciplinarity*

Occupational Science has always been described as interdisciplinary (Clark, 2006; Clark et al., 1991, 1993; Rudman et al., 2008; Wilcock, 2001; Yerxa, 1990, 1993). While the concept of interdisciplinarity within a discipline carries some tensions (A. D. Calhoun, 2021; Clark, 2006; Frank, 2012; Pierce, 2012; Rudman, 2014), interdisciplinarity within occupational science has been identified as a fundamental characteristic of the occupational science paradigm. Human

occupation is multivariate and there is much richness to be gained by synthesising knowledge about human occupation from diverse fields (A. D. Calhoun, 2021; Rudman et al., 2008). Moreover, the constituent parts of occupation are well studied in other disciplines (Ilott & Mounter, 2000).

The implementation of interdisciplinarity has been a challenge for occupational science as it carries both opportunities and potential pitfalls (A. D. Calhoun, 2021; Rudman et al., 2008). One of these pitfalls is the consumption of theory from other disciplines without adequate synthesis (Pierce, 2012). If the purpose of occupational science is to develop knowledge about occupation and humans as occupational beings (Yerxa, 1990), interdisciplinary research within occupational science must relate the concept of occupation to other concepts through critical synthesis (Pierce, 2012). Such an approach has been highlighted as crucial for the development of theory in occupational science, particularly regarding developing a socially transformative praxis (Angell, 2014; Galvaan, 2021; Rudman, 2014).

### *Resilience and Interdisciplinarity*

Many have argued that resilience should be studied with an interdisciplinary approach because the concept of resilience spans across so many domains of inquiry (Baggio et al., 2015; K. Brown, 2021; Xu & Kajikawa, 2018). Indeed, resilience as a construct has been identified as having the potential to facilitate interdisciplinary inquiry (Baggio et al., 2015; Olsson et al., 2015). Moreover, the greatest advancements in the study of resilience have occurred in the context of interdisciplinary research (Ungar, 2021).

While the need for interdisciplinarity in the study of resilience is acknowledged, there is still more work to be done. Network citation analyses of resilience research continue to show that research remains siloed (Baggio et al., 2015; Xu & Kajikawa, 2018). Siloed perspectives limit opportunities for intervention. If we are to broaden the opportunities for intervention, the integration of disciplinary insights, and therefore interdisciplinarity, is required. The emerging multisystem perspective of resilience (see Chapter Two for more detail), has begun to address this need, but more interdisciplinarity is necessary (Atallah et al., 2021; G. E. Richardson, 2002; Ungar, 2018; Wright et al., 2013).

### *An Interdisciplinary Paradigm*

The core concern of the interdisciplinary paradigm is the integration of diverse forms of knowledge and theory to build comprehensive understandings, ultimately to address pragmatic issues (Bruhn, 1995; Newell, 2006; Repko & Szostak, 2020). To do this, firstly an emphasis on integration through knowledge synthesis, rather than merely a 'borrowing' of constructs and theories, is necessary (CohenMiller & Pate, 2019; Pye, 2019; Repko & Szostak, 2020). Secondly, a commitment to epistemological and ontological pluralism is required (Repko & Szostak, 2020).

### Knowledge Synthesis

There are two steps involved in interdisciplinary theorisation: drawing on disciplinary insights and integration. To integrate, it is necessary to first develop an adequacy of understanding of the relevant disciplinary knowledge and theories (Repko & Szostak, 2020). As discussed in Chapter Two, there are many theories of resilience and thus it is vital to understand what is meant by the term before any attempt at synthesis (Vale, 2014). Similarly, the relation of occupation to other concepts is contingent on full theoretical descriptions of what the term means (Pierce, 2012). Therefore, in this research, the initial search, sampling, and critique examined theories of resilience and theories of occupation separately to develop insight before drawing connections and developing a synthesis. This process is described in more detail in Chapter Four.

### Epistemological & Ontological Pluralism

All theories and empirical research contain epistemological and ontological assumptions (Reus-Smit, 2013). Epistemology is concerned not only with how we know, but also how we justify knowledge as valid (Reus-Smit, 2013). In contrast, ontology is concerned with understanding the nature of being and how things are related (Reus-Smit, 2013). The aim of pluralism is not to see one view or another as superior, but to participate in the intellectual effort of engaging with challenges to one's own thinking.

Epistemological and ontological pluralism recognises that a plurality of perspectives is necessary to reach a nuanced understanding of an issue (Leonelli, 2005). This recognition is based on an understanding that all epistemological positions impose limits on research by bounding insights to a particular way of constructing knowledge (Suri, 2013). Epistemological pluralism not only recognises that there are multiple valuable ways of constructing knowledge, but also appreciates that there are similarities and overlaps between epistemologies (Suri, 2013). A position of epistemological and ontological pluralism has additionally been advocated in the study of socio-ecological resilience (Folke, 2016).

An additional benefit of adopting a stance of pluralism is that it allows one to avoid becoming caught in debates about epistemology and ontology that distract from theory development (J. H. Turner, 1991). Of course, the position of pluralism is steeped in epistemological and ontological assumptions. One cannot escape complexity.

Pluralism is strongly influenced by the philosophy of pragmatism, a philosophy that has had considerable influence within occupational science (Morrison, 2016, 2021). Pragmatism, as advocated for by theorists such as John Dewey and Charles Pierce, is concerned primarily with producing knowledge that is practically relevant (Reus-Smit, 2013). It is a bias that I am comfortable adopting, and a position that is consistent with both occupational science (Kinsella,

2012; Kinsella & Durocher, 2016; Lawlor, 2021; Rudman et al., 2008) and with resilience studies (Olsson et al., 2015), but an assumption and bias nonetheless, so worth explicating.

We cannot escape questions of ontology and epistemology, but we are given the option of engaging with our assumptions and choosing to consider diverse and alternative perspectives (Reus-Smit, 2013). Making assumptions explicit is important in theorising (Wallis, 2010). This process of engagement is particularly significant given the context of resilience studies where previous attempts at integration have received criticism for attempting synthesis without adequate attention being paid to epistemological and ontological assumptions. In the study of socio-ecological resilience, the assumptions driving ecological science differ considerably from those driving social studies (Bousquet et al., 2021; Olsson et al., 2015).

One of the arguments against pluralism is that of incommensurability where it is argued that ontological and epistemological differences mean that theory cannot be synthesised across disciplines as the underlying assumptions differ too greatly (Olsson et al., 2015; Pound & Campbell, 2015). While this may be a valid concern, I would argue that pluralism is the answer to incommensurability as it allows the topic under study to be examined from different ontological and epistemological positions without advocating for one position as superior to another. In this way, epistemological and ontological pluralism is a genuine attempt at understanding different ways of knowing. Engaging with these different ways of thinking can stimulate thought and result in more interesting theory (Weick, 1989). However, to do so requires critical reflexivity.

### Critical Reflexivity in Theorisation

Reflexivity is of paramount importance in interdisciplinary theory generation. While determinations of quality are often made based on procedural rigour for more conventional research methodologies, interdisciplinary theorisation is both iterative and deeply personal. For this reason, the quality of theorisation is dependent on the theorist and their reflections (Teo, 2022; Wallis, 2010).

While the practice of reflexivity does not guarantee the quality of theorisation, it remains important as it opens the process to the possibility of better theorising (Teo, 2022). Critical reflexivity is important in all theorisations, but it is particularly important in the context of epistemological and ontological pluralism (McFerran et al., 2017; Repko & Szostak, 2020; Reus-Smit, 2013; Suri, 2013) and metatheorising (Wallis, 2010).

A lack of reflexivity carries risks. In the study of occupation, critical reflexivity is necessary to reduce the risk of theoretical imperialism (Farias & Rudman, 2019; Hammell, 2009a, 2011; Kiepek et al., 2014; Rudman et al., 2008). Similarly, in resilience studies, a lack of critical reflexivity can result in the perpetuation of adversity (Atallah et al., 2021).

It is important to make explicit the questions asked and the moments of inspiration and excitement (Wallis, 2010). But equally so, it is vital to reflect on the questions not raised and the theories that are discarded (Teo, 2022). Chapter Five recounts in detail the questions posed and the process of theorising about occupation and resilience.

## Conclusion

This chapter has captured the orientation of this work as theoretical, interdisciplinary, and critical. Different understandings of the terms theory and theorising were unpacked. The significance of constructs in theory development were explored and the process of theory synthesis explained. I discussed how theory and theorisation have been understood in the study of occupation and suggest that interdisciplinary theory synthesis has potential to contribute to the development of occupational science. The paradigm of interdisciplinarity was introduced and justified. Finally, the value of critical reflexivity in the process of interdisciplinary theory generation was presented.

While the interdisciplinary research process provides a broad conceptual framework for structuring this research, particularly by describing the process of first examining resilience and occupation separately before drawing the two constructs together, the study design of critical interpretive synthesis provides further methodological guidance.

## Chapter Four: Critical Interpretive Synthesis

This chapter details the main methodology of this research: an interpretive review using the methodology of critical interpretive synthesis (CIS). I discuss the appropriateness of this method given the research purpose and explain the value of theorisation through interpretive review. Next, I provide an overview of the methodology of CIS and explain how it is differentiated from other review methodologies. I also explore some of the considerations necessary in applying CIS methodology in the context of interdisciplinarity. This is followed by a description of the processes involved in the review. After this, I provide an overview of all the works included in the review that form the basis of my theorisation about the conceptual links between occupation and resilience. I end the chapter with a discussion of some of the important considerations in the implementation of CIS and an explanation of the subject matter expert interviews which supplemented the review process. Overall, this chapter describes how I critically explored and synthesised theoretical relationships between occupation and socio-ecological understandings of resilience.

### Theory Development Through Review

If theorisation is a process of making sense (Hammond, 2018; Swedberg, 2012; Weick, 1989), theorisation can and should occur in many different research contexts (Carleheden, 2016; Swedberg, 2016; Teo, 2022). However, there is a particular advantage to developing and refining theory through a review process rather than through empirical (quantitative or qualitative) research.

While it could be argued that theory on the links between occupation and resilience could be generated through primary research methods such as grounded theory and narrative inquiry, or even through quantitative studies aimed at identifying resilience promoting variables, such an approach would not address the need for meaningful integration of diverse disciplinary insights. The main benefit of using a review methodology to develop theory about the links between occupation and resilience is that it provides a framework for the integration process, thereby increasing the quality of synthesis.

The value of research synthesis is well recognised within the evidence-based practice (EBP) movement as there is a need to integrate and make sense of the ever-expanding body of research to best inform policy and practice (Classen & Alvarez, 2015; Dixon-Woods et al., 2005; Grant & Booth, 2009; Harden & Thomas, 2010; Schick-Makaroff et al., 2016). 'Research synthesis' is a broad overarching term used to describe various approaches to combining, integrating, and synthesising research findings (Schick-Makaroff et al., 2016). Despite the importance of theoretical insight in informing policy and practice (Tricco, Antony, et al., 2016), not all research

synthesis is focused on theory generation or refinement. Different research synthesis methods have varied aims including the exploration of the literature and identification of gaps, the evaluation of quality of evidence for interventions, and the development or refinement of theory (Grant & Booth, 2009; Harden & Thomas, 2010). For this reason, the choice of review synthesis methodology must be related to the research question (Dixon-Woods et al., 2005). Differentiating between integrative and interpretative reviews is helpful in selecting a review methodology most aligned with the research question being asked.

### *Integrative Reviews*

Integrative reviews (also known as “aggregative reviews”) are the better-known forms of research synthesis. Some examples include the systematic review, meta-analyses, and scoping reviews (Schick-Makaroff et al., 2016). The defining characteristic of integrative reviews is that the aim is to answer the question ‘what do we know?’. For this reason, integrative reviews present summaries of data (Dixon-Woods et al., 2005; Harden & Thomas, 2010; Noblit & Hare, 1988). With the emphasis placed on summary, integrative synthesis is not explicitly orientated towards theoretical development (Harden & Thomas, 2010). When theory is addressed, integrative reviews are better suited to test theory or advance theory that addresses questions of causality or generalisability (Dixon-Woods et al., 2005). Thus, an integrative review methodology would not support the aim of theorising about the links between occupation and resilience.

In integrative reviews, concepts, as well as the limits of the study, are defined *a priori* and the synthesis process follows a predefined protocol. The benefits of this approach include systematicity, rationality and transparency (Dixon-Woods et al., 2005). A common ideal in the integrative review is to minimise subjectivity and interpretation on the part of the reviewer (Harden & Thomas, 2010). This idea has, however, come under much criticism, as any review process involves subjective decision making and interpretation (Dixon-Woods et al., 2005; Harden & Thomas, 2010). Another shortcoming of this approach is that there is little room to explore new concepts or adjacent literature that may surface during the review process that was not included in the review protocol (Boell & Cecez-Kecmanovic, 2014, 2015). Where the topic under inquiry is not easily defined or if there are many varied understandings of the concepts in question, as is the case with both occupation and resilience, an integrative review methodology is not appropriate. Moreover, integrative reviews are not well suited to inquiry that requires a large degree of critical reflexivity or iterative engagement.

For integrative reviews to be effective, the concepts and phenomena under study need to be well defined (Dixon-Woods et al., 2005; Noblit & Hare, 1988). Moreover, it is both assumed and required that the research paradigms of the primary research included in the synthesis are commensurate (Harden & Thomas, 2010). While it has been established that addressing

questions of epistemology and ontology is important in knowledge synthesis (Suri, 2013), one of the shortfalls of integrative reviews is that they are seldom explicit about the philosophical and theoretical perspectives that influence the synthesis (Schick-Makaroff et al., 2016).

Understanding how occupation and resilience are conceptually related requires a research orientation which is explicitly orientated towards theory and which places emphasis on critical reflexivity. This has precluded the selection of more traditional review methodologies such as systematic reviews, meta-analyses, and scoping reviews. Systematic reviews are not well suited to addressing complex questions with nuance (Tricco, Soobiah, et al., 2016) and their methodology does not support the type of interpretation necessary for theorising. The systematic review is limited by its emphasis on procedural rigor, often with insufficient attention being paid to conceptual clarity. Indeed, there is a risk in systematic reviews where the emphasis placed on methodological rigour can obscure the need for examining epistemological and ontological assumptions (Clegg, 2005, 2012). Moreover, the assumption that following a structured methodology will result in good theorisation is flawed (Weick, 1989). Meta-analyses are focused on statistical methods. Traditional systematic reviews and meta-analyses are not well suited to synthesising complex bodies of literature that includes qualitative and theoretical work (Schick-Makaroff et al., 2016). Scoping reviews merely aim to map existing knowledge and not to generate new theory (Barnett-Page & Thomas, 2009; Grant & Booth, 2009; Schick-Makaroff et al., 2016). Given these limitations, an interpretive approach to research synthesis was required to generate theory on how occupation and resilience are linked.

### *Interpretive Reviews*

Interpretive reviews are often termed 'emerging' as they remain less mainstream (Schick-Makaroff et al., 2016; Tricco, Antony, et al., 2016; Tricco, Soobiah, et al., 2016). This may be due partly to their paradigmatic positioning which stands in contrast to the positivist positioning of more traditional review methodologies. The interpretive paradigm is primarily concerned with human experience and is thus grounded in the everyday lives of people (Noblit & Hare, 1988). The commonality here with an occupational science paradigm is self-evident (G. Whiteford et al., 2000). The interpretive research tradition is primarily qualitative including ethnography, phenomenology, and hermeneutics (Noblit & Hare, 1988). Interpretive reviews may however include both qualitative and quantitative studies in the review (Schick-Makaroff et al., 2016). Examples of interpretive review include concept synthesis, critical interpretive synthesis,

integrative reviews<sup>3</sup>, meta-ethnography, meta-interpretation, meta-study, meta-synthesis, narrative synthesis, and realist review (Schick-Makaroff et al., 2016; Tricco, Soobiah, et al., 2016).

The defining characteristic of the interpretive review is that it is focused on theory production and not simply the aggregation of data (Dixon-Woods et al., 2005; Harden & Thomas, 2010; Schick-Makaroff et al., 2016). Interpretive reviews are therefore conceptual in both process and outcome with the main aim being the integration of concepts and theories (Dixon-Woods et al., 2005; Schick-Makaroff et al., 2016). This process of theorising is necessarily interpretive and requires a reflexive and iterative approach (Dixon-Woods et al., 2005; Harden & Thomas, 2010; Noblit & Hare, 1988; Schick-Makaroff et al., 2016).

Yet just as integrative reviews involve interpretation, interpretive reviews require a degree of integration to support theorisation (Dixon-Woods et al., 2005; Harden & Thomas, 2010). Interpretive reviews often begin with data aggregation and then progress to theorisation, thus extending beyond the scope of more traditional review methodologies. Through such a process, interpretive reviews provide opportunity for theorising that is grounded in prior research (Dixon-Woods et al., 2005). Given that the purpose of this research is to explore how the constructs of resilience and occupation are conceptually related, using an interpretive review methodology affords the opportunity to theorise while drawing on diverse disciplinary insights. Doing so addresses the need that has previously been highlighted in resilience studies for conceptual and theoretical reviews that follow a methodological framework (Ungar, 2018; Windle, 2011). Moreover, adopting such an approach acknowledges that reflexive and interpretive reviews have been more influential in the development of resilience than systematic meta syntheses that adopt predefined protocols (Ungar, 2018). Similarly, the interpretive approach is well aligned with occupational science (Kinsella, 2012). The methodology of CIS creates a structure for the integration and interpretation of interdisciplinary knowledge about occupation and resilience while supporting a reflexive and interpretive approach.

### Critical Interpretive Synthesis

Critical Interpretive Synthesis (CIS) is a knowledge synthesis review methodology that has the explicit aim of theory generation (Dixon-Woods et al., 2006). The purpose of CIS is to generate a deeper understanding from what is already known (Depraetere et al., 2021; Dixon-Woods et al., 2006; Schick-Makaroff et al., 2016). It is one of the few methodologies appropriate for examining, generating, and refining theory (Depraetere et al., 2021; Tricco, Soobiah, et al., 2016) and can

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<sup>3</sup> Despite their name, integrative reviews are indeed a form of interpretive synthesis and not an integrative synthesis as they aim to generate new frameworks or perspectives (Tricco, Soobiah, et al., 2016).

generate theory with broad explanatory power (Dixon-Woods et al., 2006). Furthermore, it is well suited to research that is exploratory in nature (Barnett-Page & Thomas, 2009).

CIS was developed from meta-ethnography and grounded theory to support the synthesis of a larger and more diverse body of literature than the original methods supported (Dixon-Woods et al., 2006). Given the diversity of the body of literature on resilience, and the need to integrate this with literature on occupation, the ability to handle a large and diverse body of literature makes CIS an appealing approach for this research.

Unlike systematic reviews where the process of summation requires homogeneity in terms of research designs, paradigms, and conceptualisation (Dixon-Woods et al., 2005), in CIS complexity and heterogeneity are purposefully sought out (Barnett-Page & Thomas, 2009), as understanding commonality and contradiction supports the development of transformative understandings (Edwards & Kaimal, 2016). This feature of CIS means that it is well suited to the integration of diverse perspectives.

CIS has previously been used in occupational therapy and occupational science literature to explore constructs such as independence (Bonikowsky et al., 2012), meaningful engagement (Du Toit et al., 2019), participation (Cogan & Carlson, 2018), and oppression (Pooley & Beagan, 2021), to examine the uptake of theory (Benjamin-Thomas & Laliberte Rudman, 2018; Farias & Laliberte Rudman, 2016) and to address concepts that have been previously studied but not examined from an occupational perspective (Kiepek, Beagan, & Phelan, 2019). There is thus precedent for the use of CIS in conceptual and theoretical inquiry. Moreover, the critical stance of CIS is in alignment with current calls for reflexivity within both occupational therapy and occupational science (Farias & Rudman, 2019; Hammell, 2009a, 2011; Kiepek et al., 2014; Rudman et al., 2008).

### *Criticality*

The critical stance of CIS is its main distinguishing factor (Harden & Thomas, 2010). In CIS, the literature itself is seen as deserving of scrutiny (Dixon-Woods et al., 2006). Questioning the way in which concepts have previously been conceptualised creates opportunity for reconceptualisation of what is already known (Harden & Thomas, 2010; Schick-Makaroff et al., 2016). This is of particular value when it comes to the examination of occupation and resilience as up till now, the study and theorisation of these constructs has been dominated by western voices (Atallah, 2016; Hammell, 2009a; Kantartzis & Molineux, 2011). The critical stance of CIS thus supports the foregrounding of decolonial perspectives and critical perspectives.

Yet the critical stance of CIS does not confine itself to only questions of power dynamics, as in critical social theory (C. Calhoun, 1995), but also seeks to question all aspects of the literature included in the review, including normative assumptions underlying the literature, and questions

of epistemology and ontology (Schick-Makaroff et al., 2016). By paying attention to questions of epistemology and ontology, and by engaging in critical reflexivity, CIS supports the synthesis of diverse literature.

Thus, 'critical' does not just refer to the critique of literature but refers to the whole orientation of the methodology (Dixon-Woods et al., 2006). This includes the importance of the reviewer interrogating their own beliefs, values, and assumptions during the research process (Dixon-Woods et al., 2006; McFerran et al., 2017).

### *The Review Process*

While CIS is sensitive to the logic of conventional systematic review methodologies, it adopts a more interpretative and iterative approach (Dixon-Woods et al., 2006). This is based on the understanding that following a predetermined research process does not guarantee rigour and that rigour can be supported through iterative processes. Similarly, replicability is not necessarily a measure of quality (McFerran et al., 2017). The flexibility of an iterative approach allows for the development of the methodology as the researcher's knowledge of the subject develops through the research process (Schick-Makaroff et al., 2016).

In traditional review methodologies, predictable steps are followed, often according to a predefined protocol. First, important concepts and the scope of the research is carefully defined. Next the literature is searched and selected based on predefined inclusion and exclusion criteria. This selection process may or may not include an appraisal of methodological quality. Finally, pertinent findings are extracted and presented (Harden & Thomas, 2010).

By contrast, in CIS, terms are not predefined, and the research question is continuously refined during the review process (Dixon-Woods et al., 2006). Open search strategies are used to identify a broad sample frame and the literature for inclusion in the review is sampled based on potential theoretical contribution (Dixon-Woods et al., 2006). Critique is not confined to the quality appraisal process but is considered fundamental to the overall methodology (Dixon-Woods et al., 2006). Most importantly, CIS rejects a staged approach to research synthesis and the definition of the research process *a priori*. Instead, consistent with interdisciplinary research approaches, the four core processes involved in review – including determining scope, the identification of literature, abstraction and analysis, and synthesis – are seen as dynamic, iterative, recursive, and mutually informing (Dixon-Woods et al., 2006).

### *CIS and Interdisciplinarity*

Before moving on to the core processes of CIS and how they have been implemented, a note needs to be made on the adaptation of CIS methodology to suit the interdisciplinary nature of this research. While CIS was developed in a multidisciplinary context (Dixon-Woods et al., 2006), and

is well suited to the interdisciplinary paradigm, one main adaptation was required. In the original CIS methodology, research from multiple disciplines addressing the same topic was pooled together (Dixon-Woods et al., 2006). This approach is well suited to topics where there is literature that clearly addresses the topic under question, even if this literature originates in different disciplines. However, as discussed in Chapter Two, there is very little literature that addresses both occupation and resilience explicitly from a theoretical perspective. Therefore, to answer the research question of how occupation and resilience are conceptually related, it is necessary to understand occupation and resilience as separate constructs first. Moreover, an interdisciplinary orientation requires that the contribution of the separate disciplines, in this case, occupational science and resilience studies among others, is recognised (CohenMiller & Pate, 2019; Pye, 2019; Repko & Szostak, 2020). Thus, during the early stages of the review, occupation and resilience were researched concurrently but independently. My understanding of how occupation and resilience are linked, and the interdisciplinary synthesis, therefore evolved through this process. This process is illustrated below in figure five.



***Figure 5 Logic of the Review Process***

Importantly, the examination of occupation and resilience first as separate constructs does not represent separate review processes. Rather, this examination was the requisite first stage of understanding both occupation and resilience. The aim of this first stage was not to develop all-encompassing understandings of either occupation or resilience but rather aimed at developing an 'adequacy of understanding' (Repko & Szostak, 2020), that would support theorisation about how occupation and resilience are related.

Given that CIS was developed to be used with large and complex bodies of literature (Dixon-Woods et al., 2006), this modification to first examine occupation and resilience separately, did not have major implications for the implementation of the methodology other than guiding the identification of literature which is discussed in more detail below.

*Implementation of the Method*

CIS involves four core processes that are mutually informing (Dixon-Woods et al., 2006). They are: determining the scope of the review, the identification of literature, abstraction and analysis of the literature, and finally, synthesis. Here I describe the techniques, methods and strategies used in each of these processes. For ease of reporting, I describe the questions that I was grappling with as I moved between the different processes in Chapter Five. Thus, this section is more of a procedural description of the processes involved, while Chapter Five contains a reflexive account of the overarching process.

**Table 4 Core Processes of CIS**

<b>Four Processes of Critical Interpretive Synthesis</b>
Determining Scope
Identification of Literature
Abstraction and Analysis
Synthesis

One of the common criticisms of the emerging knowledge-synthesis methodologies is that while they provide a strong foundation for determining the overall approach, they sometimes lack operationalisation (Tricco, Soobiah, et al., 2016). This is no different for CIS (Depraetere et al., 2021). In refining and operationalising my methodology, I have also drawn considerably from the hermeneutic approach to literature reviews, meta-ethnography and grounded theory, and interdisciplinary methods. Hermeneutics, like CIS, forms a part of the interpretive research tradition (Noblit & Hare, 1988) and the hermeneutic approach to literature reviews helped operationalise my approach to the identification of literature. Similarly, CIS is developed from meta-ethnography and grounded theory thus drawing on these methods is not only consistent with CIS but provided greater clarity for the process of memo-writing as a part of the abstraction and analysis process. Lastly, given that research into the links between occupation and resilience requires interdisciplinary integration, interdisciplinary methods helped guide the synthesis process. First, however, I describe the process of determining scope.

*Determining Scope*

Where the aim of the review is to explore an area of interest, the scope of the review is difficult to determine at the outset. Trying to define the scope of the project without engaging with the literature in depth can lead to the artificial construction of boundaries and the exclusion of

enlightening perspectives. In interpretive reviews, and more specifically in CIS, it is understood that fields overlap and the boundaries between fields are diffuse (Dixon-Woods et al., 2006). Boundaries for the scope of the review do however need to be drawn. Yet instead of being defined at the outset, the scope of the review is constantly being determined and re-determined as new information comes to light during the process of exploration. Such an approach allows for the exploration of commonalities and contradictions in the literature thereby enriching synthesis (Edwards & Kaimal, 2016).

While in more conventional review methodologies the research question and variables are defined at the outset, in CIS, the research question rather focuses on a field of inquiry and the concepts and variables contained in the research question are clarified through the CIS process (Dixon-Woods et al., 2006). Thus, resilience and occupation were not predefined. Rather the constructs of occupation and resilience were explored as part of the CIS process. This approach to asking research questions that are open to further refinement is also preferable in the interdisciplinary research process (Bruhn, 1995) as it is understood that the process of exploring, critiquing, and problematising taken-for-granted-assumptions in the literature will not only generate more insightful research questions, but also more influential theoretical development (Alvesson & Sandberg, 2011).

#### Identification of Literature

The identification of literature is the foundation of reviews. This process includes search strategies, screening and sampling and is shaped by the overall orientation of the review (Finfgeld-Connett & Johnson, 2013).

