Cycles of Creation:
Essays Exploring Continuous Creative Work

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I, Poornika Anantha Ramakrishnan, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the work.

Abstract

With the rise of the knowledge economy, organizations and entire industries are focused on continuously generating new products and solutions. Creators who work in these contexts are increasingly seen to be engaged in regular attempts at experimentation and exploration. However, our theories of creativity continue to be based on singular models of the creative process i.e., models where creativity is examined as a single, distinct process of generating ideas in response to a task or problem, selecting a subset and moving these towards implementation. The three studies in this dissertation take a unique approach to studying creativity by focusing on continuous creative work and developing theory that extends beyond the boundaries of a single creative process. The first study is a qualitative study in theatre and architecture investigating how creative workers engage with ideas during continuous creative work. I develop theory on idea stockpiling, a third alternative to idea selection and rejection. In the second study I develop a conceptual model which describes the process of developing a body of creative work—a set of creative products characterized by core themes that extend beyond individual ideas. To do so I move away from episodic models of creativity, and draw instead from theory and research on enduring engagement, incompleteness, and broad goal pursuit to develop a model of enduring creative engagement. The final study is a qualitative investigation of how creators draw from existing inputs, a common recommendation for continuous creativity which is often at odds with prescriptions for originality and individuality in creative work. My findings highlight two practices for navigating tensions between inspiration and imitation. The implications of each study for theory and research are discussed.

Impact Statement

What are the challenges experienced by individuals who are continuously involved in creative work? How do they engage with and develop ideas? What resources do they rely on to navigate the continuous development of ideas? These are the questions that are at the core of this dissertation. By asking and answering these questions, this dissertation contributes to debates within and outside academia, and provides insights for employees, managers and organizations looking to understand more about creative work.

In the first chapter which serves as an introduction to the studies in this dissertation I draw a distinction between individual creative processes and continuous creative work, a distinction which has not been articulated in the creativity literature to date. In doing so I provide a framework for understanding and exploring the work of those who regularly develop novel and useful ideas. This distinction may be of importance to anyone looking to understand creative work be they academics or practitioners. In the second chapter I explore how creative workers engage with ideas during continuous creative work and advance a model of idea stockpiling. Stockpiling and its functions have received limited attention as a creative practice. However, my findings reveal that it is an important means through which creative workers develop both instrumental and symbolic resources. An expanded understanding of creative practices and resources for creative work can also be gained through the third chapter of this dissertation which explores how individuals can develop a connected body of creative work. This can be of particular interest to managers and organizations looking to support their employees' efforts at creating over time. In the final chapter I explore how creative workers navigate contrary prescriptions regarding the use of existing inputs in creative work. While creative workers are sometimes advised of the benefits of exploring existing inputs for inspiration, they are also warned against doing so due

to the risk of imitation. My findings illuminate two sets of practices through which creative workers can navigate such tensions between inspiration and imitation.

Taken together these findings provide a deeper understanding of creative processes, particularly interconnections between different creative processes. They also provide new insights about resources for creativity, shedding light specifically on the notion of ideas as a resource (both substantive and symbolic), and how creative workers can cultivate and use this resource in their work. These findings can be important for creative workers who are operating in fast-paced settings which demand constant creativity and their managers as well as educators and policy makers who are interested in promoting creativity and providing creative workers with clear advice and a tangible set of strategies for improving their work.

Preface

The first study in this dissertation (Chapter 2) is based on work conducted with my advisor Dr. Sarah Harvey. I identified and designed the research program and collected, analyzed, and theorized around the primary data as part of my PhD upgrade submission. I subsequently worked with Dr. Harvey to develop the paper for submission to a journal where I contributed equally to subsequent rounds of coding, theorizing and writing up. A version of this study has been invited for a second-round revision at *Administrative Science Quarterly*. This is the version of the study reported in this dissertation. All aspects of studies two and three (Chapters 3 and 4) including identification and design of the research program, data collection and analysis, model construction, theorizing and writing up were conducted primarily by me. The studies reported in the papers of this dissertation were approved by UCL's behavioural ethics board: 10009/001.

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They all said that doing a PhD would be impossibly hard. I was silly enough to ignore them. When I began this journey over five years ago, I did it because I wanted to be a professor at a university. Working on my applications I pictured myself as a fun professor, an interesting professor, the kind who would fill their classes with clever facts and interesting anecdotes and stimulate exciting debates. Imagine my disappointment when I realized that before I could hope to do any of that I would have to do research, and during this journey I would be questioned at every turn, and worse yet, would question myself. Those questions often turned to doubts, and those doubts at times turned to abject terror. Suffice it to say that I experienced my fair share of obstacles throughout my PhD and several times I nearly gave in. They only reason why I was able to overcome those obstacles is because my family, friends, colleagues, and mentors gave me the strength and security I needed to pursue my ideas. For that I owe them a great deal of gratitude.

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Yours Sincerely,

Poornika Ananth

For my grandfather Mr. A.K. Venkatapathi,

now I have a story to tell you.

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1. Introduction

> *I'm always thinking about creating. My future starts when I wake up every morning. That's when it starts—when I wake up and see the first light.*
>
> — Miles Davis in Davis and Troupe, 1990

While the phrase "I'm always thinking of creating" – the legendary jazz trumpeter Miles Davis' summary of his own creative process may seem like an overstatement, the notion of continuous creative work, or regular attempts at exploration and experimentation (Puccio & Cabra, 2012) is becoming commonplace in the knowledge economy where organizations and even entire industries are striving to continuously generate novel and useful ideas (Florida, 2002). The model of work in such contexts is often based on hiring individuals who demonstrate creative potential and giving them the tools and resources needed to create continuously over time (Florida, 2004; Koppman, 2016; Long Lingo & Tepper, 2013). Some organizations construct jobs in response to the creative abilities and interests of employees, allowing them to work on ideas and problems of their choosing (Tan, 2015). Others give their employees specifically allotted times to work on projects of their choosing alongside more routine tasks (Schrage, 2013). Indeed, the entire system of advancing research and scientific enquiry within universities has been premised on hiring scientists and allowing them to pursue their own research projects, with the aim of continuously developing creative outputs and advancing knowledge (Musselin, 2009; Weisberg, 1986). Professional creators who work in such contexts where "a great deal of creativity is called for" (Amabile, Conti, Coon, Lazenby & Herron, 1996) are regularly seen to be engaging in multiple creative projects simultaneously and over time (Rouse, 2020; Sterjne & Svejenova, 2016). In other words, they are "always thinking about creating."

In the literature, creativity is defined as the generation or production of ideas that are both novel and useful (e.g., Amabile, 1988, 1996; Oldham & Cummings, 1996; Scott & Bruce. 1994). Creativity is typically viewed as a key precursor to innovation (the successful implementation of creative ideas) and is increasingly being recognized as an important ingredient for effectiveness in all kinds of work and organizations (e.g., Amabile, 1988, 1996; George & Zhou, 2007; Oldham & Cummings, 1996). Scholars have long advocated for the importance of studying not only the antecedents of creativity but also the process through which creative ideas are generated. A creative process is one in which an individual behaviourally, cognitively and emotionally attempts to produce creative outcomes (Kahn, 1990). For example, designers working on a project may attempt to design a device that is creative; they may collect data, consult past solutions, contemplate alternatives, propose and elaborate on inventive ideas, and become psychologically invested in their work. The ultimate outcome may or may not be novel, useful, or both, but scholars have argued that the process of developing those ideas can be called a "creative process" (c.f. Mainemelis, 2010; Drazin, Glynn & Kazanjian, 1999). Engaging in a creative process is therefore a necessary, but not sufficient, condition for the production of creative outcomes (Drazin et al., 1999).

Several theoretical models of the creative process have been put forward over the years describing multiple phases in the development of a creative idea (e.g., Amabile, 1988; Amabile & Pratt, 2016; Perry-Smith & Mannucci, 2017; Wallas, 1926). In developing these models, scholars have primarily underlined the importance of generation, or coming up with a novel and useful idea (e.g., Amabile, 1983). Idea generation usually follows a process of task identification and preparation (Amabile 1996). Generated ideas are then considered against task and domain relevant criteria (Amabile, 1983; 1996). The best ideas from the set are selected (Campbell, 1960; Mednick, 1962; Simonton, 2003), refined (Perry- Smith & Mannucci, 2017) and moved toward implementation (Baer, 2012; Perry- Smith & Mannucci,

2017). We therefore model the creative process as a set of phases which when successfully completed, result in the implementation of an idea that is both novel and useful. (Anderson, Potocnik & Zhou, 2014; Amabile & Pratt, 2016). Scholars have suggested that this model represents the idea journey – that is, the path followed by a novel idea as it moves from conception to completion (Perry- Smith & Mannucci, 2017).

These theoretical conceptualizations rely on one simplifying assumption: that creativity can be examined as a single, distinct process that occurs in response to a specific problem or task and results in the selection and implementation of one or more ideas that meets task requirements. This picture, however, does not align with the certain reality of how creative workers really conceive, consider and complete projects. People who do creative work for a living are seldom engaged in just one creative process at a point in time but instead create simultaneously on multiple fronts. Findings from qualitative investigations of the development of ideas in creative contexts show that creative workers often think about different ideas even as they are complete a focal project (Rouse, 2016), work towards simultaneously developing solutions for multiple clients (Hargadon & Sutton, 1997), discuss several independent ideas with collaborators (Elsbach & Kramer, 2003), work with multiple groups of people towards the accomplishment of different creative outputs (Long Lingo & O'Mahony, 2011; Sonenshein, 2016) and schedule their days to allow multiple projects to move forward (Fisher, Pillermer & Amabile, 2018).

However, the complexities of continuous creative work have not been fully explored in the research or captured by existing models of the creative process. In reflecting on the usefulness of these models for our ability to understand the experiences of the professional creator and their "creative life" Gruber (1989:20) said:

> Wallas's scheme was intended to apply to the development of the individual creative project, not to the longer enterprise of which each project is a part, and certainly not to the creative life. In fact, when Wallas's serviceable scheme is applied to the creative

> life, the result is not so simple [...] At the level of the creative life, Wallas's scheme is silent since it deals with the genesis of single projects.

Although Gruber's comments above refer specifically to one process model developed by Wallas (1926), his critique applies more broadly to other models which examine the single creative process. Other scholars have also noted that it may be time to move beyond studying how the single creative process unfolds (Fisher, Ananth & Demir-Caliskan, *forthcoming*; Stjerne & Svejenova, 2016), and have explicitly called for research that goes beyond the boundaries of the single creative process and examines the "initiation, management, and integration of [multiple] creative processes and ideas" (Litchfield & Gilson, 2013:111). These scholars argue that continuous creative work presents a series of challenges and complexities that may not be observed when examining singular instances of creativity. In this dissertation I focus on examining different challenges and complexities characteristic of continuous creative work and uncovering how creative workers respond to them.

This dissertation consists of three studies that explore different aspects of continuous creative work. Study 1 is a qualitative examination of how creative workers engage with ideas during continuous creative work. Creativity research has largely centered on a model of the single creative process in which creators generate ideas in response to a task, select a subset for implementation, and reject the rest. This paper calls into question this binary between selection and rejection in the context of continuous creative work, which involves regular attempts at exploring and experimenting with ideas. Through an inductive qualitative study of creative workers in architecture and theater, I show that during continuous creative work, creative workers also engage with ideas through stockpiling—maintaining a connection to ideas by saving and storing them without dedicating resources to developing them at that point in time, but not discarding them entirely. Two forms of stockpiling emerged in our data and related to three different practices—strategic stockpiling was critical to synchronizing project streams, symbolic stockpiling was key to dissimulating

discontinuities; the practice of projecting possibilities was anchored by both strategic and symbolic stockpiling. The findings of this paper herald a portfolio approach to creativity centered around managing a portfolio of ideas. This expands our conceptualizations of creative processes, provides new insights about resources for creativity, and illuminates the value of ideas beyond implementation.

Study 2 is a conceptual paper which provides insight into how some individuals produce a body of creative work by reconsidering the process through which multiple creative outputs are developed. Previous research has focused on ways of improving individual episodes of creativity, where ideas are generated, selected from, and implemented in response to a given task or problem. In contrast to this episodic approach, I present a model of enduring creative engagement in which a problem or task that persists over time and across creative projects (which I label an enduring dilemma) provides the foundation for developing a body of creative work: a set of creative products that are characterized by core themes which extend beyond individual ideas. I propose that by cultivating an enduring dilemma, creators experience a balance between familiarity and novelty, a sense of unresolvedness, and meaningfulness from working on questions that are part of a broader whole, and that this in turn supports the development of a body of creative work. By integrating theories of enduring engagement with theories of incompleteness and broad goal pursuit, this article contributes to our understanding of the process of developing a body of creative work, re-examines relationships between problems and solutions in creative work, and offers new insights about resources for creativity.

Study 3 is a qualitative investigation of how creators draw from existing inputs, a common recommendation for continuous creativity which is often at odds with prescriptions for originality and individuality in creative work. Research suggests that getting ideas, inspiration, and stimulation from what has come before is fundamental to the creative

process. At the same time, research indicates that creative workers are likely to desire the experience of developing ideas that are unique to themselves and are clearly the product of their own efforts as opposed to imitating the outputs of others. In turn, creative workers are likely to experience tensions between inspiration and imitation when using existing inputs in their own creative processes. Yet, little research has addressed how creative workers use existing inputs or how they manage this tension when doing so. Through a qualitative, inductive study of architects, I develop a theoretical model of borrowing practices used in creative work that delineates how creative workers use existing inputs in their own creative processes, and the key psychological experiences associated with each of these practices. In elaborating theory on borrowing practices in creative work, this study has implications for understanding creative processes and how creative workers use resources that are available to them, as well as understanding the psychology of authorship in creative work.

In sum, the overarching purpose of this dissertation is to illuminate how creativity unfolds when we go beyond the boundaries of a single, distinct creative process to consider the continuous development of creative ideas simultaneously and over time, and what that means for our understanding of creative processes, people, and ideas. Theoretically, the findings of this dissertation will contribute to our understanding of creative processes, provide new insights about the experiences of creative workers, and expand our understanding of creative ideas.

2. Ideas in the Space Between: Toward a Theory of Stockpiling in Continuous Creative Work

> *Sometimes ideas are coming so fast that I have to stop doing one song to get another. But I don't forget the first one. If it works, it will always be there. It's like the truth: it will find you and lift you up.*
>
> - Prince in Pareles, 1996

> I *hold on to more than I'd like to admit. On my hard drive, I keep a Work in Progress folder, which includes anything I think might grow into a distinct piece of writing. I also keep an Under the House folder, off-site storage for sentimental items I can't quite part with but don't exactly want to look at.*
>
> - Manguso, 2017

The continuous creative work of writing songs or literature, as described in the opening quotations; designing new products (Sutton & Hargadon, 1996; Hargadon & Sutton, 1997), advertisements (McLeod, O'Donohoe & Townley, 2011), or toys (Elsbach, 2009); starting new ventures (Rouse, 2016); conducting research (Musselin, 2009); or making films (Sterjne & Svejenova, 2016) is a messy process of generating, developing, and implementing multiple ideas that are novel and useful (Amabile & Pratt, 2016). Continuous creative work means engaging in continual experimentation and exploration as one works across multiple creative processes unfolding simultaneously and sequentially, overlapping and intertwining in an ongoing stream of activity (Puccio & Cabra, 2012; Rouse, 2020). Continuous creative work is complex. As the quotation from Prince above suggests, sometimes, creators have so many ideas for a given project that they cannot capture them quickly enough and are left with a surplus; other times, creators face the terror of the blank page, unable to overcome a *"creative block*" to complete their work (e.g., Joyce, 2009; Catmull & Wallace, 2014). Furthermore, given that creativity is nonlinear and ambiguous, there is uncertainty on whether, how, and when ideas will be realized and, therefore, when projects will begin or end (Gruber, 1989; Long Lingo & Tepper, 2013).

An emerging process perspective on creativity is increasingly capturing the nuances of how creative work is accomplished, outlining the different activities involved in moving ideas from inception to implementation (e.g., Elsbach & Kramer, 2003; Long-Lingo & O'Mahony, 2010; Harvey, 2014; Harrison & Rouse, 2015; Amabile & Pratt, 2016; Cronin & Lowenstein, 2018). However, research has yet to capture the reality of continuous creative work and the dynamics of creating in the face of an asynchronous flow of ideas and opportunities, unexpected setbacks across projects, and regular transitions to new projects (Gruber, 1989; Long Lingo & Tepper, 2013). This is because most theoretical conceptualizations of the creative process continue to rely on one simplifying assumption—that creativity can be examined as a single, distinct process that occurs in response to a specific task and results in selecting and implementing one or more ideas that meet task requirements (e.g., Amabile, 1998; Unsworth, 2001; Perry-Smith & Mannucci, 2017). This model leads to two implications that are at odds with the nature of continuous creative work.

The first implication of viewing the creative process as a one-time event distinct from other creative work is that during the process, creators face a binary choice between selecting and rejecting ideas (Fayard, Gkeredakis & Levina, 2016; Zhou et al., 2019). Selected ideas are those that creators dedicate time to develop (Csikzentmihalyi, 1997; Berg 2019), seek resources for (Howell & Higgins, 1990; Anand, Gardner & Morris, 2007), and implement (Baer, 2012; Perry-Smith & Mannucci, 2017); the other ideas left behind in that process are typically considered to be rejected (see Zhou et al., 2019). The second implication is that implementation is the primary relevant outcome of the process (Levitt, 1963), and ideas are only considered to be valuable if they are selected and implemented (e.g., Levitt, 1963; Klein & Sorra, 1996; Baer, 2012). These implications underlie an important stream of research which examines factors that influence the selection and implementation, and rejection of

novel ideas (e.g., Rietzschel, Nijstad & Stroebe, 2010; Baer, 2012; Mueller, Melwani & Goncalo, 2012; Berg, 2016).

If creators work on multiple projects over time, however, there are many opportunities to use the ideas generated for any one particular task or problem (Litchfield & Gilson, 2013). Thus, in continuous creative work, in addition to selecting and implementing or rejecting and discarding ideas, creators can "hold on" to treasured ideas in a space between these alternatives, only to "find" and reconnect with them at another point in their creative journey, as the quotations at the beginning of this paper attest. Scholars have therefore suggested a need to better understand "how shadows of past and future projects come to play" in the present (Stjerne & Svejenova, 2016: 1773; see also Litchfield & Gilson, 2013). Yet, because existing models of creativity focus on the creative process as involving a single and distinct project, we have relatively little understanding of how creators use, think about, develop, draw on, shift, or otherwise interact with ideas across multiple creative projects.

In the present research, we therefore ask: *how do creators engage with ideas during continuous creative work?* We explored this question in an inductive qualitative study of creative workers in architecture and theater. Individuals in these industries are recognized as creative workers, as they are professionally, systematically, and routinely involved in continuous creative work (Townley, Beech & McKinlay, 2009). Our findings revealed that in the course of continuous creative work, creators also engage with ideas through *stockpiling*. We define stockpiling as maintaining a connection to ideas by saving them, choosing neither to select nor reject them in a focal creative process at a given point in time, and storing ideas, usually in some tangible form. Underlying stockpiling was a deep personal connection to ideas, and through stockpiling, creators connect simultaneous and sequential creative processes in navigating the challenges of continuous creative work. Our study therefore suggests shifting from a view of the creative process as a single act of generating, selecting,

and implementing ideas to a set of creative processes grounded in an unfolding process of managing ideas through stockpiling (e.g., Lubart & Sternberg, 1995; Litchfield & Gilson, 2013; Sonenshein, 2014). Our research also sheds new light on how creative activities, such as iteration and evaluation, may be connected across creative processes as well as contained within them. Finally, our work expands understandings about the value of ideas, and suggests that ideas that are *not* implemented are critically valuable for continuous creative work.

2.1 Theoretical Background

We review research on a process perspective on creativity (Drazin, Glynn & Kazanjian, 1999; Mainemelis, 2010; Harvey, 2014; Cronin and Lowenstein, 2018) to elaborate how prior research has predominantly viewed creativity as a process of producing a single, distinct, creative output and contrast this with the complexity of working on multiple creative projects in continuous creative work.

Creativity as a Single Process

The creative process is typically described as a sequence of phases in which creators move from identifying a problem to generating ideas and then evaluating, selecting, and implementing these ideas (Amabile, 1996; Amabile & Pratt, 2016; Perry-Smith & Mannucci, 2017). An evolutionary model of idea generation through random variation, followed by selective retention (Campbell, 1960; Staw, 1990; Simonton, 1999), is the theoretical engine underpinning this process. According to this model, the generation of alternative solutions is the variation part of the process. The usefulness of possible solutions is considered during the selective retention stage. During selective retention, one or more ideas are identified as the alternatives that best fit task- and domain-specific criteria and are moved toward implementation (Amabile, 1996; Amabile & Pratt, 2016).