In more conventional review methodologies, which were designed for the summation of evidence in well-defined fields, the aim of the literature search process is to conduct an exhaustive search (Boell & Cecez-Kecmanovic, 2015; Finfgeld-Connett & Johnson, 2013). However, where there is permeability in the topics of inquiry, aiming for an exhaustive review of all literature is untenable (Schick-Makaroff et al., 2016). Rather, the aim in a theory generating review is an expansive literature search (Finfgeld-Connett & Johnson, 2013). It is therefore unnecessary to locate all literature on the topic of inquiry. Rather, to improve the quality of the synthesis, the goal is to ensure that the literature search process identifies a broad range of concepts and perspectives (J. Thomas & Harden, 2008), as well as the most significant works within the area of inquiry (Grant & Booth, 2009). This was a particular challenge when it came to resilience studies as the expanse of literature published on resilience makes it more challenging to identify core literature (Xue et al., 2018). Bibliometric analyses in resilience studies such as Smirnova et al. (2021), Meerow et al. (2016), Xue et al. (2018) and Xu and Kajikawa (2018) were helpful in clarifying key journals and authors that are influential in the field.

In CIS, the use of several search strategies – including database searching, reference chaining, hand searching key journals and contact with experts – is advocated for (Depraetere et al., 2021; Dixon-Woods et al., 2006; Finfgeld-Connett & Johnson, 2013; Flemming, 2010). This use of broad search strategies is a key feature of CIS (Depraetere et al., 2021).

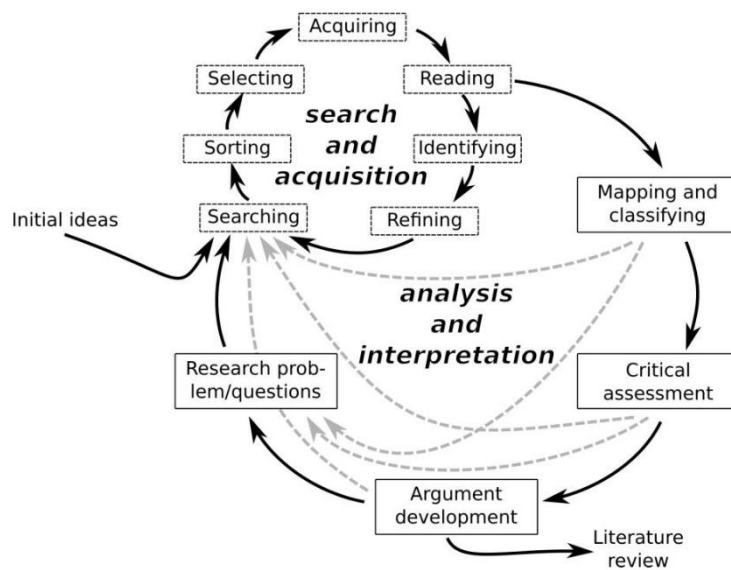
While more conventional review methodologies also advocate for the use of broad search strategies, the main emphasis is often placed on database searches with alternative search strategies seen as adjuncts. Relying on database searching as a primary strategy has many shortfalls. Firstly, such an approach relies on predefined boundaries which are sometimes arbitrarily defined (Tricco, Antony, et al., 2016). Secondly, databases are limited in their coverage (Boell & Cecez-Kecmanovic, 2010). Thirdly, the selection of search terms is not a precise science, and, where the body of literature is broad and diverse, even sophisticated search strategies will not yield all relevant texts (Boell & Cecez-Kecmanovic, 2010; Schick-Makaroff et al., 2016). The study of resilience has a particularly amorphous body of literature. Moreover, while following a highly structured approach is considered beneficial in terms of replicability, it downplays the importance of engaging with the literature (Boell & Cecez-Kecmanovic, 2014).

In CIS, engagement with the body of literature is facilitated by the concurrent use of multiple search strategies as well as simultaneous searching, sampling, analysis, and synthesis (Dixon-Woods et al., 2006). The identification of relevant literature for inclusion in the review is therefore seen as integral to the entire review process, not as a single stage at the start of the review.

Yet, given the ubiquity of traditional literature search methodologies along with their sequential PRISMA flow diagrams, I struggled to conceptualise both how divergent strategies could be used concurrently as well as how the literature search process interacted with sampling, analysis, and synthesis. This is where a hermeneutic approach to literature review proved helpful.

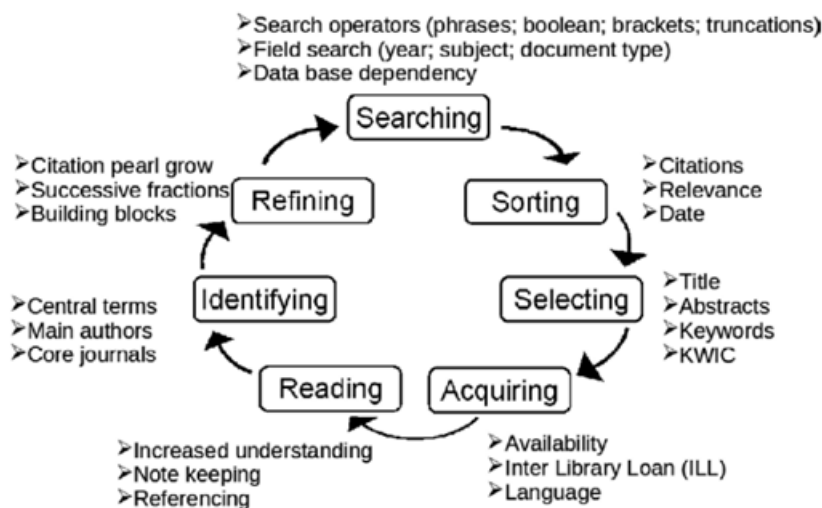
#### *A Hermeneutic Approach*

Hermeneutics is the study of interpretation (Boell & Cecez-Kecmanovic, 2014) and is therefore of obvious relevance to interpretive reviews. Moreover, theorising itself is hermeneutic in nature (Teo, 2022). According to a hermeneutic understanding, the interpretation of an individual text is dependent on an understanding of the body of literature, which in turn is dependent on the interpretation of individual texts (Boell & Cecez-Kecmanovic, 2010). Thus, the process of conducting a literature review can be understood as a hermeneutic circle (Boell & Cecez-Kecmanovic, 2010). The hermeneutic circle is illustrated in figure 7. Identification and selection of literature is therefore seen as integrated with the process of interpretation and analysis (Boell & Cecez-Kecmanovic, 2014). In both advocating for simultaneous identification of literature and interpretation, the alignment between CIS and a hermeneutic approach is clear.



**Figure 6 Hermeneutic Circles (Boell & Cecez-Kecmanovic, 2014)**

In viewing these processes as intertwined, the product of the review is understood as the unique interaction between the reviewer and the literature (Boell & Cecez-Kecmanovic, 2015). For this reason, it is not assumed that a ‘correct’ or ‘ultimate understanding’ can be reached. Rather the emphasis is placed on developing understanding that is contextually situated, meaningful and saturated (Boell & Cecez-Kecmanovic, 2010, 2014; Finfgeld-Connett & Johnson, 2013). The open and iterative approach to literature searching allows for an evolution of understanding as well as the inclusion of learning from adjacent areas (Boell & Cecez-Kecmanovic, 2010; Finfgeld-Connett & Johnson, 2013).



**Figure 7 A Hermeneutic Approach to Selecting Literature (Boell & Cecez-Kecmanovic, 2010)**

A hermeneutic approach begins with a small number of highly relevant works and the search is expanded from here (Boell & Cecez-Kecmanovic, 2010; Finfgeld-Connett & Johnson, 2013). Search processes include database searching, reference chaining, hand searching key journals, exploring the works of key authors and consultative processes. Browsing the literature is considered a core practice as the reviewer explores, examines, and abandons information (Boell & Cecez-Kecmanovic, 2010; Finfgeld-Connett & Johnson, 2013). It is understood that key texts will stand out to the reviewer because it 'resonates, gives vision or adds to understanding' (Reed, Smythe, et al., 2013, p. 254). The identification of literature that sparks imagination thus forms the foundation and core of theorising.

#### *Early Literature Exploration*

During early stages of the review, I used a more conventional search strategy to try and find literature that directly addressed both occupation and resilience. Appendix B details this initial search strategy and a discussion of the findings of this search can be found in Chapter Two: Conceptualising Resilience and the Rationale for Integration in the section on resilience in occupational therapy and occupational science. However, this more conventional approach showed that there was insufficient literature in this area to aid in the development of theory on the links between occupation and resilience.

Where existing literature does not answer the review question directly, conceptual innovation with regards to literature searching is required (Harden & Thomas, 2010). Therefore, instead of looking for literature that addressed both occupation and resilience together, I shifted my strategy to look for literature on occupation and resilience as separate constructs with the intention of synthesising the insights from these two separate bodies of literature. The searches were conducted separately but concurrently and with sampling considerations that were primarily influenced by interest in how the constructs of resilience and occupation might be related.

In CIS, the identification of literature is guided by the expertise and previous knowledge of the reviewers (Dixon-Woods et al., 2006). In several recent applications of CIS, instead of beginning the search process with a database search, key pieces of literature were identified by the reviewers as a starting point for analysis (McFerran et al., 2017). This approach is supported by a hermeneutic orientation (Boell & Cecez-Kecmanovic, 2010; Finfgeld-Connett & Johnson, 2013).

After the initial preliminary database searches that revealed that there was very little written about occupation and resilience, I adopted a similar strategy working through the interdisciplinary textbook *Multisystemic Resilience: Adaptation and Transformation in Contexts of Change* (Ungar, 2011). This reading helped shape the focus of my search strategies. I was able to recognise the importance of including both psychosocial and ecological perspectives on resilience – thus shaping the selection of databases to search. I could confidently exclude literature on

resilience from material and computer sciences recognising that their perspectives were not well-suited to synthesis with occupational perspectives. I was also able to narrow my focus in both occupation and resilience to socio-ecological perspectives as this showed the most potential for synthesis. Finally, I was able to identify the range of theory that I was most interested in as formal theory. While I have included some substantive theories<sup>4</sup>, that is theories that are bounded to a particular topic and context, in the synthesis, early exploration of the literature showed that substantive or middle range theories from resilience studies were often too focused on applications or specific contexts where I was interested in the broader overarching principle that apply across contexts. These insights were important in guiding further searching. Five book chapters from *Multisystemic Resilience* were included in the final review.

#### *Search Strategies*

In selecting literature for the full review, a broad range of search strategies were used. Here I provide the rationale and overview of the various methods used to find literature, including identifying key works that I had previously read, database searching, reference chaining, hand searching of core journals, exploring the works of key authors and consultative processes.

Because of the iterative and purposive approach adopted, search strategies were not designed to be replicable. Rather transparency was sought in keeping clear records. The aim of transparency being that the reader can determine for themselves the value of the findings (McFerran et al., 2017).

#### *Preliminary Reading*

I have been interested in understanding the links between occupation and resilience for quite some time. This combined with my early literature exploration meant that I had several key sources flagged for inclusion in the review. In CIS, pre-existing awareness of the research topic is an advantage to be embraced (Dixon-Woods et al., 2006).

#### *Database Searching*

Resilience, occupation, and theory were the grounding concepts for the database searches. Grounding concepts differ from search terms or keywords in that they describe the topics of interest (Finfgeld-Connett & Johnson, 2013). The same concept can be described using a non-finite number of terms and the same term can be used to describe many different topics (Boell & Cecez-Kecmanovic, 2010, 2015). Moreover, overreliance on search terms may result in missing

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<sup>4</sup> See Kantartzis and Molineux (2017), Dickie (2010) and Reed et al., (2011) for examples of substantive theories of occupation that were included in the review. For substantive theories of resilience included in the review see Shrestha, 2019, Theron (2021), Clarke & Mayer (2017), Vindevogel (2017), Walsh-Dilley & Wolford (2015), Harrison (2013), Masten (2018) and Theron, Theron & Malindi (2013).

adjacent literature on the same topic that has not made use of the same terms (Dixon-Woods et al., 2005). For this reason, database searching was only one of the search methods used.

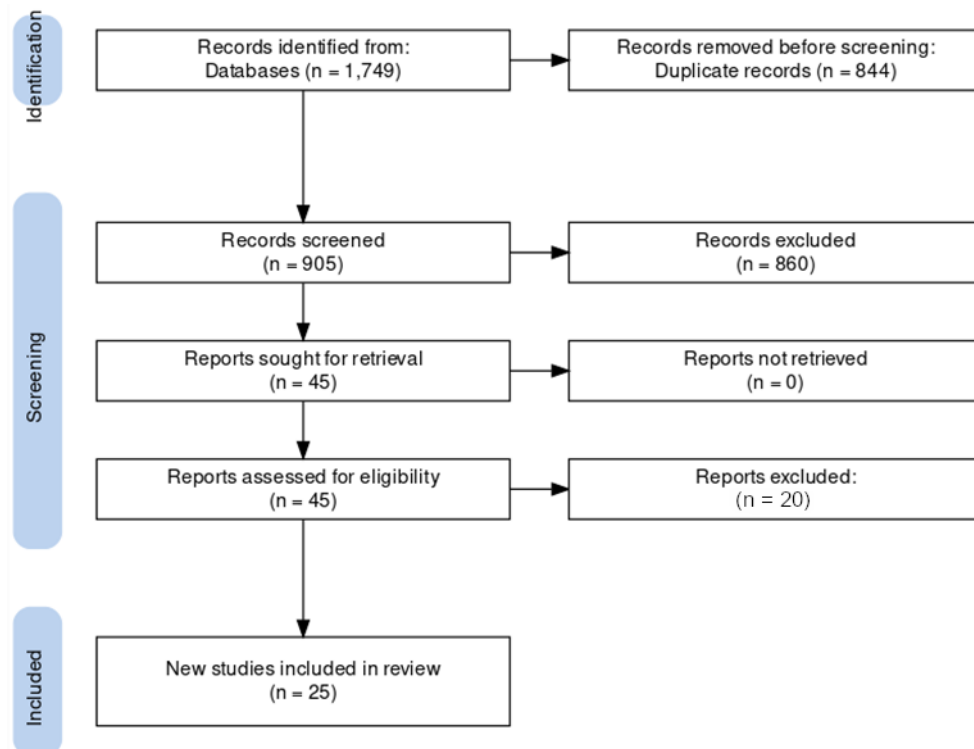
*Table 5 Grounding Concepts and Search Terms*

<b>Grounding Concept</b>	<b>Search Terms</b>
Resilience	Resilience OR Resiliency OR Resilient
	Occupation
	AND
Occupation	Occupational Therapy OR Occupational Science
Theory	Theory OR Concept OR Construct OR Crit*

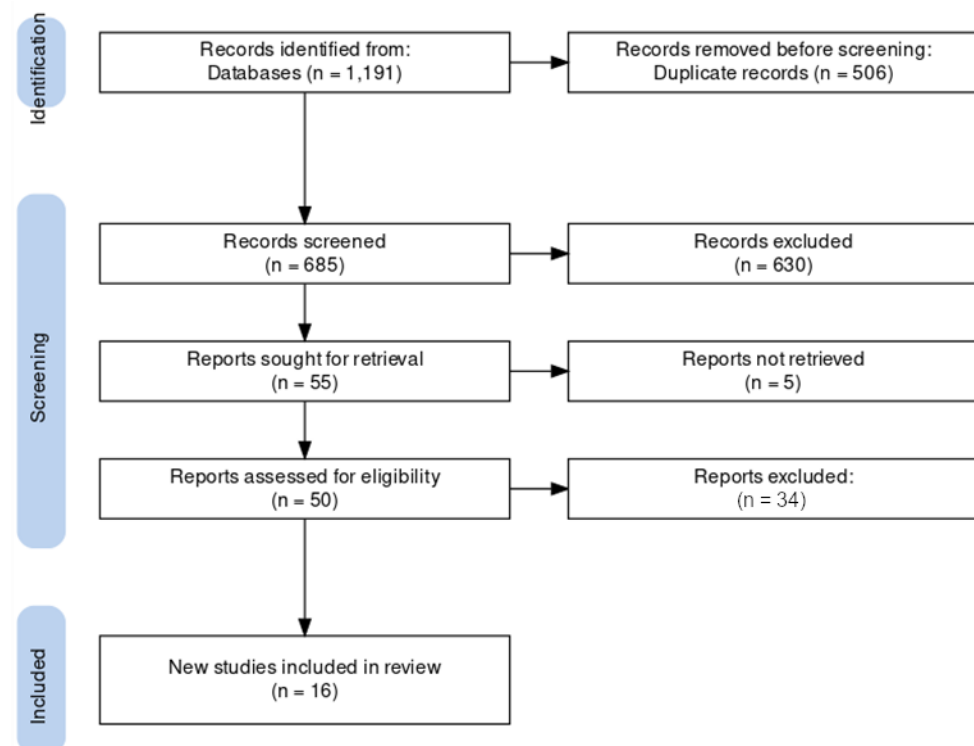
The term 'occupation' is incredibly common but is typically not used in the sense of human occupation as used in occupational therapy and occupational science, and thus cannot be used on its own for literature searches (Ilott & Mounter, 2000; Roberts & Bannigan, 2018). In my literature searches I therefore combined the term 'occupation' with 'occupational therapy OR occupational science'. The shortfall of this method was that search results from the adjacent fields of sociology and anthropology that examine occupation from the perspective of work were not included. Similarly, there may be other literature that describes occupational processes without using the term occupation (Hocking, 2000).

Effective database searches must not only identify relevant literature but also exclude irrelevant sources as small sets of relevant literature is of far more value than large sets that require combing through (Boell & Cecez-Kecmanovic, 2014, 2015). To make database searches more manageable, and in line with the research objectives focus on current conceptualisations, database searches were time bound to the last 10 years. This limit was however only applied to the database searching and not to the overall search timeframe in order not to result in the exclusion of seminal works that were important for the synthesis (Windle, 2011). Searches were also limited to English. Yet despite these limitations, database searching still yielded high numbers of results that were generally unapplicable, this was partly due to the emphasis on formal theory over substantive theory as there is no limit or search term that can be used to discriminate between different levels of theory.

Full details of the database searches can be found in Appendix C. The following databases were searched: Academic Search Premier, Africa Wide, CINAL, ERIC, Health Source Academic, Medline, APA Psych, APA Psych Info and Web of Science.



**Figure 8 Flow Diagram for Database Searching on Occupation**



**Figure 9 Flow Diagram for Database Searching on Resilience**

## Reference Chaining

Reference chaining, also known as citation pearl growing, citation chaining or snowballing, is a way of identifying further literature from known sources (Boell & Cecez-Kecmanovic, 2010). Citations can be traced forward or backward. Backwards through reference lists and forward using search engines that keep track of citations such as Web of Science and Google Scholar. Whilst reading through included works, I kept note of sources that were referenced repeatedly and I scanned through reference lists to browse references that appeared interesting (this again highlights how analysis, and the identification of literature are intertwined). If a particular piece of literature was proving helpful to my analysis, I would look that paper up on a search engine to see if any newer publications that cited it appeared of relevance. 19 more works on occupation were identified through reference chaining and 11 on resilience.

## Core Journals

Another strategy used to identify literature of relevance was to hand search key journals (Boell & Cecez-Kecmanovic, 2010). I was able to identify these journals based on their frequent publication of works that I had already included in the review. These journals are listed below in table six. I hand searched their indexes over the last 5 years from 2018 to 2022 with the exception of *Resilience* which I searched from 2015 until it was discontinued in 2019. Three works on occupation and three on resilience were identified through hand searching.

**Table 6 Key Journals**

<b>Journal</b>	<b>Key Focus</b>	<b>Publisher</b>
<b><i>Occupation</i></b>		
Journal of Occupational Science	Human Occupation	Taylor & Francis
Canadian Journal of Occupational Therapy	The Science of Occupational Therapy	Sage Journals
Scandinavian Journal of Occupational Therapy	Occupational Therapy and Occupational Science	Taylor & Francis
<b><i>Resilience</i></b>		
Ecology & Society	Social Ecological Systems	Resilience Alliance
Resilience	Policy & Discourse	Taylor & Francis

## Key Scholars

Similarly, if I noted that particular authors were frequently cited, that their contributions were influential in my synthesis process, or that they had been prolific in an area of interest, I would search their research profile on Web of Science and Google Scholar in order to check that I did not miss any relevant publications. Six publications on occupation and three on resilience were included in the review through this process.

**Table 7 Central Resilience Scholars**

<b>Scholar</b>	<b>Field</b>	<b>Affiliation</b>
Katrina Brown	Social Sciences	University of Exeter
Carl Folke	Sustainability Science	Stockholm University
Crawford Stanley Holling	Ecology	Resilience Alliance
Suniya Luthar	Psychology	Columbia University
Ann Masten	Developmental Psychopathology	University of Minnesota Twin Cities
Linda Theron	Psychology	University of Pretoria
Michael Ungar	Social Work	Dalhousie University
Adrian van Breda	Social Work	University of Johannesburg
Brian Walker	Ecology	CSIRO Australia

**Table 8 Central Scholars on Occupation**

<b>Scholar</b>	<b>Affiliation</b>
Rebecca Aldrich	University of Southern California
Antoine Bailliard	Duke University
Malcolm Cutchin	Pacific Northwest University of Health Sciences
Virginia Dickie	University of North Carolina at Chapel Hill
Clare Hocking	Auckland University of Technology
Karen Whalley Hammell	University of British Columbia
Ann Wilcock	University of South Australia

### Consultative Processes

The final search strategy used was a consultative process with subject matter experts for both resilience and occupation. This process is described later in this chapter.

### *Screening & Sampling*

Broad search strategies can result in an overwhelming amount of data for analysis. In conventional systematic review methodologies, this issue is dealt with through the strict application of predetermined inclusion and exclusion criteria during the screening process. The shortfall of this method is that it does not support critical engagement with the literature (Boell & Cecez-Kecmanovic, 2015). In CIS, the body of literature itself is seen as requiring critical engagement (Dixon-Woods et al., 2006), therefore it is important that the methods used in identifying literature facilitate critical engagement with the body of literature, rather than restricting critique to an analysis of methodological quality.

In CIS, it is anticipated that the search process will result in an overwhelming amount of data for analysis. However, one of the key differentiations of CIS from conventional review methodologies is the process of theoretical sampling which allows the selection of literature for analysis to focus on relevance to the research question and contribution to theory development (Barnett-Page & Thomas, 2009; Depraetere et al., 2021; Dixon-Woods et al., 2006; Grant & Booth, 2009; Schick-Makaroff et al., 2016). All potentially relevant works form the sample frame from which literature is purposively sampled (Dixon-Woods et al., 2006). While conventional reviews focus on reasons for exclusion, CIS focuses on reasons for inclusion, considering how the works included might contribute to the theorisation process.

The threshold for inclusion (Barnett-Page & Thomas, 2009) for works<sup>5</sup> to be included was based on an explicit theoretical orientation<sup>6</sup> and evidence of socio-ecological perspectives. Seminal works<sup>7</sup>, works that offered some form of theoretical critique, and works that focussed on a formal level of theory rather than middle range theory were prioritised. Works that did not offer enough information for critique (such as conference proceedings, posters, and abstracts), looked at the application of existing theory or intervention approaches without offering any significant advancements from a theoretical perspective, from the fields of material or computer science, or were not available in English (for pragmatic reasons) were excluded. No papers were excluded

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<sup>5</sup> The term 'work' has been used here to represent the diversity of literature that is appropriate for inclusion ranging from empirical studies (quantitative or qualitative) to editorial comment and theoretical work including theses and dissertations. There is no requirement for peer review.

<sup>6</sup> The term 'theoretical orientation' refers to the need for the included work to provide explanation of constructs rather than merely description or direct application.

<sup>7</sup> Determination of seminal status was guided by the frequency of citation and significance of contributions to the development of their respective fields.

based on assessment of methodological rigour. Reviews and opinion pieces were prioritised as they tended to show a greater theoretical orientation than empirical work. With empirical works, both quantitative and qualitative methodologies were considered eligible for inclusion, as greater emphasis was placed on the literature's ability to contribute to the synthesis than on the literature's research methodology (Harden & Thomas, 2010). The screening process aimed to determine if the works identified through the ongoing search process met this threshold for inclusion. Appendix D contains a full list of the works included in the review alongside the reasons why they were included and their contribution to the theorising process. Works were included based on novel theoretical contribution, critical perspectives, integrative perspectives, or seminal status.

While guided by selection criteria, the screening process in theory generating reviews is shaped by expertise and intuition (Barnett-Page & Thomas, 2009). The depth of screening required varied from a title screening to abstract or full-text screening and was considered part of the 'browsing process' (Boell & Cecez-Kecmanovic, 2010; Finfgeld-Connett & Johnson, 2013). Thus searching, screening, and sampling are seen as integrated in CIS (Dixon-Woods et al., 2006). The overall aim of browsing was to identify key papers that were conceptually and theoretically rich and able to contribute to theoretical development regarding the links between occupation and resilience. Emphasis was placed on finding both seminal and disruptive perspectives.

Early sampling was based on the perceived potential of the paper to contribute to synthesis, while later sampling was theoretical in that it was guided by the emerging theory developed through the synthesis process. In this research, initial sampling examined occupation and resilience as distinct constructs while later sampling was guided by my emerging theory of occupation and resilience as well as subject matter expert consultation. This approach to sampling has been described as a two-staged sampling approach (Depraetere et al., 2021). However, I find the term 'two-staged' misleading as the shift from purposive to theoretical sampling evolves throughout the synthesis process until the point of saturation.

The decision to end the search, screening and sampling process was determined by a point of conceptual and theoretical saturation. In theory-generating reviews, continuing the review process is only beneficial if this aids in further explicating concepts or substantiating relationships between concepts (Finfgeld-Connett & Johnson, 2013; Noblit & Hare, 1988; J. Thomas & Harden, 2008). Indications of saturation include boredom, increased awareness of repetition of ideas, and familiarity with references cited (Boell & Cecez-Kecmanovic, 2010). Continuing reading in the presence of these indicators is unlikely to yield any additional insights, especially if early sampling sought maximum variability (J. Thomas & Harden, 2008). Determining the point of saturation is, however, dependent on the processes of analysis and of synthesis.

### Abstraction & Analysis

In other review methodologies, this process of data abstraction and analysis is often described as data extraction and analysis. However, in theory-generating reviews, it is up to the reviewer to identify the most salient information for the purpose of the synthesis, a process that is necessarily interpretive (Harden & Thomas, 2010; Suri & Clarke, 2009). For this reason, I prefer the term abstraction over extraction.

The purpose of abstraction and analysis is to identify patterns of meaning (Tricco, Antony, et al., 2016). As the review is theoretical, the focus of thematic analysis is on concepts, the relationships between concepts, and critiques of theory (Harden & Thomas, 2010; Schick-Makaroff et al., 2016; Toye et al., 2014). Concepts and themes are not necessarily self-evident (Harden & Thomas, 2010) and related concepts may be described with different terms (Dixon-Woods et al., 2005; Harden & Thomas, 2010). The process of identifying patterns of meaning thus does not rely solely on deductive or inductive reasoning; rather, as with theorising, there is constant movement between these different types of logic (Finfgeld-Connett & Johnson, 2013).

To move beyond simply summarising theory towards generating theory, abstraction and analysis must include critique. An important part of critiquing theory is exploring the underlying normative, epistemological, and ontological assumptions within the body of literature. Critique thus extends far beyond an appraisal of methodological quality (Dixon-Woods et al., 2006; Toye et al., 2014). While methodological quality is a consideration, poorer quality research is expected to contribute less to the analysis and the final synthesis (J. Thomas & Harden, 2008). Asking critical questions and challenging the underlying assumptions of the original authors is the core aim of analysis (McFerran et al., 2017). Clearly there is a complexity to the abstraction and analysis process for which a simple data extraction approach would be insufficient.

Dixon-Woods et al. (2006) originally suggested that more informal processes, such as repeated re-reading and highlighting, might be more helpful for analysis than traditional data extraction. In contrast, Depraetere et al. (2021) suggest that data extraction supports critical engagement with the literature. My approach draws from both perspectives and involves two intertwined processes: thematic analysis and data abstraction.

Thematic analysis and data abstraction were intertwined in that the descriptive themes generated through thematic analysis were constantly contrasted to the critical overview produced through data abstraction (Harden & Thomas, 2010; Toye et al., 2014). Combining these processes also meant that analysis was both descriptive and analytical (J. Thomas & Harden, 2008).

### *Thematic Analysis*

Thematic analysis is used in CIS (Dixon-Woods et al., 2006; Tricco, Antony, et al., 2016). In line with the original approach of Dixon-Woods et al. (2006), I engaged in repeated re-reading during which I would highlight key definitions or statements of ideas. This method of analysis meant that data remained contextualised (Depraetere et al., 2021; Flemming, 2010; Noblit & Hare, 1988). It is important to note that this form of analysis is personal as the meaning drawn from reading and the what stands out are shaped by the assumptions, background, and beliefs of the reader (Boell & Cecez-Kecmanovic, 2015).

Memos were written based on the ideas that emerged from repeated re-reading. These memos were used to identify and develop themes which formed the basis of my theorisation. These memos were used to shape the narrative and thematic account of the theorising process that can be found in Chapter Five. These memos also formed part of my practice of critical reflexivity.

### *Data Abstraction*

The second process involved creating summary tables. The headings used for the data abstraction process are listed in table nine. Based on repeated re-reading and the memoing process (Toye et al., 2014) I extracted key quotes (McFerran et al., 2017) or wrote summary statements regarding key concepts, the relationships between concepts, and critiques. The data abstraction process allowed for easier comparison to support theorisation by showing points of convergence and divergence (J. H. Turner, 1991). To these summaries I added my interpretation of the epistemological and ontological foundations of the research. Analysis of epistemological and ontological foundations was based on the categories described by Patterson and Williams (1998). The aim of this was to make the implicit explicit (McFerran et al., 2017) and to support the process of synthesis by mapping how different ontological and epistemological assumptions shaped conceptualisation of both occupation and resilience.

**Table 9 Data Matrix for Data Abstraction**


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<b>Data Matrix for Data Abstraction</b>
Date of Publication
Authors
Title
Publication Source
Resource Type
Field of Origin
Reason for Inclusion
Citation Count
Search Strategy Used to Identify the Work
Context of Development
Level & Type of Theory
Key Ideas
Epistemological & Ontological Foundations
Contribution of Study to the Review

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*Memo Writing*

Throughout the abstraction and analysis process I kept descriptive memos of the questions I was grappling with and the evolution of my theorising. The purpose of these memos was to ensure that I remained focused on conceptualisation and did not become lost in the data and the description of data. These memos were iteratively revised until they became fully articulated. The process of memo writing helped move the theorising process beyond description and critique towards reconceptualisation and the generation of new conceptual understandings (Alvesson & Sandberg, 2020; Barnett-Page & Thomas, 2009; Dixon-Woods et al., 2006). These memos form the basis of Chapter Five and were the main process that enabled synthesis.

### Synthesis

In CIS the aim of synthesis is not to generate a summary of all relevant information, but rather to draw together relevant concepts. This process is guided by the review question (J. Thomas & Harden, 2008). Thus, while the literature searches and analysis looked at occupation and resilience separately, during synthesis, the focus was on understanding how the constructs are related. It was through synthesis that the constructs of occupation and resilience were brought together, the relationship between the two explored and theory about links generated.

In meta-ethnography, on which CIS is based, there are three main forms of synthesis: reciprocal translation, refutational synthesis and line-of-argument synthesis (Noblit & Hare, 1988). In reciprocal translation, similar ideas and concepts are carefully combined. Yet equally, understanding how concepts and perspectives differ is important for generating new insights into a topic. Refutational synthesis refers to the process of explaining contradictions. Finally, in a line-of-argument synthesis, the relationships between corroborating concepts are explored in a 'line of argument'. In CIS, these different forms of synthesis are combined in what is termed the 'synthesising argument' (Dixon-Woods et al., 2006).

A 'synthesising argument' refers to a coherent conceptual framework of constructs and descriptions of the relationships between constructs (Dixon-Woods et al., 2006). Synthesising arguments contain a combination of concepts original to the literature included in the review, and what are termed 'synthetic constructs' (Dixon-Woods et al., 2006). Synthetic constructs are developed through the review process and describe the underlying concepts in a new conceptual form (Dixon-Woods et al., 2006).

While much of the process of developing a synthetic argument is inductive and creative (Dixon-Woods et al., 2006), four techniques of integration drawn from interdisciplinary studies were used in this research. These techniques are similar to the different types of synthesis described in meta-ethnography. They are: redefinition, extension, transformation, and organisation (Newell, 2006).

Redefinition is useful when different terminology refers to overlapping meaning (Morse, 2015). Extension refers to expanding a definition so that it can encompass insights from different disciplines (Newell, 2006). Both redefinition and extension could be considered forms of reciprocal translation. Where concepts are diametrically opposed, transformation refers to the development of a continuous concept which can account for variance (Newell, 2006). This is known in CIS as a 'synthetic construct' (Dixon-Woods et al., 2006) and is a form of refutational synthesis. Finally, organisation refers to the arrangement of concepts using conceptual mapping to identify relationships (Newell, 2006). Organisation thus forms the basis for the development of a line of argument.

**Table 10 Interdisciplinary Integration Techniques** (Newell, 2006)

<b>Interdisciplinary Integration Techniques</b>	
Redefinition	Used when different terminology refers to overlapping meaning.
Extension	Expansion of a definition so that it can encompass insights from different disciplines.
Transformation	The development of a continuous concept which can account for variance when concepts are diametrically opposed.
Organisation	The arrangement of concepts using conceptual mapping to identify relationships.

Synthesis is the culmination of the exploration of the literature and analysis. Record of the synthesis process was also kept through the practice of memoing. The synthesis process is described in detail in Chapter Five while the outcome of the synthesis is presented in Chapter Six.

#### *Included Works*<sup>8</sup>

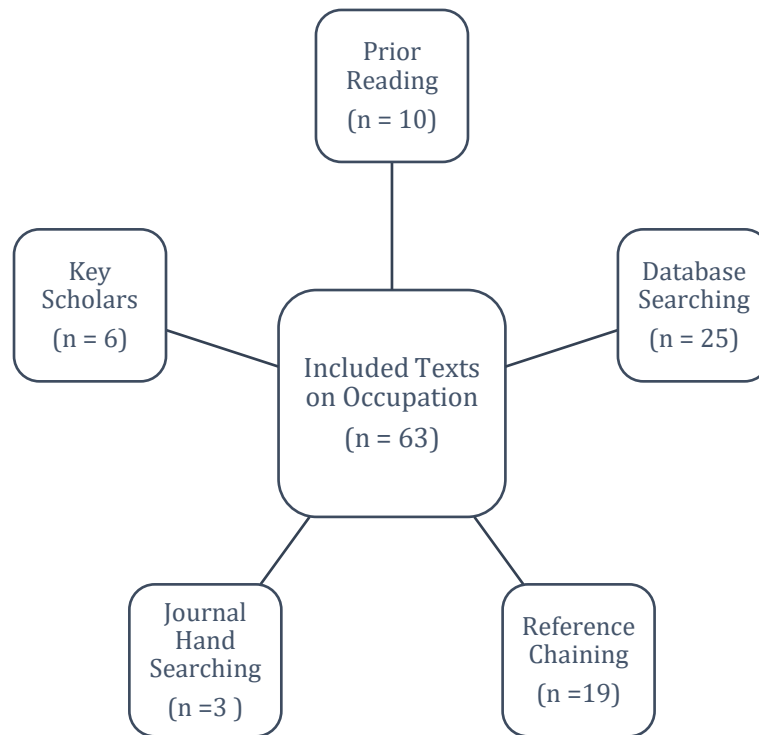
A total of 131 papers were included in the review. Sixty-three of these papers were on occupation and 68 on resilience. The search strategies and number of papers identified through each strategy are shown in figures 10 and 11. Tables 11 and 12 list the papers included in the review. Given that literature was chosen for inclusion based on purposive and theoretical sampling, to support transparency, the reasons why the work was included in the review are also indicated. Appendix D also lists the contribution of each included work to the theorising process and final synthesis.

Unsurprisingly, the vast majority of the included works were from the global north (resilience  $n = 60$ , occupation  $n = 58$ ), even works calling for greater diversity in the voices being foregrounded (Kantartzis & Molineux, 2011; Ungar, 2004). I thus purposively sought out southern perspectives, even if the level of theory was more substantive than formal.

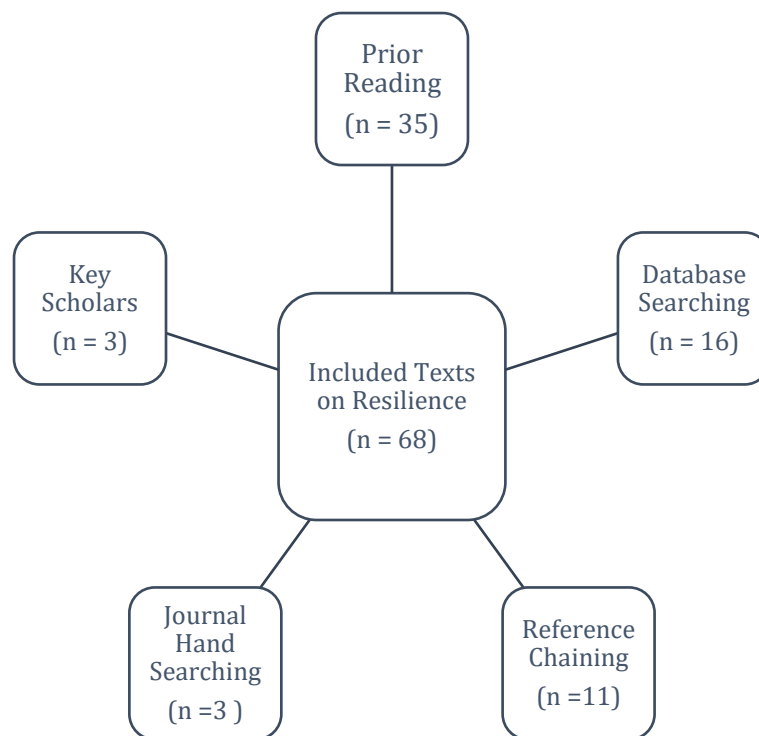
Most of the papers on occupation that were included in the review were published in the context of occupational science and in the *Journal of Occupational Science*. By contrast, the publications on resilience were spread across multiple disciplines including geography, medical philosophy, social work, sociology, urban planning, and politics, with the majority of publications from ecology or psychology.

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<sup>8</sup> Note that the papers listed here as formally included in the review do not represent all of the reading that was done as part of the review process. Occasionally browsing would prompt a new avenue of exploration and theorisation even if the full paper was discarded from the review. Where relevant, I have referenced these works in text.



**Figure 10 Search Strategies Used to Identify Literature on Occupation**



**Figure 11 Search Strategies Used to Identify Literature on Resilience**

**Table 11 Works on Occupation Included in the CIS**

<b>Citation</b>	<b>Title</b>	<b>Reason for Inclusion</b>
Aldrich & Cutchin, 2017	Filling in the gaps: A case for enhancing Madsen and Josephsson's assertions about occupation, situation, and inquiry	Response
Aldrich, 2008	From complexity theory to transactionalism: Moving occupational science forward in theorising the complexities of behavior	Critical Perspective
Bailliard et al., 2022	From embodiment to emplacement: Toward understanding occupation as body-mind-environment	Integrative
Bailliard, Carroll, et al., 2018	The inescapable corporeality of occupation: Integrating Merleau-Ponty into the study of occupation	Novel Theory
Bailliard, Dallman, et al., 2018	The relationship of macro and micro processes in Merleau-Ponty: A response to Cutchin	Response
Barber, 2006	Occupational science and the first-person perspective	Response
Barlott & Turpin, 2022	Desiring occupation: Theorising the passion, creativity, and social production of everyday life	Novel Theory
Barlott et al., 2017	Becoming minor: Mapping new territories in occupational science	Novel Theory
Bukhave & Creek, 2021	Occupation through a practice theory lens	Novel Theory
Bunting, 2016	A transactional perspective on occupation: a critical reflection	Integrative
Cutchin et al., 2008	Action theories for occupational science: The contributions of Dewey and Bourdieu	Novel Theory
Cutchin, 2004	Using Deweyan philosophy to rename and reframe adaptation-to-environment	Novel Theory
Cutchin, 2013	The art and science of occupation: Nature, inquiry, and the aesthetics of living	Novel Theory
Cutchin, 2018	Commentary on the inescapable corporeality of occupation: Integrating Merleau-Ponty into the study of occupation	Response
Cutchin et al., 2006	Transaction versus interpretation, or transaction and interpretation? A response to Michael Barber	Response
Cutchin et al., 2017	Foregrounding the transactional perspective's community orientation	Response
Delaisse et al., 2021	Conceptualizing the role of occupation in the production of space	Novel Theory
Derakhshanrad & Piven, 2020	Neuro-occupation: A self-organizing approach to conflate the brain, context, and occupation	Novel Theory/Southern Perspective
Dickie, 2010	Are occupations 'processes too complicated to explain'? What we can learn by trying	Novel Theory
Dickie et al., 2006	Occupation as transactional experience: A critique of individualism in occupational science	Seminal

Emery-Whittington & Te Maro, 2018	Decolonising occupation: Causing social change to help our ancestors rest and our descendants thrive	Critical Perspective
Fogelberg & Frauwirth, 2010	A complexity science approach to occupation: Moving beyond the individual	Novel Theory
Gailey, 2018	The systems view of life: Undergirding and unifying three philosophies of occupation	Novel Theory
Gerlach et al., 2018	Expanding beyond individualism: Engaging critical perspectives on occupation	Critical Perspective
Grajo et al., 2018	Occupational adaptation as a construct: A scoping review of literature	Integrative
Hammell, 2004	Dimensions of meaning in the occupations of daily life	Seminal
Hammell, 2009b	Self-care, productivity, and leisure, or dimensions of occupational experience? Rethinking occupational "categories"	Novel Theory
Hammell, 2009a	Sacred texts: A sceptical exploration of the assumptions underpinning theories of occupation	Seminal/Critical Perspective
Hocking, 2009	The challenge of occupation: Describing the things people do	Seminal
Hocking, 2021	Occupation in context: A reflection on environmental influences on human doing	Integrative
Jansson & Wagman, 2017	Hannah Arendt's <i>vita activa</i> : A valuable contribution to occupational science	Novel Theory
Jansson & Wagman, 2018	Hannah Arendt's thoughts in relation to occupational science: A response to Turnbull	Response
Kantartzis & Molineux, 2011	The influence of western society's construction of a healthy daily life on the conceptualisation of occupation	Critical Perspective
Kantartzis & Molineux, 2012	Understanding the discursive development of occupation: Historico-political perspectives	Critical Perspective
Kantartzis & Molineux, 2017	Collective occupation in public spaces and the construction of the social fabric	Novel Theory
Kiepek et al., 2019	Silences around occupations framed as unhealthy, illegal, and deviant	Critical Perspective
Kiepek, 2021	Innocent observers? Discursive choices and the construction of "occupation"	Critical Perspective
Kiepek et al., 2014	Introducing a critical analysis of the figured world of occupation	Critical Perspective
Larivière & Quintin, 2020	Heidegger and human occupation: An existential perspective	Novel Theory
Madsen & Josephsson, 2017b	Engagement in occupation as an inquiring process: Exploring the situatedness of occupation	Novel Theory
Madsen & Josephsson, 2017a	Asking how as a next step in avoiding dualistic perspectives on occupation: A response to Aldrich and Cutchin	Response
McLaughlin Gray, 1997	Application of the phenomenological method to the concept of occupation	Novel Theory

Nelson, 1988	Occupation: Form and performance	Seminal
Njelesani et al., 2014	Articulating an occupational perspective	Integrative
Nyman & Isaksson, 2021	Enacted togetherness – A concept to understand occupation as socio-culturally situated	Novel Theory
Pierce, 2001	Untangling occupation and activity	Seminal
Ramugondo & Kronenberg, 2015	Explaining collective occupations from a human relations perspective: bridging the individual-collective dichotomy	Novel Theory
Reed et al., 2010	The interconnected meanings of occupation: The call, being-with, possibilities	Integrative
Reed et al., 2011	Exploring the meaning of occupation: The case for phenomenology	Novel Theory & Integrative
Reed, Hocking, et al., 2013	The meaning of occupation: Historical and contemporary connections between health and occupation	Integrative
Reed, Smythe, et al., 2013	The meaning of occupation: A hermeneutic (re)view of historical understandings	Integrative
Roberts & Bannigan, 2018	Dimensions of personal meaning from engagement in occupations: A metasynthesis	Integrative
Rowles, 2008	Place in occupational science: A life course perspective on the role of environmental context in the quest for meaning	Novel Theory
Townsend, 1997	Occupation: Potential for personal and social transformation	Seminal
Turnbull, 2020	The vita activa and the human condition: Points of clarification in reply to Jansson and Wagman	Novel Theory
Twinley, 2013	The dark side of occupation: A concept for consideration	Novel Theory
Walder et al., 2021	Occupational adaptation – analyzing the maturity and understanding of the concept through concept analysis	Integrative
Whiteford et al., 2000	Reflections on a renaissance of occupation	Integrative
Wilcock, 1993	A theory of the human need for occupation	Seminal
Wilcock, 1999	Reflections on doing, being and becoming	Seminal
Wilcock, 2007	Occupation and health: Are they one and the same?	Seminal
Wu & Lin, 1999	Defining occupation: A comparative analysis	Integrative

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**Table 12 Works on Resilience Included in the CIS**

<b>Citation</b>	<b>Title</b>	<b>Reason for Inclusion</b>
Adger, 2000	Social and ecological resilience: Are they related?	Seminal
Atallah et al., 2021	Centering at the margins: Critical community resilience praxis	Critical Perspective
Biermann et al., 2016	Approaching a critical turn? A content analysis of the politics of resilience in key bodies of resilience literature	Critical Perspective
Bousquet et al., 2021	Social and ecological systems resilience and identity	Integrative
Brand & Jax, 2007	Focusing the meaning(s) of resilience: Resilience as a descriptive concept and a boundary object	Critical Perspective
K. Brown, 2021	Multisystemic resilience: An emerging perspective from social-ecological systems	Integrative
Clarke & Mayer, 2017	Community recovery following the Deepwater Horizon oil spill: Toward a theory of cultural resilience	Novel Theory
Cote & Nightingale, 2012	Resilience thinking meets social theory: Situating social change in socio-ecological systems (SES) research	Critical Perspective
R. K. Craig, 2020	Resilience theory and wicked problems	Novel Theory
Cutter, 2016	Resilience to What? Resilience for Whom?	Integrative
Denckla et al., 2020	Psychological resilience: An update on definitions, a critical appraisal, and research recommendations	Integrative
Estêvão et al., 2017	Resilience: Moving from a "heroic" notion to a sociological concept	Critical Perspective
Fletcher & Sarkar, 2013	Psychological resilience: A review and critique of definitions, concepts, and theory	Integrative
Folke, 2006	Resilience: The emergence of a perspective for social-ecological systems analyses	Integrative
Folke, 2016	Resilience (republished)	Seminal
Garrett, 2016	Questioning tales of 'ordinary magic': 'Resilience' and neo-liberal reasoning	Critical Perspective
Harris et al., 2018	Negotiated resilience	Novel Theory
Harrison, 2013	Bouncing back? Recession, resilience and everyday lives	Critical Perspective
Helfgott, 2018	Operationalising systemic resilience	Integrative
Holling, 1973	Resilience and stability of ecological systems	Seminal
Holling, 2001	Understanding the complexity of economic, ecological, and social systems	Seminal

## OCCUPATION AND RESILIENCE

Hutcheon & Lashewicz, 2014	Theorising resilience: Critiquing and unbounding a marginalizing concept	Critical Perspective
Joseph, 2013	Resilience as embedded neoliberalism: A governmentality approach	Critical Perspective
Kuldass & Foody, 2022	Neither resiliency-trait nor resilience-state: Transactional resiliency/e	Integrative
Lade et al., 2020	Resilience as pathway diversity: Linking systems, individual, and temporal perspectives on resilience	Novel Theory
Luthar, 2015	Resilience in development: A synthesis of research across five decades	Seminal
Luthar et al., 2000	The construct of resilience: A critical evaluation and guidelines for future work	Seminal
Mahdiani & Ungar, 2021	The dark side of resilience	Critical Perspective
Masten, 2007	Resilience in developing systems: Progress and promise as the fourth wave raises	Seminal
Masten, 2011	Resilience in children threatened by extreme adversity: Frameworks for research, practice, and translational synergy	Seminal
Masten, 2014	Global perspectives on resilience in children and youth	Seminal
Masten, 2015	Pathways to integrated resilience science	Integrative
Masten, 2018	Resilience theory and research on children and families: Past, present, and promise	Integrative
Masten, 2021	Resilience in developmental systems: Principles, pathways, and protective processes in research and practice	Integrative
Masten et al., 1990	Resilience and development: Contributions from the study of children who overcome adversity	Seminal
Meerow et al., 2016	Defining urban resilience: A review	Integrative
Métais et al., 2022	Integrative review of the recent literature on human resilience: From concepts, theories, and discussions towards a complex understanding	Integrative
Münch et al., 2021	Resilience beyond reductionism: Ethical and social dimensions of an emerging concept in the neurosciences	Critical Perspective
Olsson et al., 2015	Why resilience is unappealing to social science: Theoretical and empirical investigations of the scientific use of resilience	Integrative
G. E. Richardson, 2002	The metatheory of resilience and resiliency	Seminal
Robinson & Carson, 2016	Resilient communities: Transitions, pathways and resourcefulness	Integrative
Rogers et al., 2020	Resilience and values: Global perspectives on the values and worldviews underpinning the resilience concept.	Novel Theory

Schoon, 2021	A socio-ecological developmental systems approach for the study of human resilience	Integrative
Schwarz, 2018	Resilience in psychology: A critical analysis of the concept.	Critical Perspective
Shrestha, 2019	Which community, whose resilience? Critical reflections on community resilience in peri-urban Kathmandu Valley	Southern Perspective
Smirnova et al., 2021	The critical turn of resilience: Mapping thematic communities and modes of critical scholarship	Critical Perspective; Integrative
Southwick et al., 2014	Resilience definitions, theory, and challenges: interdisciplinary perspectives	Seminal
Theron, 2021	Learning about systemic resilience from studies of student resilience	Novel Theory
Theron et al., 2013	Toward an African definition of resilience: A rural South African community's view of resilient Basotho youth	Novel Theory
Thorén & Olsson, 2018	Is resilience a normative concept?	Critical Perspective
Ungar & Theron, 2020	Resilience and mental health: How multisystemic processes contribute to positive outcomes	Integrative
Ungar, 2004	A constructionist discourse on resilience: Multiple contexts, multiple realities among at-risk children and youth	Critical Perspective
Ungar, 2008	Resilience across cultures	Seminal
Ungar, 2011	The social ecology of resilience: Addressing contextual and cultural ambiguity of a nascent construct	Integrative
Ungar, 2012	Researching and theorising resilience across cultures and contexts	Integrative
Ungar, 2013	Resilience, trauma, context, and culture	Integrative
Ungar, 2018	Systemic resilience: principles and processes for a science of change in contexts of adversity	Integrative
Vale, 2014	The politics of resilient cities: Whose resilience and whose city?	Critical Perspective
van Breda, 2018	A critical review of resilience theory and its relevance for social work	Southern Perspective; Integrative Theory
Vindevogel, 2017	Resilience in the context of war: A critical analysis of contemporary conceptions and interventions to promote resilience among war-affected children and their surroundings	Critical Perspective
Walker et al., 2004	Resilience, adaptability and transformability in social- ecological systems	Seminal
Walker et al., 2006	A handful of heuristics and some propositions for understanding resilience in social-ecological systems	Seminal
Walker, 2020	Resilience: What it is and is not	Integrative

Walsh-Dilley & Wolford, 2015	(Un)Defining resilience: Subjective understandings of 'resilience' from the field	Critical Perspective
Wilson & Wilson, 2019	Assessing the resilience of human systems: A critical evaluation of universal and contextual resilience variables	Integrative
Windle, 2011	What is resilience? A review and concept analysis	Integrative
Xu & Kajikawa, 2018	An integrated framework for resilience research: A systematic review based on citation network analysis	Integrative
Xue et al., 2018	Exploring the science of resilience: Critical review and bibliometric analysis	Integrative

Resource types included in the review comprised of book chapters, reviews, qualitative studies, case studies and a mixed methods study, published lectures on occupation, and bibliometric analyses on resilience studies. The overwhelming majority were discussion papers that referenced no particular methodology but offered narrative reviews, theoretical insight, new propositions, or critical perspectives.

Occupational science and occupational therapy are much smaller fields than resilience studies, thus making it much easier to follow the development of key ideas and debates surrounding new theoretical developments than in resilience studies. Eight of the included papers on occupation were response articles that either offered criticism or clarified key ideas presented in previous theoretical publications (Aldrich & Cutchin, 2017; Bailliard, Dallman, et al., 2018; Barber, 2006; Cutchin, 2018; Cutchin et al., 2006, 2017; Jansson & Wagman, 2018; Madsen & Josephsson, 2017a). There was a strong interrelationship between most of the papers included in the review on occupation. In contrast to this, resilience studies represents a vast field of inquiry and there was far less cross referencing between the papers included in the review, indicating that research on resilience is still occurring in distinct streams.

Given the focus on theory and purposive sampling used, most included works represented theory of a formal level. However, a wide range of types of theory were included in the review. In the literature on occupation, most theory was theory<sub>3</sub> or theory<sub>4</sub> according to Abend's (2008) classification system. The large prevalence of theory<sub>4</sub>, that is theory that is focused on the reapplication of existing theory (Abend, 2008), is unsurprising given that occupational science has a tradition of re-examining concepts through 'an occupational lens' (Pierce, 2012). In contrast, most of the literature on resilience was spread between theory<sub>1</sub> and theory<sub>3</sub>. Given that theory<sub>1</sub> is concerned with establishing the relationship between variables (Abend, 2008), it is understandable that theory<sub>1</sub> was well represented in the literature on ecology and psychology, both disciplines concerned with the understanding and prediction of system behaviour.

Associations can also be mapped between the type of theory and the ontological and epistemological foundations of the works included in the review. Most of the literature on occupation included in the review is grounded in ontologies and epistemology that can be described as constructivist, narrative, meaning-based and hermeneutic. Where literature on occupation could be considered to be more objectivist and deterministic, it was categorised as theory<sup>1</sup>. The literature on resilience included in the review was evenly split between constructivist and narrative ontologies and epistemologies, and those that were more objectivist and deterministic. Literature from the fields of geography, urban planning and sociology could be mapped as constructivist and narrative whereas most but not all ecological literature was far more objectivist and deterministic. Interestingly, literature from psychology was split between these two positions. Awareness of the underlying ontological and epistemological assumptions was paramount in the synthesis process, contributing to the rigour of the review process.

### Considerations in the Review Process

In any review process, there are two main considerations in the implementation of the methodology: promoting rigour and ethical considerations.

#### *Promoting Rigour*

In traditional review methodology, the adherence to predefined protocols is the main means of promoting rigour. However, following a standardised approach does not guarantee rigour (Boell & Cecez-Kecmanovic, 2015; Schick-Makaroff et al., 2016). In interpretative reviews, given their iterative nature, the adherence to protocols cannot act as a proxy for rigour. Considerations of rigour should include depth of analysis, quality of argumentation and critique, and the creativity of synthesis and clarity of presentation (Boell & Cecez-Kecmanovic, 2015). In interpretive reviews, systematicity, critical reflexivity and transparency support rigour; allowing the reader to critically evaluate the findings of the synthesis (Schick-Makaroff et al., 2016; Suri & Clarke, 2009).