If an idea is selected, it is elaborated on (Csikszentmihalyi, 1997; Berg, 2019), championed (Howell & Higgins, 1990; Baer, 2012), resourced (Runco, 2003; Anand,

Gardner, & Morris, 2007), and implemented (Perry-Smith & Mannucci, 2017). On the other hand, if an idea is selected against at some point during this process, its journey ceases. Scholars have conceptualized such ideas as rejected ideas (e.g., Dailey & Mumford, 2006; Rietzschel, Nijstad & Stroebe, 2010, 2014; Mueller, Melwani & Goncalo, 2012) and argued that such ideas provide little value to creative workers or their contexts (Levitt, 1963; Klein and Sorra, 1996). Perry-Smith and Mannucci (2017: 57) summarized this perspective as follows: "an idea moves from a vague concept in the creator's mind to a more developed idea that is sharable with others, unless the idea is abandoned, at which point the idea journey ceases." Thus, in the single process model, selection is a key determinant of success, whereas rejection, the other alternative implies that the idea journey has ended.

This perspective is understandable given that decisions about creative ideas have typically been studied in settings where actors are given a set of ideas to select from or are asked to generate multiple ideas themselves and then select a subset for development. The existing literature has focused either on lab experiments or on settings in which decisions about ideas were made sporadically and within specified task boundaries (c.f. Zhou et al., 2019). This approach to studying decisions about ideas follows the tradition of the broader decision-making literature, in which rejected options are those that have been eliminated from a set of alternatives (Shafir, 1993). In that research, the decision paradigm is typically structured such that a limited number of options can be selected. For example, choice tasks (e.g., Tversky & Kahneman, 1981; Kahneman, Tversky & Slovic, 1982) ask participants to select between alternatives of equal utility, and hidden profile tasks (e.g., Stasser & Titus, 1985) test whether groups can identify and select the best alternative when group members' information is integrated. In this paradigm, alternatives that are not selected are considered rejected because a decision on a set of choices can only be made once, and the individual is unlikely to engage with any of these choices again. Studies in the creativity literature tend to

similarly conceptualize ideas that are not selected as rejected, and they problematize the rejection of more novel ideas (e.g., Dailey & Mumford, 2006; Mueller, Melwani, & Goncalo, 2012; Rietzschel, Nijstad, & Stroebe, 2010, 2014).

Continuous Creative Work

Although theoretical representations of the creative process focus primarily on the development of a creative solution to a specific task, research on the complexity of the process when situated in the context of real ongoing creative work shows that creative workers in these contexts are typically involved in an ongoing stream of creative activity (e.g., Elsbach, 2009; Musselin, 2009; McLeod, O'Donohue & Townley, 2011; Rouse, 2016; Sterjne & Svejenova, 2016). For example, studies of filmmakers (Sterjne & Svejenova, 2016) and musicians (Long Lingo & O'Mahony, 2010) show creators working simultaneously on multiple projects, often in response to the needs of different stakeholders. In a study of entrepreneurial exits, Rouse (2016) found that some entrepreneurs work sequentially on different projects, selling off ventures as they mature and initiating new ventures. These patterns are unpredictable; ideas fail or opportunities fall through, and creators find themselves faced with breaks within a process (Amabile et al., 2005) or gaps between projects (Throsby & Zednick, 2011).

These complexities bring to the fore unique challenges that have not typically been considered in research focusing on creativity as a single process. Instead, research on creative work and creative careers (e.g., Townley, Beech & McKinlay, 2009; Long Lingo & Tepper, 2013) provides a window into how creators may struggle during continuous creative work because of a mismatch between ideas and opportunities, the emergence of breaks or discontinuities in creative work, and the need to transition from one project to the next.

The first challenge is that when creators work on multiple projects, the flow of ideas they generate may not be balanced with the flow of opportunities to realize such ideas (Long

Lingo & Tepper, 2013). Creators may have many ideas but few projects in which to develop them, or they may have many projects to work on but a dearth of creative ideas to fulfill project briefs (Roe, 1946). Creators need and are likely to generate many ideas for each creative project, yet they cannot use every idea either because only one idea is selected for a project (Sutton & Hargadon, 1996) or because they lack resources, including time, to develop every idea they generate (Litchfield & Gilson, 2013). Despite that, creators often believe that ideas not selected are good ideas (Elsbach, 2009). Indeed, an idea might be very good but might not be appropriate for any opportunity at hand (Litchfield & Gilson, 2013). At the same time, creators may not have the time or be allocated to work on every opportunity that comes their way (Petriglieri, Ashford & Wrzesniewski, 2019). Even when they may be able to take on a new project, starting from scratch to respond to an opportunity with a tight deadline can be a terrifying prospect (Catmull & Wallace, 2014).

The second challenge of continuous creative work is coping with discontinuities that exist within and between projects. Creative work is highly uncertain (Long Lingo & Tepper, 2013; Huang & Pearce, 2015), and discontinuities may occur because a creative process stalls, such as when a creator realizes that a particular idea is not working out, or there is an obviously superior way of responding to a task (Amabile et al., 2005), which may force them to make difficult decisions about ideas they had experimented with (Elsbach, 2009; Leonardi, 2011). Creators may also be forced to stop working on an idea because others around them—particularly those in decision-making roles—do not recognize its value (Berg, 2016; Mueller et al., 2018). Research on psychological ownership suggests that this can be a painful experience for creators who, through investments of time, energy, and resources into ideas, come to view ideas as extensions of the self (James, 1980; Belk, 1988; Pierce, Kostova, & Dirks, 2001). Moreover, discarding an idea can create a sense of futility around the work that was done. Futile work is demotivating, and progress is essential for experiencing

meaningfulness (Amabile & Kramer, 2011; Amabile & Pratt, 2016). In the face of frequent discontinuity, creators might not want to continue creating or might resort to developing safe ideas (cf. Berg, 2019; Kelley & Kelley, 2012; Mueller et al., 2018).

A final challenge of continuous creative work is the need to progress from one project to the next over time. This is problematic because creators need to secure a stream of future projects to move on to, but creative work is ambiguous and uncertain, and knowing how to transition can be a challenge (O'Mahony and Bechky, 2006; Long Lingo & Tepper, 2013). Starting new projects may involve engaging with new problems and possibilities, collaborators, and stakeholders (Uzzi & Spiro, 2005). Creative workers need to ensure that they will have the skills, resources, and networks necessary to take advantage of future opportunities (Bridgstock, 2005; O'Mahony & Bechky, 2006; Pinheiro & Dowd, 2009; Throsby & Zednik, 2011), and even seasoned creators may struggle with the ambiguity around standards for novel ideas (Long Lingo & O'Mahoney, 2010) and experience difficulties deciding whether to pursue an idea (Berg, 2019). Thus, in many ways, progressing to new projects may feel like starting from scratch and becoming a novice again, making these transitions a challenging prospect (McLeod, O'Donohoe & Townley, 2011).

Engaging with ideas during continuous creative work. The complexities of continuous creative work also hint at more complex interactions involved in managing and integrating multiple ideas across processes (Litchfield & Gilson, 2013, see also Gruber, 1989). In particular, in the context of continuous creative work, selection and rejection are not the only possible outcomes for ideas; ideas may live on beyond a focal creative process. Only a small number of studies provide a window into how this process may occur. A study by Hargadon & Sutton (1997, 2002), for example, shows that some creative companies keep ideas alive, embedding them "in objects that designers can look at, touch and play with" (Hargadon & Sutton, 2000: 160). Elsbach (2009) similarly observed that toy designers often

kept and displayed their original designs around their workspaces, and Rouse (2016) noted in her study of entrepreneurial exits that entrepreneurs sometimes documented ideas for new ventures in diaries or journals while working on a current venture. However, these alternate ways of engaging with ideas have not been theoretically developed in the literature, which has primarily focused on the selection and rejection of ideas, particularly within the bounds of a single creative process (c.f. Zhou et al., 2019 for a recent review). This leaves many questions for research to explore.

First, it leaves open the question of how creators engage with ideas as they navigate the challenges caused by the complexity of continuous creative work. In prior studies, ideas are seen primarily as raw materials that can resurface in a current project or provide inspiration for future creative processes (e.g., Harrison & Rouse, 2015), and having a large pool of different sources of inspiration is assumed to help with subsequent idea generation (Dugosh et al., 2000). This may actually intensify the challenges of continuous creative work, as creators produce increasingly long lists of wished for projects that generate too much work for the future. Second, prior work has yet to account for the many ideas that are not realized or resourced during continuous creative work; the ideas that lived on in previous studies were typically implemented (e.g., Hargadon & Sutton, 1997) or intended to be realized in some way (e.g., Rouse, 2016). This suggests that ideas may live on until the next process; but what do creators do with those ideas not selected or implemented after that, as many ideas tend to be? Finally, previous studies have focused on ideas implemented in and collected from other contexts that do not belong to creators themselves (e.g., Hargadon & Sutton, 1997). However, this fails to account for the deeply personal and emotionally charged nature of creativity (Drazin, Glynn & Kazanjian, 1999; Amabile & Pratt, 2016) and personal connections to ideas (Rouse, 2013; Grimes, 2018). How does a creator's personal connection to an idea shape the

way they hold on to or interact with that idea? To address these questions, we systematically explored how creators engage with ideas during continuous creative work.

2.2 Methods

To address our research question, we adopted an inductive qualitative approach, which is appropriate for exploring the processes through which phenomena unfold (Creswell, 1998; Denizen & Lincoln, 2008) and for understanding the meaning of a phenomenon "from the perspective of those living it" (Corley, 2015: 601; see also Denizen & Lincoln, 2008). We followed the procedure for developing grounded theory outlined by Glaser & Strauss (1967) and developed further by Gioia and colleagues (e.g., Gioia, Corley, & Hamilton, 2013), which is built on two key concepts—theoretical sampling and constant comparison (Suddaby, 2006). As we describe in detail below, we supplemented this with other qualitative analysis techniques (e.g., Boje, 2001; Abell, 2004; Charmaz, 2006; Willig, 2017), integrating different techniques to organize and analyze the emerging data (Pratt, Sonenshein & Feldman, 2019).

Research Contexts

Our study is set in two contexts that involve continuous creative work—independent theater and architecture. At the beginning of our study, we were broadly interested in exploring continuous creative work to gather insights that could not be observed by studying singular instances of creativity (Gruber, 1989). We therefore focused on identifying contexts involving regular engagement with creative ideas. This led us to consider independent theater artists. We first grounded ourselves in this context before recruiting participants and conducting interviews. Specifically, the first author attended and volunteered at a variety of industry events, including five performances, five rehearsals, and two conferences. These events helped us to develop a better understanding of the nature of theater work through informal discussions with theater artists.

The purpose of independent theater is producing "cutting-edge drama" and showcasing new scripts with unusual or experimental material (Simpson et al., 2015). Theater artists generate new ideas and experiment with new content instead of reproducing well-established work (Quinn, 2005). They have autonomy for initiating their own projects—they typically conceive ideas and seek resources from producers, venue managers, patrons, and funding organizations to implement their projects. Theater artists are responsible for selecting ideas to develop and pitch and have a significant role in the design and production of the plays they showcase (Simpson et al., 2015). The creative process in independent theater includes conceiving an idea, writing the script, workshopping the script with a team, and conducting rehearsals (Brook, 1968). Final creative products are in the form of plays and are showcased in festivals and other theater venues (Quin, 2005). Some theatre artists work as freelancers; others work for or start their own small companies. However, those occupational arrangements have minimal influence on the nature of the work and the challenges of continuously developing creative ideas.

During our initial investigations in theater, we were surprised by how often creators described holding on to ideas rather than selecting or rejecting them. We therefore oriented our research toward understanding this mode of engaging with ideas. As our analysis progressed, we wanted to probe our emerging insights in a more traditional organizational setting where creators were more likely to be presented with closed problems with specific client deadlines rather than the more open-ended nature of writing and producing theatre (c.f. Unsworth, 2001), so we expanded our data collection to architecture. Our goal was to broaden our understanding by capturing "shared patterns that cut across cases and derive their significance from having emerged out of heterogeneity" (Patton, 1990: 172). We used a replication logic (e.g., Harrison & Rouse, 2015) to seek out another context similar to theatre in terms of key theoretical constructs—the need for continuous creative work and autonomy

over projects and decisions about ideas. This led us to explore architecture as a second context. As for theatre, we began by grounding our work in that context. The first author attended two showcases, five workshops, and one conference in architecture.

Like theater artists, architects conceptualize, design, and oversee the construction of their ideas (physical structures; Vough et al., 2013). Previous research reveals that novelty is prized in architecture, and architects work hard to ensure that their designs are not mere replications of existing work (Rahman & Barley, 2017). Unique designs also offer architects the opportunity to compete for awards, providing individual architects and architectural practices greater prestige and standing in the community (Blau & McKinley, 1979). The creative process in architecture includes concept design, schematic design, design development, and construction administration. Architects frequently work with civil engineers, project managers, electricians, and other contractors, particularly in the later stages of the process. However, creative control remains with the architects; they choose the ideas to pitch to clients or submit to competitions and the changes that should be made to initial concepts and designs as development progresses (Cuff, 1992; Rahman & Barley, 2017).

Ongoing exploration of and experimentation with ideas makes these contexts ideal for examining the complexities of continuous creative work, including more complex ways of engaging with ideas. Indeed, decisions about ideas were "transparently observable" in these contexts (Pettigrew, 1990), as participants not only made decisions about ideas, but they also did so repeatedly and at different points (see also Simpson et al., 2015; Rahman & Barley, 2017). We were thus able to observe different dynamics related to engaging with ideas.

Sample and Data Collection

The primary data for our study comes from interviews with 70 theater artists and architects, complemented by a follow-up diary study with 10 participants from the sample of interviewees. We recruited participants using three strategies. First, we contacted educational

institutions, organizations, and professional bodies for theater and architecture in the United Kingdom to identify and contact potential participants. Second, we approached potential participants who attended industry events (e.g., conferences and workshops) (Fayard, Stigliani, and Bechky, 2017). Third, at the end of every interview, we asked informants to put us in contact with other people in their industry who were also continuously involved in creative work and made decisions about ideas. Forty theater artists and 30 architects participated in our study. Table 2.1 provides the descriptions of our informants.

Our sampling strategy moved from purposeful to theoretical as we began our analysis in tandem with data collection. We recognized that individuals who were directly involved in *idea work*, that is generating, evaluating, and elaborating ideas (Grimes, 2018; Håkonsen Coldevin et al., 2019), were more theoretically important to our study than individuals who were primarily responsible for the managerial and administrative aspects of projects and were thus not directly involved in idea work. Therefore, we continued to seek out and recruit additional participants from both contexts who were involved in developing ideas. We used context-specific terms to clarify our requirements as we asked recommendations for participants, asking to speak to "real theater artists, not puppets or imitators," and "real architects, not mere contractors" who repeated the same designs or just executed what they were told. Additionally, during the interviews, we asked all participants questions to confirm their experience of generating, evaluating, and elaborating ideas.

Our sample includes both freelancers and creative workers from theater and architectural companies. We did not observe significant differences between the way the participants from these two occupational roles engaged in continuous creative work. Participants in our contexts tended to work relatively free of institutional constraints; even those working for theater or architectural companies in our sample were often self-employed or part of very small organizations. They therefore enjoyed substantial creative freedom and

suffered the lack of a "predictable future" (Petriglieri, Ashford and Wrzesniewsk., 2019: 125) as characteristic of jobs in creative industries. Please see Table 2.1 for a breakdown of the sample between these roles.

We used in-depth semi-structured interviews triangulated with informant diaries as our primary sources of data. See Appendix A for our interview protocol and diary questions.

Semi-structured interviews. The first author interviewed participants in the two contexts between 2016 and 2018. The interviews lasted between 45 and 90 minutes, were tape recorded with permission, and transcribed verbatim. In some cases, we also conducted follow-ups by email to seek additional answers or ask for clarification. All the interviews included questions about the nature of creative work in the industry, descriptions of each person's creative process, and questions about times when creative workers made decisions about ideas. We asked broader questions throughout but started focusing on narrower areas as data collection and analysis progressed, modifying the interview protocol to address emerging themes (Spradley, 1979; Charmaz, 2006). In our initial interviews, the participants described the times when they selected ideas, rejected ideas, *and* held on to ideas. Repeated references to holding on to ideas led us to develop a second set of questions around this theme. We delved deeper into this theme in subsequent interviews, asking the participants questions about when, how, and to what effect they held on to ideas.

During our interviews, several participants showed us examples of ideas they were holding on to. The use of object elicitation (Willig, 2017) allowed us to extract prompt, unrehearsed, and specific descriptions; we could ask the participants questions about how they interacted with specific ideas they showed us. We began noticing differences in how the participants described certain sets of ideas versus others. For example, one architect spoke about documenting ideas in folders, categorizing and labelling each of them, but he also showed us a photo of an idea that he had uploaded on his website as a way of holding on to

the idea. He also distinguished between the former and the latter by saying that the latter was not the full idea but was instead a snapshot of his *process*. Initially, we did not know how to interpret this distinction, but a return to the literature suggested that people might see their ideas as self-reflective (e.g., Elsbach, 2009; Goncalo & Katz, 2020). We further refined our interview protocol to delve into these distinctions.

Diary entries. Our interview data provided us with a rich understanding of how creative workers engage with ideas as they work on multiple creative processes. However, because of a significant time lag between the occurrence of an event and reflection on it, the accounts provided in interviews can be colored by retrospective sensemaking (Bolger, Davis, & Rafaeli, 2003; Rouse, 2013). To offset these limitations, we elaborated on and checked interview responses using data from a 12-week diary study with six theater artists and four architects who had participated in our interviews. This approach is in line with previous research in which the purpose of the diary study was not to uncover the core phenomenon but to reduce the time lag between the occurrence of the event and the reflection on the event and to gather deeper insights (e.g., Margolis and Molinsky, 2008). As the primary purpose of the diary study was to explore in detail the practices that had emerged in our interviews, only creators who had participated in our interviews were recruited for the diary study.

At the time of the interviews, we asked all participants if they would be interested in taking part in a continuation of the same study. Those who expressed interest were contacted with details about the diary study. Six theater artists and four architects confirmed their willingness to participate in this more intensive follow-up study. These participants were asked to respond to a weekly diary study consisting of three open-ended, optional questions about creative activities pertaining to the past week. The diary questions were sent to the participants at the end of every week via an email link to an online survey site, and the participants could provide their responses by clicking the link at any time in the following

week. All participants provided answers to at least three diaries, typically answering all three questions when they responded. We included all participants in our data analysis, as they all described in their responses multiple instances of engaging with ideas. Fifty percent of the participants responded to at least half of the diaries, and 40 percent provided responses to 10 or more diaries. This resulted in 203 diary entries across all questions. The diaries generated a source of data closer to the time the reported experience occurred, providing a means for checking the insights gained from our interview data (Margolis and Molinsky, 2008).

Analysis

Analysis of the data began in tandem with the data collection efforts. We initially conducted a preliminary coding of longer segments of data (Glaser & Strauss, 1967) to identify first-order codes while maintaining the context around each coded piece of data (Boje, 2001). We also wrote research memos to keep track of ideas and explore themes and connections throughout the process (Charmaz, 2006). A key insight that emerged from the initial rounds of coding was that during continuous creative work, creative workers sometimes hold on to, or *stockpile*, ideas in addition to selection and rejection. We re-coded the data with this theme in mind, looking for instances of holding on to ideas and for how creators subsequently thought about, used, developed, discarded, or otherwise engaged with those ideas. As we progressed, we identified similarities and differences across our first-order codes, which we used to create more theoretical second-order categories. For example, we combined statements about "deploying ideas toward emergent opportunities," "releasing ideas when trends change," and "revisiting ideas when circumstances improve" under the second-order code "matching" to represent the different actions our informants took to coordinate ideas and opportunities.

Ultimately, these second-order themes were combined into aggregate dimensions that formed the basis of our emergent model (Gioia, Corley & Hamilton, 2013). For example, the

second-order theme “matching” was aggregated with the themes “elaborating” and “structuring” to represent the practice of “synchronizing.” We performed multiple rounds of coding, constantly moving between the data and an emerging set of conceptual categories (Glaser & Strauss, 1967). As we received responses to our diary study, we also triangulated these findings with data from the diary study. We found no systematic differences between the conceptual insights that emerged from the diary and the interview data, so we collapsed the two types of data in our analysis (e.g., Margolis & Molinsky, 2008). We present the findings in Figure 2.1 using the three-order approach of Gioia, Corley, and Hamilton (2013).