#### *Systematicity*

Adherence to a predefined protocol is not required for systematicity (Boell & Cecez-Kecmanovic, 2015). Rather systematicity refers to the use of appropriate methods to ensure the internal validity of the review (Depraetere et al., 2021). The systematicity of the review has been ensured through the selection of a review methodology consistent with the aims of the research and an interdisciplinary paradigm.

#### *Critical Reflexivity*

Critical reflexivity is significant not only for rigour but is foundational to theorisation, interdisciplinarity and CIS. It should be noted that the frequent references to 'criticalness' do not refer to critical social theory which, as a lens, is primarily concerned with power relations (C.

Calhoun, 1995), but rather refers to an attitude of questioning taken-for-granted assumptions (Alvesson & Sandberg, 2020).

Within the interpretive paradigm, bias is seen as inescapable. Rather than trying to avoid bias, the aim of critical reflexivity is to make use of bias as a tool for theorisation through reflection. It is the denial of subjectivity that poses a threat to rigour, not subjectivity itself (Suri & Clarke, 2009).

Given that this research is focused on theory, considerations of ontology and epistemology were a main point of reflection (McFerran et al., 2017; Repko & Szostak, 2020; Suri, 2013). It was also important that critical reflexivity extended to include the ways in which my own worldview shaped decision making during the review (France et al., 2019; Suri & Clarke, 2009).

The process of memo writing was key in engaging with reflexivity (Lempert, 2007). Chapter Five contains a record of some of the key points of reflection. In keeping a record of reflections, memo writing supports transparency.

#### Transparency

Transparency refers to the explicitness of reporting practices (Depraetere et al., 2021) and allows the reader to ascertain the value of the findings (McFerran et al., 2017; Suri & Clarke, 2009). Unlike more conventional review methodologies where the description of the methodology is intended to support reproduction, in CIS, the purpose of the description of the methods is to ensure transparency while at the same time acknowledging the authorial voice (Repko & Szostak, 2020; Suri, 2013).

Transparency is supported by clear reporting of methodological decisions (Depraetere et al., 2021). However, reporting guidelines for interpretive reviews have not been well established (France et al., 2019). Appendix E provides the proposed reporting guidelines for CIS, which have been adhered to (Depraetere et al., 2021).

#### *Ethical Considerations in Reviews*

As a review of publicly available materials, the main aspects of this research did not require ethical approval. This does not however mean that this research was devoid of ethical implications (Suri, 2020; Wager & Wiffen, 2011). In review methodologies, ethical considerations are driven by understanding the potential impact of the review on shaping further practice and policy (Suri, 2020). As reviews claim to be representative of existing research, a review carries significant ethical risk if the review is not transparent about potential biases, is not purposefully inclusive to prevent the continued exclusion of marginalised perspectives, and is not reflexive about the role of the researcher in the review (Suri, 2020). The critical and reflexive stance adopted in this research therefore served to mitigate ethical risk.

## Subject Matter Expert Consultations

Both CIS and interdisciplinary inquiry are ideally conducted by a team of researchers (Dixon-Woods et al., 2006; Repko & Szostak, 2020). Discussion, debate, and critique are all instrumental in synthesist work (Suri & Clarke, 2009) as is the inclusion of multiple perspectives (Swedberg, 2016; Wallis, 2010). Although supervision played an important role in this process, subject matter expert consultations were included in the methodology to supplement the review process as the inquiry was being conducted by a single researcher. Furthermore, subject matter expert consultations have been instrumental in developing theory on resilience (Ungar, 2018; Windle, 2011). Consultation processes are also commonly mentioned in reviews methodologies as a way of identifying otherwise overlooked literature (Depraetere et al., 2021; Dixon-Woods et al., 2005; Flemming, 2010; Noblit & Hare, 1988).

The aim of the subject matter expert consultations was not to capture the perspective of the subject matter experts but rather to stimulate further thinking and refine theorisation (Hellmann, 2003). Interviews were framed as a dialogue and process of collaborative sense making, thus drawing on the principles of praxis (Teo, 2022).

Key authors identified through the review process were contacted via email and asked to participate in an online semi structured interview (the informed consent can be found in Appendix F). Rebecca Aldrich, Adrian van Breda and Linda Theron agreed to the interviews.

The interview prompts were based on themes that emerged from the literature and can be found in Appendix G.

To ensure smooth integration of the consultation process with the overall methodology, a similar analysis approach of memo writing was used. While interviews were recorded and transcribed, it was through reflexive memo writing that insights from the consultations were incorporated into the theorisation process.

### *Ethical Considerations for Subject Matter Expert Consultation*

There are currently no ethical guidelines on the inclusion of subject matter expert consultation processes in reviews, as the ethical considerations differ from those for traditional quantitative and qualitative studies (Petkovic et al., 2020; Pollock et al., 2018). As subject matter experts were invited to participate based on the recognition of their expertise, the usual consideration of confidentiality did not apply. This was clearly communicated. Informed consent was obtained from all subject matter experts. A copy of the informed consent form can be found in

Appendix F. Ethical approval was granted by the University of Cape Town Human Research Ethics Committee (Appendix H).

## Conclusion

This chapter justified the chosen methodology of CIS and described its application within the interdisciplinary paradigm. The different processes involved in CIS, determining scope, identifying literature, abstraction and analysis, and synthesis, were described in detail. Next, I gave an overview of all the works included in the review. I then presented a discussion on the considerations for ensuring rigour as well as ethical considerations in review processes. Finally, I explained the process of subject matter expert consultation and how this contributed to the review. While this chapter focused on the methodology used in generating theory about the links between occupation and resilience, the next chapter recounts my process of theorisation.

## Chapter Five: A Personal Reflexive Account

Theorisation is a deeply personal endeavour that is simultaneously the result of rigorous and systematic work as well as iterative processes and serendipitous ideas (Hammond, 2018; Swedberg, 2012; Weick, 1989). Writing about theorisation is challenging for several reasons. Firstly, writing is part of the theorisation process and not simply an expression of what one already knows (Clegg, 2012; G. E. Richardson, 2002; Suri & Clarke, 2009). Secondly, theorisation is seldom written about so there are few examples to draw from (Hammond, 2018; Swedberg, 2012, 2016). Finally, the process of theorisation is non-linear which creates a challenge for clear reporting. Despite these challenges, writing about theorisation is imperative, as the only way in which the quality of theorisation can be assessed, is if the reader is able to participate in the process of discovery (Clegg, 2012; Swedberg, 2012; Teo, 2022).

Autoethnographic approaches are recommended when reporting on the process of theorisation (Swedberg, 2012). For this reason, I have based this chapter on the style and structure of an autoethnographic layered account (Ellis et al., 2011). While autoethnography inspires this chapter specifically, this approach remains consistent with the overall methodology of this review as critical interpretive synthesis has evolved from another form of ethnography – meta-ethnography (Dixon-Woods et al., 2006).

Autoethnographic approaches centre the researcher and their interpretive and critical engagement with the research process (Ellis et al., 2011). The process of inquiry itself is seen as an instrument of data collection (Hammond, 2018). In this research, the literature I was reading, my process of inquiry and my personal experience formed part of the data that informed my theorisation (Hammond, 2018). Here I present a layered account of the theorisation process, reflecting on epiphanies, incorporating memos, and include key data from the review.

This chapter is a reflection on the way in which I engaged with the literature and explored how occupation and resilience are related. This process was guided not only by what I was reading, but also my personal experiences and positionality, questions I was posing and quandaries that I was pondering. I attempt to capture all these dimensions and now invite you into my process.

### The Starting Point

I can (and have) justified some of the academic reasons for the undertaking of this research. But research, and particularly synthesis work is undertaken for both professional and personal reasons (Edwards & Kaimal, 2016). So why did I undertake this research?

I had been exposed to some resilience theory (particularly the work of Ann Masten) before starting my undergraduate occupational therapy degree. While linkages between occupation and

health were emphasised throughout my degree, no mention of resilience theory was ever made in relation to occupation. I found this curious. This was partly due to personal experience as I knew that particular forms of occupational engagement (music in particular) had been crucial for me during periods of stress. Yet I was also curious as I could see a theoretical synergy between the constructs of occupation and resilience. Moreover, occupational therapy as a profession is focussed on helping people experiencing adversity, why was resilience thinking not being drawn upon?

Occasionally I would come across a mention of resilience in the literature or in professional settings, but more often than not, this was frustrating rather than encouraging as there was a lack of theoretical framing and a predominate assumption that resilience is an individual characteristic.

Understanding more about human occupation, I could not escape the feeling that there was a dynamic synergy between resilience and occupation. In summary, the reason for this research was that I was curious.

*White, Middleclass, Female, English & South African*

I was hesitant. I had studied occupational therapy in my undergraduate degree in South Africa at the University of Cape Town during the Fees Must Fall student protests. During this time my consciousness was raised as I was exposed to critical perspectives in occupational science and confronted with the realities of privilege as a white student in an African University.

After graduating, I worked in a rural and systemically disadvantaged community. Chronic and intergenerational poverty stemmed from Apartheid discrimination and the community continued to be neglected in terms of service delivery. Adversity was pervasive, not some single event from which people could recover. Yet despite adversity, the people I worked with were resilient, but not in the conventional sense. There was no 'bouncing back' from adversity because the adversity was ongoing. Still people made a way.

These two experiences had a profound effect on me when embarking on this research, I was acutely aware of the necessity of decolonial thought when it came to theorising about both occupation and resilience. Occupation and resilience have both tended to be theorised about by scholars in the global north, and southern perspectives have been missing. This has led to conceptualisations of occupation and resilience that are overly individualistic, overlook the effect of power dynamics and systemic discrimination, advance neoliberal agendas and ignore the socio-cultural realities of the global majority. The decolonial lens questions these biases, the ontological and epistemological assumptions driving these biases, and seeks to develop an understanding of

the world that extends beyond dominant narratives and supports diverse ways of understanding and being in the world.

In my early reading on resilience and occupation, I resonated with the works I read that critiqued the individualisation of these constructs and called for critical perspectives. But I am white, middle-class, and female. This positionality means my understanding and experience of the world is often more closely aligned with dominant discourses and that adopting a decolonial lens requires constant reflexivity.

Historically speaking, occupational therapy and occupational science have been dominated by white, middle-class women (Hammell, 2011). If the profession and discipline are to advance, diverse perspectives must be sought and espoused (Hammell, 2011; Hocking, 2012; Kantartzis & Molineux, 2012; Rudman et al., 2008). As a white, middle-class women, could my contribution be of value? What would it mean to theorise from a southern perspective?

Awareness of my own positionality has caused me to approach this research in a particular way (France et al., 2019; Suri & Clarke, 2009). I have chosen a research methodology that supports critical engagement. I have been intentional about drawing upon southern and decolonial perspectives. I have questioned epistemological and ontological assumptions. While theorisation is deeply personal, through these processes I have sought to expand my own understanding and contribute constructively to our understanding of the relationship between occupation and resilience.

### *Some Assumptions*

- According to praxis, practice and theorisation are intimately linked.
- Our theories and theorisation constrain or expand possibilities for action.
- If we want to claim that occupational therapy promotes resilience, we need to know what we mean by the term.
- There are links between the constructs of resilience and occupation and these links can be made apparent through the examination of existing theory.
- A better understanding of resilience would support the development of a socially transformative praxis in both occupational science and occupational therapy.
- It is necessary to approach this topic from an interdisciplinary approach and draw upon a diverse range of disciplines.
- This work will contribute something to the development of socially transformative praxis.

### *Nascent Ideas*

Preconceptions guide theorisation (Swedberg, 2012). It is cognitively impossible to come to theorising as a 'blank slate'. I began this work with the idea that there is something that connects

occupation and resilience, but I could not quite put my finger on it. I did know that whatever it was, it was not 'occupational resilience'. Occupational therapy and occupational science have a tendency to draw concepts into the so-called 'occupation lens' rather than expanding the concept of occupation outwards into other areas of study. While we certainly can speak about the resilience of specific forms of occupation engagement (see Muriithi & Muriithi, 2020 for example), I was not interested in resilience in this sense. Instead, I was convinced that occupation had something to contribute to our understanding of resilience in the broadest sense of the term.

My suspicion stems from the human experience of both resilience and occupation as lived and embodied experiences. Humans experience resilience. Humans are occupational beings. Resilience was about ordinary magic. Occupation about the ordinary and the extraordinary. Then there was something in this idea that resilience was related to the interaction between people and their environments that shouted occupation.

### *Narrowing Focus*

*The challenge with developing robust theory on occupation and the same with resilience becomes the scale. Both fields can feel overwhelming individually so the idea of bringing them together seems even more overwhelming. How does one develop a theory that is both useful at an applicable level and is universal enough to be able to apply in different circumstances? (Reflective Journal, 18 October 2021)*

All synthesis work involves a series of key decisions that shape the outcome of the synthesis (Depraetere et al., 2021; France et al., 2019; Suri & Clarke, 2009). If reflexivity is being practised, it is important to reflect not just on the questions asked and the materials used, but also the questions that were not posed and the materials that were ignored or neglected (Teo, 2022). Thus, the decisions relating to the determination of scope are important to reflect here.

Early in the research process I made two key decisions to narrow the scope of the synthesis. Firstly, to focus primarily on human resilience and secondly, to foreground socio-ecological perspectives. Later, I determined that a focus on formal theory was also important in making the synthesis feasible.

While the idea of limiting the scope of research to human resilience could seem obvious given that occupation is a phenomenon tied to human experience, nuance was required. Theorising was focused on human resilience but was informed by theories of resilience across domains. While it was easy to determine that theories from computer and material science had less applicability, I knew it was important to include theories of resilience from ecology and urban planning because environmental context is pivotal in understanding occupation. These theories often did not relate directly to human resilience but were related through the concept of occupation.

Based on my understanding of occupation as embedded in social and ecological contexts, I gravitated towards socio-ecological understandings of resilience over individual or psychological explanations of resilience. As a southern scholar, the idea that resilience could be an individual trait was completely incongruent with my understanding of how context, power and culture determine human experience. Initially, I excluded literature that viewed resilience as a personal characteristic. However, over time, I came to see that some of the insights from psychological research could be subsumed into a broader perspective of resilience. Thus, in the end I prioritised socio-ecological perspectives without fully excluding theories that had a more individual bent.

As the synthesis evolved, the other key way in which I narrowed the scope of the synthesis was to prioritise formal theories over substantive theories, thereby choosing to focus on broader explanations rather than specific closed explanations. While close descriptions of resilience and occupation in context undoubtedly have much to offer theorisation, I chose not to be drawn in too far.

### Rethinking Resilience

Starting this research, I was convinced that an understanding of resilience would aid the development of more socially transformative praxis in occupational therapy and occupational science. Yet, as I explored the topic, I became disillusioned with the concept of resilience. Resilience was a term used everywhere yet it felt fuzzy (Robinson & Carson, 2016). There was this core idea that people seemed to gravitate towards but there was no cohesion in the many varied descriptions of what resilience actually was. Worse, it seemed to be a term that could be used to shame those who did struggle for 'not being resilient enough'.

I remember once being told by a practice learning supervisor when asking for help that I needed to find more ways to be resilient. I felt betrayed at the time and to be honest, still angry upon reflection. I did not need to be more resilient, something in the situation needed to change.

It seems there is a romance to the idea of resilience, the idea that people can cope in the face of overwhelming adversity. Yet often for those who are resilient, resilience is not a choice but a necessity that comes at a cost (Harrison, 2013). Resilience is not a heroic property of individuals to be exploited (Estêvão et al., 2017), allowing the status quo to be reinforced or creating the expectation that people ought to 'bounce back' in the face of adversity (Harrison, 2013). This observation is pertinent in a South African context, as the way to promote the wellbeing of those most exposed to adversity is not to demand resilience of them but to change the situation by addressing systemic factors.

Similar thoughts about resilience relate to my clinical experience as an occupational therapist. In my clinical work, I primarily support people living with chronic pain or fatigue. For these people,

resilience is not so much a choice as a necessity. Despite significant adversity, they often find ways to achieve better than expected outcomes within the constraints of their current situation. Yet mainstream conceptualisations of resilience are often not congruent with their experience. Often their health does not 'bounce back' in the way that doctors or insurance companies expect.

If resilience is a term that does not always capture the reality of experience, is it still a useful term? I would argue yes.

Firstly, resilience as a concept has proven to be remarkably resilient. Despite shortcomings in the way that it is often conceptualised, it is common in vocabulary and likely will continue to be. Secondly, many of the valid criticisms of resilience, such as the neoliberal critique (discussed further below), can be addressed by the richer and more dynamic theories of resilience that extended far beyond the idea of promoting individual resilience as a 'bouncing back'. Therefore, the outcome of the synthesis was shaped by a desire to find conceptual clarity and cohesion with enough nuance to address the critique of neo-liberalism while honouring the reality of the many people I saw as resilient.

#### *Developing a Line of Argument*

The synthetic argument that is the output of CIS is based on the concept of a 'lines of argument synthesis' from metaethnography (Dixon-Woods et al., 2006; Noblit & Hare, 1988). Understanding lines of argument brought more clarity to my understanding of resilience.

Part of the confusion around resilience is that people tend to conceptualise resilience as either a process that unfolds, a particular form of outcome, or as the capacity of a system to be resilient in the future. These differing conceptualisations have differing implications for theorisation. When resilience is considered an outcome, research focuses on identifying characteristics associated with 'resilient outcomes'. When resilience is considered as being about capacity, more attention is paid to resources that might be required for resilience. These differing conceptualisations have led to much debate within resilience studies. *How can debates be transformed into coherence?* (*Reflective Journal*, 22 November 2021).

In a line of argument, conflicting understandings are brought into a continuous concept (Noblit & Hare, 1988). Thus, resilience can be reconceptualised as the overarching concept with capacity, process and outcome forming a continuum. In this way, insights from each different conceptualisation of resilience can be integrated. I cannot take credit for this line of argument as it was written about as far back as 1990 by Masten et al. However, understanding that these different conceptualisations of resilience could be integrated into a broader theory was pivotal and led me to a second key realisation regarding how these different conceptualisations of resilience are related.

In one of the more comprehensive definitions of resilience, resilience is described as processes of persistence, resistance, recovery, adaptation, and transformation in the face of adversity (Ungar, 2018, 2021). Yet no theory had been put forward to account for how these different processes related to one another (Mittelmark, 2021). Having placed the processes of resilience within a broader framework, suddenly there was a new avenue to explore when accounting for the variety of processes that lead to resilient outcomes. What if the process of resilience was determined by the existing capacity of the system? What if the process of resilience was determined by the desired outcome? How do we determine what is a desirable or resilient outcome?

### *Normativity*

The discussion around whether resilience is normative is a key debate in resilience studies (Olsson et al., 2015; Robinson & Carson, 2016). The most common understanding of resilience, where resilience is described as positive outcomes or adaptation in the face of adversity (Luthar et al., 2000; Mahdiani & Ungar, 2021), is profoundly normative. Who gets to define what is considered a positive outcome? Which outcomes get to define resilience? Who gets to define adversity?

Yet there is an alternative approach to understanding resilience that tends to be descriptive rather than normative. Within ecological studies, resilience is commonly understood as the ability of a system to absorb shock and disturbance and remain the same (Olsson et al., 2015). No determination of whether this is good or bad is made; it merely is.

Normative understandings are shaped by values, power, and privilege. Descriptive understandings claim neutrality. Clearly these two approaches have vastly different implications for understanding resilience (Brand & Jax, 2007). Given that occupation and ecology cannot be separated, I knew it was important that I included ecological theories. Yet until I understood the difference between normative and descriptive approaches, synthesis felt unachievable. *'You cannot achieve integration with resilience theories without understanding the difference in approaching resilience from a normative perspective or a descriptive perspective'* (Reflective Journal, 26 February 2022).

While the idea of a purely descriptive understanding of resilience seemed appealing, it is my personal conviction that we cannot escape the normativity of resilience as a construct. Rather than trying to, I believe it is of far more value to allow room for questioning norms embedded in our understandings of resilience. According to Panter-Brick (2021), understanding normativity can improve the relevance of resilience studies. Can we create space to ask the question: 'what do we mean when we speak about resilience?'

### ‘Something that Might be Called Occupation’

I came across this phrase ‘something that might be called occupation’ in a paper by Dickie et al. (2006, p. 5) and it seemed to capture so much nuance in one simple phrase. Having been trained as an occupational therapist, I was convinced I knew what occupation was when I started this research. Yet re-examining the construct from a critical perspective led me to question what we truly meant by the term. Occupation could be described as multivariate, a paradox and an enigma. What was this thing we called occupation?

Occupation has always seemed to defy definition. It is a term with multiple and changing meanings (Rudman et al., 2008). At one point in my undergraduate training, I created a document to track definitions of occupation that I came across. In the brief span before I gave up on the idea, I had collected sixteen unique definitions.

In revisiting the construct of occupation for this research, I came to notice that there are two distinct but interrelated ways in which theorists define and discuss occupation. I refer to these two schools of thought as occupation as a noun (occupation<sub>n</sub>) or occupation as a verb (occupation<sub>v</sub>). Clarifying which school of thought is being referred to would help immensely in communicating the conceptual richness of occupation.

#### *Occupation and Occupation*

Before differentiating between occupation<sub>n</sub> and occupation<sub>v</sub> I wish to make clear that both schools of thought are concerned with ‘human doing’. They differ in that they approach doing from different perspectives.

Occupation as a noun is concerned with the role of culture in making sense of what and how humans do things. For example, Clark et al., (1991) define occupation as “chunks of daily activity that can be named in the lexicon of [the] culture” (p. 301). When occupation is thought of as a noun we speak of occupations (note the plural). Things such as cooking, showering, taking the dogs for a walk. Within this school of thought, occupations are considered to have distinct beginnings, middles, and endings. Occupations exist outside of people and are something that people engage with or participate in.

In contrast, when occupation is thought of as a verb, theorists are more concerned with the process of how human doing unfolds in place and time. How we occupy ourselves. In this view, all human activity is understood as occupation (Hammell, 2009a). Occupation is considered to be a continuous flow as people move from one activity to another. Occupation<sub>v</sub> refers to the idea of doing itself.

One of the moments where the distinction between these two schools of thought become clear was while reading some commentary from Morris and Cox (2017). They were questioning the commonly used phrase 'occupational participation' and described it as tautology, given that occupation means doing. I made a note stating: *'it is not tautology if occupation is understood as describing cultural forms of activity'* (Reflective Journal, 5 December 2022).

Understanding the difference between occupation<sub>n</sub> and occupation<sub>v</sub> also helps to clarify some of the confusion around the phrase 'occupational engagement'. While some use the phrase to describe the quality of participation, the phrase can also be used to describe someone taking part in a socially structured and sanctioned way of doing (occupation<sub>n</sub>). Throughout this thesis, I have used the phrase 'occupational engagement' in this sense.

The idea of occupational engagement is helpful in developing a line of synthesis that connects occupation<sub>n</sub> and occupation<sub>v</sub>. In understanding human beings doing, it is helpful to acknowledge that what we do can be described using cultural lexicons (occupation<sub>n</sub>). Yet it is also important to understand how the particular enactment of these cultural forms of occupation<sub>n</sub> occur and unfold in both time and place. In this way, occupation is always both social and individual.

### *On the Topic of Individualism*

One of the themes that emerged during my reading on occupation was a critique of individualism. I came across two ways in which people advocated for a move away from individualism: either towards a perspective that focussed on the environment, or, towards an understanding of the occupational engagement of groups, communities, and society. Yet it is important to critically reflect on apparent tensions between individual and social perspectives (Magalhães, 2012). How might these views be subsumed by a broader line of synthesis?

One of the side effects of occupational science emerging from occupational therapy is that much of our knowledge of occupation has been shaped by therapeutic agenda of occupational therapy.

*Many of our conceptualisations of occupation are concerned with the human subsystems that are required for occupation. BUT when it comes to understanding occupation itself, this focus on the individual becomes confounding. Removing the individual from the analysis or rather shifting the perspective away from the individual opens up so many new opportunities for theorisation* (Reflective Journal, 03 December 2022).

Shifting focus away from the individual as the unit of analysis, to occupation itself, helped me to understand how social and individual perspectives of occupation might relate.

There is no escaping the idea that occupation is experienced on an individual level. Yet occupation cannot be understood individualistically as occupation is always shaped and contained by context

and culture. *'Individually experienced does not mean individualistic'* (*Reflective Journal*, 23 January 2022).

This perspective has significance for understanding the links between occupation and resilience. If occupation is positioned individualistically, the natural conclusion is to argue that people should just engage in occupations that build resilience. This conclusion would support a neoliberal agenda where responsibility for adaptation is placed on the individual and the need for social support structures and systemic change is obscured. Rather, when occupation is understood to be shaped and inseparable from context, the obvious question for understanding resilience is what determines possibilities for people's occupational engagement?

### *Understanding Context*

The terms context and environment were terms used interchangeably<sup>9</sup> in the literature on occupation, but what did they truly mean? Did context refer to the physical environment or the social? Are the two related? How do we understand the interaction between context and temporality? Do we occupy time or place or both? How does this all relate to the individual experience of occupation or to more collective understandings of occupation?

I came to understand context as threefold, consisting of temporality, society, and space. All human activity takes place within these dimensions. Occupation (in the occupation<sub>v</sub> sense of the word) unfolds over time. Society shapes what we understand as desirable when it comes to occupation, but it is also through occupation that we relate to one another. Finally, because we are physical beings, occupation always occurs in space.

When it comes to relating individual experience to a contextual understanding, meaning is pivotal. It is through meaning that the broader context is interpreted on the individual level. Meaning is simultaneously individual and collective, occurring at the interface between the individual and the socio-cultural. We ascribe meaning to certain occupations based on our experiences and life history (temporality), but also based on broader cultural shared systems of meaning (society). Meaning is part of the interpretive process through which occupation moves between occupation<sub>n</sub> and occupation<sub>v</sub> as we navigate individual experience as part of a broader collective in context. In a way, as we make sense of occupation through meaning, everyone engages in theorisation as praxis, making sense of everyday life (Teo, 2022).

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<sup>9</sup> In some instances, a clear distinction between context and environment is made with environment referring to the immediate physical characteristics and context referring to the broader social dynamics. This distinction is not however universal in literature on occupation. The term environment can be used to refer to physical and social dynamics (Dennis, Dorsey & Gitlow, 2015) I use the terms context and environment interchangeably to refer to both space and social dynamics going forward.

## A Praxis of Theorisation

Theorisation is motivated by a desire to make sense of reality (Teo, 2022). It is a process that evolves through action (in my case extensive reading) and reflection (which I practiced through memo writing). I began this research asking how resilience and occupation might be related. As time progressed, I started asking another question: 'what are resilience and occupation really?'. Developing lines of synthesis had helped me to understand that resilience referred to capacity, process and outcome and that occupation might refer to specific forms of occupation or to the unfolding of occupation in time, space, and society. Yet I still did not feel like I had reached the crux of the matter. So, I delved deeper into topics that related to theorisation, asking questions of ontology, exploring the nature of constructs, and drawing from critical perspectives to seek an understanding of occupation and resilience that would transcend what was already known.

### *Questions of Ontology*

Ontology and epistemology drive all theorisation (Reus-Smit, 2013) yet often questions of ontology are overlooked in the face of epistemological questions (Slaney & Racine, 2011). So much time is often spent justifying what we know (epistemology) that we can fail to ask the important ontological question of 'what is it?' While an epistemological question about resilience would be 'how can we recognise or measure resilience?' the ontological question is 'what is resilience?'. To answer the epistemological question the ontological question needs to first have been satisfactorily answered (Slaney & Racine, 2011).

Ontology is concerned firstly with the nature of something and secondly with how things might be related (Reus-Smit, 2013). But is resilience a thing? *'Is there such a thing as resilience? Is it a phenomenon or is it an idea? Or as Luther et al. (2000) put it, is resilience veridical or mythical?'* (*Reflective Journal*, 25 January 2022).