In the final stage of analysis, we considered how our emerging theoretical categories related to one another to develop an overarching theoretical framework (Corley & Gioia, 2004; Charmaz, 2006). This included going back to the literature and reading extensively about creative processes, creative careers, uncertainty, and emotions to better understand the similarities and differences between the emerging dimensions. We then examined *narrative causality* in the descriptions provided by our informants by examining quotations within the context of longer passages (Abell, 2004), examining in parallel initial research memos where we recorded initial observations of themes and connections (Boje, 2001). We also examined our diary data to see whether ideas that were mentioned in one diary entry were discussed again in another diary entry and what, if anything, creators subsequently did with such ideas (for example, did they use them, develop them, discard them, reinterpret them, etc.). Examining these relationships allowed us to consider how the theoretical dimensions fit together in a conceptual framework. During this process, we also developed preliminary theoretical models, which helped us better visualize the relationships between the different categories (Pratt, Lepisto, and Dane, 2019) and pointed out inconsistencies, which led us to return to and refine our conceptual categories (Grodal, Anteby & Holm, 2020). Through this

process, we transformed our "static data structure into the dynamic inductive model" (Gioia, Corley & Hamilton, 2013: 24).

2.3 Findings

Our main finding is that in the course of continuous creative work, creators not only selected and implemented or rejected and discarded ideas; they also held on to some of their ideas, maintaining a connection to these ideas by choosing not to relinquish them entirely, but no longer considering them as a part of an ongoing creative project or dedicating resources toward developing them further at that point in time. We use the term *stockpiling* to describe this mode of engaging with ideas. We defined stockpiling as maintaining a connection to ideas by saving them, choosing neither to select nor reject them in a focal creative process at a given point in time, and storing ideas, usually in some tangible form.

We observed two distinct forms of stockpiling. *Strategic stockpiling* involved withholding ideas from selection and storing them systematically, whereas *symbolic stockpiling* involved withholding ideas from rejection and storing them emblematically. We elaborate on these two forms in the section below. Our analysis further revealed that the two forms of stockpiling provided the foundation for three practices for managing continuous creative work—*synchronizing* project streams, *dissimulating* discontinuities, and *projecting* possibilities. Our emerging model illustrates how creative workers engage with ideas through stockpiling in managing continuous creative work.

Continuous Creative Work in Theatre and Architecture

Before moving on to describe our findings, we discuss how continuous creative work was critical in both our settings. Participants in our study reflected on how they were always creating and how thoughts about their ideas permeated their work and non-work activities: "I would go back from rehearsal in the tube and I would be in a flow state and I would just be

thinking about [the idea] …" (T6). At the same time, channelling creativity into multiple projects brought challenges, as Architect A7 suggested

> I think for all the partners in the practice, the design stage at the beginning is very intense. And it's very difficult just to say I've just got five hours to design something because creativity is much more fluid… So, if I was working on five projects that are in the concept design stage at the same time, that would be very difficult. So how do you deal with creativity and trying to churn out ideas all the time?

In particular, we observed that the creators in our study experienced three challenges in the course of continuous creativity. The first was asynchrony between ideas and opportunities, which created coordination difficulties. For example, theater artist T34 described how "sometimes, your most productive thoughts will happen at [a] completely separate time [than during a project]," and architect A23 noted that being asked to work on exploratory projects was often inefficient: "… you might have one in 10 that results in something. [But] you might have eight projects that never happen, and it's just a waste of time." The second challenge was a state of psychological discomfort that resulted from discontinuities in the process when the projects "never happen" or when idea generation stalled. T1 described his "frustration" that "you end up building all these ideas and working like mad… then you're like we don't have the space to make this show… it's damaging!" A final challenge that creators experienced was the need to progress and transition between projects. As T6 explained, "The thing with what we do, every single thing starts from scratch… You're so happy [when you're creating], and at the end of it, it's like crap; I'm at square one again."

The three challenges of asynchrony between ideas and projects, discontinuities across projects, and the need to transition to future projects mirrored the difficulties experienced by those in creative careers described in prior literature. However, our analysis went beyond that to show how creators navigated these challenges by engaging with ideas in a new way—through stockpiling.

Defining Stockpiling

> In October, I did an idea a day. I had 31 ideas, and I had to start evaluating them. I would either select [an idea] or cross it out, or I would put a question mark if it was in the middle… I chose five different ones. One of them is kind of an idea I'm writing now. I think out of those 31, there are six on the "maybe" list. They are still in the notebook that I have… The ones that I crossed out… they are actually not on my laptop anymore. (T40, playwright)

The creative process described in the preceding excerpt by T40 closely parallels the evolutionary model of creativity but with one important exception: in continuous creative work, the process does not just involve decisions to select or reject ideas but also decisions to hold on to some ideas. This process can therefore result in three different sets of ideas—selected ideas, rejected ideas, and a third set of ideas that are stockpiled. A selected idea is one that a creative worker dedicates resources toward developing, like the idea that T40 notes he is writing now. A rejected idea is one that a creative worker removes from the consideration set, even for future projects, such as the ideas that T40 removed from his laptop. The six ideas that T40 said are kept in his notebook are examples of stockpiled ideas because he has decided to hold on to those ideas without actively dedicating resources to developing them at that moment in time. Over time, ideas could shift between the three sets. For example, a selected idea could later be rejected if the development process did not progress as expected; similarly, an idea stockpiled at one point in time could later be selected for a different creative project. However, as we will illustrate when describing the practices associated with stockpiling, ideas could also remain indefinitely in the stockpile. Stockpiling was extremely common in our data. In most cases only a small number of ideas could be selected, and we saw few instances in which creative workers rejected an idea completely.

The quotation from T40 also illustrates that stockpiling involves maintaining a connection to ideas by saving and storing them. Saving involved keeping ideas in a space "in the middle," where they were neither selected and developed further nor rejected and "crossed out" entirely. Saving reflected a creator's desire to maintain a connection to his or

her ideas. Storing involved holding on to an idea, usually in tangible form, such as how T40 writes ideas in a notebook. We further observed two different ways of stockpiling ideas—strategic stockpiling and symbolic stockpiling—each of which involved distinct connections to ideas and ways of saving and storing ideas. We describe these forms in detail below.

Strategic Stockpiling

Strategic stockpiling involved saving ideas by withholding them from selection for a period of time, experiencing attraction towards those ideas, and storing them systematically. In strategic stockpiling, creators acted as if they were building a library or database of raw materials or "references". For example, Architect A25 said,

> They will usually just be pictures with a few words about what it says. For example, a picture might be a view of this park, which is relatively private, disconnected from the road. An urban oasis. [And] I keep them for reference because it's a library.

Similarly, A24 wrote in a diary entry how she created a folder of reference images not used on a project thus "building a library of design content and inspirations that is stored." In the stockpile, these ideas remained in a state of arrested development in which no resources were being dedicated to moving the idea forward. Architect A12 summarized, "You might have an idea, but you really don't know what to do with it, who to talk to, or how to approach it... [it] is not finished or realized. But they are all archived."

The creators in our study saved three types of ideas by withholding selection—seeds, ambitious projects, and drafts (see Table 2.2 for examples). Seeds were brief concepts that creators found interesting but did not have a specific use for, as theater artist T31 described: "There's a folder on my Mac called 'seed ideas.' If I have been inspired by something, I'll put it in there," even if "things [hadn't] kind of aligned to do anything about that." A second type of idea that creators saved by withholding selection was ambitious projects. These were high-novelty ideas or ideas that required substantial resources to "do justice to" (T32). Architect A21 described holding off an ambitious project about integrating mobility into

architecture because of external constraints, including having the right contacts. Similarly, theater artist T35 described how she aspired to work on a massive costume drama, but she wanted to do it properly. Therefore, she decided to "hold on to it" until her theater company's professional standing improved "because we think it's a really good idea, and we don't want to waste it… We could've put a table in the middle and a green sheet over it, but it would've looked a bit rubbish! It would've looked like a school play." Finally, the creators in our study saved drafts of ideas, as theater artist T38 explained: "Sometimes, I've written something, but I don't know what to do with it… I've started and then gone, 'I don't have the time to do this.' [But I keep it] because you never know." Drafts were more than a seed concept but less complex or resource intensive than ambitious projects. Creators withheld selection from drafts because they could not yet figure out how to fully materialize the idea.

Saving reflected that creators were attracted to an idea despite not having the opportunity or resources for developing it further at that moment. We use the term attraction to reflect that just as people experience interest and pleasure in, feel the desire to interact with, and have expectations of positive outcomes from connections with other attractive entities, such as individuals, and even organizations (Berscheid & Walster, 1969; Schneider, 1987; Hatfield, 1988), they can also experience an attraction to ideas. Similar to research in other domains, the creators in our study expressed attraction through their excitement for ideas, imagining positive outcomes for those ideas, and thinking about the ideas often (Hatfield, 1988; Fisher, 1998). T33 described attraction to an idea for a play about witches as follows: "I keep bringing up and I am so passionate about… If I see an article about witchcraft or something, I am attracted to it." Similarly, A16 described in a diary entry a feeling of "suppressed excitement—like leaving your favorite food on the plate until the end! I know [the idea] will make people happy, so I'm looking forward to being able to share that happiness." Thus, creators saved ideas that had not been selected because of a strong

attraction to them, characterized by feelings of excitement and hope, and frequent thoughts about these ideas (c.f. Fisher, 1998). Laughing lightly, T14 summarized the experience:

> It's a feeling in my solar plexus; it's like a fizz! It sounds bonkers. I suppose you can say I feel excited, and I can't stop thinking about it. I have an idea for a character, and there's two other things I'm working on at the moment, but I just can't stop thinking about her. I'm just so distracted by her. I just want to live her and breathe her.

Strategic stockpiling was further characterized by storing ideas systematically such that the ideas were maintained in ways that were tangible, accessible, and secure. T38 noted, "I name everything. It's not like Play 1, Play 2… I name everything, so I can understand what it is just by reading the name… And I keep [ideas] orderly and tidy." Systematic storage often involved physically documenting ideas as soon as they emerged, as architect A12 said: "A lot of these are quick ideas which I have at the time. So, I record it; I put it down on paper." In other cases, creators developed shorthands as mnemonic devices for keeping track of ideas. These systems evolved over time as their stock of ideas grew and creators sometimes went to great depths to ensure systematic storage including creating and maintaining categorized filing systems, as T40 described in a diary:

> I was on holiday this week, and not working certainly brings an abundance of ideas... I only had my poetry notebook with me, so any other ideas (plays, film) that I had went straight into my phone… but I'll transfer them [into my journal] as soon as possible.

Accessibility was a critical aspect of the system. For instance, creators sometimes maintained ideas on a company server so that they could be accessed from anywhere in the world (A1), or they stored them in a shared space where they could be accessed by a team of collaborators (T39). Systematizing retained details about ideas while facilitating easy retrieval.

Symbolic Stockpiling

Symbolic stockpiling on the other hand, involves withholding ideas from rejection for a period of time, experiencing attachment to ideas, and storing them emblematically. In symbolic stockpiling, creators stored ideas that represented their creative experiences or efforts, as architect A8 explained: "Because they are symbols! I see an idea that I had drawn

four years ago, and I completely connect with that time. It's very very powerful!" Theater artist T14 similarly noted that an idea could be "… a little like a body part. It's like, 'oh there's my ears, here's my nose.' It's a little part of your story, your DNA, your map." Thus, these ideas contained a section of the creator's personal story and represented a chapter of their creative journey.

We uncovered three types of ideas that creators saved symbolically by withholding rejection—investments, original prototypes, and early career experiments (see Table 2.2 for examples). Investments were ideas that creators had spent much creative or personal energy or resources on but had not been able to implement successfully. For example, T28 described saving an idea after it failed to receive funding from the Arts' Council:

> A theater project I had been pursuing for some time was a play about heroin… It got quite close to a full production, [but] it didn't go through; it didn't get funding… which is very difficult because you invested a lot of time and care in the idea… So, [the script is] in a drawer.

Similarly, architect A3 explained how ideas that formed a part of a big project that had eventually been scrapped continued to exist as a representation of his creation:

> It's not just simply drawings. It's effort, it's discussion. Every drawing is a part of your life. It's 1.5 years of my job and my life. It's not like every day you worked on a different project. It's something that you created slowly, navigating different problems.

A second type of idea saved by withholding rejection was original prototypes. These were early versions of ideas that creators had developed, but had eventually been radically modified during implementation or scrapped entirely over the course of the creative process. Architect A6 said, "I do have chunks of code or projects that are sort of there [from] projects which I did during my tinkering time...." Creators often considered prototypes to be their most creative work, unhindered by external constraint:

> This is a project, a house I designed in Islington. It's a really cool black metal house with an angled roof. It's all very geometric and very stark and a little bit kind of Memphis style, kind of post-modern. And it's the first time that I've been able to do something that creative… the planning committee [forced me] to make something that looks terrible. I would not claim that house now because it's just a dog's dinner!

Instead, he "claimed" his original black metal designs and placed them in his portfolio to "hold on to the original design that I came up with" (A16), maintaining these designs even after resources had been withdrawn from the idea itself. Finally, creators saved from rejection early career experiments. These were ideas that occurred during defining developmental periods in the creators' lives, such as university, a first job, or childhood. For instance, A29 described saving early career drawings inspired by caves near the city he grew up in.

With symbolic stockpiling, creators withheld their personal evaluation of these ideas even in the face of negative experiences. As T29 explained, "It is much, much easier to say, 'I'm going to [keep it] and come back to it in a few years' time,' rather than to say, 'Oh yeah, my baby is just a hideous mutant; I'm going to throw it out of the window.'" Saving an idea in this way reflected that creators retained an *attachment* to the idea, as A22 revealed: "I just get really attached to things. Usually, the things I've spent a lot of time on… it's really hard to let go." By attachment, we mean that creators had affection for the idea and felt personally linked to it in some way (O'Reilly and Chatman, 1986; Hatfield, 1988). This attachment endowed creators with a sense of security when their ideas were saved but with anxiety about letting ideas go (c.f. Hatfield, 1988; Fisher, 1998). A3 expressed attachment when he discussed ideas for a decommissioned project: sighing deeply, he said, "Personally, *ooof,* I would possibly cry if I had to get rid of all the work done!"

Symbolic stockpiling was further characterized by storing ideas emblematically in ways that served as perceptible reminders of ideas. Creators emphasized that this involved preserving ideas as representations or snapshots of their creative journey: "Mostly, it's just like my Facebook photos. I would show them to you in the same way that I would show you a photo of me in LEGOLAND… sentimental things…" (T29). This form of storage tended to be unsystematic and often retained only fragments of ideas. During our interviews, the

respondents often pointed to photographs, models, or artifacts from plays; A22 described how representations of his ideas were strewn haphazardly around his workspace:

> It's a nightmare!... Ideas lie about all over the place in whatever form they are in. I've got a computer full of broken ideas that never happened, a studio full of broken models that never happened, and drawings I have [stopped working on] at some point.

To deal with this logistical "nightmare," creators periodically moved big chunks of ideas into deep storage, away from their primary workspace to locations that they did not access or encounter routinely. For example, architect A29 moved his "filled-in" sketchbooks to his parents' home in Cyprus. Creators coupled this deep storage of details with the selective display of fragments of ideas. This involved extracting the most personally valuable or representative aspects of ideas and displaying these fragments, for example, on personal websites, portfolios or around their studios. Architect A22 directed our attention to a photograph on his website: "That's me standing there [among] loads of plaster objects... to me that photograph is more important than anything else [even though] nothing in that photograph formed part of the project." In this way, through emblematizing, creators could preserve representations of valued ideas.

Relationship between strategic and symbolic stockpiling. Our data suggest that ideas tended to be either strategically or symbolically stockpiled; however, the two forms were not mutually exclusive. On occasion, participants described ideas in ways consistent with both forms of stockpiling. For instance, T12 commented, "… it's usually very useful to keep everything because you can just take what you need sometimes; [also] I think writers find it quite difficult to get rid of ideas." Thus, an idea could be stockpiled in ways that were consistent with both strategic and symbolic forms. For example, architect A23 developed "booklets" with selected images etched on the front to show that "these are some ideas that we have had." However, each booklet also contained project details documented inside, so "it's not something we have to remember"; instead, they could access these details any time.

Stockpiling Practices and Continuous Creative Work

Our analysis further revealed that strategic and symbolic stockpiling provided the foundation for a set of practices for navigating continuous creative work. Creators used three practices associated with stockpiling to navigate continuous creative work. The first practice, *synchronizing project streams*, involved coordinating an unpredictable flow of ideas and opportunities through stockpiling. The second practice, *dissimulating discontinuities*, involved drawing on stockpiling to help neutralize the psychological discomfort that resulted from breaks in creative processes, such as when projects were cancelled or ideas did not gain traction. The final practice, *projecting possibilities*, involved using stockpiling to map out a trajectory for future creative work. Supporting data are presented in Table 2.3.

Synchronizing Project Streams

Synchronizing project streams involved using stockpiling to align the uneven flow of ideas and opportunities that occurred as creators worked on multiple projects at once. It consisted of three sub-practices—matching, elaborating, and structuring—through which stockpiled ideas acted as a resource for accomplishing work.

Matching. Matching involved coordinating ideas and opportunities by deploying stockpiled ideas for appropriate projects and continuously scanning for high-potential settings in which to develop stockpiled ideas. Theater artist T12 explained how she engaged in matching to capture an unexpected opportunity:

> There was a theater that was interested in stories set on the English Coast. I didn't have the time to come up with something brand new, so I looked through my files to see what I had written. There was a short story that I had written years ago, and I formulated a play based on that. So, it was about matching their theme with a stub of something I had…

Matching did not occur blindly; creators often had to cultivate ideas or opportunities to make ideas fit. For instance, in a diary entry, architect A24 described how she "pushed" for a stockpiled idea with a new client that she felt was the right opportunity:

> I have been creating material sample boards, and I had kept a few finishes in my desk drawer that I thought could be useful in the future… some of these are very suited for the hostel project I am developing at the moment. For example, I had a sample of pink terrazzo that I wanted to use for a bar front for a while, but no projects yet were quite right to design it. For the hostel, I think that it is a really good opportunity to try this; therefore, I have pushed this idea and will be presenting it to the client.

Matching meant checking ideas continuously against opportunities. This reflected creators' deep attraction to strategically stockpiled ideas they wanted to pursue. Theater artist T10 commented, "You end up having a bloodhound nose for opportunities. [When you talk to people] you kind of have your little back burner list of things that might happen and then you go, 'Oh, that opportunity is perfect for this thing on my list.'" At the same time, matching could mean withholding ideas from selection until the environment became more hospitable. T10 described holding an idea until there was a change in "the zeitgeist":

> I [created] an opera, which is about a real person called Annie Jump Cannon [an astronomer] who lost her hearing in her 30s… People were going, "an opera for deaf people, that's not a thing!" But slowly, that's changing, and people are making music accessible to deaf people. And Darvis Hobell has just written a book about this. And because of this, everyone is going, "What an amazing story; someone should write an opera about that." So, we have started sending it out again and trying to make the best out of this opportunity that arises from this awareness.

Similarly, changes in the environment could improve the context for materializing an idea by increasing funding or a creator's reputation or network, and creators would wait to implement these ideas because they longed to execute the idea well. For example, theater artist T32 described holding a cherished idea for adapting a classic French play for 10 years until his theater company had grown and he had become a more skilled director. In this way, matching involved both deploying ideas to take advantage of opportunities and searching out optimal opportunities for ideas by using interesting ideas when appropriate opportunities emerged.

Elaborating. Elaborating involved drawing on stockpiled ideas to develop current projects and move them forward. Stockpiled ideas could build on and add depth to a current project. Architect A16 wrote in a diary entry, "[We] created some alternative designs for a project… We will keep these in our back pocket… in reserve for the rainy day when [there is

a] spanner in the works…" Resolving a "spanner in the works" often involved directly plugging a piece of a stockpiled idea into a focal creative project, as T35 described:

> One time, I wrote a load of diary entries about terrible dates that I'd been on… one day, I just pinched a load of those and put them in the play because this character was just so heavy and depressing, and I felt like we needed something light to counterbalance this awful character.

In other cases, stockpiled ideas acted more as raw materials or sources of inspiration that turned projects in new directions or helped overcome creative blocks, as T37 explained: "… you can use it as stimuli... If you're writing something and you have a little pause and don't know where to go next, you can go through your list, and maybe it will inspire you to do something." Similarly, T25 used "parts of ideas from the past" to overcome a crisis:

> I had come across an image that felt very evocative for me of Marina Abramovic's work, HOUSE WITH OCEAN VIEW, and I had put it away, but this week, when we had a crisis with our [play development] process, I came back to it.… So, I showed [my partner] the image I'd put away and decided to change the idea to something inspired by that image.

Elaborating could also involve integrating or synthesizing stockpiled ideas into a new composition. For example, architect A25 described how her creative process involved "collaging [ideas], which is a good way of formulating an idea which slowly crystalizes over time." This meant that creators could connect different ideas across time, building an elaborated idea using snatches of work they have done or have found inspiration in over time. In this way, through strategic stockpiling, creators could slowly connect different ideas over time to create an elaborated project.