The more I thought about it, and the more I read, the more it seemed impossible that resilience referred to a phenomenon. Resilience is a name used to represent such varied outcomes and processes that it cannot refer to just one thing. Likewise, while descriptions of resilience as a process were commonplace in the literature, this approach felt incomplete as the term 'resilience' was also used to refer to processes and outcomes.

At one point, I quite liked the idea of referring to resilience as a metaphor. Noblit and Hare (1988) used the word 'metaphor' as another term for concepts, themes or perspectives that help organise our understanding of a topic, using the term as a way of emphasising the non-literal nature of language and description. Metaphors do not describe reality exactly but rather help us to make sense of it. Atallah (2016) described a third wave of resilience research that focuses on resilience as a metaphor or name used to describe outcomes that result from varied processes and

dynamics. Yet I could not settle on using the term metaphor to describe resilience, as it felt a little too abstract. I toyed with the idea of resilience as an analogy, where there was similarity between the many different processes and pathways that we describe as resilience. Yet this too felt too abstract. Perhaps resilience was a dimension rather than a category? Something that was often if not always present but to a varying degree? I felt a bit lost trying to make sense of what resilience really was.

Clarity came unexpectedly. I had been stuck for months. The closest I had come to was to describe it as a phenomenon, but this did not sit comfortably with me because I kept coming back to the idea that resilience is not a distinct thing, but rather a 'somethingness'. I sometimes referred to this as a higher order construct, a term that describes how we interpret reality but not reality itself. Yet I was also not comfortable with that description because resilience seemed to be so closely tied to concrete experience.

I was not reading about resilience when the lightbulb struck, rather I was reading up on theorisation as a practice, perfectly illustrating the concept of abduction, a subconscious process through which the brain forms new associations, a blinding flash of the obvious as things fall into place.

Pattern is a popular term for the latter type of generalization. A pattern is sometimes mistaken for a phenomenon that exists independently of the observer but is actually a theoretical construction that is produced by the researcher in interaction with reality (Swedberg, 2017, p. 194).

Resilience is a collection of patterns that describe and predict ways in which all systems adapt to change and adversity. This conceptualisation of resilience as a pattern can be applied to many different systems including those intrinsic or extrinsic to people. Resilience was not a noun or a verb but rather an adjective. Resilience describes, resilience is inferred. Understanding this means questions change. Instead of asking 'who is resilient?', the question becomes 'which pattern of resilience is being followed and why? Can we create opportunities for different patterns to be followed?

Taking it one step further, I started applying concept theory to resilience. According to concept theory, to recognise something as an extension of a concept, we hold on to prototypes. What might our prototype of resilience be? Are there certain features of a pattern that make it easier to identify as resilience because they are the exemplar? Do other patterns share overlapping features and similarities with resilience patterns, but because they are not like the prototype they are not as easy to identify as resilience?

But if resilience is about patterns, what is occupation? I had been so focussed on trying to figure out the overlap, how occupation and resilience were similar, that I missed how they were different.

I would consider occupation to be a phenomenon, or in the least, a category of phenomena (Lala & Kinsella, 2011). Occupation<sub>v</sub> describes phenomenological experience itself while occupation<sub>n</sub> groups together similar phenomena.

Another thought occurred: perhaps the pattern of resilience is made up of the phenomena of occupation?

### *On the Nature of Constructs*

It seems to be a common misconception that constructs ought to fit together neatly into hierarchies and diagrams. Or perhaps, having been trained predominately in occupational therapy models, this was my perception of how constructs ought to relate.

Yet constructs are approximations and abstractions of reality (Slaney & Racine, 2011). Therefore, it would follow that constructs do not need to fit together neatly, rather constructs are constructed and understood as overlapping and intertwined. This represents an important paradigmatic understanding. In occupational science we are not working to uncover constituent components of reality, rather we are trying to make sense of reality by describing and abstracting from our experience of reality.

What if occupation and resilience are not merely related, what if occupation and resilience both describe the same everyday processes and experience?

### *Limiting Perspectives*

If occupation and resilience are both about everyday experience, not everything about them can be good. Or rather, if we try to hold to this assumption, we limit our perspective and restrict our praxis. A fixation on the positive aspects of occupation (or resilience for that matter) without a broader exploration of the nature of human occupation can narrow our scope of understanding (Molke et al., 2004).

Within a praxis of theorising, it is important to consider how concepts might be used to uphold ideologies and the degree to which concepts do justice to the reality of lived experience (Teo, 2022). Limiting understandings of occupation to health and our understanding of what constitutes a positive outcome when it comes to resilience limits our praxis.

Because the study of occupation has been so closely tied to the profession of occupational therapy, there has been a preoccupation with the relationship between occupation and health and a moral and normative understanding of occupation (Kiepek et al., 2014). Occupation has been

conceptualised as health promoting with less attention being paid to the ways in which occupation can contribute to loneliness, ill health, boredom, and the perpetuation of systemic injustice (Kiepek et al., 2014; Twinley, 2013). Only conceptualising occupation as positive overlooks the potential of occupation as a unit of analysis that can help us understand these other social dynamics. Like resilience, occupation as a concept is normative (Angell, 2014). What might happen if these normative perspectives are unpicked? Would the constructs unravel or would new possibilities for praxis emerge?

One of the most important realisations when it comes to understanding resilience is that resilience is not actually the end that we are aiming for. What we want is resilient outcomes, not resilient people (Luthar & Cicchetti, 2000; Ungar & Theron, 2020). But it is also important to question how we place value on certain kinds of outcomes, recognising that if we limit our definition of positive outcomes, we render invisible those who are succeeding in complex environments and in the face of adversity. Coping, adaptation, and flourishing can manifest in different ways (Mittelmark, 2021).

Just as the darker side of occupation is often overlooked, so too is the darker side of resilience (Mahdiani & Ungar, 2021; Panter-Brick, 2021). When it comes to resilience, there has been a tendency to place the responsibility for adaptation on individuals, abdicating those in power from their responsibility for addressing adverse circumstances (Mahdiani & Ungar, 2021). Overemphasis on particular forms of 'resilient outcomes' also needs to be cautioned against. For example, good work performance might come at the cost of mental wellbeing. Resilience has a history of being associated or measured with mental health outcomes data, yet for those who have experienced significant adversity, what if positive adaptation occurred alongside poor mental health? Predetermining or defining what constitutes positive adaptation is not an objective process but involves implicit or explicit value judgements (Masten, 2014).

Indeed, to counter a neoliberal bias in the research on resilience, decolonial frameworks that centre transformation, the resilience of communities and the reality of power dynamics are needed (Atallah et al., 2021). Similarly, occupation needs to be theorised in ways that consider that it can contribute to ill-health and non-resilience.

Understanding this dark side to occupation and resilience points to a complexity in the relationship between occupation and resilience. Occupation can both facilitate and limit adaptation (Clark et al., 1991; Zemke, 2019). This implies that occupation could both facilitate or limit resilience.

In this broader perspective, occupation remains the mechanism for resilience. Yet it is understood that there is complexity to the way in which people navigate everyday experiences. Occupation and resilience are both shaped by broader power dynamics and can come at a cost.

*Is Resilience Extraordinary?*

It took me a long time to settle a question that had bothered me from the beginning. Is resilience extraordinary? Often, resilience is constructed as such, as something unique and impressive that we should aspire to or seek to promote. Yet if resilience is about everyday occupation, how can it be extraordinary? Does not viewing resilience as extraordinary limit our insight?

The study of resilience began with the study of people who, extraordinarily, coped far better than was expected of them given the adversity they faced (Masten, 2014). Ungar (2018) argues in a synthesis on resilience research, that the context of adversity is one of the defining characteristics that differentiates resilience from other concepts. Yet who gets to define what adversity is? Does adversity include navigating ordinary daily stressors or only extraordinary stressors?

I do not presume to have the answer to what differentiates ordinary adaptation from resilience. Nor am I the first to ask if resilience makes a system normal or exceptional (K. Brown, 2021). I have only observed that popular conceptions of resilience presume its necessity in everyday life. This conception of resilience also appears to be commonplace in psychology (Fletcher & Sarkar, 2013; Joyce et al., 2018). Perhaps there is room for differentiation between fundamental adaptive systems and resilience, even when it appears that the mechanisms for both are the same (Masten & Narayan, 2012). Given this, is a distinction necessary or useful?

I came to view resilience not as something extraordinary but something that is present in all ordinary human life. Richardson (2002) wrote that 'everything is driven by resilience'. Reflecting on this I wrote:

*Resilience describes the world in flux, ever changing and adapting with infinite potential, constantly forming & reforming, how all systems respond to the world around them. For humans, our reality is shaped by how we engage with the world and our world is shaped by our engagement. It is through everyday occupation that potential is created, and resilience is expressed.*

*But resilience is not the lifeforce as Richardson claimed, but rather something required by life. It is in some way, a fundamental reality, a lore, and a law of the world: all systems change and adapt in the face of adversity and suffering. In the same way, occupation is so difficult to explain and define, simply because it is.*

*Occupation and resilience both describe the nature of reality, a taken for granted invisibility that shapes our everyday existence. Both are embedded in the fabric of our world, dispersed*

*across multiple systems. In this sense, they are not discreet and definable, but this does not diminish their somethingness, essence, quiescence, actuality, verity? (What is the distillate?)*

*An abstract verity, concepts that can help us make sense of the world that describe fundamental realities about our world (Reflective Journal, 16 January 2022).*

A fundamental shift had occurred quietly in my thinking. While I started this research thinking that resilience needed to be promoted or facilitated, I came to see resilience as something embedded in all occupation and in all systems. I had shifted from a normative understanding, to a descriptive one. This shift in my thinking did not mean the implications for practice were any less. In fact, quite the opposite. Instead of thinking that intervention is required for resilience, I have come to believe that a more descriptive understanding of resilience pushes us to consider what options people have available to them and question how we might create contexts that allow for more options, more pathways, a multitude of resilient patterns.

#### *Occupationalisation vs Theorisation*

About two years into this research, I came across a paper that initially left me feeling gutted but then reanimated. The paper was a protocol for a scoping review addressing the question of how resilience has been conceptualised and operationalised in occupational therapy and occupational science literature (J. Turner et al., 2022). Here was a separate group of researchers writing about what I had spent the last two years working on. In all fairness, I had not published a protocol for this synthesis as this was not in alignment with my methodology. Yet there was something in print long before I was ready to share my work. As I read their work, there was an assertion that I have repeatedly bumped up against that frustrated me, the idea that we need to re-examine resilience through ‘an occupational lens’. What even is an occupational lens?

Occupational Science has a habit of reinterpreting theory through this so called ‘occupational lens’ (Pierce, 2012; Turnbull, 2020), and has a tradition of putting the term ‘occupational’ in front of other constructs (Morris & Cox, 2017). In creating and naming new ‘occupational’ concepts, are we truly exploring new concepts, or just trying to capture all of the complexity of occupation? I wonder if this habit of ‘occupationalisation’ was not off-putting to anyone outside of the discipline who would have otherwise benefitted from the insight that occupational science has to offer.

Is occupational justice separate from justice itself? Are not all possibilities expressed and mediated by occupation? Is not all choice exercised through occupation? Does not all consciousness relate to occupation? Instead of subsuming constructs such as justice, possibilities, choice, and consciousness into our understanding of occupation, we ought to be explaining the value of occupation in understanding these constructs more deeply. Instead of drawing theory

into occupational science, we need to communicate the value of the idea of occupation with other disciplines.

There are two ways in which an 'occupational lens' could be used. The first is to draw theories and research from other fields into the domain of occupational science, applying these concepts to the construct of occupation. This approach adds depth to understanding of occupation but leaves the original construct unchallenged. The second approach and one that I favour, is to engage in interdisciplinary theorisation, taking the construct of occupation and applying it to the fields outside of occupational science.

For this reason, I would argue that we should not speak of 'occupational resilience'. While this might add an element to our understanding of occupational engagement, the idea of 'occupational resilience' does not challenge conceptualisations of resilience. Moreover, describing the relationship between occupation and resilience as occupational resilience fails to capture the idea that all human resilience is mediated through occupation. Occupation is key to understanding resilience.

## Conclusion

This chapter describes the process through which I came to understand that resilience and occupation both describe overlapping aspects of everyday reality. I described how my positionality and professional practice has shaped the way in which I approached this synthesis. I detailed some of my starting assumptions and spoke about how my thinking developed and changed over time. I shared some of my reasoning process and the questions that I was asking as I worked through the literature as well as my perspective on the importance of communicating the value of the concept of occupation. Chapter Six now presents my final theory of occupation and resilience.

## Chapter Six: A Theory of Occupation and Resilience

This chapter introduces a theory of occupation and resilience, a theory that describes the everyday processes of navigating change, uncertainty, and adversity. This theory of occupation and resilience is the outcome of an interdisciplinary critical interpretive synthesis and conversations with subject matter experts. I present these thoughts in three main sections. The first two sections describe how I have conceptualised and made sense of human occupation and resilience. As both occupation and resilience are conceptually broad and rich, the explanations I provide are necessarily pared down. This was done so as to not distract from the final synthesis. Rather, the explanations of occupation and resilience that I offer are intended to support the synthesis of the two constructs. In the third and final section, I present an overarching theory of how the constructs of occupation and resilience are related.

### Occupation

The construct of occupation describes the idea that people occupy everyday life through the things they do (Townsend, 1997). Occupation as a construct is both simple and complex. Put simply, the concept of occupation captures the idea that all human life consists of people doing things. But human life is far from simple. In its complexity, occupation describes the ways in which people, time, space, and society interact. Occupation is thus an abstract concept that captures many of the complex features and dimensions of human experience. Occupation as a construct thus captures far more than just doing an activity.

The term occupation is used in two main ways. Firstly, if the term is used as a noun, occupation describes recognisable forms of human activity. Things like cooking, taking care of family, spending time at play. These occupational forms are strongly influenced by culture. For example, the idea of food preparation is universal but what the process involves varies widely by context and culture. Secondly, if occupation is used as a verb, it describes the ways in which people make use of their time in unfolding processes. Each activity blurs into the next as people navigate their days and lives.

Key to understanding occupation (in both senses of the word), is an understanding of how people and environments interact. In earlier theories and models of occupation, theorists often spoke of occupation occurring in context where the environment would shape occupation and occupation impacted the environment. This interactionist view has been contested and critiqued (Dickie et al., 2006). Occupation does not just occur in environments; it cannot be separated from the environment. Dewy's theories of transactionalism have been particularly influential in developing the idea that occupation is inseparable from context (Dickie et al., 2006).

While my thinking has been strongly influenced by transactionalism, I think that the term can be confusing for those not familiar with Dewy's theories. Moreover, transactionalism and systems theory have been presented as opposites (Aldrich, 2008), a dichotomy I do not believe is helpful. Thus, instead of speaking about transactionalism, I prefer to describe occupation as the point of intersection. This language helps in drawing together insights from the transactionalism school of thought and systems theory.

### *Occupation as the Point of Intersection*

Rather than thinking of occupation as what occurs when people interact with their environment, understanding occupation as the point of intersection allows us to see that occupation does not just occur at the interface between people and place, occupation is the liminal space, the interface. It is through occupation that the social and ecological meet. This intersection can occur on multiple levels as occupation can be understood at an individual, group, community, or population level. Occupation is thus the entanglement between space and people.

Yet the interface between people and place is not the only intersection that occurs with occupation. Occupation is also the point where we interact with other people. This can occur in concrete ways through collective occupation or co-occupation, or in more abstract ways where culture and history shape how we engage in occupation. Moreover, the occupations of any one person undoubtedly shape the occupations of another.

Occupation is also the place where occupation interacts with occupation. This is undoubtedly meta, but something we take for granted and a clear theme in the literature. Past occupational engagement interacts with current occupational engagement shaping future occupations. In this way occupation has a clear temporal dimension. This temporal dimension to occupation allows for development, change, adaptation, and transformation.

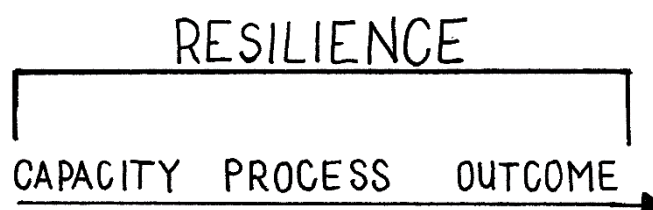
Occupation is the point of intersection for multiple systems: systems within people, systems between people, environmental systems, time as a system. Occupation acts as the vehicle for these dimensions to come together (Reed et al., 2011). Occupation is what occurs at the interface between social, spatial, and temporal dimensions.

### Resilience

Resilience is commonly understood as positive outcomes in the face of change, uncertainty, or adversity. Yet in conceptualising resilience, it is important to point out that resilience itself is not the aim; it is only the means to an end, that end being a positive outcome that we see as resilient. The notion of positive outcomes is not neutral. Rather, what is considered a positive outcome is determined by personal values and broader cultural ideals. If we are to truly understand

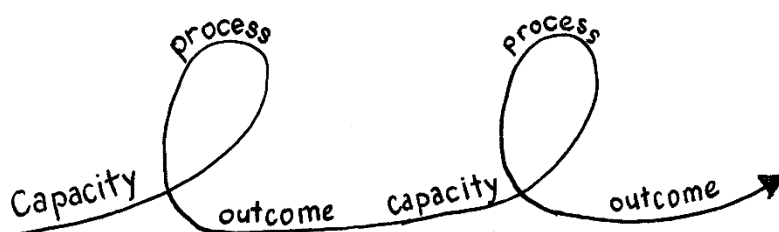
resilience, it is important that we question our understanding of what we consider to be positive outcomes.

Yet resilience refers to more than just an outcome, and if resilience is to be useful for practice, our understanding of resilience needs to encompass the multiple dimensions of resilience. Resilience as a term is also used to refer to potential capacity for achieving positive outcomes, as well as the processes by which those outcomes are achieved. Capacity, process, and outcome refer to different aspects of the concept of resilience but also relate to each other with dynamic interplay (see figure 13). Capacity shapes both process and outcome. Yet, what is determined to be a positive outcome will preference what sort of process is followed in the unfolding of resilience.



*Figure 12 Resilience as a Framing Concept*

Relating capacity, process and outcome also reveals a temporal dimension to resilience (see figure 13). Available capacity shapes resilience processes, which determine outcomes, which in turn shape future capacity. Resilience is thus far more than an outcome or even a process, but rather is the overarching concept. An integrated understanding of capacity, process and outcome is therefore necessary to capture the conceptual breadth of resilience.



*Figure 13 The Temporal Dimension of Resilience*

### *An Integrated Theory of Resilience*

From an integrated perspective, resilience is positioned as the overarching or framing concept (Olsson et al., 2015) under which understandings of resilience as capacity, resilience as process, and resilience as outcome fall.

#### Capacity

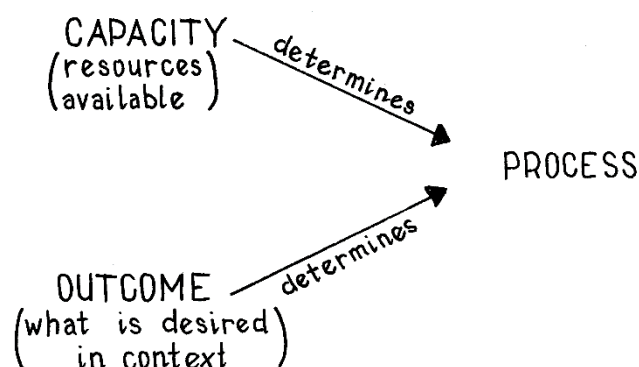
Capacity refers to the potential for resilience. This potential is distributed across multiple systems as resources that may be drawn upon when change, uncertainty or adversity is faced (Masten, 2014). On an individual level, these resources may be internal or external to a person. Likewise,

when looking at the resilience of a collective, capacity for resilience both refers to the internal characteristics of the group and the external resources available to that group to draw upon.

### Processes

Persistence, resistance, recovery, adaptation, growth, and transformation have all been identified as processes that form apart of resilience (Ungar, 2018, 2021). These processes differ considerably and up to this point, no theory has been able to account for how these different processes are related to each other (Mittelmark, 2021).

Ungar (2008) speaks about how the ability to navigate and negotiate towards resources is a requirement for resilience. Building on this idea, I propose that the processes that might be followed will be determined by available capacity and resources as well as by what is considered a desirable outcome (see figure 14). For this reason, it is important to consider how unequal power dynamics and structural disadvantage might shape what resilience process is followed as these factors shape both capacity and possibility (Atallah et al., 2021; Olsson et al., 2015). Moreover, human values will also shape what is seen as a positive outcome and thus the processes at play (Atallah et al., 2021).



**Figure 14 Capacity and Desired Outcome Determine Process**

The interplay between capacity, outcomes and processes is dynamic as processes will draw upon capacity as systems interact, while the outcome of this process results in a new configuration of systems.

### Outcomes

There has been recognition for a long time now that we need to think carefully about how we understand, define, and measure positive outcomes. Positive adjustment in one area does not necessarily mean wellbeing across all domains (Kaplan, 2013; Luthar et al., 2006; Luthar & Cicchetti, 2000; Schoon, 2021). Perhaps it is also helpful to caution against the use of the term resilient. While using the term resilience conveys the idea of an unfolding process, 'resilient' is a term that applies to outcomes that would be considered indicative of resilience. Resilient as a term

can tend to be deterministic and static, a perspective that is in tension with an understanding of resilience as dynamic and unfolding (Cutter, 2016).

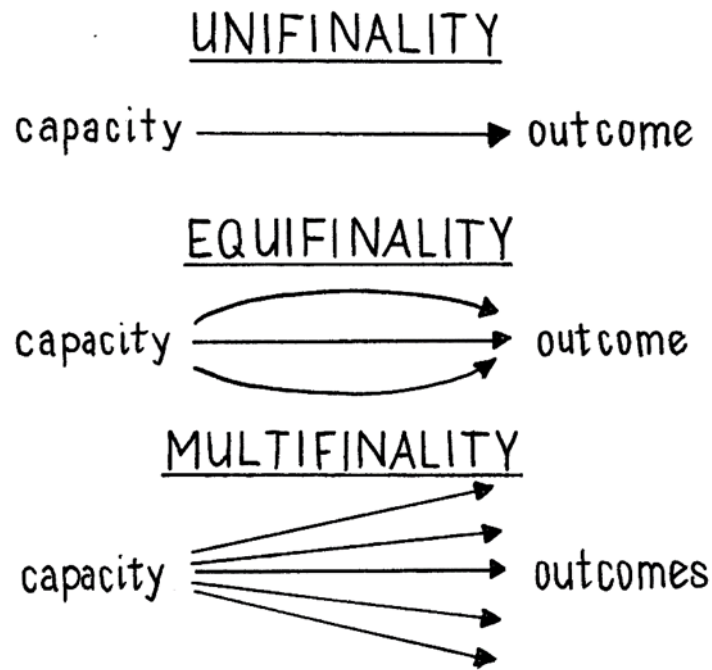
Just as the unfolding of resilience as a process is dependent on context, resilience as an outcome is also dependent on context. The very concept of positive adaptation needs to be understood in specific contexts rather than universally defined (Schoon, 2021). Whenever resilience is being discussed, two key questions need to be asked: resilience from what and resilience for whom? (K. Brown, 2021; Helfgott, 2018; Olsson et al., 2015; Robinson & Carson, 2016; Schoon, 2021; Ungar, 2018; Vale, 2014).

Calls to be specific about what we are referring to when we speak about resilience go back to the 2000s (for example Luthar et al., 2000), but are worth repeating as resilience as a concept only holds significance if we know whose resilience is being considered (Vale, 2014).

For resilience to be significant, we also need to understand the dynamics of power in who gets to define what is considered a positive outcome. Is only one outcome being considered as positive, or are people able to define for themselves what a positive outcome would be for them?

#### Integration

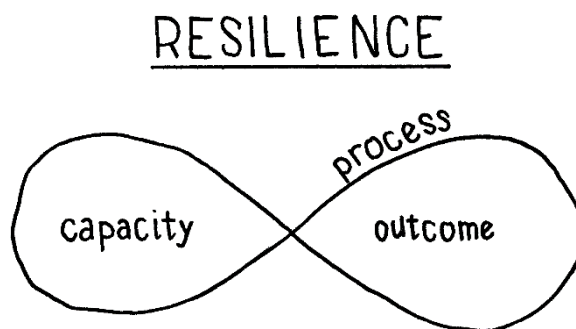
In considering the way in which capacity, process and outcome interact, the concepts of *equifinality* and *multifinality* from systems theory are helpful. Equifinality is the idea that there are multiple pathways to the same outcomes. Multifinality captures the idea that there are multiple pathways to reach many different outcomes which could all be considered as resilient (Masten, 2021; Schoon, 2021; Wright et al., 2013). These concepts stand in contrast to the deterministic idea of *unifinality* where a set of specific initial conditions or group of conditions will lead to a single predetermined outcome. Much of the early research on resilience was shaped by the assumption of unifinality. If certain variables (such as personality traits) are present, resilience should occur. As resilience research has evolved, greater consideration has been given to the dynamic interplay between variables helping us to consider how resilience might unfold differently in diverse circumstances.



*Figure 15 Unifinality, Equifinality & Multifinality*

The concepts of equifinality and multifinality, when applied to resilience, help to make sense of why multiple and seemingly opposed processes can all fall under the umbrella of resilience. Until now, the question of how these various processes relate to each other has been unanswered (Ungar, 2018, 2021). In my conceptualisation, these processes do not directly relate to each other, but form differing pathways through which resilience can unfold dependent on capacity available, and the outcomes both desired and possible in context. There are many potential outcomes that can be considered resilient. There are also many pathways by which these outcomes could be reached.

This interplay between capacity, process and outcome means that resilience is both dynamic and durative.



*Figure 16 A Dynamic and Durative Understanding of Resilience*

## Occupation and Resilience

While up till now I have described occupation and resilience as distinct constructs, occupation and resilience are best understood as intertwined. As constructs, occupation and resilience are not phenomena in so much as themselves. Rather, they are abstractions or descriptions of reality or observable phenomena that help us to make sense of the world. The terms are distinct, but the everyday processes that they describe are not. Occupation and resilience both describe the ways in which people, in their context, negotiate everyday life.

Socio-ecological and multisystem perspectives on resilience have demonstrated the most utility when it comes to theorising the complexity of human resilience. But, up to this point, these approaches have not been able to explain how social and ecological systems interact. An understanding of occupation addresses this gap.

Rather than describing resilience vaguely as the interaction between socio and ecological systems, or as a collection of processes such as persistence, resistance, recovery, adaptation, and transformation (Ungar, 2018, 2021), integrating the concepts of resilience and occupation helps us to understand how these systems interact and thus how resilience unfolds. Resilience studies has been limited by the challenge of describing how the multiple systems and levels of influence that affect resilience operate and interact, systems such as biological systems, psychological, interpersonal, and cultural systems (Wright et al., 2013). Occupation answers this challenge.

Understanding occupation adds depth to resilience theories. In this integrated perspective, resilience can be understood as a pattern of occupational engagement, whether individual or collective, that unfolds over time in a specific context.

### *Resilience and Occupation in Context*

From a socio-ecological understanding of resilience, resilience is understood as dependent on complex interactions between biological, psychological, social, and environmental systems (Schoon, 2021; Ungar, 2012). Resilience is commonly described in relation to spatial and temporal scales (Bousquet et al., 2021). This understanding of resilience shares many characteristics with the construct of occupation which views occupation occurring as the contextual interplay between intrapersonal systems (biological and psychological), interpersonal systems (society and culture), space and time. Thus, both occupation and resilience are recognisably shaped and determined by context. Context structures what is possible for people and thus the potential for resilience and occupation. It follows that resilience processes and outcomes will differ between contexts (K. Brown, 2021; Ungar, 2004). Resilience however is not only contextually determined, but also contextually defined (Ungar, 2021) just as occupational forms are culturally determined

and defined. With the contextual factors shaping occupation and resilience being the same, understanding how occupation occurs illuminates the processes through which resilience occurs.

*Occupation as the Mechanism of Resilience*

Many authors have noted that resilience is made manifest in everyday life (Nguyen-Gillham et al., 2008; Ungar, 2008; Ziervogel et al., 2017). Resilience can be understood as occurring due to the recurring interactions between internal and external factors, co-facilitated between people and environments. Occupation is this point of intersection between social and ecological systems. Occupation is thus the mechanism for resilience.

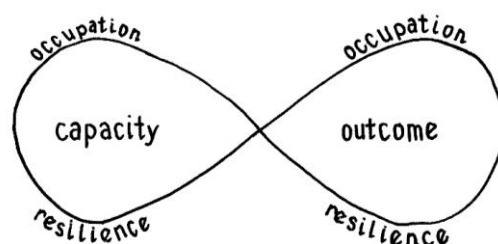
Occupation is understood to be key to human adaptation (Clark et al., 1991). That adaptation occurs through occupation, suggests that resilience too would occur through occupation.

Occupation can be understood as the mechanism of resilience relating to the three different components of capacity, process, and outcome. When thinking about capacity, occupational engagement can be understood as a resource upon which people may draw. Likewise, it is through occupations that people access resources that might be required for resilience. Knowing that it is through occupation that people develop, adapt, and transform (Nelson, 1988), it is clear that resilience is developed through occupation. Similarly, resilient outcomes can be understood as being enacted or expressed through occupation.

Understanding occupation to be the mechanism for resilience draws into focus an important point. Where opportunity for diverse forms of occupational engagement is lacking, the possibilities for resilience will be restricted both in terms of process and outcome.

Yet both resilience and occupation also contain a temporal dimension with capacity, process and outcomes blurring as people negotiate everyday life, each element of resilience constantly evolving. In the same way, occupation is constantly evolving and unfolding. If occupation is the mechanism for resilience and occupation is constantly unfolding, resilience can be understood as unfolding alongside or through occupation. Occupation and resilience are thus two sides of the same coin.

RESILIENCE & OCCUPATION



*Figure 17 Resilience & Occupation*

*Scale & Systems*

One of the reasons resilience is so fascinating a concept is that it can be applied to just about any system across any scale, including systems within systems (Masten & Narayan, 2012). Dynamic models of resilience could allow for integration of resilience theories across levels of analysis and across disciplines (Masten, 2015). Yet one of the current challenges for studying socio-ecological resilience is the lack of a clear unit of analysis and no simple means of moving between different levels of analysis (K. Brown, 2021; Mittelmark, 2021; Wright et al., 2013). Calls for scalable ways of theorising about resilience have been made repeatedly (Masten, 2021). Yet so far this need has not been adequately addressed. Moreover, there is a need for theories of resilience that remain consistent across all levels of analysis (Cicchetti & Curtis, 2007). For human resilience, an integrated resilience theory should be applicable from the individual level to the population level. In addition, it should be able to link individual and collective dimensions of human experience (Panter-Brick, 2021). As a construct, occupation can address these requirements.

Occupation provides an interesting unit of analysis as it can be used to describe the interaction between many systems and can be applied at different levels of analysis (Fogelberg & Frauwirth, 2010). The key here is moving away from using people as the unit of analysis to rather consider what occurs at the interface between people and context, where occupation helpfully describes this interface.

While understanding each individual component of a given system can be helpful, for example, understanding how individual-level systems are comprised of physiological and psychological systems, or how social systems are comprised of social actors, institutions and norms, no system can be fully explained by its constituent parts (Schoon, 2021). For this reason, shifting focus to understanding the interface between these systems may yield new insight. Thereby addressing the need identified by Masten (2015) for theory that provides a more nuanced understanding of the processes that link systems and levels. By describing the interface between individuals, society, time and space, the construct of occupation could also yield new insight into how individual, structural, and social resilience are linked.

### *Occupation is Resilience*

If I were to summarise what I have come to understand about the relationship between occupation and resilience. I would summarise it as this: occupation is resilience. That is not to say that resilience and occupation are synonymous; not all aspects of resilience can be captured within the construct of occupation. Yet to fully grasp resilience, at least when it comes to human resilience, one needs to understand occupation. Resilience depends on occupation.

Both occupation and resilience describe fundamental aspects of reality. Although an abstract construct, resilience captures the reality of an everchanging context and the need for continual adaptation. Occupation describes not only everything that people do, but also captures the way in which the multitude of systems that determine human experience intersect. Human experience occurs at this interface between systems as systems change. For people, resilience occurs through occupation. For this reason, occupation is resilience.

*Resilience is a process by which change is negotiated and contested in complex social-ecological situations to make up every day experiences*

(Brown, 2021, p. 779)

### Conclusion

In this chapter I presented my theory of occupation and resilience. Occupation and resilience are understood as overlapping constructs that describe everyday processes. I described occupation as the point of intersection between people, space, and time. Resilience was described as capacity, process and outcome, a pattern of occupational engagement that unfolds over time. As occupation is the mechanism for resilience, understanding occupation is key to understanding resilience.

## Chapter Seven: A Praxis of Resilience

Resilience has been described as a concept with inherent promise (Luthar & Cicchetti, 2000). While complex, messy, and dynamic (Ungar, 2021), resilience has much potential for shaping the development of socially transformative praxis in occupational therapy, occupational science and beyond, as it helps us to conceptualise how people negotiate adversity and everyday experience. Praxis consists of theorisation, action, and reflection and thus theory is essential to the development of socially transformative praxis. The aim of this research was to generate an overarching theory on how occupation and resilience are related to advance the development of socially transformative praxis that can respond to the politics of everyday occupation and meaningfully support health, wellbeing, participation, and justice. Occupation and resilience both describe the ways in which people, in their context, negotiate everyday life. Understanding occupation is key to understanding resilience, as resilience can be understood as a pattern of occupational engagement that unfolds over time. This insight into the interlinkages between resilience and occupation has implications for how we understand a praxis of resilience, in occupational therapy, occupational science, and elsewhere.

### Resilience in Occupational Therapy and Occupational Science

There have been increasing calls for the development of socially transformative praxis that is able to respond to the situated and political nature of human occupation (Angell, 2014; Farias & Rudman, 2019; Frank, 2012; Galheigo, 2011; Ramugondo, 2015; Richards & Galvaan, 2018; Rudman, 2014). Socially transformative praxis is concerned with the factors that both constrain and promote health, wellbeing, participation, and justice. Yet within occupational therapy and occupational science, more attention is generally given to the contextual and hegemonic structures that constrain human flourishing than to those that promote it. It is within this realm that an understanding of resilience and occupation can make a valuable contribution to the praxis of occupational therapy and occupational science. Moreover, an understanding of the complexity of the relationship between occupation and resilience helps to problematise the binary distinction between constraining and promoting flourishing. A contextual understanding of resilience and occupation shows that resilience processes and possibilities are constrained by the context in which people find themselves.

### *Resilience and Occupational Therapy*

It has generally been assumed by occupational therapists that occupational therapy interventions promote resilience (Matuska, 2014) yet little attention has been paid to how or why this might be. Understanding the relationship between occupation and resilience helps to make sense of why occupational therapy interventions might indeed promote resilience. If occupation is the

mechanism for resilience, and limited opportunities for occupational engagement constrain possible resilience processes, any intervention that facilitates occupation will thus facilitate resilience. It is because occupational therapy is concerned with human occupation that it has the potential to influence resilience. Thus, several implications for occupational therapy praxis arise.

Firstly, understanding that occupation is the mechanism for resilience presents a strong call for occupational therapists to remain focused on occupation rather than getting side-tracked by other frameworks. While much of the literature on resilience interventions, particularly in psychology, focuses on resilience skills, it is important that occupational therapists do not shift their practice to these more traditional resilience interventions and remain focussed on enabling occupational processes. Occupational therapists are uniquely positioned to enable different expressions of resilience by facilitating occupational engagement.

Secondly, understanding the complexity of the relationship between occupation and resilience alongside the concepts of equifinality and multifinality invites us to consider that there are many paths to resilience and many outcomes that can be considered resilient or positive. There is a subjectivity to understanding resilience and this requires occupational therapists to consider the subjective lived realities that impact the development and expression of resilience through occupation. The role of the occupational therapist is therefore to collaborate with those we work with, whether individuals, groups, or communities, in exploring what people consider to be positive outcomes and support them in reaching those outcomes.

Thirdly, knowing that both resilience and occupation are contextually bound requires the occupational therapist to consider the possibilities available in context. Moreover, we are invited to remember that when people struggle to attain what they would consider a positive outcome, it is the context that needs to be investigated, as changes in the context will open up new possibilities for resilience. This approach would also assist in countering the neoliberal bias that can be present in many of the so-called resilience interventions. While narrow conceptualisations of resilience lead to narrow interventions (Crane, 2021), broader conceptualisations of resilience invite us to consider more appropriate interventions. Such interventions would consider the nuances of the context (in terms of temporal, environmental and societal factors) and move away from an individualistic focus.

Finally, I would suggest that an understanding of occupation and resilience can reframe how we understand occupational therapy itself. Occupational therapy is often described as a profession that enables occupation. As discussed previously, occupation can be understood as a noun or a verb. If we say that occupational therapy enables occupation in the occupation<sub>n</sub> sense, what we are saying is that occupational therapy interventions help people return to socially sanctioned ways of doing and being in the world. If we speak of enabling occupation in the occupation<sub>v</sub> sense,

it becomes confusing. If we understand all human doing as a part of occupation<sub>v</sub>, what is there to enable? I would suggest occupational therapy is about supporting resilience more than it is about enabling occupation. Describing occupational therapy as a profession that promotes resilience does not downplay the importance of occupation. Occupation will remain central as occupation is the mechanism for resilience. While resilience will look different for each person, individual or group, describing occupational therapy as a profession that enables resilience highlights that occupational therapy helps people navigate change, uncertainty, and adversity.

### *Resilience and Occupational Science*

There seem to be two approaches to discussing resilience in the context of occupational science. In the first, resilience is a term that is used generically without definition (Armstrong-Heimsoth et al., 2021; L. Craig et al., 2017; Duncan et al., 2011; Eakman et al., 2016; Marshall et al., 2020; Price et al., 2012; Salsi et al., 2017; Shamrock et al., 2016). In the second, resilience is defined and discussed in the context of *occupational resilience*. Neither approach captures the full complexity of the relationship between occupation and resilience or the potential contribution of occupational science to resilience studies.

Occupational resilience has been described as the ability to navigate changes and modifications to daily occupational participation (K. Brown, 2021) or as the continuation of occupational engagement in the face of obstacles (Muriithi & Muriithi, 2020). The first describes a process of adaptation while the second of persistence. Within a broader conceptualisation of resilience, both adaptation and persistence can be understood as resilience processes (Ungar, 2018, 2021) while the selection of which process will be followed will be dependent on the desired outcome, available capacity, and the context. Thus, if we are speaking of the resilience of occupational engagement (what has been previously termed occupational resilience), rather than defining it only as either persistence or adaptation, it would be more useful to state that resilience in occupational engagement could involve persistence, resistance, recovery, adaptation, growth, or transformation depending on the resources available in context and what is considered a desired outcome. Yet still, I would caution against the use of the term 'occupational resilience' as this belies that occupation is implicated in all human resilience. Additionally, the term occupational resilience means something else outside of occupational therapy and occupational science, creating unnecessary confusion (J. Turner et al., 2022).

The study of human occupation in occupational science has much to contribute to resilience studies, even beyond the idea that occupation is the mechanism for resilience. If occupation is the mechanism for resilience, occupational analysis techniques (Clark et al., 1991; Hocking, 2009) developed in occupational science could provide richer insight into contextual manifestations of resilience. Moreover, occupational science has a strong tradition of addressing questions of power,

justice, and social transformation and how these relate to human occupation (Kiepek et al., 2014; Magalhães, 2012; Rudman et al., 2008; Whiteford et al., 2000). Integration of these insights into how privilege and oppression are made manifest, reinforced, or challenged through occupation, with an understanding of how resilience unfolds through occupation could help resilience studies to address the critique of paying insufficient attention to these factors and how they shape possibilities for human flourishing. The construct of occupation is a key point for synthesis.

### A Heuristic for Resilience

If the construct of resilience is to be useful in the development of socially transformative praxis, a thinking tool that helps clarify what is meant by the term and helps make explicit issues of power would be advantageous. The acronym COPE can be used as such a heuristic.

Firstly, for a term as ubiquitous as resilience, I believe it counterproductive to urge the adoption of a single definition or understanding of resilience. Resilience is polysemous, it has always been (Alexander, 2013), and it is unlikely to change. Clarifying what is meant by the term when it used is thus important.

Secondly, where issues of power are not made explicit, the construct of resilience can advance a neoliberal agenda whereby the responsibility for responding to change is placed on the individual and those with power are absolved of their responsibility for transforming the context (Mahdiani & Ungar, 2021). If resilience is to be useful in praxis, issues of power must be made explicit by asking clarifying questions.

***Table 13 COPE a Heuristic for Resilience***

<b>C</b>	Capacity
<b>O</b>	Outcome
<b>P</b>	Process
<b>E</b>	Environment

The acronym COPE stands for capacity, outcome, process, and environment. It offers a framework for asking clarifying questions.

In terms of capacity, whose resilience is being examined? What types of adversity are in question? What resources are available to this person or group? Are these resources intrinsic or extrinsic? Are they able to negotiate or navigate towards these resources?

Regarding outcome, what outcomes are seen as desirable in this context? Who has the power to determine which outcomes are seen as desirable? Are there possibly many desirable or positive outcomes? Are there outcomes that could be resilient that we might overlook?

When it comes to process, how do the resources available and the outcome desired determine which process will be followed? Is only one pathway to resilience possible or are there multiple options? Given a particular context, which resilience process is most likely to be followed? Persistence, resistance, recovery, adaptation, or transformation?

Concerning environment, have all dimensions of context in terms of society, space and temporality been considered? How does the context shape capacity, the possible processes, and desired outcomes?

These clarifying questions can facilitate communication which forms the foundation for a praxis of resilience. A foundation that can serve as a starting point for reflection, guiding subsequent theorisation and action including further interdisciplinary inquiry.

### Boundary and Bridging Concepts

Resilience has been described as a boundary object, a term used to describe concepts that facilitate communication between different research communities or disciplines but that are still understood differently between groups (Baggio et al., 2015; Brand & Jax, 2007). Boundary or bridging concepts are important in the development of interdisciplinary praxis as they help to coordinate research and theorisation (Baggio et al., 2015). Bridging concepts differ from boundary concepts in that they actively link disciplines and stimulate new dialogue based on shared understandings. Occasionally, resilience will act as a bridging concept, yet resilience research still remains largely siloed (Baggio et al., 2015). Ungar (2021) has called for a bridging concept to be introduced to the field of resilience studies. What if occupation were that bridging concept?

Bridging concepts foster interdisciplinarity and transdisciplinarity (Baggio et al., 2015). Occupation as a construct is inherently interdisciplinary and transgresses disciplinary boundaries, including the traditional divide between ecological studies and social studies (Clark et al., 1991; Wilcock, 2001). Indeed, one of the strengths of this synthesis has been the integration of ecological perspectives on resilience with social perspectives where most reviews focus on one or the other. One of the reasons for the divide between ecological and social perspectives is the differences in ontologies and epistemology (Xue et al., 2018). Ecological perspectives tend to be dominated by determinism, positivism, and objectivism whereas social perspectives on resilience tend to be characterised by constructivism, meaning based models and narratives. Here occupation offers a unique advantage. The construct of occupation can span these diverse ontologies and epistemologies as it draws together the ideas of substrates, form, function and

meaning (Clark et al., 1991; Hocking, 2000). If the full potential of resilience has yet to be realised (Southwick et al., 2014; Ungar, 2011, 2018), perhaps occupation is the key.

Occupational Science was founded on the idea that the construct of occupation has relevance beyond the practice of occupational therapy (A. D. Calhoun, 2021; Clark et al., 1991; Hocking et al., 2015; Molke et al., 2004; Pollard et al., 2010; Rudman et al., 2008; Wilcock, 2001; Yerxa, 1990, 1993). Yet occupation seems to remain a well-kept secret. Conceivably, the conceptual integration of occupation and resilience may help the concept of occupation become mainstreamed. Rudman et al. (2008) asked what occupational science has to offer other disciplines, the answer, unsurprisingly, lies in the construct of occupation itself and its potential for advancing socially transformative praxis across disciplines.

## Conclusion

A praxis of theorisation creates possibilities for human flourishing by seeking to understand the factors that shape everyday life (Teo, 2022). Likewise, a praxis of resilience seeks to understand what shapes possibilities for resilience. A praxis of resilience requires a clear understanding of what is being meant by the term resilience, insight into how power dynamics shape possibilities for resilience and gives credence to the diversity of process and outcomes that people might consider to be resilient based on their context. In all of this, the concept of occupation provides a crucial point of synthesis and insight into the development of socially transformative praxis in occupational therapy, occupational science and across disciplinary boundaries.

## Chapter Eight: Conclusion

The aim of this thesis was to produce a rigorous and transparent account of my exploration of the relationship between occupation and resilience. Resilience and occupation both describe fundamental aspects of everyday human life. Not only do they share considerable overlap, but an understanding of occupation helps to explicate how resilience unfolds. Resilience unfolds through occupation. Understanding this creates unique opportunities for the development of socially transformative praxis.

Praxis involves an ongoing process of theorisation, practice, and reflection. Theorisation, particularly when focused on making sense of everyday life, forms the foundation of praxis. Thus, by generating theory on how occupation and resilience are related, this research contributes towards the ongoing development of socially transformative praxis. An understanding of human occupation contributes to a richer understanding of resilience, which in turn can result in new interventions that can respond to the complexity of human experience. However, without theory to clarify thinking and enrich analysis, such interventions are not possible. Theory creates possibilities for action. My hope is that the ideas I have written about will be taken up by others, examined, applied, and reworked.

The first chapter introduced the concept of socially transformative praxis, the potential contribution of resilience, and importance of theorisation, interdisciplinarity, and reflexivity in the development of such a praxis. An overview of resilience studies was provided in Chapter Two, as well as a call for further interdisciplinary theory development. Chapter Three focussed on the process of theory generation within an interdisciplinary paradigm as well as the importance of ontological and epistemological pluralism in knowledge synthesis. In Chapter Four, the methodology of critical interpretive synthesis was described as well as the literature that was included in the review and the subject matter expert consultation process. Chapter Five provided a personal reflexive account of the theorising process. My theory of occupation and resilience was presented in Chapter Six and the implications of this theory for a praxis of resilience were described in Chapter Seven.

Yet the purpose of synthesis is not to achieve closure, rather it is to advance dialogue (Noblit & Hare, 1988). In this final chapter, I present some considerations for how theory might be evaluated, discuss the limitations of this work and opportunities for further study. I end with some final reflections on the research process.

## The Evaluation of Theory

Weick (1989) describes four possible reactions to new theory: 'that's obvious', 'that's irrelevant', 'that's absurd', or 'that's interesting'. Where the reaction is 'that's obvious' a strong assumption on the behalf of the reader is confirmed. As an occupational therapist, the idea that resilience processes are contingent on the context, felt obvious to me. Yet the reaction 'that's obvious' invites us to consider to whom this might not be obvious.

The response of 'that's irrelevant' occurs when no link can be made to current challenges within a field. The concept of occupation directly addresses several contemporary challenges in resilience studies including the need to understand how socio-ecological systems interact, how resilience processes unfold, how different resilience processes might be connected as well as the need for a bridging concept that can span the divide between ecological and social perspectives.

The response 'that's absurd' occurs when strong assumptions are disconfirmed. A theory of occupation and resilience may be found absurd by those who hold to a psychological trait perspective of resilience, or for those who discount the role of context in shaping the emergence of human behaviour.

The response that is aimed for is the response of 'that's interesting'. When a response of 'that's interesting' is prompted by theory, the reader's previous explanation of the topic under question is brought into question. Interesting theory offers obvious novel observations, unexpected connections, and high narrative rationality (Weick, 1989). Interesting theory is also parsimonious in that it is as simple as possible but no simpler, accounting for all important variables with the fewest assumptions and the greatest explanatory power (Weick, 1989). An understanding that resilience unfolds through occupation is both simple and powerful in that it accounts for the complexity of the interaction between multiple systems in a single unit of analysis.

The critique of theory differs from the critique of empirical research in that theory cannot be evaluated based on methodology. While methodological rigor is important, the evaluation of theory requires consideration of relevance and usefulness.

### *Relevance*

The relevance of research can be determined along three lines: pertinence, commitment, and centrality (Rudman et al., 2008). Pertinence has to do with the timing of research. Within occupational therapy and occupational science, there has been increasing interest in resilience as seen in the two new conceptualisations of occupational resilience as well as the frequent references to resilience in conferences. The pertinence of theory on resilience and occupation can also be seen in that an understanding of resilience as a construct contributes to the advancement of socially transformative praxis, something that there have been growing calls for in occupational

therapy and occupational science. In this way, this theory of occupation and resilience shows relevance in terms of commitment, as commitment in occupational science refers to dedication to work that fosters social justice (Rudman et al., 2008). Finally, centrality in terms of relevance refers to the need for academic work that seeks to increase the influence of a discipline within both academic and public discourse (Rudman et al., 2008). If occupation is understood as key to understanding resilience, occupational science and occupational therapy needs to take center stage in the discourse and praxis that seeks to enable resilience.

### *Usefulness*

In terms of usefulness, theory can be considered useful if it prompts reflection and further questioning (Suri & Clarke, 2009; Wallis, 2010). The purpose of CIS is to generate new insights through the examination of already existing material (Depraetere et al., 2021; Dixon-Woods et al., 2006; Schick-Makaroff et al., 2016). Thus, usefulness in CIS and more broadly in knowledge synthesis, can be judged by the extent to which it offers fresh insight into the topic under study (Edwards & Kaimal, 2016). This fresh insight should do more than just make observation, but should clarify and resolve, aiming to bring to the forefront an underlying sense of coherence (Noblit & Hare, 1988).

### *Limitations*

This research aimed to produce a theory of occupation and resilience. Despite the strong unification aim of resilience studies, this work did not intend to produce a grand theory, but rather aimed to generate a formal theory of resilience and occupation, one that can operate across multiple topic areas and a range of contexts (Neuman, 2011). While grand theories tend to be all-encompassing and aim to provide a coherent framework to guide enquiry and practice (Ritzer, 1990), formal theories have boundaries and acknowledge limitations.

The theory of resilience and occupation that I have developed is primarily bounded by a focus on human resilience. It is a theory that can be used across different contexts and at different levels of analysis from the individual to population levels. It does, however, focus specifically on the resilience of humans. This was, in part, due to my background as an occupational therapist. It is possible that this theory could extend to the examination of the resilience of systems where it is the resilience of the system under question rather than the resilience of people, as is the case in some areas of study within socio-ecological studies. However, this theory is limited in applicability in the study of non-human systems at this point.

Theory synthesis is limited in terms of generalisability and validity by the research upon which it is based (L. O. Walker & Avant, 2005). In other words, decisions about which work was included in the review will have shaped the quality of the theory produced. In narrowing the scope of the

review, I chose to focus on the construct of occupation itself rather than including all potentially relevant occupational science constructs. This leaves room for future theory synthesis. Yet as all occupational science constructs relate to the construct of occupation, future synthesis between resilience and other occupational science constructs would be supported by the theory generated through this review.

One of the main limitations of this review has been the language restriction to only sources in English. While necessary for pragmatic reasons, the bias towards English has been identified as restricting the development of occupational science and as a factor in perpetuating theoretical imperialism in occupational therapy theory (Magalhães, 2012; Rudman et al., 2008). Likewise, resilience research has a historically Eurocentric epistemology (Ungar, 2008). To counter this Anglocentric bias, attention was paid to the context in which the included works were developed (were they from the global north or south?) and a diversity of cultural perspectives were sought during the purposive sampling. While the quality of theory synthesis may be limited by the literature upon which it is based, it is also enriched when it is based on diverse perspectives.

It should be noted that this work does not represent theoretical consensus but rather one interpretation of multiple perspectives. The original CIS methodology was developed in the context of a group of researchers (Dixon-Woods et al., 2006) as is the case with most interdisciplinary research endeavours (Repko & Szostak, 2020). That this research was conducted by a single researcher does represent a limitation. However, the inclusion of a subject matter expert consultation process was intended to address this limitation. Nonetheless, the interpretative nature of this theory is acknowledged and has been addressed through a practice of critical reflexivity.

CIS is a methodology that is openly interpretive and inductive (Dixon-Woods et al., 2006). Because of this, this work could be criticised on the basis that it is not replicable, particularly by proponents of a positivist paradigm (Alvesson & Sandberg, 2020). Proponents of participatory research might also criticise that knowledge is not being co-constructed with those who have a lived daily experience of resilience and occupation (Hammell, 2009a). However, by generating theory around occupation and resilience, this research might support future research that is more replicable or participatory.

Finally, from an ontological and epistemological perspective, the pluralistic stance of the research can also be critiqued. While epistemological and ontological pluralism aims to allow for the integration of diverse perspectives, not only can it be argued that issues of complementarity and commensurability can become limitations to adequate synthesis (Suri, 2013), but also that pluralism can lead to disguising important theoretical diversity (Grant & Booth, 2009). Nonetheless, epistemological pluralism allows for shifting between paradigmatic stances which

creates opportunity for the synthesis of diverse views, which a single paradigmatic stance would not achieve.

### Opportunities for Future Research

One of the main limitations of occupational science has been the challenge of interdisciplinarity (A. D. Calhoun, 2021; Rudman et al., 2008). Occupation is a powerful organising construct for both enquiry and practice. Yet knowledge of occupation has remained siloed within occupational science and occupational therapy instead of contributing to interdisciplinary studies that address wicked problems. If the potential of occupation is to be realised, the concept needs to be communicated beyond our disciplinary boundaries. The study of resilience presents a unique opportunity for this, as resilience is already acknowledged as an important boundary concept for research, practice, and policy (Baggio et al., 2015; Brand & Jax, 2007). The construct of occupation helps to address a conceptual and theoretical gap in the study of resilience. Thus, resilience studies could help with the dissemination of the construct of occupation within the interdisciplinary space.

Another limitation of occupational therapy and occupational science has been the historical focus on the therapeutic use of occupation and focus on individual health and wellbeing (Hocking, 2000; Ilott & Mounter, 2000). While both occupational therapy and occupational science have started to address more collective issues that affect health and wellbeing such as homelessness and issues of asylum, I would suggest that the construct of occupation should also be contributing more to issues such as disaster management and ecological sustainability (Dennis et al., 2015), and urban and regional planning. In each of these areas, the significance of resilience is well understood and used as an organising concept, yet an understanding of occupation would add depth to analysis approaches and intervention design. Again, the integration of resilience and occupation presents a unique opportunity to address some of the wicked problems that challenge us collectively.

I have stressed the importance of theory in the development of socially transformative praxis. Yet for such a practice to advance, further frameworks that can guide action and intervention design will need to be developed. While this theory can guide the development of such frameworks, this theory will need to be applied in a contextually responsive and participatory manner.

### Recommendations for Occupational Therapy and Occupational Science

Given that resilience is a term used in occupational therapy and occupational science, resilience theory should be included in occupational therapy and occupational science education. But when taught, it is important that socio-ecological perspectives are foregrounded, and individualistic conceptualisations critiqued. This is important as occupational therapy is often influenced by the reductionism present in biomedical thinking.