Structuring. Finally, creators synchronized their roster of projects by using stockpiling to structure temporal boundaries between projects or ideas. Through these boundaries, they created space for working on focal projects while structuring times to revisit old ideas. T14 described how "[stockpiling] is like treating them like children and going okay you need to sit; there's no point in you running around. It's about looking at what the priority is [and revisiting ideas] in the future." T40 elaborated,

> I work on one or two things at a time… I don't like to cloud my mind with [ideas] all the time. It's because I know that it will just interfere with the ideas I'm working on. So, I'll revisit them once I've completed the redraft of a script, or I have just finished a new script. I'll give space to that script. Then, I'll look at these ideas. When I have downtime. And I'll schedule that time. So, I'll say, I'm going to finish the script on this day, and then later that week maybe, I will re-evaluate those ideas.

Architect A20 similarly described structuring a temporal boundary between current projects and stockpiled ideas that she may develop at a later time:

> The land that [my family weekend home] sits on, I've always thought that it would be really cool if I could turn it into a space to do workshops, sort of like a summer camp… I need to take on a lot of practical things out of the way, and then I can dedicate time to it over the summer. You know, when I can take a break [from commissions] and maybe take a holiday to do it.

Creators thus planned times when they could revisit stockpiled ideas, allowing them to focus on a small number of ideas and use breaks or "downtime" more productively. That boundary enabled them to focus on completing current projects, ensuring that other attractive ideas did not "cloud (their) mind" (T40). Structuring boundaries thus helped creators to complete current projects without being distracted by other ideas, which waited in the stockpile.

Dissimulating Discontinuities

The second practice we observed for engaging with stockpiling during continuous creative work was dissimulating discontinuities. Through dissimulating, the creators came to view their stockpile of ideas as a part of their creative work and creative process, which transformed the negative psychological experience of discontinuities that occurred because ideas failed or projects came to a halt. Creators reframed ideas they felt attached to in a positive way. Our data revealed three sub-practices for dissimulating discontinuities—disentangling processes and outcomes, distancing from decisions, and constructing progress. Through these sub-practices, the creators treated ideas as representations of their creative process that provided them with new understandings of their creative work.

Disentangling. The first sub-practice for dissimulating discontinuities was disentangling creative processes from creative output so that stockpiled ideas became

celebrated for the effort that went into creating novelty, regardless of whether ideas resulted in a final product. Theater artist T29 explained,

> What a lot of artists talk about is a safe space to fail. The idea [being] in order to achieve success creatively, you're going to go down the long road usually. I think partly it's about getting past this binary of saying that something is either useful or useless. Its valuing the process by which you mess stuff up… [Stockpiling] helps you break out of the habit that stops you from conceptualizing a problem in a certain way.

Disentangling processes and outcomes was a way through which the creators protected "a safe space to fail" (T29), where they could continue to experiment with ambiguous and risky ideas. Thus, stockpiled ideas represented and justified efforts of "messing stuff up," helping creators overcome the feeling that their efforts were wasted.

Thus, creators felt more comfortable working on high-risk projects with uncertain outcomes or in changing directions midway through a project. Architect A22 explained, "… [this] really frees me during the creative process not to be precious about every piece of work but to value every piece of work." Moreover, stockpiled ideas came to take on a life of their own through this process, as architect A23 described when showing detailed plans for a building that failed to materialize:

> Now, we have got a book that shows a way of dealing with a project like that. And because it's a book and it's in our library, it's not just a wasted opportunity. Making the book and making the library means that they are real projects. Because they are physical. They are in the book. Their potential is almost realized in the book.

Thus, through disentangling, the process itself came to be a valued product. In this way, creators cushioned themselves from the futility of working on ideas that were unlikely to materialize, enabling them to be risky and experimental in their approach.

Distancing. Creators in our study distanced themselves from decisions about the future of ideas, postponing, shifting, or even denying the need to make decisions about rejecting ideas. Distancing therefore helped creators deal with the negative experience of rejecting ideas, as T29 went on to explain: "Sometimes, it's easier to reject when it's not fresh... [With time] this sense that I have invested in has sort of disappeared and faded." Others like A27

below psychologically or physically passed ideas on to other people, abdicating responsibility for making calls about ideas that were "super personal":

> I used to sketch how this motorcycle could move a little bit. That, for instance, is an example of me holding on to a design that I'm never going to use. Its super personal, and it's just a part of me… [Retaining these designs] is a way of having something precious forever, until my kids sell them or put them in the bin or something (A27)

Some creators postponed the decision to get rid of ideas indefinitely or even denied the need to make decisions. Architect A25, for example, commented,

> A sketch on a napkin is a well-known thing. You keep the sketch on the napkin because it might be really precious… You keep the sketch on the napkin forever.

Similarly, T34 commented, "I'm just a hoarder by nature. So, letting go of anything is just not my style. I'm constantly at the threshold of what my laptop can fit in terms of space. I don't like deleting anything." Thus, distancing themselves from decisions through symbolic stockpiling helped creators mitigate the negative psychological experience and the pain of rejecting or discarding treasured ideas in the face of inevitable discontinuities.

Constructing. A final sub-practice of dissimulating was constructing a sense of progress. T12 explained, "I think it's good for me to see how much I've invested in my career by writing so much… Seeing all these notebooks and libraries gives me a sense of achievement even though some of them are unfinished." Reviewing stockpiled ideas enabled creators to measure their progress in different ways. First, it provided evidence of their productivity and engagement in the creative enterprise even without final creative products. For instance, architect A18 remarked on how it made him feel "productive and creative":

> For the [cancelled] museum project, I would definitely be happier knowing that the culmination of the year's work was held as a body of work in some form or another. [A] digital report or physical portfolio or something. [It's a way] to know that you are being productive and creative… I use the physical output to validate my productivity.

As theater artist T29 noted, creators could develop a record that would say, "was born, wrote some shit, wrote some stuff that was good, then stuff that got better... [otherwise] it's an

incomplete archive" (T29). Furthermore, this helped creators see the progress they had made over time, as A30 explained:

> I have sketchbooks from university and from my first year in architecture. And you keep them, you keep all of them because they are kind of like a visual documentation of where you were at one point and where you are now. It's nice to see alright, I started here, and you've done this and done that because then it shows that you are actually doing well and you are moving forward… And then you're optimistic because you think, "I'm just going to keep improving until I get to the final point."

Moreover, constructing a sense of progress enabled creators to turn discontinuities into a part of their own creative story. In particular, representations of unmaterialized ideas evidenced that a creator was willing to take risks and do things that were experimental and difficult to implement—risks that others might hesitate to take. A13 explained that the mere fact that they had a stockpile of investments and experiments "tells people that we are willing to learn, and we are willing to put ourselves in positions where not a lot of architects and designers are willing to put themselves." Stockpiled ideas therefore signalled one's creative ability; creators could evidence that they were indeed trying to do things that were novel and challenging, thus turning discontinuities into a source of pride.

Projecting Possibilities

The final practice we uncovered for engaging with stockpiling in the course of continuous creative work was projecting possibilities, in which creators transitioned between projects by using stockpiling to map out a path for future creative work. Projecting involved four sub-practices—anticipating, cultivating, guideposting, and centering. These sub-practices involved drawing on stockpiled ideas to help orchestrate and filter ideas for future creative work and to help guide that work forward.

Anticipating. The first sub-practice of projecting was anticipating, which involved using stockpiling to build a vision of and forecast potential future projects. T36 described a stockpiled idea that he intended to work on the following year: "I am also maintaining the Zombie opera idea with my writer colleague who is very excited about doing it properly and

applying for funding to do it in the next year." Anticipating working on stockpiled ideas moved projects forward and prompted transitions between projects in two ways. First, it motivated creators to complete current projects. As theater artist T29 commented,

> I'm at the stage of the cycle where I'm like, "Okay, let's get rid of some of these projects because then I can start focusing on the list." In some ways, it motivates me in that it makes me think, "Okay, there is stuff there that I want to do."

Second, creators began to forecast times when they might be able to try an idea they "never had a chance to work on… [and] find out if [it] really does work" (A19). This created "a hunger for finding a project that I can use [an idea] in" (A27), driving creators to seek out new projects that might present such an opportunity. Architect A29 explained,

> It's a vision that can drive you and keep you excited about things. That's why they are at the front. At the forefront of my desk. When I think about those ideas, I feel excited. Because there is a lot of potential. A lot that you can develop and expand… it's why I wake up in the morning and go to work.

Interestingly, respondents also felt the absence of stockpiled ideas when they attempted to transition without that pool of resources, as theater artist T25 described: "Those few years [after an important project] were a little dark because I wasn't doing much work, but I also didn't know what I wanted to do." She further elaborated on this point in a diary entry:

> I've had experiences before [in which I've] been at a loss [about] what projects I'm dying to make now and in the future. Dream projects. The kind of projects you harbour and carry around for years, hoping someone will give you a chance to make them.

Thus, stockpiled ideas could lay the foundation for progressing through to future projects, building momentum by setting the stage for anticipating.

Cultivating. Stockpiling also lay the foundations for cultivating entirely new sets of resources. Cultivating involved using strategically stockpiled ideas to approach new domains, build networks, and sharpen one's skills. Architect A20 explained,

> Let's say I have five projects that are in my head, and I somehow have stumbled upon them because I walk about or I hear about them. And it's just there. But these five projects, they kind of create a kind of depository of things… And if they are there, I can talk about them, and I can think about them, and I can communicate to colleagues and friends like, "Look, I'd love to do this."

As the quotation illustrates, initiating partnerships was a big part of this, as these ideas often formed the basis for conversations that could lead to new collaborations. T36 said,

> So, the bank of potential ideas is very useful for forming connections. It's very useful when it is revealed because producers who want to work with me very frequently ask me what I would like to do, and I think they are doing the same thing that I am doing; they are trying to connect dots. Oh well [this director] is interested in this, and I've got a project two years down the line, and that could be really useful.

For others, a stockpiled idea that could not be materialized because of a lack of skills led to efforts to develop that expertise. Theater artist T12 said, "I might have ideas that I would like to bring to a particular form. So, let's say not naturalism but in a different form of theater… So, I do workshops and things like that, [and] they can lead you down interesting paths… I did a series of workshops at [institution] because I wanted to find a way to write a particular play." Architect A26 further commented that as a result of storing ideas, "you gather material, research, you go to exhibitions that remind you of [an idea], or you speak to people about it. So, you unconsciously do things…" Thus, through stockpiling, the creators cultivated new resources in the form of new knowledge or networks that would hasten the transition to new projects instead of waiting to consider these factors after initiation.

Centering. Through centering, creators used stockpiling to surface and reconnect with their true interests and unique creative style as they came to the end of projects that had been shaped by the implementation process. Creators were often forced to make compromises and deviations from their vision as they realized creative ideas, and centering was a process of reminding themselves of their creative ideals in the face of projects that had been influenced by external constraints. Stockpiled ideas could therefore act as representations of creators' true interests and ambitions in ways that realized ideas could not, as Architect A20 explained: "A project that starts in your head might end up being completely different because of reality getting in the way in developing the initial project to the final… These idealistic ideas are the ones that really show who you are."

Thus, creative workers turned to their stockpiles to reconnect with their creative ideals as they completed a project that had been modified and shaped by the implementation process. For example, T1 described turning to his stockpiled ideas in a diary entry he wrote during a particularly "reflective week" when he was trying to "reconsider and reassess where I'm going and what it is I want to be doing and talking about as an artist":

> I think it's important to sometimes look around and see what ideas have stayed relevant throughout time because those ideas will show you your identity as an artist. The thematics you're interested in and the aesthetics that are recurrent.

Architect A29 similarly commented,

> [In these old sketches] you can see your true self. It sticks out… you can also see the building blocks of your identity… I think you can trace your signature in your sketches… Going back through your sketchbooks, you can trace a real personality beyond the told one, which I think is much more important. You can see your core.

Centering thus helped creators focus on "thematics" that were unique to their identities as artists and block out the influences of collaborators, mentors, clients, and other stakeholders that they viewed as diluting the "true self" to make way for the "told one." As T12 related,

> It also helps you center yourself. Because as you become more developed over the years, you start sometimes diluting a bit. That sort of raw chaotic voice that you began with which is all passion and no skill. And as you develop new skills, it's a very delicate balance of maintaining your voice and making it strong enough to speak in a play rather than letting it get diluted by trying out new techniques.

Thus, centering provided the creators with a focus, "maintaining" their voice instead of letting it get "diluted" over time.

Guideposting. Finally, creators engaged in guideposting by reflecting on stockpiled ideas to identify how ambitious to be in future projects. Through this, they established a sense of what was possible going forward. From looking across a set of stockpiled ideas, creators could extract lessons about what they could accomplish or hold up examples of their ability, as architect A18 illustrated:

> … there's a number of reports [on the university building project] that are defunct that are not related to the building proposal. But we often look back to them… One documentation on the consultation strategy for the [project] is

> something that we always use as an exemplar because it was a very challenging [design in the] project.

Similarly, A23 described how maintaining representations of a project that crossed the boundaries of design reminded him to be equally aspirational in all his designs: "So this client was interested in co-working; we just had to look at it and try to be clever and creative about how to use the space and also how to work out different activities. So, it's crossing the boundaries. This isn't just design. It's almost a business!" Stockpiled ideas could also reveal unproductive avenues or help creators hone in on the appropriate level for their goals, as T29 explained:

> A lot of the things in that folder [titled sketches that should never see the light of day], there is a very strong intellectual conceit… You'll have to be Stephen Sondheim or someone who really can make a concept like that come to life. So, working out that this is something you keep doing. You keep running into this wall at top speed…

Whereas centering was primarily about filtering and envisioning the content of creators' ideas going forward, guideposting was about estimating how far they should push themselves. Architect A16 described holding "… on to my original designs, so that I can [see] how have I achieved a harmony in the visuality and materiality… it is a reminder that it's possible. It means that as an experienced architect, at the point when you might cave in, you can say 'no, I'm not going to compromise.'" Guideposting could also reveal unproductive avenues, helping creators avoid mistakes by pushing them to consider the process of developing certain ideas, reminding creators that "… You've tried going here before. What do you need to do in order to go there better next time? (T29)" Thus, stockpiled ideas acted as guideposts, helping creators maintain a sense of ambition grounded in their experiences.

2.4 Discussion

Our study follows the path of prior research that builds a more nuanced understanding of the inner workings of the creative process (e.g., Elsbach and

Kramer, 2003; Long-Lingo and O'Mahony, 2010; Harvey, 2014; Harrison & Rouse, 2015; Amabile & Pratt, 2016; Cronin & Lowenstein, 2018). In this study, we shifted attention from a single focal creative process to the flow of projects that unfold over time. Doing so revealed that in navigating this flow, creators engage in stockpiling so that many ideas live on in a space between selection and rejection. We develop a model of stockpiling in continuous creative work to build theory around this insight.

Toward a Model of Stockpiling in Continuous Creative Work

Our emergent model is depicted in Figure 2.2. In the model, stockpiling practices are the basis for managing a portfolio of ideas that develop through continuous creative work. Creators in our study described their worlds as larger than a "particular moment" (T31), where all ideas were a part of a "creative journey" (A22). We thus propose that stockpiling is a holistic creative practice in which creators are "creating on all fronts all the time… It's about the artist being self-generative" (T25). We suggest that stockpiling accomplishes this by connecting simultaneous and sequential creative processes through the practices of synchronizing, dissimulating, and projecting. Synchronizing connects creative processes occurring at the same time, as creators match ideas with emergent opportunities and shift ideas around between processes, stealing bits of one idea to elaborate in a different project. Dissimulating connects previous creative processes to one another as creators move ideas into the past and string them together to create meaning around their creative journeys. Finally, projecting connects sequential processes together as ongoing work facilitates transitions to new projects, and past ideas light the way for new work.

We further argue that synchronizing, dissimulating, and projecting draw on the forms of strategic and symbolic stockpiling in different ways. We suggest that synchronizing is associated with strategic stockpiling because it requires that creators can access attractive

ideas that are systematically stored and can be deployed toward opportunities and creative processes. Dissimulating is associated with symbolic stockpiling because it involves making sense of one's attachment to ideas by drawing on reminders of important past projects. Unlike synchronizing and dissimulating, projecting draws on both strategic and symbolic stockpiling. In projecting, creators use representations of their past process to identify how they want to move forward, and they use strategically stockpiled ideas to build these up for such opportunities. This notion mirrors work suggesting that people adaptively draw on past experiences to imagine and shape their future environment (Buckner & Carroll, 2007; Suddendorf & Corballis, 2007). Furthermore, it suggests that stockpiling enables creators to use ideas as instrumental resources for idea work (Håkonsen Coldevin et al., 2019) and as psychological resources (Sonenshein & Dholakia, 2012) to develop feelings of efficacy, to serve as motivation, or to overcome the pain of letting ideas go.

We further propose that creators' deep personal connections to ideas through attraction or attachment are critical to using ideas in this way. Objects of attraction tend to take on a special meaning to those who hold them (Fisher, 1998). Attraction draws creators toward ideas, providing them with the energy and motivation (Hatfield, 1988) to continuously hunt out opportunities that will make the best of such ideas. This might mean cultivating and matching a full idea with a new project or elaborating a part of an idea in an ongoing creative process. Attachment provides people with a sense of security when objects of attachment are held close (Fisher, 1998). Attachment could therefore help creators overcome the anxiety associated with such an uncertain endeavour, providing them with comfort as they reflect on their creative process and progress.

The figure depicts the practices and sub-practices as iterative and interrelated. We theorize that stockpiling unfolds through a loosely structured cycle of moving between sub-practices and that sub-practices may trigger a shift to a new practice; for instance, structuring

boundaries allows for anticipation of future projects, which may trigger a shift from synchronizing to projecting. However, we do not view these relationships as deterministic; creators may engage in some sub-practices only and in different sequences.

Contributions of the Model

Creativity research has taken the view that in the course of a creative process, an idea can move "from its generation to its implementation or rejection" (Zhou et al., 2019: 2591) and has left the implementation processes to be the providence of innovation research (e.g., Anderson, Potocnik & Zhou, 2014). By showing how some ideas live on in a space between these alternatives during continuous creative work, our study expands the scope of creativity research beyond the end of a focal creative process. This opens up new questions for research into the consequences of stockpiling for ideas and creators, the nature of creative activities within the process, and the value of ideas that are not immediately implemented.

Portfolio perspective on continuous creative work. Our work challenges the view that generating ideas is the heart of creativity, suggesting instead that creativity lives in managing a portfolio of ideas across projects. From a portfolio perspective, creativity lies in generating connections between ideas and opportunities, synthesizing ideas into new understandings, and creating a map for future creative activities. Thus, the portfolio view of creativity prioritizes skills such as identifying opportunities and pivoting ideas to take advantage of these opportunities through synchronizing; framing and reframing past ideas to construct a sense of meaning through dissimulating; and mapping out a path to move forward through projecting.

A critical question for future research is how portfolio management skills relate to creative outcomes both for specific ideas and for creators over the course of their careers. Several of the practices we uncovered, such as holding ideas for the right opportunity or elaborating to add richness and depth to ideas, may improve the creativity of a focal idea. At

the same time, reusing an idea that has not met its generative potential forestalls idea generation and may indicate an escalation of commitment to a treasured but poor investment. Similarly, for creators, strong portfolio management skills can help them manage the challenges of continuous creative work; however, the practices also involve accepting the complexities of this work as inevitable and unresolvable. Stockpiling therefore does little to reduce actual discontinuities or complexity; indeed, they may even make them more common or intense by making them more tolerable. Dissimulating, in particular, may require a careful balancing act—it can help creators cope with the uncertainty of discontinuities in their creative work, but if they excel at that practice, they may end up hoarding ideas, haunted by the ghosts of ideas that could have been, without feeling pressured to move forward on new projects. Past research suggests that navigating uncertainty and the ability to make sense of and find worth in what one does in the face of failure is critical for creative work (Throsby & Zednik, 2011; Long Lingo & Tepper, 2013), so these tensions may be the *sine qua non* of continuous creativity. However, future research could explore which of the practices is more or less functional for different types of ideas or at particular points in one's career.

The portfolio perspective offers several contributions to our understanding of creativity. First, it points to the deeply personal nature of creative work. Creators in our study stockpiled ideas that they were personally attracted or attached to, and it was this connection that compelled them to hunt out opportunities that will realize their ideas, generate new meanings from unrealized ideas, and discern themes and values to transition to new projects. Viewing stockpiled ideas as personal resources distinguishes our work from prior studies of how some ideas live on (e.g., Hargadon & Sutton, 1997, 2000), which have described a collective, generalized knowledge sharing function of ideas from the past.

The portfolio view further suggests that in contrast to past research on how the work environment provides creators with the cognitive, emotional, and motivational resources they

need to generate novel and useful ideas (Amabile, 1983, 1996), creators instead shape their own work environments. This constructionist perspective (Gruber, 1989; Sonenshein, 2014) contrasts with the view of resources and environments for creativity as fixed attributes of contexts or as open systems subject to external forces (Woodman, Sawyer & Griffin, 1993; Amabile & Pratt, 2016) and instead implies that the creator is also a "force" in this system shaping their own environment (McLeod, O'Donohoe, & Townley, 2011: 128). It further suggests that managers can foster creativity by enabling their most creative members to maintain and manage their own ideas. This runs counter to prior advice of separating idea generation and managerial decision-making roles (Benner & Tushman, 2003; Zhou et al., 2009). Our work highlights that it is the subjective nature of creators' relationship with their ideas (that is, their attraction and attachment to certain ideas) that allows them to match, integrate, and make sense of ideas across multiple processes.