Resilience is pertinent to occupational therapy practice in all settings. In clinical work, resilience thinking can be drawn upon to understand how best to support those experiencing health challenges. In community focused work, resilience thinking could provide a useful framework for collaborating with multiple stakeholders and addressing systemic barriers. Across settings, resilience thinking can be helpful in developing interventions that consider the influence of multiple systems on human flourishing.

Regarding the professional resilience of occupational therapy practitioners and students, however, a significant shift in thinking is required. The individualistic approach to professional resilience needs to be challenged. Instead, systemic thinking is required in considering how to create conducive learning and working environments.

As experts in human occupation, occupational therapists and scientists are uniquely positioned to influence policy relating to resilience. Resilience is often used as a boundary concept for interdisciplinary collaboration. Thus, occupational therapists and scientists should seek out opportunities to collaborate with professionals from other fields such as public health, urban planning and environmental sciences.

### Final Reflections

The impetus for beginning this research was a desire to consider how occupational therapy and occupational science might promote resilience. What emerged from this process was something quite different. I no longer see resilience as something that needs to be promoted because resilience is something embedded in all processes of everyday life. This does not mean that resilience thinking becomes irrelevant or interventions unnecessary.

Resilience is a powerful concept that can co-ordinate research, policy, and practice as we consider ways in which to promote ideal outcomes in the face of change, uncertainty, and adversity. The way we approach resilience, however, changes as we consider the role of the context as it shapes possibility. Resilience unfolds through occupation, which is in turn the result of complex intersections and transactions between time, space, and society. Understanding the links between occupation and resilience highlights the complexity of resilience.

I began this research because I believe the concept of resilience has potential to guide praxis. I chose my methodology based on the conviction that theory is foundational to praxis and that the way we think and theorise about resilience matters as it shapes possibilities for seeing, understanding, and acting upon the world.

Despite the limitations and criticisms of resilience, I still believe it to be a useful construct, particularly when conceptualised in a way that considers socio-political factors and seeks to

understand possibilities for transforming the status quo. Resilience is a concept full of inherent promise, an invitation to consider what it means to flourish even in the face of adversity.

The intention is that this work has provided a transparent account of an attempt at rigorous theorisation based on the belief that intellectual engagement with complex ideas can advance the development of socially transformative praxis in occupational therapy, occupational science and beyond.

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## Appendices

**Appendix A.** Glossary of Terms

**Appendix B.** Resilience in Occupational Therapy and Occupational Science

**Appendix C.** Database Search Strategies

**Appendix D.** List of Included Works

**Appendix E.** Recommended Reporting Practices for Critical Interpretive Synthesis

**Appendix F.** Informed Consent for Subject Matter Experts

**Appendix G.** Interview Preparation Guide

**Appendix H.** Ethics Approval Letter from the Health Sciences Research Ethics Committee

## Appendix A

### Glossary of Terms

**Occupation:** Human occupation refers to all the things that people do, both the ordinary and extraordinary. The concept of occupation also encompasses the understanding that what people do is shaped by their individual life history and their context (both physical and social).

**Occupational Science:** A discipline concerned with the study of the human as an occupational being.

**Occupational Therapy:** A profession that aims to support health, wellbeing, participation, and justice through occupation.

**Resilience:** Resilience is a broad concept that is studied across many different domains. When used in relation to people, it is normally used to describe positive adaptation in the face of adversity. A socio-ecological perspective views resilience as the outcome of complex interactions between biological, psychological, social, and environmental systems. Resilience may encompass processes as divergent as persistence, resistance, recovery, adaptation, and transformation.

**Socially Transformative Praxis:** Practice that responds to the politics of everyday occupation with the aim of supporting health, wellbeing, participation, and justice.

**Socio-Ecological Perspectives:** A perspective that views the social and the natural world as interconnected and mutually independent.

**Theory:** Abstract understanding of the world that seeks to explain the world as we experience it.

**Theorisation:** The process by which theory is developed.

## Appendix B

### Resilience in Occupational Therapy and Occupational Science

Initial literature searches sought to examine the ways in which resilience has been described in occupational therapy (OT) and occupational science (OS) literature. The search strategy was based on scoping review methodology (Tricco et al., 2018). The findings of this search are discussed in Chapter Two. No scoping review of resilience within occupational therapy and occupational science had been published when the search was begun. However, when the search was updated, a protocol for a similar scoping review was found published (J. Turner et al., 2022).

#### *Objective*

To map how resilience has been conceptualised in occupational therapy and occupational science and identify what is already known about the relationship between occupation and resilience.

#### *Inclusion and Exclusion Criteria*

##### **Inclusion Criteria**

- Discussion of resilience within the context of occupational therapy or occupational science.

##### **Exclusion Criteria**

- Research that makes no reference to occupational therapy, occupational science, or occupation. This resulted in the exclusion of research that occupational therapists were involved in but did not directly relate to occupational therapy or occupational science.
- No limit was placed on the type of sources of evidence thus any existing literature was eligible for inclusion including primary research, reviews, editorial pieces, and opinion pieces.

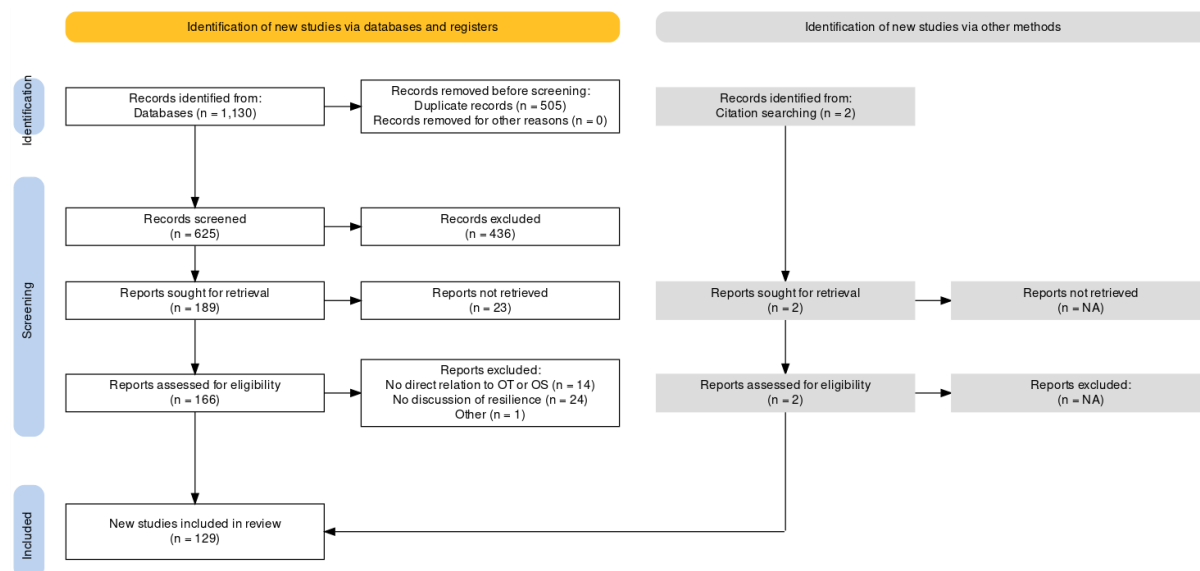
#### *Methods*

The key search terms of 'occupational therapy' OR 'occupational therapist' OR 'occupational therapists' OR 'occupational science' AND 'resilience' OR 'resiliency' OR 'resilient' were searched in the following databases: Academic Search Premier; Africa Wide; CINAL; ERIC; Health Source Academic; Medline; APA Psych and APA Psych Info. Initial searches were conducted in April 2021 and updated again in June 2023. Searches were limited to English for pragmatic reasons and to peer reviewed publications. No date limit was placed. No journal hand searching was conducted as a part of this literature search. However, 2 additional records were found through citation tracking.

Records were screened for eligibility first by title, then by abstract, and finally by full text.

Data was extracted according to the following headings: title, year of publication, authors, and population. Where information was available the following was also extracted: definition of resilience, whether reference was made to resilience theory or not, description of the relationship between occupational therapy or occupational science and resilience, and an explanation of the mechanism of how resilience operates.

No appraisal of quality of evidence was made.



**Figure 18 PRISMA Flow Diagram for Literature Included on Resilience in OT and OS**

## Results

129 sources of were included in the literature review. A full list can be found in table 14 below. Interestingly, there has been a substantial increase in the use of the term resilience in literature within occupational therapy and occupational science. 56 of the papers included were published from 2021 onwards.

Resilience is most mentioned in the context of patients, occupational therapy students and practitioners and in reference to vulnerable groups (individuals and families living with disability, immigrants and the homeless).

Of the included references, less than half offered a definition of resilience (57 of 129 sources included a definition). Similarly, there is little refence made to resilience theories (80 of the included papers made no reference to resilience literature). Where referenced, there is often only brief mention made. Only 19 of the 129 included papers offered discussion about the concept of resilience. This suggests that although resilience is a term mentioned in the context of occupational therapy and occupational science, there is room for further conceptualisation and theorisation.

For a full discussion please refer to the section on resilience in occupational therapy and occupational science in Chapter Two.

### *Conclusions*

Despite resilience being mentioned in occupational therapy and occupational science, insufficient attention has been paid to the conceptualisation of resilience. The results of this search highlighted the need for further theorisation on the relationship between occupation and resilience.

Furthermore, given the paucity of literature that addresses both occupation and resilience, further investigation into the linkages between occupation and resilience needed to draw from literature on occupation and on resilience in their respective disciplines. The need for interdisciplinary integration highlighted by this search of the literature on resilience in the context of occupational therapy and occupational science thus shaped the methodology of the full review.

*Table 14 Sources Included on Resilience in OT and OS*

<b>Citation</b>	<b>Title</b>
Abelenda & Helfrich, 2003	Family resilience and mental illness: The role of occupational therapy
Allen-McHugh, 2022	Factors affecting resiliency in outpatient pediatric occupational therapist
Apostol et al., 2021	Evaluating a multidimensional strategy to improve the professional self-care of occupational therapists working with people with life limiting illness
Armstrong-Heimsoth et al., 2021	Former foster system youth: perspectives on transitional supports and programs
Ashby et al., 2013	Factors that influence the professional resilience of occupational therapists in mental health practice
Avrech Bar et al., 2018	The role of personal resilience and personality traits of healthcare students on their attitudes towards interprofessional collaboration
Beck et al., 2012	The effects of animal-assisted therapy on wounded warriors in an occupational therapy life skills program
Bolding et al., 2021	A survey of incivility in the OT workplace
Boniface et al., 2015	Developing an occupation- and recovery-based outcome measure for people with mental health conditions: An action research study
Bowden et al., 2018	The contribution of occupation to children's experience of resilience: A qualitative descriptive study
T. Brown et al., 2020	Exploring the relationship between resilience and practice education placement success in occupational therapy students
T. Brown et al., 2022	Professionalism, resilience and reflective thinking: How do these influence occupational therapy student fieldwork outcomes?
T. Brown, 2021	The response to COVID-19: Occupational resilience and the resilience of daily occupations in action
T. Brown et al., 2021	Listening and interpersonal communication skills as predictors of resilience in occupational therapy students: A cross-sectional study

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Bundy et al., 2008	Playful interaction: Occupational therapy for all children on the school playground
Ceramidas et al., 2009	The 2009 world team of mental health occupational therapists: A resilient and dedicated workforce
Champagne, 2018	AOTA's societal statement on stress, trauma, and posttraumatic stress disorder
Chang et al., 2021	Impact of stress, anxiety, and depression on occupational engagement in graduate students
Christiansen, 2007	Adolf Meyer revisited: Connections between lifestyles, resilience and illness
Clemson, 2022	Relevance, resilience, and ageism: A bright future for occupational therapy and healthy ageing, Sylvia Docker Lecture 2021
Clouston, 2019	Pearls of wisdom: using the single case study or 'gem' to identify strategies for mediating stress and work-life imbalance in healthcare staff
L. Craig et al., 2017	Work-related experiences of people who hear voices: An occupational perspective
Cruyt et al., 2021	Meaningful activities during COVID-19 lockdown and association with mental health in Belgian adults
Davies et al., 2017	Impact of an international workplace learning placement on personal and professional development
De Koker et al., 2019	Occupational therapy at 'Klein Kasteeltje' in Brussels for children of asylum seekers who cannot participate in the Belgian schooling system
de Vries et al., 2023	Older adults' adaptiveness to disruptions during South Africa's COVID-19 lockdown: Keep your head up and continue breathing
de Witt et al., 2019	Resilience in occupational therapy students
Dean et al., 2018	Sensory processing in the general population: Adaptability, resiliency, and challenging behavior
Del Gallo & Rice, 2022	Leisure and coronavirus disease 2019: evaluating the role of leisure pursuits among doctor of occupational therapy students and practitioners

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Dennis et al., 2015	A call for sustainable practice in occupational therapy
Derakhshanrad et al., 2017a	Adaption to stroke: A nonlinear thinking approach in occupational therapy
Derakhshanrad et al., 2017b	Comparing the cognitive process of circular causality in two patients with strokes through qualitative analysis
Dionne et al., 2022	Understanding service delivery decisions: More than a digital divide
Duncan et al., 2011	The burden of psychiatric disability on chronically poor households: Part 1 (costs)
Eakman et al., 2016	Protective and vulnerability factors contributing to resilience in post-9/11 veterans with service-related injuries in postsecondary education
Falk-Kessler et al., 2012	Influence of occupational therapy on resilience in individuals with multiple sclerosis.
Fang et al., 2022	Adult attachment, stress-coping, and resilience in first-generation immigrants in the United States
Fine, 1991	Resilience and human adaptability: who rises above adversity? 1990 Eleanor Clarke Slagle Lecture
Friedman & Banta, 2023	A call to arms for professional sustainability and practitioner's mental health
George et al., 2022	The relationship between resilience, reflective thinking and professionalism in Australian undergraduate occupational therapy students
Ghoochani et al., 2022	Investigating the relationship between locus of control, emotional intelligence, and resilience among young male opium abusers in Shiraz
Gibbs et al., 2016	The acquisition of parenting occupations in neonatal intensive care: A preliminary perspective
Gómez-Trinidad et al., 2021	Resilience, emotional intelligence, and occupational performance in family members who are the caretakers of patients with dementia in Spain: A cross-sectional, analytical, and descriptive study
Green & Wilson, 2008	The importance of parent and child opinion in detecting change in movement capabilities.

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Guy et al., 2020	How do autistic adults define and describe resilience?
Hall et al., 2016	Youth perceptions of positive mental health
Haracz & Roberts, 2016	Workplace resilience interventions show some evidence of positive effects, particularly on mental health and wellbeing
Hatzikiriakidis et al., 2022	When immunosuppression and COVID-19 intersect: An exploratory qualitative study of young lung transplant recipient perceptions of daily life during a pandemic
Heard et al., 2019	Transitional housing in forensic mental health: Considering consumer lived experience.
Heard et al., 2022	Ecospirituality in forensic mental health: A preliminary outcome study
Helitzer et al., 2002	Perceived changes in self-image and coping strategies of mothers of children with disabilities
Hildenbrand, 2019	Let's start here: Relationships, resilience, relevance
Huang et al., 2021	Predictors of mothers' satisfaction, resilience, and maternal–infant attachment after NICU discharge
Huffman, 2023	Does burnout affect the self-efficacy of occupational therapists?
Hughes et al., 2020	Giving credence to the experience of x-linked hypophosphatemia in adulthood: An interprofessional mixed-methods study
Hunt et al., 2016	“Like a drawing of breath”: leisure-based art-making as a source of respite and identity among older women caring for loved ones with dementia
İnal & Özkan, 2023	Investigation of predictors of psychological resilience in occupational therapy students in terms of different variables
Jackson et al., 2023	The experience and role of mentorship for paediatric occupational therapists
Jacobs-Nzuzi Khuabi et al., 2022	Towards occupational resilience: A model to facilitate high school participation post traumatic brain injury

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Jennings et al., 2020	Octopus watch fosters family resilience by enhancing occupational engagement for children with spina bifida and/or hydrocephalus: Pilot study
Judkins & Bradley, 2017	A review of the effectiveness of a combat and operational stress control restoration center in Afghanistan
Kelly et al., 2022	Young people's experiences of returning to physical leisure activities after a severe acquired brain injury
King et al., 2003	A conceptual model of the factors affecting the recreation and leisure participation of children with disabilities
Kinney et al., 2020	Protective and health-related factors contributing to resilience among student veterans: A classification approach
Kinsley et al., 2022	A provider perspective of psychosocial predictors of upper extremity vascularized composite allotransplantation success
Kotera et al., 2021	Positive psychology for mental wellbeing of UK therapeutic students: Relationships with engagement, motivation, resilience and self-compassion
Kuhaneck et al., 2015	Effectiveness of interventions for children with autism spectrum disorder and their parents: A systematic review of family outcomes
Lange & Grajo, 2021	Promoting social participation for adolescents with burn injury: A guideline for occupational therapy practice
Lee et al., 2015	A study on the effect of self bedside exercise program on resilience and activities of daily living for patients with hemiplegia
Lopez, 2011	Posttraumatic stress disorder and occupational performance: Building resilience and fostering occupational adaptation
Makhata et al., 2021	Occupational choices of school-going adolescents: a study in the Pitseng Area, Leribe District, Lesotho
Malloy et al., 2021	Responding to COVID-19: Resilience in occupational therapy
Mann, 2015	Work transition narratives
Marshall et al., 2020	Occupational experiences of homelessness: A systematic review and meta-aggregation

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Marshall et al., 2023	Effectiveness of suicide safety planning interventions: A systematic review informing occupational therapy
Matuska, 2014	The art and science of resilience
McAdam & Rose, 2020	Opinion piece: People need nature to thrive—a case for inclusion of environmental sustainability in occupational therapy practice in rural South Africa
McCarthy & Jackson, 2022	Exploring dating as an occupation for young heterosexual women in Ireland
Missiuna et al., 2008	Life experiences of young adults who have coordination difficulties
Mohler & Miller, 2020	Social participation facilitators and barriers among older adults residing in assisted living
Munambah et al., 2020	Being a mother of a child with HIV-related Neurodevelopmental Disorders in the Zimbabwean context
Muriithi & Muriithi, 2020	Occupational resilience: A new concept in occupational science
Murphy et al., 2019a	Healing with horses: Outcomes of an equine-facilitated cancer program and directions for OT practice
Murphy et al., 2019b	Healing with horses: Pilot study of equine-facilitated cancer therapy
Payne & Ward, 2020	Conceptual framework of developmental coordination disorder in adolescence: Findings from a qualitative study
Popova et al., 2023	Exploring well-being: Resilience, stress, and self-care in occupational therapy practitioners and students
Pozzi et al., 2022	Occupational therapists and COVID-19 pandemic: An observational survey in Europe
Precin, 2019	The interactive role of emotional intelligence, attachment style, and resilience in the prediction of time perception in doctoral students
Precin, 2021	Emotional intelligence, attachment style, resilience, and subjective time perspective as predictors of doctoral academic outcomes

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Pretorius, 2022	COVID-19 - what did/can we learn from this?
Price et al., 2012	"Still there is beauty": one man's resilient adaptation to stroke
Quigley et al., 2023	University student experiences of work-based placements during COVID-19 pandemic: An inter-disciplinary survey of allied health and social work students
Rasa et al., 2017	Factors contributing to low resilience in people with spinal cord injury in Iran
Rasa et al., 2018	The process of non-resilience in a spinal cord injury population in Iran: A grounded theory
G. Richardson et al., 2022	The impact of the COVID-19 restrictions on nursing home residents: An occupational perspective
Rodríguez-Bailón et al., 2023	The contribution of participation in meaningful activities on mental health during the COVID-19 lockdown in the Spanish population
Rodríguez-Martínez et al., 2021	Changes in resilience in students of occupational therapy after their first exposure to practice placement education
Rothman & Lynch, 2023	The state of the science on adverse childhood experiences
Rushford & Thomas, 2016	Occupational stewardship: Advancing a vision of occupational justice and sustainability
Salsi et al., 2017	Occupational needs and priorities of women experiencing homelessness
Sangster Jokić & Jokić-Begić, 2022	Occupational disruption during the COVID-19 pandemic: Exploring changes to daily routines and their potential impact on mental health
Santoso et al., 2015	Resilience in daily occupations of Indonesian mothers of children with autism spectrum disorder
Scanlan & Still, 2013	Job satisfaction, burnout and turnover intention in occupational therapists working in mental health
Scanlan et al., 2017	Mental health education in occupational therapy professional preparation programs: Alignment between clinician priorities and coverage in university curricula

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Segev-Jacobovski & Fogel, 2022	Disruption in daily occupational patterns, optimism, and positive affect during Israel's COVID-19 lockdown
Shamrock et al., 2016	Physical disabilities in Asia: A meta-synthesis of qualitative literature written in English
Silver Seidle, 2022	Life after caregiving: Everyday resilience during the bereavement phase of the caregiver journey
Sprange et al., 2013	Lifestyle Matters for maintenance of health and wellbeing in people aged 65 years and over: Study protocol for a randomised controlled trial
Stephenson, 2019	Building resilience and minimizing burnout in school-based practice
Stokes & Holsti, 2010	Paediatric occupational therapy: Addressing parental stress with the sense of coherence
Struwig & van Stormbroek, 2023	Support, supervision, and job satisfaction: Promising directions for preventing burnout in South African community service occupational therapists
Tan et al., 2020	Defining occupational competence and occupational identity in the context of recovery in schizophrenia
Tao et al., 2023	Quality of physical activity participation among adults with disabilities through pandemic restriction
Thomas & Judd, 2015	Establishing a community of practice for occupational therapy curriculum development: The value of a two-way process
Turner et al., 2022	How is resilience conceptualized and operationalized in occupational therapy and occupational science literature? Protocol for a scoping review
Usaite & Cameron, 2016	Promoting young people's resilience through enjoyable structured activities
van der Merwe et al., 2021	Human praxis as possible innovation for occupational therapy practice: An interpretivist description from people who enact praxis
Vaughan-Horrocks et al., 2021	The experiences of veterans with mental health problems participating in an occupational therapy and resilience workshop intervention: An exploratory study
Vesnaver et al., 2023	Exploring distress and occupational participation among older Canadians during the COVID-19 pandemic

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Voss et al., 2018	Late-career unemployment has mixed effects in retirement
Wachspress et al., 2021	OT-ParentShip: An intervention for parents of adolescents with autism
Wachspress et al., 2019	Content validity of the parentship protocol: A multidimensional intervention for parents of adolescents with high-functioning autism spectrum disorder
Wachspress et al., 2020	Feasibility of a multidimensional intervention for parents of adolescents with autism
Walder et al., 2022	Understanding professional identity in occupational therapy: A scoping review
Wegner et al., 2022	"This pandemic has changed our daily living": Young adults' leisure experiences during the COVID-19 pandemic in South Africa
S. Williams & Murray, 2013	The lived experience of older adults' occupational adaptation following a stroke
M. W. Williams et al., 2021	Pain anxiety and rehabilitation outcomes after acquired brain injury
Yoshida et al., 2021	Motivation for rehabilitation in patients with subacute stroke: A qualitative study
Zwicker et al., 2018	Developmental coordination disorder is more than a motor problem: Children describe the impact of daily struggles on their quality of life

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## Appendix C

**Table 15** Database Search Strategies

Sources searched	Search Strategy	Results	Notes on Screening
<b>Occupation</b>			
<i>03/11/2022</i>			
Academic Search Premier	Limited to English Last 5 years	1,749 44 papers	Did not include papers talking about occupation-based practice.
Africa-Wide Information	Occupation	for full text screening	Generally excluded other occupational concepts with the exception of occupational adaptation (adaptation is sometimes used as a synonym for resilience) and papers speaking about occupational engagement (engagement felt relevant to an understanding of how occupation unfolds).
CINAHL	AND		
ERIC	(Occupational Therapy OR		Include papers looking at how to teach the concept of occupation as these often included an overview of the development of the concept.
Health Source: Nursing/Academic Edition	Occupational Science)		
MEDLINE	AND		Included any commentary on occupation and space (given links to ecological theories of resilience that spoke of space and time).
APA PsycArticles	(Theory OR Concept OR Construct OR		
APA PsycInfo	Crit* )		
<i>05/11/2022</i>			
Web of Science	Limited to English Last 5 years Occupation AND (Occupational Therapy OR Occupational Science) AND (Theory OR Concept OR Construct OR Crit*)	645 1 for full text review	Similar search results as with previous searches.

Sources searched	Search Strategy	Results	Notes on Screening
<b>Resilience</b>			
<i>03/11/2022</i>			
Academic Search Premier	Limited to English Last 5 years	1,191 45 for full text review	Avoided substantive theories unless they spoke about reframing the concept of resilience.
Africa-Wide Information	Resilience OR Resiliency OR Resilient		Prioritised papers that mentioned South Africa.
CINAHL			
ERIC	AND		Noted a bias towards psychosocial perspectives as I see these as more relevant to occupational therapy and occupational science. I also noted an interest in resilience in planning and ideas of community resilience as this related to ideas of collective occupation and occupation-environment interactions.
Health Source: Nursing/Academic Edition	Theory OR Concept OR Construct OR Crit*		
MEDLINE			
APA PsycArticles	Terms needed to be in the title to restrict results to a manageable number.		
APA PsycInfo			
<i>05/11/2022</i>			
Web of Science	Limited to English Last 5 years Resilience OR Resiliency OR Resilient  AND Theory OR Concept OR Construct OR Crit*  Terms needed to be in the title.	837 11 for full text review	Similar search results as with previous searches.

## Appendix D

## Included Works and Contributions to the Review

**Table 16 Included Works on Occupation and Contributions to the Review**

<b>Citation</b>	<b>Title</b>	<b>Contribution of Study to the Review</b>
Aldrich & Cutchin, 2017	Filling in the gaps: A case for enhancing Madsen and Josephsson's assertions about occupation, situation, and inquiry	Speaks about the tension of dualism between what is done and how it is done in occupation. Helped inform my ideas of occupation being used both as a noun and a verb.
Aldrich, 2008	From complexity theory to transactionalism: Moving occupational science forward in theorising the complexities of behavior	Describes 'functional co-ordination' in further detail and how this can help to understand occupation.
Bailliard et al., 2022	From embodiment to emplacement: Toward understanding occupation as body-mind-environment	Describes the concept of emplacement as a way of understanding human experience as person & environment as a whole.
Bailliard, Carroll, et al., 2018	The inescapable corporeality of occupation: Integrating Merleau-Ponty into the study of occupation	Explores the relationships between people and the environment and introduces the concept of reversibility.
Bailliard, Dallman, et al., 2018	The relationship of macro and micro processes in Merleau-Ponty: A response to Cutchin	Considers how micro and macro processes are co-constructive for human occupation.
Barber, 2006	Occupational science and the first-person perspective	Draws attention to the interpretive way in which we respond to context and for the inclusion of first-person perspectives.
Barlott & Turpin, 2022	Desiring occupation: Theorising the passion, creativity, and social production of everyday life	Theory of desire and assemblage with occupation mirrors my understanding of how resilience is desired and achieved within the unique constraints of a particular context. Helped to extend my understanding of occupation beyond just 'doing'
Barlott et al., 2017	Becoming minor: Mapping new territories in occupational science	Suggested a shift away from using the individual as the unit of analysis.

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Bukhave & Creek, 2021	Occupation through a practice theory lens	Practice as entity and as performance helped distil my thinking about the two ways of approaching occupation (as a noun or verb).
Bunting, 2016	A transactional perspective on occupation: a critical reflection	Further description and critique of the transactional perspective on occupation. Highlighted the need for theorisation on context beyond the social context.
Cutchin et al., 2008	Action theories for occupational science: The contributions of Dewey and Bourdieu	Presents an understanding of occupation that is inherently relational.
Cutchin, 2004	Using Deweyan philosophy to rename and reframe adaptation-to-environment	Critiques adaptation to environment instead offering an understanding of people and environments as an integrated whole.
Cutchin, 2013	The art and science of occupation: Nature, inquiry, and the aesthetics of living	Further explication of a transactional perspective of occupation.
Cutchin, 2018	Commentary on the inescapable corporeality of occupation: Integrating Merleau-Ponty into the study of occupation	States that habit is a driver of occupation (habit relating to the interaction between people and society).
Cutchin et al., 2006	Transaction versus interpretation, or transaction and interpretation? A response to Michael Barber	Relates phenomenological and transactional perspectives of occupation.
Cutchin et al., 2017	Foregrounding the transactional perspective's community orientation	Advances an understanding of the broader community's role in transactionalism.
Delaisse et al., 2021	Conceptualizing the role of occupation in the production of space	Contributes to a deeper understanding of the complexity of the relationship between occupation and space.
Derakhshanrad & Piven, 2020	Neuro-occupation: A self-organizing approach to conflate the brain, context, and occupation	Links to ecological resilience concepts with a theory of self-organisation that incorporates the brain, context, and occupation.
Dickie, 2010	Are occupations 'processes too complicated to explain'? What we can learn by trying	Illustrated the utility of moving away from using people as the unit of analysis in the study of occupation.
Dickie et al., 2006	Occupation as transactional experience: A critique of individualism in occupational science	Seminal paper on transactionalism, a view that provides an integrated understanding of the person and context.
Emery-Whittington & Te Maro, 2018	Decolonising occupation: Causing social change to help our ancestors rest and our descendants thrive	Decolonial perspective. Helps to question the confabulation of occupation with the use of resources.
Fogelberg & Frauwirth, 2010	A complexity science approach to occupation: Moving beyond the individual	Advances a systems perspective of occupation that supports synthesis with resilience theories. Supports the shift of moving away from using the individual as the unit of analysis in the study of occupation.

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Gailey, 2018	The systems view of life: Undergirding and unifying three philosophies of occupation	Synergy with ecological theories of resilience in the application of systems perspectives to understandings of occupation.
Gerlach et al., 2018	Expanding beyond individualism: Engaging critical perspectives on occupation	Critique of neoliberal influences on the conceptualisation of occupation.
Grajo et al., 2018	Occupational adaptation as a construct: A scoping review of literature	Identifies key themes in understanding occupational adaptation.
Hammell, 2004	Dimensions of meaning in the occupations of daily life	Positions meaning as the core feature of occupation which helps us to understand other dimensions of occupation.
Hammell, 2009b	Self-care, productivity, and leisure, or dimensions of occupational experience? Rethinking occupational "categories"	Assumes all human activity is occupation. Highlights the subjective experience of occupation as well as social and temporal dimensions of occupation.
Hammell, 2009a	Sacred texts: A sceptical exploration of the assumptions underpinning theories of occupation	Critical perspective that questions western norms that underpin theories of occupation.
Hocking, 2009	The challenge of occupation: Describing the things people do	Differentiates between occupation as the act of doing and cultural forms of occupation. Provides a framework for understanding occupation.
Hocking, 2021	Occupation in context: A reflection on environmental influences on human doing	Explores how the conceptualisation of context has changed over time within occupational science.
Jansson & Wagman, 2017	Hannah Arendt's vita activa: A valuable contribution to occupational science	Prompted reflection on the idea of occupation being in the physical environment or in the sociocultural environment.
Jansson & Wagman, 2018	Hannah Arendt's thoughts in relation to occupational science: A response to Turnbull	Clarifies the idea that all human behaviour is conditioned but this does not mean it is determined. Contrasts the particularity of individual experience with commonality of human experience (thus occupation is both universal and particular).
Kantartzis & Molineux, 2011	The influence of western society's construction of a healthy daily life on the conceptualisation of occupation	Questions how western conceptualisations of what it means to be healthy have shaped the way in which occupation has been conceptualised.
Kantartzis & Molineux, 2012	Understanding the discursive development of occupation: Historico-political perspectives	Questions how a Western, anglophone, and middle-class view of reality has shaped the conceptualisation of occupation itself. Presents an understanding of occupation as the continuous flow of occupation. Essentially contrasts occupation(n) with occupation (v).
Kantartzis & Molineux, 2017	Collective occupation in public spaces and the construction of the social fabric	Contributes to an understanding between collective forms of occupation, society and space.

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Kiepek et al., 2019	Silences around occupations framed as unhealthy, illegal, and deviant	Questions the linkages between occupation and health and explores how occupation is socially sanctioned or non-sanctioned.
Kiepek, 2021	Innocent observers? Discursive choices and the construction of "occupation"	Describes occupation as a discursive construct and some of the discourses surrounding occupation.
Kiepek et al., 2014	Introducing a critical analysis of the figured world of occupation	Questions the associations between health and occupation prompting reflection on broader conceptualisations of occupation.
Larivière & Quintin, 2020	Heidegger and human occupation: An existential perspective	Describes occupation as relational and ongoing as a part of an interconnected web of meaning.
Madsen & Josephsson, 2017b	Engagement in occupation as an inquiring process: Exploring the situatedness of occupation	Explicates the temporal nature of occupation.
Madsen & Josephsson, 2017a	Asking how as a next step in avoiding dualistic perspectives on occupation: A response to Aldrich and Cutchin	Prompted reflection on the difference between understanding what resilience is (what happens) and how it unfolds.
McLaughlin Gray, 1997	Application of the phenomenological method to the concept of occupation	Applies phenomenological analysis to the concept of occupation highlighting that occupation is a phenomena.
Nelson, 1988	Occupation: Form and performance	First introduced me to the idea that occupation can refer to two distinct but related concepts as well as the idea of adaptation occurring through occupation.
Njelesani et al., 2014	Articulating an occupational perspective	In talking about an occupational perspective, offers an interpretation and overview of what occupation encompasses.
Nyman & Isaksson, 2021	Enacted togetherness – A concept to understand occupation as socio-culturally situated	Draws attention to socio-cultural dimensions of occupation.
Pierce, 2001	Untangling occupation and activity	Differentiates between occupation as a unique experience and cultural understandings of activity.
Ramugondo & Kronenberg, 2015	Explaining collective occupations from a human relations perspective: Bridging the individual-collective dichotomy	Explains occupation as the mechanism for human relations, in other words occupation is the place of intersection between people. Offers a southern perspective on collective occupation.
Reed et al., 2010	The interconnected meanings of occupation: The call, being-with, possibilities	Exploration of meaning in occupation that helps to make sense of the core features of occupation.
Reed et al., 2011	Exploring the meaning of occupation: The case for phenomenology	Discusses meaning and how it features as a central aspect of occupation.

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Reed, Hocking, et al., 2013	The meaning of occupation: Historical and contemporary connections between health and occupation	Provides an overview of how our conceptualisation of occupation has been shaped by various factors.
Reed, Smythe, et al., 2013	The meaning of occupation: A hermeneutic (re)view of historical understandings	Analyses historic perspectives of occupation and how this affects current conceptualisations.
Roberts & Bannigan, 2018	Dimensions of personal meaning from engagement in occupations: A metasyntesis	Explores the concept of meaning and how this relates to how we understand occupation.
Rowles, 2008	Place in occupational science: A life course perspective on the role of environmental context in the quest for meaning	Highlighted the associations between place, time and meaning in the understanding of occupation.
Townsend, 1997	Occupation: Potential for personal and social transformation	Highlights the developmental and transformative nature of occupation. Considers how occupation both organises and displays power.
Turnbull, 2020	The vita activa and the human condition: Points of clarification in reply to Jansson and Wagman	Discusses the tension between social determinacy and agency in regards to occupation.
Twinley, 2013	The dark side of occupation: A concept for consideration	Poses a critical question of how we view occupation. Do we view it only relation to health & wellbeing?
Walder et al., 2021	Occupational adaptation – Analyzing the maturity and understanding of the concept through concept analysis	Summarises perspectives on occupational adaptation where occupation is viewed as the means of adaptation. Mentions a link between occupational adaptation and resilience.
Whiteford et al., 2000	Reflections on a renaissance of occupation	Links postmodernism and current conceptualisations of occupation as situated & temporal.
Wilcock, 1993	A theory of the human need for occupation	Describes the reasons for occupational behaviour and the way in which socio-cultural factors have affected these.
Wilcock, 1999	Reflections on doing, being and becoming	Offers a conceptualisation of occupation as multidimensional and goes beyond just 'doing'
Wilcock, 2007	Occupation and health: Are they one and the same?	Describes the links between occupation and health as well as the drive for occupation.
Wu & Lin, 1999	Defining occupation: A comparative analysis	Compares two models of occupation and highlights common features being the interaction between people and context and meaning.

**Table 17 Included Works on Resilience and Contributions to the Review**

<b>Citation</b>	<b>Title</b>	<b>Contribution to the Review</b>
Adger, 2000	Social and ecological resilience: Are they related?	Key piece of literature that introduces the idea of socio-ecological resilience.
Atallah et al., 2021	Centering at the margins: Critical community resilience praxis	Centres decolonial perspectives on resilience studies.
Biermann et al., 2016	Approaching a critical turn? A content analysis of the politics of resilience in key bodies of resilience literature	Integrative overview of critical theory in resilience studies.
Bousquet et al., 2021	Social and ecological systems resilience and identity	Provides an up to date overview on SES resilience.
Brand & Jax, 2007	Focusing the meaning(s) of resilience: Resilience as a descriptive concept and a boundary object	Compares and contrasts descriptive and normative understandings of resilience.
K. Brown, 2021	Multisystemic resilience: An emerging perspective from social-ecological systems	Integrative and cross disciplinary perspectives on multisystem resilience. Identifies the difference between normative and descriptive understandings of resilience.
Clarke & Mayer, 2017	Community recovery following the Deepwater Horizon oil spill: Toward a theory of cultural resilience	Describes the interaction between culture and individual action in the context of resilience. Shares similarities with theories of occupation.
Cote & Nightingale, 2012	Resilience thinking meets social theory: Situating social change in socio-ecological systems (SES) research	Helpful discussion on how the integration of diverse epistemologies might be achieved in resilience thinking.
R. K. Craig, 2020	Resilience theory and wicked problems	Offers an interesting angle on resilience in terms of social capriciousness, what we consider to be ideal (and thus linked to resilience) will evolve and this interacts with ecological panarchy to create many layers of complexity.
Cutter, 2016	Resilience to What? Resilience for Whom?	Describes key conceptual questions for the study of resilience in geography and a helpful discussion on integrating ecological and social perspectives.
Denckla et al., 2020	Psychological resilience: An update on definitions, a critical appraisal, and research recommendations	Spoke to the cost of adversity and resilience in terms of physiological changes and spoke to the importance of moving towards structural and population based perspectives.

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Estêvão et al., 2017	Resilience: Moving from a "heroic" notion to a sociological concept	Emphasis on contextualisation. Affirming the idea that resilience comes at a cost.
Fletcher & Sarkar, 2013	Psychological resilience: A review and critique of definitions, concepts, and theory	Describes resilience as a response to adversity ranging from everyday stressors to major life events. Recognises the importance of context but presents some of the main assumptions of psychological resilience without adopting a trait perspective.
Folke, 2006	Resilience: The emergence of a perspective for social-ecological systems analyses	Overview of the development of social-ecological perspectives on resilience.
Folke, 2016	Resilience (republished)	Integrative review on SES resilience. Describes resilience thinking as an approach for analysis (rather than viewing resilience just as a property). Describes resilience as dynamic and emergent.
Garrett, 2016	Questioning tales of 'ordinary magic': 'Resilience' and neo-liberal reasoning	Explanation of how resilience is in alignment with neoliberalism.
Harris et al., 2018	Negotiated resilience	Describes resilience not as something that exists but as negotiated.
Harrison, 2013	Bouncing back? Recession, resilience and everyday lives	Cautions against the implications of discourse surrounding resilience.
Helfgott, 2018	Operationalising systemic resilience	Clear integration of multiple perspectives on resilience.
Holling, 1973	Resilience and stability of ecological systems	Seminal introduction of resilience to ecology.
Holling, 2001	Understanding the complexity of economic, ecological, and social systems	Seminal explanation of resilience and panarchy.
Hutcheon & Lashewicz, 2014	Theorising resilience: Critiquing and unbounding a marginalizing concept	Disability perspective on resilience. Questions the normativity of current conceptualisations and offers a helpful discussion on resilience and vulnerability.
Joseph, 2013	Resilience as embedded neoliberalism: A governmentality approach	Introduced the critique of neoliberalism in resilience studies.
Kuldas & Foody, 2022	Neither resiliency-trait nor resilience-state: Transactional resiliency/e	Describes resilience from a transactional perspective sharing synergy with transactional descriptions of occupation.
Lade et al., 2020	Resilience as pathway diversity: Linking systems, individual, and temporal perspectives on resilience	Offers an alternative conceptualisation of resilience as pathway diversity.

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Luthar, 2015	Resilience in development: A synthesis of research across five decades	An integrative review on psychological resilience research that comes to the conclusion that resilience is relational.
Luthar et al., 2000	The construct of resilience: A critical evaluation and guidelines for future work	Core definition of resilience used psychology, positive adaptation in the face of significant adversity. Presents a synthesis of theories and critiques of resilience up to the 2000s contextualising many of the later debates.
Mahdiani & Ungar, 2021	The dark side of resilience	Speaks about the cost of resilience as well as how the manifestation of resilience is dependent on the resources available.
Masten, 2007	Resilience in developing systems: Progress and promise as the fourth wave raises	Overview of systems perspectives. Calls for the integration of multiple levels of analysis.
Masten, 2011	Resilience in children threatened by extreme adversity: Frameworks for research, practice, and translational synergy	Addresses frameworks for resilience research and interventions highlighting the importance of addressing different scales and the interaction of multiple systems.
Masten, 2014	Global perspectives on resilience in children and youth	Discusses the importance of cultural understandings of resilience and how resilience is influenced by cultural roles and values. Raises the issue of a cost of resilience.
Masten, 2015	Pathways to integrated resilience science	Articulates principles and assumptions in the study of resilience in the context of human development.
Masten, 2018	Resilience theory and research on children and families: Past, present, and promise	Speaks about resilience as a pattern that unfolds over the life course. Speaks of the multiple systems involved in human development.
Masten, 2021	Resilience in developmental systems: Principles, pathways, and protective processes in research and practice	Overview of resilience theories in human development and discusses considerations in the study of multisystem resilience.
Masten et al., 1990	Resilience and development: Contributions from the study of children who overcome adversity	Describes resilience as capacity, process and outcome.
Meerow et al., 2016	Defining urban resilience: A review	Explore conceptual tensions around how resilience is understood in relation to urban environments.
Métais et al., 2022	integrative review of the recent literature on human resilience: From concepts, theories, and discussions towards a complex understanding	Discusses a transactional and constructivist approach. Close alignment with transactional perspectives in occupational science.
Münch et al., 2021	Resilience beyond reductionism: Ethical and social dimensions of an emerging concept in the neurosciences	Unique perspective on ethical risk of resilience research and interventions. Blend of deterministic ontology and interpretivist axiology.

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Olsson et al., 2015	Why resilience is unappealing to social science: Theoretical and empirical investigations of the scientific use of resilience	Helpful discussion of ontological and epistemological considerations in resilience studies. Advocates for pluralism in resilience studies.
G. E. Richardson, 2002	The metatheory of resilience and resiliency	Offers an integration of multiple perspectives on resilience and describes resilience as a core process of human life.
Robinson & Carson, 2016	Resilient communities: Transitions, pathways and resourcefulness	Offers a discussion around the concept of community resilience.
Rogers et al., 2020	Resilience and values: Global perspectives on the values and worldviews underpinning the resilience concept.	Helpful distinction between instrumental and critical perspectives on resilience. Unique theoretical contribution on the importance of understanding values. Also introduced the concept of traveling theory. Emphasises the importance of a temporal understanding of resilience from a developmental perspective and speaks to resilience as an interaction between people and context.
Schoon, 2021	A socio-ecological developmental systems approach for the study of human resilience	Non-mainstream psychological perspective that integrates more traditional psychological concepts into a contextual understanding of resilience. Critique of neoliberalism.
Schwarz, 2018	Resilience in psychology: A critical analysis of the concept.	Argues for a nuanced understanding of how resilience plays out at a community level. What fosters the resilience of some costs the resilience of others.
Shrestha, 2019	Which community, whose resilience? Critical reflections on community resilience in peri-urban Kathmandu Valley	Explains the concept of traveling theory and maps how critical perspectives have travelled between research communities as well as what these perspectives are.
Smirnova et al., 2021	The critical turn of resilience: Mapping thematic communities and modes of critical scholarship	Explicates a developmental systems perspective on resilience including the importance of understanding multilevel dynamics.
Southwick et al., 2014	Resilience definitions, theory, and challenges: Interdisciplinary perspectives	Provides a model for understanding the interaction between the resilience of individual actors and the resilience of institutions.
Theron, 2021	Learning about systemic resilience from studies of student resilience	
Theron et al., 2013	Toward an African definition of resilience: A rural South African community's view of resilient Basotho youth	Offers insights from an African perspective on how resilience might be conceptualised.
Thorén & Olsson, 2018	Is resilience a normative concept?	Discussion of normativity in the construct of resilience. Interesting because it starts from an ecological perspective.

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Ungar & Theron, 2020	Resilience and mental health: How multisystemic processes contribute to positive outcomes	Provides a contemporary theory of resilience in relation to mental health from a multisystem perspective.
Ungar, 2004	A constructionist discourse on resilience: Multiple contexts, multiple realities among at-risk children and youth	Offers constructionism as a means of understanding the plurality of resilience.
Ungar, 2008	Resilience across Cultures	Culturally diverse research with a global perspective. Presents a contextual and cultural understanding of resilience as the navigation and negotiation of resources.
Ungar, 2011	The social ecology of resilience: Addressing contextual and cultural ambiguity of a nascent construct	Explains key principles of a socio-ecological approach to understanding resilience.
Ungar, 2012	Researching and theorising resilience across cultures and contexts	Describes the importance of understanding resilience across cultures and contexts and draws attention to the heterogeneity of the concept. Describes resilience as ideographic and nomothetic.
Ungar, 2013	Resilience, trauma, context, and culture	Explains how resilience will manifest differently based on the quality of the environment.
Ungar, 2018	Systemic resilience: Principles and processes for a science of change in contexts of adversity	Describes core principles of resilience across disciplinary silos.
Vale, 2014	The politics of resilient cities: Whose resilience and whose city?	Describes resilience as a concept and as a practice.
van Breda, 2018	A critical review of resilience theory and its relevance for social work	Clear overview of resilience theories alongside critical interrogation and a focus on southern perspectives. Argument for person-in-environment understandings (congruent with occupational science perspectives on occupation).
Vindevogel, 2017	Resilience in the context of war: A critical analysis of contemporary conceptions and interventions to promote resilience among war-affected children and their surroundings	Described a relational perspective on resilience that aligns with occupational concepts.
Walker et al., 2004	Resilience, adaptability and transformability in social- ecological systems	Describes stability landscapes as a way of understanding resilience and the components of resilience.
Walker et al., 2006	A handful of heuristics and some propositions for understanding resilience in social-ecological systems	Describes key heuristics for understanding adaptive cycles, panarchy and ecological conceptualisations of resilience.

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Walker, 2020	Resilience: What it is and is not	Offers clarification for several current issues in resilience thinking.
Walsh-Dilley & Wolford, 2015	(Un)Defining resilience: Subjective understandings of 'resilience' from the field	Describes the concept of resilience as having 'place-specificity' and discusses epistemic considerations in the study of resilience.
Wilson & Wilson, 2019	Assessing the resilience of human systems: a critical evaluation of universal and contextual resilience variables	Argues for a contextual understanding of resilience variables as the same variable may result in resilience or vulnerability.
Windle, 2011	What is resilience? A review and concept analysis	Clear concept analysis of developmental conceptualisations of resilience in the context of older adults (in contrast to much of the literature which is written about children and youth).
Xu & Kajikawa, 2018	An integrated framework for resilience research: A systematic review based on citation network analysis	Describes key features of resilience based on an extensive review of the literature.
Xue et al., 2018	Exploring the science of resilience: Critical review and bibliometric analysis	Provides insight into how trends in resilience have evolved over time.

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## Appendix E

## Recommended Reporting Practices for Critical Interpretive Synthesis

**Table 18 Suggested Reporting Practices According to Depraetere et al. (2021)**

<b>Feature</b>	<b>Description</b>	<b>Explanation</b>
<b>1</b>	Data extraction method for identifying themes/concepts	Since the goal of a CIS is to formulate a synthesising argument, the identification of themes (using techniques from the meta-ethnography) is required and may therefore be considered as an important element of a CIS.
<b>2</b>	Formulation of a synthesizing argument	Placed second in the hierarchy since the development of a theoretical framework is the major goal of a CIS and cannot be formulated without the identification of themes
<b>3</b>	Inclusion of various research results	Inclusion of both quantitative and qualitative research is placed third given the emphasis that scholars place on this advantage.
<b>4</b>	Flexible Inclusion Criteria	CIS reviews utilize flexible inclusion criteria to select sources that are directly relevant to the research question and the emerging theoretical framework. The applied selection criteria thus determine the development of the theoretical framework and are therefore placed fourth in the hierarchy.
<b>5</b>	Quality Appraisal	Placed fifth in the hierarchy since one can also carry out a CIS without quality appraisal of the included sources.
<b>6</b>	Two Staged Sampling Process	The two-staged sampling strategy allows the authors to select additional potentially relevant sources that inform the emerging theoretical framework. However, a synthesising argument may also be formulated without a two-staged sampling method.
<b>7</b>	Broad Searching Strategy	Placed last in the hierarchy since the broadness of the search strategy does not guarantee that more relevant sources will be found. Furthermore, a CIS can also be implemented when no broad searching strategy is applied.

## Appendix F



### Informed Consent for Subject Matter Experts

*Occupation & resilience: An interdisciplinary critical interpretive synthesis*

Principle Investigator: Julie Anne van Veenendaal

Supervisors: Dr Amshuda Sunday & Mr Elvin Williams

This study is being undertaken in fulfilment of a Master of Science in Occupational Therapy degree at the University of Cape Town in the Department of Health and Rehabilitation Sciences.

The aim of the research is to explore potential theoretical links between human occupation (the ordinary and extraordinary things that people do every day) and socio-ecological understandings of resilience. During the initial stages of the critical interpretive synthesis, you were identified as a subject matter expert. Your voluntary participation as a subject matter expert will add depth and richness to the development of theory regarding the links between occupation and resilience.

Consultation as a subject matter expert would involve one 60-90 min interview to discuss some of the key themes that have emerged from the literature, scheduled at a time convenient to yourself. The interview will be conducted online and will be audio and video recorded. This interview will be used to guide further theory development and refinement.

Your name and key contributions to the theory developed through this review process will be noted in the final thesis as well as any publications based on this research.

Participation is voluntary and you can withdraw at any point without giving a reason. There is no reimbursement for participation. This study bears no risk for the participants. However, if any psychological or emotional issues may arise, a referral to an appropriate professional would then be advised.

Should you have further questions, please do not hesitate to ask either me or my supervisors Dr Amshuda Sunday ([a.sunday@uct.ac.za](mailto:a.sunday@uct.ac.za)) or Mr Elvin Williams ([ewilliams1@qmu.ac.uk](mailto:ewilliams1@qmu.ac.uk)). Alternatively, the UCT FHS Human Research Ethics Committee can be contacted on +27 21 406 6338.

*I have read the above information and hereby give my consent to participate in the interview process and have my name and contributions recognised in the final thesis and publications based related to this research.*

Signature:

Date:

## Appendix G



**DHRS**  
Department of Health and  
Rehabilitation Sciences  
FACULTY OF HEALTH SCIENCES

### Interview Preparation Guide

*Occupation & resilience: An interdisciplinary critical interpretive synthesis*

Principle Investigator: Julie Anne van Veenendaal

Supervisors: Dr Amshuda Sunday & Mr Elvin Williams

Thank you for agreeing to consult as a subject matter expert. I appreciate your time, expertise, and willingness to participate. Below I have included some of the discussion prompts for our upcoming interview. These prompts are meant to serve as a starting point for our discussion and are based on some of the key themes and questions that have emerged from the initial stages of the critical interpretive synthesis. As this research is centred on an understanding of human occupation and resilience as constructs, I have also included brief descriptions of occupation and resilience.

#### *Occupation*

Human occupation refers to all the things that people do, both the ordinary and extraordinary. The concept of occupation also encompasses the understanding that what people do is shaped by their individual life history and their context (both physical and social).

#### *Resilience*

Resilience is a broad concept that is studied across many different domains. When used in relation to people, it is normally used to describe positive adaptation in the face of adversity. A socio-ecological perspective views resilience as the outcome of complex interactions between biological, psychological, social, and environmental systems. Resilience may encompass processes as divergent as persistence, resistance, recovery, adaptation, and transformation.

#### *Discussion Prompts*

- We know that both human occupation and resilience arise from the interaction of multiple systems. How can we improve our understanding of the way different systems interact to shape human occupation and resilience?
- As concepts, both occupation and resilience can be applied to individuals, groups, and communities. How can we improve our ability to transition between these various levels of analysis? How might we integrate insights from these different levels of analysis?

## OCCUPATION AND RESILIENCE

- Why do we attribute value to the concept of resilience?
- What might an understanding of human occupation contribute to our understandings of resilience?
- How might an understanding of resilience contribute to our understanding of occupation?

If you have any questions, you are welcome to contact me.

I look forward to our upcoming discussion.

Kind regards

Julie Anne van Veenendaal

## Appendix H

### Ethics Approval Letter from the Health Sciences Research Ethics Committee



**UNIVERSITY OF CAPE TOWN**  
**Faculty of Health Sciences**  
**Human Research Ethics Committee**



**Room G50- Old Main Building**  
**Groote Schuur Hospital**  
**Observatory 7925**  
**Telephone [021] 406 6492**  
**Email: [hrec-enquiries@uct.ac.za](mailto:hrec-enquiries@uct.ac.za)**  
**Website: [www.health.uct.ac.za/fhs/research/humanethics/forms](http://www.health.uct.ac.za/fhs/research/humanethics/forms)**

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11 October 2021

**HREC REF: 653/2021**

**Dr A Sunday**

Division of Occupational Therapy  
F45 OMB  
Email: [a.sunday@uct.ac.za](mailto:a.sunday@uct.ac.za)  
Student: [JNSJUL009@myuct.ac.za](mailto:JNSJUL009@myuct.ac.za)

Dear Dr Sunday

**PROJECT TITLE: OCCUPATION & RESILIENCE: AN INTERDISCIPLINARY CRITICAL INTERPRETIVE SYNTHESIS-MASTERS CANDIDATE- MS JULIE VAN VEENENDAAL**

Thank you for submitting your study to the Faculty of Health Sciences Human Research Ethics Committee (HREC) for review.

It is a pleasure to inform you that the HREC has **formally approved** the above-mentioned study.

**This approval is subject to strict adherence to the HREC recommendations regarding research involving human participants during COVID -19, dated 17 March 2020; 06 July 2020 & 01 July 2021.**

**Approval is granted for one year until the 30 October 2022.**

Please submit a progress form, using the standardised Annual Report Form if the study continues beyond the approval period. Please submit a Standard Closure form if the study is completed within the approval period.

(Forms can be found on our website: [www.health.uct.ac.za/fhs/research/humanethics/forms](http://www.health.uct.ac.za/fhs/research/humanethics/forms))

***The HREC acknowledge that the student: Ms Julie van Veenendaal will also be involved in this study.***

**Please quote the HREC REF 653/2021 in all your correspondence.**

Please note that the ongoing ethical conduct of the study remains the responsibility of the principal investigator.

Please note that for all studies approved by the HREC, the principal investigator **must** obtain appropriate institutional approval, where necessary, before the research may occur.

HREC/REF 653/2021sa