Nature of creative processes. The creativity literature treats most attempts at creating as independent. Our analysis, however, shows how idea stockpiling connects seemingly disparate creative processes. In doing so, our model provides several new directions for exploring how creators engage in the activities of iterating ideas, evaluating ideas, and defining creative tasks or problems *between*, instead of within, creative processes. Our study therefore calls for a shift in research attention from how creators can successfully manage ideas "through all stages of the idea journey" (Perry-Smith & Mannucci, 2017:54) toward understanding how creators can successfully manage ideas across creative processes.

First, our study builds on research on the evaluation of ideas in situ (Elsbach & Kramer, 2003; Harvey & Kou, 2013) to reveal how evaluation takes place in the broader context of a creator's past, present, and future experiences rather than as a choice between a small set of ideas generated in response to a specific task. Whereas prior research has focused on understanding one-time decisions between selecting or rejecting ideas (e.g., Rietzschel,

Nijstad & Stroebe, 2010, 2014; Mueller, Melwani & Goncalo, 2012), we introduce stockpiling as an alternate choice. Within the practice of stockpiling, evaluation may be better thought of as a continuous process that unfolds over many iterations (e.g., Mintzberg & Waters, 1990; Chia, 1994) instead of being a one-time decision. Indeed, in our study, ideas were repeatedly evaluated as creators considered them during different projects, identifying instances where they could be deployed, others where they provided a map, and still others where they provided a buffer against gaps. Future work may explore how the nature of evaluation of an idea shifts over time as an idea moves into and out of a stockpile.

Our work further sheds new light on the meaning of iteration by suggesting that ideas can move around in space and time. Whereas prior research describes iteration in terms of shifts back toward earlier stages within a process (Amabile & Pratt, 2016), our work shows how ideas are iterated through in different projects. For instance, through the sub-practice of elaboration, writers may take a character from a draft to write an entirely new play about and then steal a different character to insert for light relief into a different project. Ideas are also iterated over time in different projects; original prototypes may provide clarity of action or guidance on how new projects may be pursued. Moreover, ideas are iterated when they take on new meaning by being combined with other stockpiled ideas that accumulate over time, such as through constructing progress or through centering, and when this new meaning shapes the way that creators see new opportunities. Further research may build on how iteration occurs between creative processes to shape ideas over time.

A final insight is that ideas may exist prior to specifying or discovering a problem (e.g., Unsworth, 2001) and that these ideas may still mould future creative work. In our study, past ideas influenced the ideas that creators considered relevant to their values or interests, how they viewed the feasibility of projects and the resources needed for these projects, and the

skills and opportunities they creators decided to cultivate. Further research may explore how past ideas help filter opportunities and shape the development of ideas in the future.

Reconsidering the value of creative ideas. The value of creative ideas is often equated with their implementation; scholars have emphasized how important it is to use ideas by turning them into innovations, arguing that ideas are useless unless used (e.g., Levitt, 1963; Baer, 2012). Our findings challenge this view, suggesting that in some cases, ideas may provide value in the absence of implementation. Thus, just as Sutton & Hargadon (1996) challenged researchers to consider the meaning of brainstorming effectiveness by questioning brainstorming's purpose, our study probes the meaning of selecting ideas by asking selecting "for what"? Whereas prior research defines selection in terms of implementation (Zhou et al., 2019), creators in our study may be thought of as choosing ideas for a variety of purposes related to continuous creative work. If creators only engaged with ideas through selection and rejection, they would have no means of mapping work, deploying toward opportunities, or buffering against gaps. This suggests that the value of ideas can stem from their contribution to the development of a portfolio rather than developing them into final products.

Similarly, our findings challenge what it means *to value* a creative idea. Current research suggests that valuing an idea means selecting and dedicating resources toward developing it (Torrance, 1995; Mainemelis, 2010; Berg, 2016). An important insight from the current study is that creative workers might hold on to, rather than select, the ideas they value the most until the time is right to realize its potential. This suggests that the importance of selecting one's best idea at a given point in time (e.g., Rietzschel, Nijstad & Stroebe, 2010, 2014; Mueller, Melwani & Goncalo, 2012) may be overemphasized in the literature, instead we may need to consider when and how an idea is selected. Attraction is fundamental to decisions to withhold ideas from selection. Although both attraction and attachment have been used to describe connections and relationships with other targets, including people (e.g.,

Berscheid & Walster, 1969; Hatfield, 1998; Fisher, 1998), brands (e.g., Funk & James, 2001; Filo, Funk & O'Brien, 2008), and organizations (e.g., O'Reilly & Chatman, 1986; Schneider, 1987; Judge & Cable, 1997), research in management and creativity, in particular, has focused on attachment and related feelings of ownership and identification (e.g., Belk, 1988; Pierce, Kostova & Dirks, 2001; Baer & Brown, 2012; Rouse, 2016; Grimes, 2018). Our work suggests further research into the dynamics of attraction to or a pull toward ideas.

Limitations and Future Research Directions

In addition to the broad questions raised above, our study has a number of limitations that suggest avenues for future research. First, although we explored stockpiling in two contexts, we did not elaborate the differences between contexts. We believe that situating our study across two contexts strengthens our research by allowing us to probe the boundaries of our theorizing and replicate the core practices we observed. However, further research is needed to compare and contrast the contexts. We observed that theater artists typically worked on tasks or problems they discovered, frequently moved between teams, and experienced a generalized financial constraint as they worked in an underfunded industry. Architects, on the other hand, were assigned problems, worked in more stable teams, and encountered unique constraints on a project by project basis. Finally, material practices were core to ideation for architects, leaving them more likely to develop tangible forms of ideas. Further research may investigate how these differences shape stockpiling.

Second, our model was developed by exploring creative workers in contexts that are characterized by continuous creativity (Quinn, 2005; Rahman & Barley, 2017). Although these contexts provided an extreme case that is ideal for theory building (Bamberger and Pratt, 2010), they may limit the transferability of the emergent theory (Lincoln and Guba, 1985). Participants from these contexts routinely worked on creative projects, so the need for a stream of new ideas may have prompted stockpiling in ways that it may not in less creative

contexts. However, we would expect our findings to extend to individuals working in other industries (cf. Long Lingo & Tepper, 2013), organizations (e.g., Stigliani and Ravasi, 2012) and departments (e.g., Rosso, 2014) regularly engaged in creative work.

Third, our findings revealed that creative workers experienced strong attraction and attachment to their ideas. Similar connections between creative workers and their ideas may not exist in contexts where individuals primarily implement or make incremental changes to ideas (Brown and Baer, 2015). Furthermore, the creators in our study identified strongly with their professions and frequently professed to love their work. Previous research has suggested differences among individuals who identify strongly with their professions or tasks (Anteby, Chan, & DiBenigno, 2016) and those who do not. The practices we observed may therefore be less prevalent or important for individuals who identify less with their professions or tasks.

2.5 Conclusion

Models of creativity and innovation sometimes use the metaphor of a funnel to explain the process of moving from idea generation to implementation. Progressing through the funnel involves winnowing down generated ideas, selecting some, and rejecting others along the way to implementation (Leonard & Sensiper, 1998; Goffin & Mitchell, 2016). This study suggests that ideas that do not move through to the end do not necessarily fall out of the funnel. Instead, they are sometimes etched onto its walls, and as creative workers go through the funnel again, they attend to and draw from the writings on the wall.

3. Building Worlds: Enduring Dilemmas and the Process of Developing a Body of Creative Work

Researchers and practitioners alike have noted that some of the most prominent creators in the world are those who have to their credit, multiple creative projects that are characterized by core themes (Feist, 1997; Simonton, 1992). Be it the range of intelligent machines developed by Jeff Hawkins (Dillon, 1998); the mythology of Middle Earth created by J.R.R. Tolkien (Carpenter, 2000); the culinary delights served in Ferran Adria's restaurant elBulli (Svejenova, Mazza, & Plannellas, 2007); or the scientific discoveries of Antoine Lavoisier (Holmes, 1989), each of these creators are associated not only with individual ideas, but also with a sizable yet coherent set of projects that are connected by a certain unique themes that underlie them (Lang & Lang, 1988). For example, Adria's restaurant elBulli was renowned for regularly developing recipes that consistently managed to stimulate and surprise diners' senses, and while many of these outputs created at elBulli were creative in their own right, they all revolved around advancing a scientific approach to cooking (Svejenova et al., 2007). Likewise, Tolkien's legacy consists of numerous celebrated novels, poems, and short stories all of which constituted a broader "mythological cycle" of high fantasy (Carpenter, 2000). As such we can describe these creators as having developed a body of creative work (Kaufman, Christopher & Kaufman, 2008; Sternberg, 1998).

Scholars have argued that a body of work has the potential to offer a contribution that extends beyond any individual creative output (cf. Gruber, 1989; Holton, 1971). Researchers have suggested that it is the unique "paradigm" created by the sum total of their outputs that sets the work of some of the most eminent inventors apart from other creators who may have developed a large quantity of disconnected ideas across diverse domains, as this may offer a contribution that extends beyond an individual output (Crane, 1965; Feist, 1997; Simonton, 1992). In other words, when creators develop a body of work, the value of the portfolio as a

whole can be greater than the sum of its parts. Yet, despite its potential value, and unique contribution, scholars have not fully considered the development of a body of work in their theories of creativity or developed theory that can explain the development of a coherent portfolio of ideas than can constitute a body of work.

One explanation for this is researchers have primarily focused on examining individual, discrete episodes of creativity, where a range of ideas is generated in response to a specific task or problem through a process of random variation, following which an idea that best fits the problem or task at hand is selected and implemented (Campbell, 1960; Simonton, 1999; Staw, 1990). Assumptions about the episodic nature of the idea development process also pervades research on the development of multiple creative products (Sternberg, 1998). Indeed, the process of generating multiple creative ideas is typically conceptualized as multiple independent attempts at variation in response to distinct problems which are addressed through the implementation of a creative idea or solution (c.f. Simonton 1999a, 1999b). In line with this approach, scholars have argued that the introduction of diverse inputs is vital for promoting sustained variation over time, and by extension for the development of multiple creative outputs (Amabile, 1983; Campbell, 1960; Dane, 2010; Mednick, 1962).

The problem with this approach is that it leaves the generation of multiple creative ideas to random events and factors outside the creator and their creative process (c.f. Dane, 2010; Mainemelis, 2002). This makes it ill-suited for explaining the sustained development of creative ideas that contributes to the development of a body of creative work, unless someone finds a way to systematically add exogenous variation, for instance by periodically exposing themselves to new stimuli (Sternberg, 1998). Furthermore, while random inputs and external resources may stimulate variety, they may not support the development of a set of projects that offers an overarching creative contribution that extends beyond individual ideas

(e.g. Simonton, 1992; Feist, 1997). Finally, it is not clear if the introduction of external stimuli will be sufficient to promote the type of sustained engagement that is takes to develop a body of creative work given that this typically overlooks the broader slate of resources needed for creativity including motivation and affect which have been recognized as vital for engagement in any creative process (Amabile, 1983, 1996; Amabile, Barsade, Mueller & Staw, 2005; Kahn, 1990). We may therefore consider whether there may be an alternative process through which creators may develop a body of creative work.

Searching for alternative processes may be fruitful for at least two reasons. First, different forms of creative output are likely to be produced through different processes (Anderson & Tushman, 1990; Madjar et al., 2011). When it comes to considering the development of a body of work within which individual outputs are not only creative in their own right, but also have the potential to offer a unique creative contribution as a whole, those alternatives have not been elaborated. Second, scholars have argued that existing theories and models of the creative process are useful for understanding how individual ideas may develop, but do not appropriately explain the development of creative products over time as most of them focus on how a single idea or solution to a problem can move from inception to implementation (e.g. Gruber, 1989; Stjerne & Svejenova, 2016). Thus, despite the valuable contributions offered by the existing models, the process of developing multiple creative products remains underexplored (Fisher, Ananth & Demir-Caliskan, *forthcoming*).

Anecdotal evidence and hints from the research suggest that the creative process followed by individuals who have successfully developed distinct bodies of creative work may not involve moving through discrete episodes of creative activity as the episodic view of creativity suggests, but may instead resemble an ongoing search centered around certain core themes (e.g. Roe, 1946; Weisberg, 2004). Cohen-Shalev (1993) further said this type of search may involve a "preoccupation" with questions that revolve around a thematic centre:

> Literary critics and readers alike have often noted that a writer's creative effort, as actualized in his or her products over time, reveals a thematic center… a powerful and constant preoccupation of the artist. They involve him or her in a creative search whose nature is so broad and comprehensive that it can never be completely satisfied, always putting the artist in the way of new problems. (1993: 107)

With a focus on examining and improving individual episodes of creativity, though, we have a limited understanding of the type of broad and comprehensive engagement with a problem described above, and how this may contribute to the development of a body of creative work. To build theory on this process, I move away from models of episodic engagement in creative processes, and draw instead from theories of enduring engagement (e.g. Prenzel, 1992; Silvia, 2001; Silvia & Kashdan, 2009) to develop a model of *enduring creative engagement* where cultivating an *enduring dilemma* — a problem or task which persists over time and across creative projects — provides the foundation for developing a body of creative work. I describe the processes associated with cultivating an enduring dilemma and explain how this can create a balance between familiarity and novelty, a sense of unresolvedness, and meaningfulness for creators as they work on questions that are connected to a problem that is bigger than an individual project. I argue that this in turn helps to advance the development of a body of creative work by building generative momentum, promoting complex task pursuit, and idea iteration and revision.

This paper contributes to research on creativity and creative processes in at least three ways. First, by describing the processes through which enduring dilemmas can support the development of a body of creative work, this model provides a process based perspective on the development of multiple creative outputs. Existing models of the creative process (e.g., Wallas, 1926; Amabile, 1983; Amabile & Pratt, 2016; Perry-Smith & Mannucci, 2017) focus primarily on the steps that underlie individual episodes of creativity, and the development of a single creative solution to a task or problem. In contrast, this paper advances a model of enduring creative engagement, and describes how, under some circumstances, problems that

persist across creative projects can provide the foundation for future creative work. In doing so it also describes the development of multiple ideas in a manner that is emergent, ongoing and cumulative as opposed to discrete and disconnected. Second, rather than assuming that problems are resolved as ideas are developed (e.g. Drazin, Glynn & Kazanjian, 1999; Amabile & Pratt, 2016), I theorize how problems can endure across creative processes as new questions are surfaced through creative activities, and reveal how these enduring problems can create tension *and* drive creative engagement. In doing so this paper reconceptualizes the relationship between creative problems and ideas, arguing that far from being complete solutions to a problem, ideas may represent incomplete parts of a broader whole. Finally, this paper provides new insights about resources for creativity. While prior research has frequently emphasized the importance of different psychological resources for creativity (Amabile, 1983; Amabile et al., 2005; Sternberg & Lubart, 1991), the theory developed in this paper also suggests the converse: that creative activities themselves can serve as mechanisms through which resources for creativity can be developed and sustained. In doing so, this paper also considers a broader slate of resources, including psychological resources like motivation, that have seldom been considered in research that explicitly examines the development of multiple creative products (c.f. Mainemelis, 2002). Before building the theory, I turn to the literature to describe existing models of the creative process and summarize what they tell us about the development of multiple creative outputs.

3.1 An Episodic Approach to Developing Multiple Creative Outputs

Creativity is the process of generating novel and useful ideas (George, 2007; Litchfield, Gilson & Gilson, 2015; Shalley et al., 2004). The process through which creative ideas are developed is typically conceptualized and studied as a set of phases which begins with the generation of ideas, and which, when successfully completed, can result in the implementation of an idea that is both novel and useful (Anderson, Potocnik & Zhou, 2014;

Amabile & Pratt, 2016; Perry- Smith & Mannucci, 2017). This process is premised on an evolutionary approach to idea generation through random variation followed by selective retention (e.g. Campbell, 1960; Simonton, 1999; Staw, 1990). To begin, a problem is identified or presented and ideas are generated in response to the problem (Amabile, 1983; 1996). Generated ideas are then considered against task and domain relevant criteria (Amabile, 1983; Wallas, 1926). One or more ideas from the set are then selected (Campbell, 1960; Mednick, 1962; Simonton, 2003), elaborated (Harrison & Rouse, 2015; Berg, 2019) and implemented (Baer, 2012; Perry- Smith & Mannucci, 2017). This process is dynamic and iterative in that creators can move between and return to prior phases, combine phases, or skip phases altogether (Amabile & Pratt, 2016). Within this model, implementation of a creative idea implies that the episode of creativity has been completed successfully and the absence of implementation implies that the process has failed (Amabile, 1983, 1996). Thus, the ultimate outcome of this model is the implementation of a single idea that happens to pass the requirements for creative success in the environment (Amabile & Pratt, 2016).

For some time now, scholars have been interested in understanding the development of multiple creative products and creativity over time (e.g. Audia and Goncalo, 2007; Dennis, 1966; Lehman, 1960; Mainemelis, Nolas and Tsirogianni, 2016; Mannucci and Yong, 2018; Simonton, 1997). Initial evidence suggested that creative productivity reaches its peak in the late 30s or 40s when individuals reap the benefits of expertise; thereafter creators experience a continued decline in productivity for the rest of their careers (Simonton 1997). Scholars have suggested that this may be because the ability to generate ideas through random variation can reduce after a period of time, and have argued that in order to sustain random variation over time it is important to introduce new inputs from external sources into the creative process, as new stimuli can increase the chances of developing a creative idea (Amabile, 1983; Campbell, 1960; Dane, 2010; Mednick, 1962). Dynamism within the

domain, “serendipitous” encounters with unexpected sources and other random events including accidents, and personal and professional crises have been identified as some of the ways in which new resources can be introduced into episodes of creativity (Mainemelis, 2002). These resources increase flexibility and promote the generation of a greater number of variations within a given episode (Dane, 2010; Mannucci and Yong, 2018).

This approach to developing multiple creative outputs by repeatedly resourcing episodes of random variation presents three challenges for theorizing about the process of developing a body of creative work. First, the “random event” approach leaves creativity to chance events or serendipitous encounters. According to this approach, an exceptional idea results from exceptional encounters (Mainemelis, 2002), an explanation which seems ill-suited for providing a complete explanation of the consistent patterns of creative production observed in the trajectories of prolific creators like Hawkins, Adria and Tolkien because it leaves creativity over time to factors outside the creator and their process (Runco, 2003). Although it may be possible for creators to systematically increase their chances of having these serendipitous encounters, scholars have indicated that this explanation may be insufficient for understanding the development of a body of work, arguing while the one of generation of a creative idea can be explained by random events, the process of consistently developing creative outputs may be more “sighted” in nature (e.g. Sternberg, 1998).

Second, research suggests that relying on external stimuli may result in truly creative combinations only in certain circumstances (e.g. Mannucci & Yong, 2018). Often creators who rely on external inputs and stimuli may come up with ideas that merely imitate the trends of the times as opposed to developing a set of creative outputs that are truly distinct from trends in their environment (Sternberg & Lubart, 1996; Godart, Seong, Phillips, 2020). Furthermore, scholars have argued that creators who developed bodies of work that offer a deep contribution may provide more value to a domain than creators who create multiple

outputs across a broad range of topics (e.g. Simonton, 1992; Feist, 1997). Thus, even if creators do generate truly unique ideas over time using random inputs, they may end up developing outputs that are very distinct from each other and do not provide the kind of unique creative contribution that a coherent body of creative work might be able to.

Third, the emphasis on random external inputs only addresses the cognitive aspects of creativity and the creative process. At the individual level, engagement in a creative task involves not only cognitive, but also motivational, emotional, and behavioural attempts to produce creative outcomes (Kahn, 1990). Classic theories of creativity suggest that in order for tasks or questions to enable creativity, individuals must experience intrinsic motivation and have an interest in solving them (Amabile, 1983, 1996). Intrinsic motivation promotes not only flexibility but also persistence in complex creative projects (Amabile, 2001; Hagtvedt, Dossinger, Harrison & Huang, 2019). A random input may therefore not captivate the interest of the creator or motivate them to engage in the challenging process of developing ideas from conception to completion. This makes the sustained generation of creative ideas through random inputs even more elusive by necessitating not only that a random encounter occurs, but also that it captivates the interest of the creator, and drives engagement in creative work. Indeed, research suggests that even if novel ideas are generated through random variation, individuals often fail to develop their most novel ideas, opting instead to pursue more conventional prospects (Berg, 2019).

These factors combine to suggest that the development of a body of work may rely on a different process, one where creative work does not take place as a set of disconnected episodes. Supporting this suggestion, biographical accounts and studies of eminent creators reveal that their creativity may unfold in a more continuous manner, characterized by reflections of prior creative processes and examinations of opportunities and challenges that emerge through creative work (e.g. Weisberg, 2004; Roe, 1946; Simonton, 2003). For

example, in an analysis of some of Picasso's work, Weisberg (2004) noted that Picasso's process appeared to be focused on the kernels of ideas that emerged from some of his other work. In another study of artists, Roe (1946) found that creators who had successfully developed distinct portfolios of projects frequently referred to their past creative projects as starting points for new ideas. Likewise, a study of Ferran Adria's restaurant elBulli revealed similar connections between creative projects, with prior projects serving as starting points for new creative endeavours. At elBulli, the creative process was not considered to have been completed when an idea was implemented; the implementation of an idea was typically coupled with an examination of roads not taken, an interrogation of what was accomplished through every creative project and what was not, and a consideration of the lessons derived from developing and implementing a given idea (Svejenova et al, 2007). These activities resulted in the creation of some extraordinary dishes including *pastilla gelada de caipirinha* (frozen pastille of caipirinha), *carbassa en textures amb desgranat de pomelo* (pumpkin in textures with grapefruit segments), or *quinoa gelada de foie-gras d'a`nec amb consome´* (frozen duck foie gras quinoa with consomme´), all of which contributed over time to the development of the scientific approach to cooking that Adria became renowned for (Svejenova et al., 2007).

These processes provide an insight into how creators may develop multiple creative products characterized by core themes that that extend beyond any individual idea. In the following sections I describe that as a process of enduring creative engagement and explore how it explains the development of a body of creative work.

3.2 A Model of Enduring Creative Engagement

In this section I build theory on enduring creative engagement and how it explains the development of a body of creative work. In focusing on the development of a body of creative work, I define enduring creative engagement as a process in which an individual

engages with a problem or task that is bigger than a single idea. From this perspective, any idea that is developed forms part of the solution to the broader problem. For example, Tolkien's ideas while manifested in multiple individual project were part of a "body of more or less connected legend, ranging from the large and cosmogenic to the level of the romantic fairytale – the larger founded on the lesser in contact with the earth, the lesser drawing splendor from the vast backcloths" (Tolkien in Carpenter, 2000: 97). Thus, in the model of enduring creative engagement, the act of implementing an idea is not merely the end point of one episode of creativity but is also the foundation for an ongoing creative process through which multiple creative outputs are developed. This definition of creative engagement draws attention to *how* people move from one idea to the next. It articulates a particular process through which creativity unfolds across projects and processes. This contrasts with many existing models of creativity (e.g. Wallas, 1926; Amabile, 1988; Perry-Smith & Mannucci, 2017) that focus on how ideas move from inception to implementation within a single creative process but do not consider what happens after an idea is implemented.

In the theorizing that follows, I argue that through enduring creative engagement, creators advance a body of work by cultivating an *enduring dilemma*. Specifically, I argue that working on an enduring dilemma — a problem or task which persists over time and across creative projects — creates a balance between familiarity and novelty, a sense of unresolvedness, and meaningfulness as creative workers engage with questions that are connected to a problem that is bigger than any individual idea. This in turn builds generative momentum, promotes complex task pursuit, and idea iteration and revision. I propose that this leads to the development of new ideas that constitute and provide the foundation for further advancing the body of work. Figure 3.1 which provides an overview of the model, highlights the processes associated with cultivating an enduring dilemma as well as the mechanisms through which an enduring dilemma advances the development of a body of

creative work.

To simplify and clarify my theorizing, I assume at the outset that the focal creator has already worked or is currently working on at least one creative project. However, this does not imply that the development of ideas through enduring creative engagement is sequential or that new projects are initiated only when a prior project has concluded. Creators can have multiple projects stopping, starting and overlapping at the same time (Fisher, Ananth & Demir-Caliskan, *forthcoming*; Rouse, 2020). To illustrate how the dynamics of enduring creative engagement unfold, I use examples from the journeys of eminent creators including entrepreneurs like Jeff Hawkins and Ferran Adria, writers and artists like J.R.R Tolkien and Robert Irwin, and scientists like Charles Darwin, Antoine Lavoisier and Robert Burns Woodard throughout my theorizing. These examples illustrate the role of enduring creative engagement across a variety of contexts that are creatively demanding including entrepreneurship, science, literature and art.

Theoretical Foundations: Enduring Engagement

The process of enduring creative engagement developed in this article is conceptualized as an ongoing search that is centered around a problem that persists over time and across creative processes. To describe this process, I move away from episodic models of engagement and exploration and draw instead from theories of enduring engagement (e.g. Prenzel, 1992; Silvia, 2001; Silvia & Kashdan, 2009). These theories distinguish between engagement with a target, such as a problem or task, in a manner that is episodic or fleeting versus enduring in the sense of lasting over time and across multiple encounters (Silvia & Kashdan, 2009). According to these theories, episodic or fleeting engagement may happen by accident or random chance (Prenzel, 1992). During that initial encounter, individuals may have experiences that expand the scope of the original target and prompt future engagement (Silvia, 2001). Each future encounter creates the potential for additional discoveries. In other

words, enduring engagement unfolds as individuals discover additional avenues for further exploration through their interactions with a problem or task (Silvia & Kashdan, 2009).

At the core of the drive to re-engage with an object is an enduring tension. Individuals typically experience a sense of enduring tension if, during an initial encounter with a target, that target challenges existing knowledge in some ways, by creating uncertainties, posing novelties, or remining in some way complex or not fully understood. Theory suggests that there may be certain unique experiences associated with a tension that is connected to an area that is already commanding attention. In this situation, the source of tension contains elements of familiarity and novelty, and resolving the tension is seen to be a means to an already meaningful end (Dewey, 1913; Silvia, 2001). This serves as a counterweight to anxiety which motivates avoiding new things, and increases arousal which broadens experiences, attracts individuals to new possibilities, and reduces the tendency to stick with tried and tested alternatives (Fredrickson, 1998; Silvia, 2017). Furthermore, it creates a sense of unresolvedness which can lead to greater cognitive processing and focused attention to tasks (Wright, 1937; Zeigarnik, 1927). In other words, an enduring tension can serve a "constructive antagonism" function by acting as an approach urge that competes against avoid urges such as potential failure and anxiety (Silvia, 2001). Thus, an enduring sense of tension can promote repeated engagement, pulling individuals seamlessly from encounter to encounter (Prenzel, 1992). The earlier tension may be resolved in a subsequent encounter. But the process of resolution can give rise to new sources of tension (Silvia, 2001).

Drawing on these insights, the overriding proposition of this article is that critical to the development of a body of creative work is a process of enduring creative engagement. This process is built on cultivating an enduring dilemma which serves as a framework for an ongoing search for creative solutions. In the sections that follow I define an enduring dilemma, and drawing on the key characteristics of enduring engagement, I describe the

processes associated with cultivating an enduring dilemma and discuss how this can lead to the development of a body of creative work. In doing so, I detail the psychological experiences associated with working on an enduring dilemma and explain how this translates to specific behaviours through which individuals can develop new ideas that constitute an advancing body of creative work. Finally, I also outline key boundary conditions of the model.

Process of Cultivating an Enduring Dilemma

At the heart of the model of enduring creative engagement is the emergence of an enduring dilemma, which I define as a problem or task that persists over time and across creative projects. For example, Jeff Hawkins explained in an interview that he gave shortly after the release of one of his most celebrated and successful inventions, the PalmPilot, that Palm was only one part of his pursuit to understand human cognition and impulses, an endeavour that "began before Palm, and it will last beyond Palm" (as quoted in Tam, 2005). Although originally conceptualized as a difficult choice between two options, since the early 20th century, the word dilemma has since been used to denote a difficult or persistent problem or task (Merriam-Webster, 2003). Indeed, some scholars argue that even if a dilemma is initially conceptualized as a choice between two options, the underlying problem is likely to be more complex (Jonassen, 1997; 2000). The notion of enduring on the other hand implies lasting over a period of time. An enduring dilemma thus refers to a problem or task that has not been resolved in its entirety through one creative project. In this way, an enduring dilemma differs from other conceptualizations of creative problems and tasks that have been described in the literature (e.g. Amabile, 1983, 1996; Litchfield, 2008; Kaufmann, 2010; Unsworth, 2001) in that it grows and develops over time and across creative processes, such that the more an individual works on the problem, the bigger the problem becomes. For example, through his experiments with organic synthesis, i.e., the process of artificially

creating naturally occurring compounds, Robert Burns Woodward was led to questions about the creation of new synthetic compounds that did not exist in nature (Woodward, 1989). In other words, the very act of trying to solve the problem of synthesis enlarged the problem itself.

Building on research on enduring engagement, I propose that three processes are critical to cultivating an enduring dilemma: attending to equifinalities, isolating inadequacies, and surfacing opportunities. Each of these processes expands the original dilemma through the inclusion of new questions, causing it to endure over time, and across creative processes. I describe each of these in the sections below.

Attending to Equifinalities. Most instances of creativity start with a problem or task (Amabile, 1983, 1996; Unsworth, 2001). As they work on a problem however, individuals may encounter multiple paths through which this problem can be solved (Hagtvedt et al, 2019). This is particularly the case when individuals work on creative or innovation related problems or tasks (Mumford, Reiter-Palmon & Redmond, 1994). These paths can correspond to different interpretations of the problem itself, each of which can lead to a different type of solution (Runco, 1994). For example, the problem of coming up with a creative idea for a comic book about superheroes can be solved by developing a creative plot-point, a novel character or innovative dialogues. Indeed, many of these different directions can be equally valid and creative (Mumford et al., 1994).

However, it may not be possible to experiment with all possible variations within a single project, either because that may lead to the idea becoming over crowded or because some of these variations may not be compatible with each other (Ronen, 1983). Indeed, in many circumstances, an idea may be been better served by not merging these variations into it (Ronen, 1983; Ryan, 1992). Converging towards a creative solution therefore involves making choices when individuals encounter these forks in the road (Amabile, 1983, 1996),

such that individuals choose one pathway over others and progress in that direction in moving towards a solution (Ronen, 1983). For example, choosing an innovative plot-point as a way of developing a creative idea. This implies that many other valid, and potentially creative pathways for pursuing the original task or problem (e.g. introducing a novel character or writing innovative dialogues) remain open and unexplored (Gresov & Drazin, 1997; Van de Ven & Poole, 1995).

I argue that mapping these decision points and potential sources of variation that emerge during the early problem identification phase (Mumford et al., 1994; Reiter-Palmon, Mumford, O'Connor Boes & Runco, 1997) is one of the primary ways for cultivating an enduring dilemma. This process involves the maintenance of alternative possibilities and ways of approaching a problem such that these possibilities remain available to the creator for future exploration even after a given project has been completed. At elBulli for example, Ferran Adria encouraged the active consideration of pathways that he and his chefs encountered as they experimented with different concepts in their cooking (Svejenova et al., 2007). In doing so they were able to return to a concept, such as an unexplored ingredient at a later date and consider within another project, dimensions that had not been explored fully during a previous project. For example, mapping the different ways in which the concept of foam could be explored meant that the original problem, i.e. developing a dish based on the principles of foam, was now expanded to include these unanswered questions about variations along it's different dimensions including taste, texture, temperature etc. Even if these avenues had not been explored within a given creative project, attending to them created a roster of avenues that remained unanswered, creating space for continued experimentation on the topic (Svejenova et al., 2007).

Consequently, I submit that one of the processes through which an enduring dilemma emerges is by attending to equifinalities. This expands the original dilemma to include

alternative questions and ways of considering a problem that were not explored in the implementation of one creative idea, highlighting these as areas for future exploration. Through this process, the dilemma expands and endures over time and across projects.

Isolating inadequacies. During a creative process an individual is likely to generate a set of ideas and then select from that set and implement ideas that best meet the stated problem (Wallas, 1926; Hogarth, 1980; Amabile, 1983, 1996; Amabile & Pratt, 2016; Perry-Smith & Mannucci, 2017). This does not imply however that every aspect of the problem has been addressed by the solution. Indeed, some problems are so complex and multifaceted such that it may not be possible for a creator to know the entire problem beforehand nor may it be impossible for creators to develop a solution that addresses the problem in its entirety (Rittel & Webber, 1973; Buchanan, 1992). As a result, there may be some areas of the problem that a solution inevitably does not address. Isolating these inadequacies when evaluating an idea as opposed to ignoring them can therefore result in the endurance of the dilemma, adding to the original problem or task, dimensions that have not been explored and resolved within a prior creative project.

For example, after developing a theory of natural selection based on the evolution of lower level species like barnacles and bees, Darwin began thinking about the evolution of higher mental faculties in our species. Indeed, during and after the publication of *On the Origin of Species* (1959), which was based primarily on lower level species, he was "plagued" with questions about how his theories of gradualism can be reconciled with the recognizably large gap between the mental capacity of human and nonhuman species (Keegan, 1989). Isolating this aspect of the problem where his original solution was inadequate lead him to a consideration of human psychology and mental development; topics that were not addressed in *Origin* (Keegan, 1989). The result was the publication of a series of projects which included detailed discussions about his personal point of view on the

development of human psychology in subsequent texts including *The Descent of Man* (1871) and *The Expression of the Emotions in Man and Animals* (1872).

The inadequacy that is experienced can very personal to the creator, so much so that an output that may be assessed by an external audience as extremely creative may nevertheless appear inadequate to the individual behind its creation. For example, Robert Irwin's experiments with line paintings were a novel and revolutionary way of altering the experience of space, and were assessed as such by audiences. However, Irwin felt like these paintings did not fully alter people's perceptions of space to the extent possible as they all contained starting and stopping points that linearly guided the viewer's gaze (Weschler, 2008). Isolating this aspect of the problem – questions about painting in a non-linear fashion without a specific starting and ending point for the viewer – added another dimension to the original problem, causing it to expand, and endure after the development of the line paintings. The experience of inadequacy was similar in Jeff Hawkins' case. When the GRiDPad, one of his first inventions was unveiled, people felt it would be the future of computing. As reported in Dillon (1998): "Trade magazines raved about it. Companies descended on GRiD with proposals for smaller and faster versions. For his part, Hawkins was not at all enamoured of his invention." He felt that his invention was too specific to niche business customers and wanted to build something that any person could carry in their hand. In an effort to address this inadequacy he proceeded to work on developing other products including the PalmPilot. Surfacing inadequacies can thus cause a dilemma to endure and fuel continued engagement in developing a body of work.

Surfacing opportunities. The final process of surfacing opportunities involves bringing to the fore and attending to new opportunities that emerge through the act of creation. Creativity is a generative process, one that centers around bringing into existence products, processes and solutions that did not exist before (Hakonsen Coldevin, Carlsen,

Clegg, Pitsis & Antonacopoulou, 2019). Any act of creation is a knowledge producing activity that creates entities that did not exist before (Churchman, 1971). For example, in describing why he continued to be plagued with questions even as he was concluding a series of paintings featuring dots, the artist Robert Irwin said it was because the successful resolution of the questions he had posed for himself in the dot paintings left him with "more questions, harder questions, a more subtle perplex" for him to unravel (Weschler, 2008: 101). In other words, the process of creation can create new opportunities for asking questions related to a particular problem.

The act of creation, and more specifically, idea generation, is the activity through which individuals are likely to encounter new opportunities much like "a climber reaching one summit discovers unseen valleys and new and higher ranges never seen before" (Gruber, 1989: 9). For example, when J.R.R. Tolkien wrote *The Lord of the Rings*, he was fuelled by the question of the significance of the ring which was in the possession of Gollum, a small slimy creature that he created in *The Hobbit*. Although he introduced the ring in *The Hobbit*, he had not fully explored it or established its significance. He then set about working out the importance of the ring, creating a story around returning the ring to the location of its creation. It is important to note that these questions about the ring did not exist prior to writing *The Hobbit*. Indeed, if Tolkien had not created a ring in *The Hobbit*, there might have been no ring that needed to be returned in The *Lord of the Rings*. In this case it was the process of writing *The Hobbit* that caused this ring to exist, which created for Tolkien a new set of questions about its significance (Carpenter, 2000).

This was clearly also the case for Galileo, the Italian astronomer, whose own invention of a telescope, now eponymously referred to as a "Galilean telescope", led him to turn his attention to celestial objects, which further led to fundamental discoveries about the Moon, planets, stars and the Sun. These discoveries, as Simonton (2012) argues, cannot

merely be explained as the result of accumulating "domain-specific expertise" and recombining the accumulated expertise in new ways. After all, in Galileo's case the invention of the telescope did not just lead to more variations on a telescope. Instead it led him to ask questions about how far one could see with this device. Furthermore, the domain in this case, observational astronomy, did not actually exist before Galileo created it through his work. His creative activities and the generation of new ideas were an act of knowledge creation which brought with them a series of new opportunities and challenges (Gruber, 1989; Nonaka, 1994; Phelps, 2010). These presented additional dimensions that provided the foundation for subsequent creative engagement.

Summary. Each of the three processes described above is connected to specific activities characteristic of creative processes, namely problem construction, idea generation, and idea evaluation. For instance, the process of surfacing opportunities is tied to idea generation as discussed above, as it is through the generation of creative ideas that novelty is typically introduced into the process, and it is this novelty that has the potential to create opportunities that did not exist previously. Likewise, mapping forks in the road is likely connected to problem construction, as this activity involves making decisions about paths to pursue to solve a problem or task. Finally isolating inadequacies is most likely to be connected to idea evaluation, as the process of evaluating an idea reveals what is working and what is not. However, that does not imply that each of these processes can only unfold in a linear fashion. Given that the creative process is dynamic and mutually influencing (Amabile & Pratt, 2016), all of these processes can occur throughout the course of developing one or more creative ideas and provide a starting point for new ideas that constitute and provide a foundation for developing and advancing the body of work.

Experiences Characteristic of Working on an Enduring Dilemma

Working on an enduring dilemma implies involvement in developing not just a

creative single idea, but a set of interconnected projects. For example, Carpenter (2000: 97) described the enduring dilemma that guided J.R.R. Tolkien's creative process:

> [Tolkien] was going to create an entire mythology. The idea had its origins in his taste for inventing languages. He discovered that to carry out such inventions to any degree of complexity he must create a 'history' in which they could develop. Already in the early Erendel poems he had begun to sketch something of that history; now he wanted to record it in full.

As exemplified in this excerpt, Tolkien was involved in the broad endeavour of creating an entire mythology and not just one creative idea or project. The enduring dilemma that Tolkien was engaging with involved different aspects of this mythology including different contexts, characters and languages, all of which were connected to the fictional world he was creating. As seen in the example provided above, that dilemma endured as he worked on individual creative ideas that created new questions. In engaging with this emerging dilemma, he developed multiple poems, short stories and novels including classics like *The Lord of the Rings*, *The Hobbit*, and *Silmarillion*, all of which drew from each other and cumulatively advanced his "mythological cycle" (Carpenter, 2000).

I argue that there are certain unique experiences associated with working on an enduring dilemma that are critical to the development to a body of creative work. The first of these is unresolvedness. Fundamentally, cultivating an enduring dilemma implies that some aspect of a broader problem remains unresolved. Theory suggests that people can experience a sense of unresolvedness if they feel like there remains aspects of a goal or task that have not been completed (Gold & Wegner, 1995; Vallacher & Wegner, 1987). Given that an enduring dilemma develops as a consequence of questions that had not previously been addressed, a sense of incompleteness or unresolvedness is likely to be of one the experiences associated with cultivating an enduring dilemma. Psychologists conceptualize unresolvedness as "an inner sense of imperfection, connected with the perception that actions or intentions have been incompletely achieved" (Summerfeldt, Huta, & Swinson, 1998: 80). Unresolvedness is

therefore a subjective experience, unique to the individual and their internal experiences of completeness (Elitzur, 1989; Summerfeldt, 2007). In the context of creative work, this subjectivity is heightened. What is incomplete in the eyes of the creator may be complete in the eye of the beholder, and vice-versa (Menger, 2006; Ronen, 1988). Thus, even if an idea has been developed, and perceived by audiences as a completed project, the creator may see it as incomplete part-solution to a broader problem.

A sense of unresolvedness was clear in Carpenter's (2000) description of Tolkien's experiences after completing an important early career project. Early in the 20th century, Tolkien was enlisted in the army. During his convalescence from the war at Great Haywood in 1917, Tolkien wrote '*The Fall of Gondolin*', the tale of a dramatic battle of two of the greatest powers in Tolkien's fictional world. However, as he concluded that story and the time neared for Tolkien to return to service in France, Tolkien did not want to return. This was partly because Tolkien was eager to continue writing his mythology. He had already lined up a set of themes, characters and stories related to the 'Fall of Gondolin' that he wanted to explore in further projects that were part of the mythology he was developing. He felt that "it would be particularly tragic if his life were wiped out by a German gun just when he was beginning his great work" (Carpenter, 2000: 103). In short, these new questions in the form of new themes, characters and stories expanded the original problem Tolkien was working on and represented ways in which his overarching task remained incomplete, thus leading to the experience of unresolvedness.

The second experience associated with cultivating an enduring dilemma is a sense of familiar novelty. Research suggests that, in most circumstances, a balance between familiarity and novelty is considered to be optimal for promoting feelings of engagement and interest (Csikszentmihalyi, 1990; Silvia, 2008). Prior research has indicated that for an outcome to be creative, it is important for the stimuli underlying those efforts to be novel

(e.g., Berg, 2016; Kaufmann, 2003). Novelty is a source of arousal which can stimulate engagement in tasks (Berlyne, 1960). However, too much novelty or unfamiliarity can also make a stimulus, such as a problem, a source of indifference or aversion as individuals may not feel like they will be able to comprehend this stimulus and master the challenges it poses (Berlyne, 1960; Silvia, 2001). As such, some familiarity with a problem is considered to be beneficial for creativity. Within an enduring dilemma these two attributes, familiarity and novelty are balanced, providing the comfort of familiarity and the arousal of novelty. Each question underlying an enduring dilemma is new in that it has not been explored by the creator. However, each question also contains threads of familiarity making the novelty of the question distinct from the novelty of external stimuli: it is novel, yet it is connected to other questions that the creator has explored previously.

Finally, I propose that another experience characteristic of working on an enduring dilemma is meaningfulness. As discussed throughout this article, when engaging with an enduring dilemma, creators work on a set of interrelated questions that are connected to a broad problem that emerges over time. Given that the dilemma is connected to and founded on other projects within a creator's body of work, each project that addresses this dilemma becomes part of a broader problem. Each creative project that is part of this dilemma therefore has continuity and a broader purpose (Gruber, 1981, 1988). I argue that this enhances the meaningfulness of each of these creative projects. Theory suggests that individuals are more likely to see a particular task as meaningful if it is a means to a broader and more overarching goal (Dewey, 1913; Carton, 2018). The resolution of any underlying goal within this broader framework therefore takes on a special meaning for the person engaging with the goal, leading them to feel like achieving this goal is likely to be a step in the direction of achieving something bigger than the goal itself (Carton, 2018). For example,

one of the participants in a study by Bateman & Barry (2012: 995) explained the experience of working on tasks connected to a broader goal:

> When I get down about the day-to-day I think about the longer term and see that it is really going to be useful... It's all coming together and it's very clear where it's leading... There it is, a forest. I'm not just digging in the dirt here.

In the example above, it was the connection to the broader goal that made each individual task seem important and meaningful to the interviewee.

Similarly, with creative projects, both a project and its outcome are likely to be seen as more meaningful if the project is connected to a problem that is bigger than the idea that is currently being worked on. When working on an enduring dilemma, resolving any aspect of the broad problem can be seen not just as the resolution of that question but also as progress in the direction of a bigger goal. For example, Robert Woodward Burns once claimed that any experiment that he completed successfully had value that extended beyond the achievement itself because it was a key component within a broader 'matrix' of discovery (Woodward, 1989). Indeed, Woodward claimed that he found it "doubly satisfying", to be "relating previous work to a subsequent context" (Woodward, 1989: 236). Given that each question within an enduring dilemma is connected to, and therefore part of a broader problem, I propose that one of the experiences characteristic of cultivating an enduring dilemma is a sense of meaningfulness: creators are likely to feel like its resolution is an important step towards resolving a broader problem.

Development of a Body of Creative Work

The process of cultivating an enduring dilemma is dependent on action being undertaken to develop new ideas that can constitute the body of work ("constituent ideas"), and as such the dilemma evolves with the development of constituent ideas. These constituent ideas therefore act as important links between enduring dilemmas and the body of work as each of these ideas adds to the body of work. They address new, hitherto unexplored

dimensions of a problem (Kuhn, 1970). Additionally, the development of each constituent idea provides new avenues for the dilemma to endure. For example, when Hawkins and his team unveiled the GRIDPad, the world's first serious pen based computer, a revelation at the time, the act of developing this pen-based computer created questions about whether it may be possible to build a general-purpose computer that could respond to human impulses (Dillon, 1998). This lead eventually to the development of the Palm Pilot which proved to be a tremendous success and also paved the way for Hawkins' future experiments with other smart devices such as smartphones and computer memory systems. Given that these questions emerge through the development of constituent ideas which provide additional opportunities for the dilemma to endure, the body of work that develops through this process is cumulative in nature (Weick & Quinn, 1995; Brown & Duguid, 1991; Tsoukas, 1996).

The two processes of this model (also articulated in Figure 3.1) i.e., the process of cultivating an enduring dilemma and the process of developing constituent ideas, need not occur at the same rate, but they are likely mutually influencing. For example, a given constituent idea may expand the dilemma in many different ways resulting in the development of multiple new ideas that further advance the body of work. Yet another constituent idea may on the other hand only expand the dilemma along one dimension and lead to the development of a single new constituent idea. However, that new idea may have the potential to expand the dilemma along many different dimensions, thus providing the foundation for multiple new creative projects and new ideas. This does not imply that every new idea developed within a body of work will achieve creative success. Ideas may be ill-conceived at the outset or subject to constraints during implementation (Van de Ven & Poole, 1995; Weick, 1979). However, creators can use these constraints to expand the original dilemma in advancing their body of work (Commons, 1950; Gibson, 1988).

In the sections below, I outline three important mechanisms through which enduring

dilemmas and the psychological experiences associated with cultivating an enduring dilemma lead to the development of new ideas that constitute and provide the foundation for developing and advancing a body of creative work.

Generative Momentum. I contend that when working on an enduring dilemma, the sense of unresolvedness (e.g. the feeling that Tolkien had that his "great work" was just beginning) builds generative momentum by causing creators to start thinking about another aspect of the broad problem almost immediately, and transition quite quickly from one creative project to the next. Theory suggests that a sense of unresolvedness can have important psychological consequences. Research into the "Zeigarnik effect" (named after Bluma Zeigarnik who first conducted experiments demonstrating this effect) suggests that people often become obsessed with incomplete tasks, thinking and processing information about them continuously, while forgetting tasks that have already been completed. According to this theory, our thoughts, feelings, and actions are directed by goals or intentions (cf. Klinger, 1975; Lewin, 1954). We strive towards these goals until we either achieve them or we decide to abandon them. When we fail to attain these goals, a "Zeigarnik charge" or a drive to complete the incomplete task is activated. This charge is usually accompanied by information processing related to the task, which continues until we either reach the goal or we disengage from it psychologically. From this point of view, our intention to do something creates a tension system that responds to any blockage or redirection of the intention with thoughts and emotional responses aimed at reinstating and resuming the incomplete activity (Gold & Wegner, 1995).

As such when working on an enduring dilemma, a creator is likely to start processing information related to the next project, and start working on that project at the earliest opportunity possible. For example, several reports suggest that George Lucas, the creator of the Star Wars Saga, was continuously thinking about and working on two subsequent Star

Wars movies even before 'Star Wars: A New Hope', the first movie in the original Star Wars Trilogy was released. Describing the generative consequences of unresolvedness, Lucas once said: "When I started to write [Star Wars], it got to be too big, it got to be 250, 300 pages… I said… I will take the first half, make a movie out of this, and then I was determined to come back and finish the other three, or other two stories." (Kaminski, 2008: 73). In Lucas' case, a sense of unresolvedness contributed to generative momentum, or an impetus to engage with different unresolved aspects of the problem or task, culminating in the release of three Star Wars movies in a 6-year time frame. Each of these ideas constituted Lucas's developing world which unfolded across anthologies, stand-alone movies and TV shows, many of which he developed personally. Momentum on these ideas can provide more opportunities for the body of work to advance further in a shorter period of time. The same momentum is less likely to occur when working on disconnected projects or tasks as individuals are less likely to be driven by a sense of unresolvedness (Barasz, John, Keenan & Norton, 2017).

Complex Task Pursuit. In addition to generative momentum, I argue that another mechanism through which enduring dilemmas contribute to the development of a body of work is complex task pursuit. I have argued above that when pursuing an enduring dilemma, individuals are likely to experience a sense of familiar-novelty. Theory suggests that a balance between familiarity and novelty can create a drive to "approach" that competes against "avoid" urges such as thoughts of potential failure and anxiety which motivate avoiding things that are complex and uncertain (Berlyne, 1960; Silvia, 2017). This can be constructive for the development of creative ideas given that creativity is most often associated with developing solutions to novel and complex tasks (Campbell, 1988). By increasing approach motivation through experiences of familiar novelty, an enduring dilemma can promote the pursuit of tasks that are novel and complex that may otherwise

induce avoidance urges. For example, as Christine Woorward noted about her father Robert Woodward in Woodward (1989: 236):

> Woodward's achievement of the synthesis of chlorophyll (1960) spurred his interest in the synthesis of vitamin B12 which is a very complex relative of chlorophyll with a much more complex molecule.

As in the example above, within the context of familiar novelty individuals are motivated to take on increasingly complex tasks in order to develop solutions to other aspects of an enduring dilemma. In the absence of an enduring dilemma, individuals may merely scratch the surface, taking on easier questions and avoiding more complex ones. Complex task pursuit can be important for developing a body of work because it further creates an opportunity to develop new ideas whose complexity as Woodward (1989: 236) put it "defied previous attempts." Such ideas can constitute the next level of the body of work, allowing it to advance, and, in the process, pave the path for the dilemma to expand further. This can lead to the development of new ideas that provide solutions to complex problems and are thus fundamental to advancing the body of work.

Idea Iteration and Revision. In addition to familiar novelty and unresolvedness, I have also argued in the sections above that individuals are also likely to experience meaningfulness as they work on an idea that is connected to a broader task or problem. Meaningfulness is typically construed as a positive phenomenon (Lepisto & Pratt, 2017). To further specify the nature of this positivity, scholars suggest meaningfulness is an indicator of eudemonia as opposed to hedonic notions of pleasure (e.g., Ryff, 1989; Seligman, 2003; Waterman, 1993). Scholars have described eudaimonia as happiness that emerges as a function of the satisfaction of organismic needs, self-realization or actualizing one's potential'' (Heintzelman & King, 2014, p. 562). This is associated with being fully involved and emotionally invested in the task. When individuals are emotionally invested in a task,

they are more likely to persist through challenges, repeat, engage repeatedly, and be willing to persist in the face of challenges (Saavedra & Van Dyne, 1999; Yee, 2006).

In creative work this can translate to iterating and revising creative ideas, responding to challenges, moving back and forth and repeating activities of idea generation, evaluation, and elaboration until the best possible version of an idea has been developed. Dillon (1998) described this level of iteration and revision of ideas when describing Jeff Hawkin's process:

> He paced the hallways at Palm headquarters, rules in hand, measuring pocket sizes against small blocks of balsa wood. He designed screens and pasted down configurations of various applications. He pushed to simplify: Which features are mandatory? Which can be sacrificed? Which might be optional? With each revision, the product kept getting smaller.

This description highlights how the development of ideas unfolds through enduring creative engagement. Ideas are iterated and revised, and individual desires are sometimes sacrificed in the service of the greater good. Sometimes this iteration can unfold within a single project. At other times, new questions can be surfaced, and ideas can be iterated and revised across different creative projects as the dilemma expands further. Some ideas and avenues that are sacrificed during iteration may become another project, thus cumulatively advancing the body of work across projects.

Boundary Conditions

The model of enduring creative engagement developed in this paper describes a process through which individuals develop a body of creative work by cultivating an enduring dilemma over time and across creative processes. The nature of the initial task or problem is likely to be an important boundary condition for this process. Researchers who study the nature of problems in organizational contexts have argued that problems differ on the degree to which the problem itself, the method for solving it and the solution to the problem are known (Dillon, 1982; Getzels, 1975, 1979, Jonassen, 1997). Some scholars have further argued that problems that allow for creative solutions to be developed in the first place differ

from more routine and standardized problems in that they tend to be more complex and ill-defined (Reiter-Palmon et al., 1997). As such it is more likely that when individuals work on such problems they encounter ambiguous information, conflicting assumptions, and information that leads to different paths. Furthermore, in solving them and developing creative solutions in response to these problems, additional opportunities and challenges are likely to be surfaced. This may not be likely when individuals work on more routine problems. Thus, it is likely that the pursuit of an ill-defined problem or task is more likely to lead to enduring creative engagement.

Also, as described earlier, the model of enduring creative engagement explains the development of a body of work through experiences of familiar novelty, unresolvedness, and meaningfulness, which prompt individuals to solve problems that are connected to an initial problem or task. Given the importance of these experiences, the enduring engagement model can fail to produce a body of work in two ways. First, if an individual was not interested in the initial task in the first place, further questions may fail to drive future engagement, given that initial interest in a target is important for deep engagement in the first place (Silvia, 2001, 2008). This type of engagement is important for thinking of a problem in different ways, and for considering opportunities and challenges (Silvia, 2001, 2008). Furthermore, even if an individual is initially interested in a task, not all individuals may be motivated to pursue that task further even in the presence of additional questions. For example, individuals with a high need for closure may prefer to complete a task to satisfaction and not pursue additional avenues (Kruglanski & Webster, 1996; Webster & Kruglanski, 1994). Thus, in addition to initial interest in a task, certain individual level characteristics that are important for creative work in general, including higher openness to experience and lower need for closure (Simonton, 2000) are likely to be important for enduring creative engagement.

Finally, contextual factors including the level of autonomy creators have, are also likely to function as boundary conditions to this model. Research suggests that autonomy is an important contextual characteristic that is required for creativity to flourish because it allows individuals to pursue tasks and ideas that are intrinsically motivating to them (Amabile, 1983). Given that during the process of enduring creative engagement individuals discover new ways of expanding the original task or problem and cultivate an enduring dilemma, I argue that contextual factors like autonomy over project pursuit is likely to be an important boundary condition, and as such, enduring creative engagement is more likely if individuals have the autonomy to pursue tasks and problems of their choice. Conversely contexts low in autonomy including routine, non-creative contexts, or even contexts where creative work takes place in response to specific projects assigned by managers or clients, are less likely to support enduring creative engagement.

3.3 Discussion

I began this article with the observation that many creators working inside and outside organizations sometimes develop a body of work: a set of creative products that are characterized by core themes which offer a contribution that extends beyond any individual idea within that portfolio. Yet we have little theory that explains the process of developing a body of creative work, and what this process might offer that is different from the process of developing a wide variety of disconnected ideas. The theory in this paper provides a foundation to understand the process of developing a body of creative work—a process that has received insufficient attention in the literature that is focused on examining single, disconnected, episodes of creativity. I move away from this episodic approach to draw attention to the role of enduring dilemmas for creativity. I theorize about how people can harness the generative power of working on a problem or task that endures over time and across creative processes and develop ideas that build on each other to develop a body of

work that has multiple creative products but also has the potential to offer a cumulative contribution that extends beyond any individual idea. By integrating literatures on enduring engagement, research on incompleteness, and broad goal pursuit with creativity theory, this article provides a process based perspective on the development of multiple creative products which reconceptualizes the relationship between creative problems and ideas and provides new insights about resources for creativity. In doing so, this article also sets the course for future research. Next, I outline key implications of this theory and suggest how future research might elaborate on these ideas.

Understanding the Process of Developing a Body of Creative Work

Although researchers are increasingly exploring creativity over time (e.g., Audia & Goncalo, 2007; Dennis, 1966; Lehman, 1960; Mainemelis, Nolas & Tsirogianni, 2016; Mannucci & Yong, 2018; Simonton, 1997), research is yet to consider the process of developing multiple creative products itself. Indeed, existing models of the creative process primarily consider individual creative processes. For example, models of the creative process developed by Wallas (1926), Amabile (e.g. Amabile, 1983, 1996; Amabile & Pratt, 2016), and Perry-Smith & Mannucci, (2017) consider in their models how ideas that respond to a single problem or task move from conception to completion. As such these models apply primarily to the development of individual creative projects. However, scholars have argued that they may not apply directly to the broader enterprise of developing multiple creative projects, as many creators do over their lives (Gruber, 1989).

The first contribution of this article is therefore to offer a process based perspective on the development of multiple creative products where the entire developmental journey is part of a process that is ongoing, evolving and cumulative. Whereas research to date has adopted an episodic approach to understanding the development of multiple creative products, examining individual episodes of creativity and investigating how any given

episode can be improved, a process which can lead to developing a diverse range of creative products, the model of enduring creative engagement developed in this paper advances an understanding of how a body of work that features multiple creative products that are connected by a core theme can be developed.

Two features of this model explain the development of a body of creative work: a set of creative products that are characterized by core themes which offer a contribution that extends beyond any individual idea within that portfolio. First, an enduring dilemma acts like a broad goal within which different creative projects are embedded. One feature of the model that leads to the development of a body of creative work is the experience of working on a broad goal which acts as an organizing mechanism for creative work. Although research has investigated the consequences of broad goals in the context of other tasks (e.g. Bateman & Barry, 2012; Catron, 2018), virtually no research to date has examined this in the context of creative work where the focus has typically been at the level of the individual project (e.g. Harrison & Rouse, 2014; 2015; Stigliani & Ravasi, 2012). The model developed in this paper shows that the experiences characteristic of working on an enduring dilemma including familiar novelty, unresolvedness, and meaningfulness, build momentum for creative activities, promote the pursuit of complex tasks, and encourage iteration and revision. This allows creators to develop the type of ideas that push the body of work to the next level, thereby constituting the advancing body of creative work.

The development of constituent ideas is another critical feature of this model which explains the development of a body of creative work. By taking the body of work to the next level, each of these ideas create additional opportunities for the dilemma to expand further. A second feature that contributes to the development of the body of work is thus the opportunity for new problems to emerge through the development of constituent ideas. When cultivating an enduring dilemma, creators may have opportunities to develop many different ideas and

different points in time. Each of these ideas can constitute and direct the body of work in different ways by expanding the problem in different directions. Research suggests that small differences in initial choices can lead to large differences over time (Arthur, 1989). This cumulative effect contributes to the distinctiveness of the body of work, setting it apart from the creative ideas of others.

Insights from this model also point to additional directions for future research related to creative processes. The model of enduring creative engagement developed in this paper rests on the development of a problem that persists over time and across processes. As more organizations and occupations are explicitly encouraging their employees to discover creative problems and create opportunities for developing new ideas (Musselin, 2009; Tan, 2015), there are opportunities for future research to elaborate theory on enduring creative engagement and the emergence of enduring dilemmas through interviews, field studies, archival accounts, and diary studies (Wallace & Gruber, 1989). By conducting these empirical investigations, future research might also explore the conditions under which an enduring dilemma, and by extension, enduring creative engagement is more likely to emerge. Research could also investigate stopping points, examining when individuals stop working on an enduring dilemma, and how these decisions relate to other creative outcomes including the development of incrementally creative ideas and radically creative ideas. Also, in this paper I focus on this process as it unfolds at the individual level, but there are likely to be circumstances under which an enduring dilemma can be cultivated at the dyadic, team, or organizational level, particularly as creative work unfolds in the context of longer term relationships (Rouse, 2020). Future research could investigate the unique dynamics that emerge when more than one individual is involved in cultivating an enduring dilemma. Alternatively, what might happen if one individual within a team cultivates an enduring dilemma when working on a problem, but others they worked with on the initial project do

not participate in the expansion of the original dilemma? Researching these dynamics could have interesting implications for research on interpersonal relationships and the ownership of ideas across projects.

Enduring creative engagement can take place inside, outside, or across organizations. For example, whereas creators like Ferran Adria and J.R.R. Tolkien largely worked within one organization even as they developed a significant body of work, and the artists in Roe's study worked as freelancers who did not identify as employees of any organization, other creators like Jeff Hawkins moved between organizations, even starting, selling and restarting different companies suited to the developing dilemma. This suggests that there are likely to be connections between the dilemma and the organizational boundaries within which creators work on them. Indeed, the dilemma and its needs may influence the organizational context within which the creator chooses to work on it, particularly as autonomy is an important boundary condition for enduring creative engagement. For example, after developing the GRiDPad within Tandy, an organization which built computers for niche business customers, Hawkins who wanted to explore intelligent machines more generally, started Palm Computing, followed by other companies like Handspring and Numenta is order to pursue what he proclaimed to be "a long endeavor" involving the development of multiple creative products (Tam, 2005). These differences raise several questions for future research: How might organizational boundaries influence and be influenced by an enduring dilemma? How does working on an unresolved problem that is cultivated over time influence an individual's ability and decision to work within a certain type of organizational structure? At what point in the development of a body of creative work might an individual benefit most from being within an organization? Answering these questions would help deepen our understanding of enduring creative engagement in different organizational contexts.

One concern is that working on an enduring dilemma might cut the individual off

from other problems that might be worth investigating and might also lead to creative ideas or products. For example, because an individual experiences familiar novelty, unresolvedness and meaningfulness when working on an enduring dilemma, they may choose not to pay attention to or work on another problem that they come across or is presented to them. Furthermore, it may exacerbate some of the problems managers already have with managing creative workers. Corporate leaders and managers commonly lament that creative workers can have priorities that are different to their managers. As Tim Bell, Chairman of Lowe Bell Communications in the UK, noted in a study by Fletcher (1999: 40):

> It can be fantastically frustrating working with creators. They're petulant and difficult and refuse to pay attention and have different priorities. Dumb insolence is a classic characteristic of creative people and they are very dismissive of everybody else.

These differences in priorities and a refusal to pay attention to the priorities of managers and other stakeholders is likely to be heightened in the presence of an enduring dilemma when individuals are more focused on resolving the broader dilemma than meeting the needs of external stakeholders. It is also possible that creators may treat any problem that they may be presented with as an opportunity to work on an enduring dilemma thereby failing to meet the requirements of the problem as presented or set by key stakeholders. Future research might investigate when managers should encourage the development of an enduring dilemma or hire individuals who are working on an enduring dilemma, and under what conditions cultivating an enduring dilemma and more generally, enduring creative engagement, might be harmful despite its potential to contribute to the development of a body of creative work.

Re-examining Relationships Between Problems and Ideas

Insights from this model also prompt a reconsideration of the nature of problems and ideas (or solutions) in the context of creative work, and challenge prevailing assumptions about relationships between problems and ideas in creative work. The model of enduring creative engagement developed in this article rests on cultivating an enduring dilemma, a

problem that persists over time and across creative processes. In this way, this paper develops a new perspective about problems which stands in contrast to existing literature which largely conceptualizes problems or tasks as existing prior to the initiation of a creative task (e.g. Amabile, 1983, 1996; Litchfield, 2008; Kaufmann, 2001; Jonassen, 2000; Unsworth, 2001). Even research which adopts a more constructivist approach towards understanding problems and emphasizes the importance of problem construction for creativity, assumes that problems exist a priori but need to be identified defined and structured prior to solving them (e.g. Mumford et al., 1994; Reiter-Palmon et al., 1997). In contrast, this research brings a novel understanding about problems to the creativity literature by suggesting that problems that can be created through creative activities. Furthermore, this model also shows that a problem may not be created all at once during a single creative process, but may instead be created continuously through the development of new ideas which repeatedly bring into existence knowledge and information that did not exist previously.

These insights also suggest that sometimes the solution to a problem is not merely one idea, and that it may be suboptimal to search for a single best solution to a problem. Instead they suggest that it may be prudent to approach a problem as a consisting of different questions which need to be addressed through different solutions. This is similar to the systems approach to design which conceptualizes the process of designing a system as a process of working on different sub components that contribute to the development of the broader system (e.g. Churchman, 1971; Churchman & Buchanan, 1969). Insights from my model further extend this perspective and suggest also that an idea is not merely a solution to a creative problem or indeed an outcome of the creative process. Instead an idea may be a foundational part of a broad, ongoing creative process and any given idea can shape the future direction of the body of work, causing it to progress in more or less productive directions. Within this model then, an idea has value that is transcendental, and extends

beyond its imminent form (Genette, 1994, see also Menger, 2006). Therefore, the question of what any given idea means for the general direction and advancement of the body of work may be an important consideration for creators as they evaluate and select ideas to develop, as efforts invested into a single idea can have consequences that extend beyond the idea itself. Future research on evaluation could explicitly consider the evaluation of ideas in the context of longer creative endeavours.

Insights from this model also prompt a reconsideration of how we conceptualize the completeness of ideas. Scholars have argued that in addition to novelty and usefulness, elaborateness or completeness is an important criterion for assessing creative ideas in that ideas that are more complete tend to receive more favourable evaluations relative to incomplete ideas (Besemer & Treffinger, 1981; Besemer & O'Quinn, 1987). Furthermore, research also suggests that during implementation, ideas move towards completion, and indeed that completeness implies progress in the creative process (Amabile & Pratt, 2016; Perry-Smith & Mannucci, 2017). The model of enduring creative engagement challenges this assumption; although an idea may represent a complete solution to a more concrete problem, it may at the same time embody a partial solution to a broader problem, and as such is an incomplete solution with respect to this broader problem. Within this model, ideas resemble Koestler's (1967, 1969) concept of a 'holon', an element that is neither a whole nor a part, but a whole/part which has its own identity and existence, but also forms part of a broader whole. Exploring the incomplete nature of creative ideas, the dynamics of whole-part relationships in creative work, and the decisions creators make as they navigate these complex relationships between problems and ideas is a rich area for future research.

Reconsidering Resources for Developing Multiple Creative Products

The few studies that examine the development of multiple creative products typically analyze the creative trajectories of individuals, documenting individual variations in

creativity over time (Audia & Goncalo, 2007; Deichmann & van den Ende, 2014; Lehman & Heidler, 1949; Levin & Stephan, 1989, 1991; Mainemelis, Noals & Tsirogianni, 2016; Mannucci & Yong, 2018; Simonton, 1991, 1997, 2003, 2007). Many of these studies present equivocal results; some studies suggest an increase in creativity over time, other indicate decreases, and still others suggest that creators may cycle between creative peaks and troughs over time. Despite their differences, most of these studies offer expertise based explanations for these trajectories (Mainemelis, 2002). As such, we know little about resources that can explain the development of multiple creative products, beyond creator experience.

The model of enduring creative engagement developed in this paper considers the role of psychological resources that extend beyond expertise in the context of developing multiple creative products, namely the psychological experiences of familiar-novelty, unresolvedness, and meaningfulness. In doing so, the model introduces different dimensions of certain psychological resources that have seldom been considered in the creativity literature overall. Specifically, this model considers the importance of meaningfulness and eudemonic drivers which have largely been overlooked in the creativity research which has primarily focused on considering hedonic experiences such as enjoyment and pleasure associated with episodic engagement in creative work (Amabile & Pratt, 2016). Incorporating these additional resources into our investigations of creativity over time may help to reconcile some of the unequivocal findings in the existing literature. For example, the process suggested here implies that when individuals experience a sense of familiar novelty, unresolvedness, and meaningfulness, they may be more inclined to initiate new ideas, take on complex tasks, and iterate ideas to improve them, they may have a higher chance of developing a set of ideas that can offer a coherent creative contribution. Examining these resources in the context of developing multiple creative products may therefore help to untangle some of the equivocal results about creativity over time found in previous research.

The model of enduring creative engagement also provides new insights about how resources for creative work may be introduced into the process. Previous research suggests that resources for creative work are primarily provided by the work environment and external sources such as managers and leaders or peers (e.g. Amabile, 1983, 1996; Perry-Smith & Mannucci, 2017). In contrast, within the model of enduring creative engagement, resources for creative work, particularly psychological resources, are not external to the creative process, they are generated through the experiences of working on an enduring dilemma, and as such can be cultivated through creative activities. The model also implies that the psychological resources associated with working on one creative project or task may be channelled into another. Previous research has indicated that motivation for a task can reduce motivation for and performance on another unrelated task (Shin & Grant, 2019). In contrast, the model of enduring creative engagement suggests that in some conditions, such as when new problems or tasks are part of a broader problem, and are characterized by experiences of familiar novelty, unresolvedness, and meaningfulness, the psychological resources generated for one task may be augmented and channelled towards another task. More broadly then, the arguments I present in this paper open up new avenues for thinking about how resources from one problem or task can be channelled productively towards others.

3.4 Conclusion

While there is growing interest in understanding how individuals can sustain creativity over time and develop multiple creative products, researchers tend to focus on understanding how a largely disconnected range of diverse ideas can be developed over time. However, creative work often takes place not as distinct episodes leading to a disconnected array of products, but a prolonged search for solutions around a core theme. For example, in investigating the story behind Jeff Hawkins' many creative discoveries, Dillon (1998) observed it was actually "the story of one man's obsession with an idea that was bigger than a

product", a process which stands in contrast to the episodic approach to developing individual creative products discussed in the literature. This article focuses on the process of developing a body of creative work: a set of creative products that are characterized by core themes which extend beyond individual ideas within the portfolio, and describes this as a process of enduring creative engagement. In doing so the theory developed in this paper moves away from the episodic approach, brings a focus on enduring engagement to the fore and provides a springboard for understanding the role of enduring dilemmas and problems that extend beyond a single idea in the context of creative work.

4. Good Artists Copy, But Great Artists? Navigating Tensions Between Inspiration and Imitation in Creative Work

Nothing is original. Steal from anywhere that resonates with inspiration or fuels your imagination. Devour old films, new films, music, books, paintings, photographs, poems, dreams, random conversations, architecture, bridges, street signs, trees, clouds, bodies of water, light, and shadows.

–Jim Jarmusch in Jarmusch, 2013

And often, the one thing you do when you get stuck, and as a designer, you often get stuck and go, "How am I going to do this?" And then you go looking in books or in magazines, or you go wandering around and spot something and see the funny bit of a corner and the edge of a roof and you go, "Oh, that's the way to do it."

–Research participant A12

Getting ideas, inspiration, and stimulation from what has come before is fundamental to the creative process (Dane, 2000; Berg, 2016). As the open quotations suggest, individuals working in creative jobs, i.e., creative workers, often draw on and use different types of existing inputs in their creative processes (Koestler, 1964; Welch, 1946). This is particularly the case in the context of continuous creativity, which involves regular experimentation and exploration, and attempts to generate multiple creative ideas over time (Puccio & Cabra, 2012; Rouse, 2020). Across these attempts, creators may go through periods during which they are in a state of flow (Csikszentmihalyi, Abuhamdeh, & Nakamura, 1990) and have several original insights that they can channel toward a new idea (Davis & Talbot, 1987). However, they also may encounter times when they have difficulties determining where to begin, remain fixated on particular ways of doing things, or struggle to overcome creative blocks (Audia & Goncalo, 2006; Vasconcelos & Crilly, 2015). At times like these, exploring existing inputs from external sources outside the creator may provide cognitive stimulation, reducing fixation by creating awareness about new possibilities and inspiring the generation of new creative ideas (Thrash & Elliot, 2003).

Researchers of creativity typically have argued in favor of using existing inputs from external sources to develop new ideas (e.g., Berg, 2016; Mannucci & Yong, 2018). Scholars have found that individuals employed in some of the most creative organizations, particularly creative workers whose jobs are focused on continuously generating and developing ideas, are constantly on the lookout for new content that may be useful for creative work, often using these ideas in their creations or sharing them with others within the organization (Austin, Devin, & Sullivan, 2002; Hargadon & Sutton, 1997). These researchers suggest that "create(ing) new combinations of old ideas" Hargadon and Sutton (1997: 717) may be the rule and not the exception at extremely creative organizations. As such, scholars have argued that underestimating the importance of existing inputs to creativity can be detrimental to individuals and organizations who want to remain creative and competitive over time, and have suggested that managers and organizations should make efforts to provide creative workers with unfettered access to these resources (Eckert & Stacey, 1998; Eckert, Stacey, & Clarkson, 2000).

Although this may be valuable advice in theory, the reality of using existing inputs may be more complex, given that when creative people draw on existing inputs, it may be difficult to determine boundaries between the input and the new idea (Reilly, 2018). In other words, it may be difficult for creative workers and others to determine where another person's idea ends and their own ideas begin. This may be challenging for creative workers who typically intend and are expected to produce unique, original ideas. Extant research on the psychology of creative work, which investigates creative workers' experiences when producing creative ideas (e.g., Rouse, 2013; 2016; Elsbach, 2009; Elsbach & Flynn, 2013), suggests that creative workers not only focus on the novelty and usefulness of the ultimate output, but also value their personal connections to ideas and the unique processes underlying the generation of each idea (see also Davis & Talbot, 1987). Studies show that creative

workers take pride in deep and autonomous engagement in creative processes (e.g., Lifshitz-Assaf, 2019; Ranganathan, 2017), seeking to develop ideas that reflect their identities (e.g., Elsbach, 2009). Other research suggests that creative workers find it difficult to feel truly interested and motivated without these psychological experiences and connections to ideas (Brown & Baer, 2015; Gray, Knight, & Baer, 2020). Furthermore, creative workers who do use materials created by others as inputs for their own creative process may risk being branded "thieves" and subjected to legal and social sanctions (Reilly, 2018). As such, many creative workers strive to stay away from practices that may lead to such consequences (Roessel & Katzenbach, 2018). This reveals a tension in the literature between the need for inspiration and the threat of imitation when drawing on existing inputs in creative work. However, given that existing research has focused primarily on the cognitive consequences and benefits of using existing inputs, we have a limited understanding of how creative workers respond to this tension. This raises the question: *How do creative workers navigate the tension between inspiration and imitation when using existing inputs in creative work?*

I was drawn to this question during an inductive, qualitative study of architects in the United Kingdom. These architects explained that although they strived to be creative and produce novel outcomes through their work, at times, they also found themselves looking to existing inputs for inspiration. However, architects often struggled with the idea of imitating what someone else already has done. In navigating these tensions, the creative workers in my sample focused on the process through which inputs were used. This focus manifested itself in two types of borrowing practices – *idea translation* and *idea customization* – neither of which involved the wholesale use of existing inputs in a given project. Translation involves abstracting intangible elements from ideas outside the domain and reincarnating them within one's own domain. Customization – the more common borrowing practice, particularly in the face of project constraints – involves adapting tangible elements from ideas within the

domain and recomposing them to fit the unique circumstances around a specific project. My findings also reveal that these practices contributed to a sense of authorship, or causal agency (Campbell, 1999; Graham & Stephens, 1994; Stephens & Graham, 2000) over ideas that ultimately were developed. Whereas translation allowed creative workers to feel a sense of contextual authorship from bringing new ideas and resources into the domain, customization allowed them to experience a sense of temporal authorship from providing established concepts with a new trajectory through which to progress.

The findings of this study highlight this overlooked aspect of creative work: tensions between inspiration and imitation when creating with the use of existing inputs. They show that in light of these tensions, creative workers engage in two sets of practices for using ideas, both of which involve engaging inputs in a critical process, as opposed to using them wholesale, and that these practices allow creative workers to experience a sense of authorship over ideas. The emergent model makes several theoretical contributions that extend and challenge prior scholarship. Most notably, these findings suggest that using existing inputs can be an effortful process of choosing what to extract from an idea and how to emerge a new idea. These findings expand our understanding of what inspiration means in the context of creative work, and in so doing, prompt a consideration of the idea boundaries, and contribute to a deeper understanding of authorship in creative work.

4.1 Theoretical Background

Scholars have long recognized that creative ideas can come from using existing inputs to inspire, stimulate, and elaborate on new ideas (Koestler, 1964; Welch, 1946). As: Weick (1979: 252) states, sometimes developing creative ideas entails "putting new things in old combinations and old things in new combinations," and it is now viewed as "an old notion that innovations are built from existing works" (Hargadon & Sutton, 1997: 747). Notions like this have motivated research into the use of existing inputs in creative work. In particular,

several studies have focused on using existing inputs as inspiration to stimulate the idea generation phase of the creative process (e.g., Dugosh, Paulus, Roland, & Yang, 2000; Dugosh & Paulus, 2005; Fink et al., 2009; Fink et al., 2010; Ward, Patterson, & Sifonis, 2004). In these studies, external stimuli are introduced into the creative process, and their effects on the novelty and usefulness of outcomes are studied. As such, many of these studies highlight the positive outcomes and benefits of using existing inputs during idea generation, arguing that existing materials from ideas generated by others can help creative workers engaged in developing solutions to similar problems spur new concepts by broadening the use of the design space and allowing for the recombination and reinterpretation of ideas. I describe some of these studies' main findings below.

Benefits of Using Existing Inputs

The beneficial effects from existing inputs in creative work primarily have been investigated under the topic of cognitive stimulation. Researchers of creativity and innovation repeatedly have argued that idea exposure can influence an individual's ability to produce creative ideas positively (e.g., Dugosh et al. 2000; Nijstad, Stroebe, & Lodewijkx, 2002; Dugosh and Paulus 2005, Liiaken & Perttula, 2010; Perttula and Sipilä 2007). A model by Nijstad (2000), "Search for Ideas in Associative Memory," proposes that idea generation is a two-stage process in which a knowledge acquisition stage is followed by an idea production stage. Other authors have proposed similar models (e.g., Raajimakers and Shiffrin, 1981, Brown et al., 1998). To activate knowledge, a search cue is formed in short-term memory, which then is used to probe long-term memory. A successful probe of long-term memory results in the activation of an image. Thus, existing inputs can serve as a source of cognitive stimulation and inspiration, as they can be added to the search cue to probe long-term memory and provide access to entities that might otherwise be difficult to access. This facilitates switching between idea categories (Nijstad & Stroebe, 2006), which is viewed as a

marker of flexibility. This also will speed up knowledge retrieval, in contrast to working without examples, because the time required to assemble the cue is reduced.

Empirical evidence largely supports this thesis. For example, in an experiment by Dugosh et al. (2000), it was found that when people are exposed to ideas and motivated to attend to these ideas, the productivity of idea generation may be enhanced. Dugosh and Paulus (2005) found further evidence of cognitive factors' role as a result of idea exposure in the following experiment: Participants who were exposed to several common ideas generated more ideas than subjects who were shown fewer unusual ideas, suggesting that exposure to a large number of ideas may stimulate more associations and that common ideas are more stimulating than unique ones, as they may be more "valid" for subjects. Mumford and colleagues (Mobley, Doares, & Mumford, 1992; Mumford, Baughman, Maher, & Costanza, 1997) examined the link between conceptual combinations and their link to creativity by studying exemplars' creativity. Results from these studies suggest that a positive relationship overall exists between the originality of exemplars and the originality of ideas that are generated subsequently.

Furthermore, extant research also suggests that using existing inputs can be particularly important when working on creative ideas over time, and that creative workers who are engaged continuously in producing creative outcomes can become entrenched in their existing knowledge and find it increasingly difficult to generate novel outputs (e.g., Audia & Goncalo, 2007; Mumford & Gustafson, 1988). Using ideas that others generate can reduce the rigidity of these linkages within and between schemas and, consequently, improve an individual's ability to generate novel ideas (Dane, 2010; Mannucci & Yong, 2018). Thus, empirical research across several contexts suggests that there can be benefits to looking to existing inputs for inspiration during the creative process.

Tensions Associated with Using Existing Inputs

The studies reviewed in the section above show that people tend to develop more creative ideas when exposed to novel external inputs. Accordingly, scholars have investigated how creative workers may secure access to existing inputs. For example, in a study of video game developers, Roessel and Katzenbach (2018) found that game developers often examined previously released games when working on their own video game ideas. Reilly (2018) found in an ethnographic study within the stand-up comedy community that comedians often watch their peers and more senior comics perform in shows in an effort to be inspired for their own comedy routines. Studies on fashions designers (e.g., Eckert & Stacey, 1998; Mete, 2006; Vangkilde, 2015) found that just about anything can be a source of inspiration. Vangkilde (2015) observed that fashion designers often went on "inspiration trips," finding specific locations within which they could access stimulating content. Furthermore, what was viewed as the *right* place to look for ideas often differed not only from designer to designer, but also from season to season. In this way, they could access old ideas that may be useful for their current creative processes. Scholars also have observed that in many organizations, accessing inputs can be a social practice. For example, in their seminal study of creative work at the design consultancy firm IDEO, Hargadon and Sutton (1997) found that designers at IDEO maintained exposure to ideas that had been developed previously both within and outside IDEO through informal exchanges and formal brainstorming sessions conducted frequently at the firm. These exchanges allowed designers to access ideas and sources of inspiration developed or secured by others. This study also showed that analogies played a critical role in allowing IDEO designers to access existing inputs that can be used in other creative processes, as they allowed individuals to link past stimulus-response information to current stimuli.

While this scholarly emphasis on understanding how creative workers may access existing inputs is crucially important, in practice, access alone may not be sufficient to reap

the potential benefits of existing inputs, given that in using existing inputs, creators risk imitating or copying materials that others have generated (Reilly, 2018). This can be problematic given that in practice, creative work often is perceived as a highly personal endeavor, rather than an instrumental one. First, creative workers often attach great weight to their own connections to ideas (Grimes, 2018; Rouse, 2016) and enjoy developing ideas that reflect their personal identities (Elsbach, 2009; Goncalo & Katz, 2019), which ultimately can be at odds with the instrumental goal of using existing inputs. For example, Elsbach (2009) conducted a series of interviews with designers at a toy-manufacturing firm and found that designers were extremely concerned about ensuring that their ideas reflected who they are. As one designer in Elsbach's study noted about another designer, "X": "His cars have a distinct triangular shape and small window openings. Everyone knows his style. He'll often ask me if a design is 'X'-esque enough. So, I know that he's trying to get that look." The designer wanted to ensure that the idea had "enough" of himself in it and made efforts to ensure this during development. Given such desires for ideas to be driven by and reflective of the self, creative workers may find it challenging to use ideas developed by others, no matter how relevant this content might be to their own work.

Additionally, in most contexts, particularly creative contexts, the actual process of developing ideas is viewed as the most "prestigious task" for an individual to be involved in. Individuals often enter various scientific and artistic professions for the challenge and prestige that come from solving difficult, creative problems (Lifshitz-Assaf, 2018). As one participant noted in an ethnographic study of scientists at NASA conducted by Lifshitz-Assaf (2018), "A lot of the people come to work here certainly not because they couldn't make money elsewhere. […] It's because they want the opportunity to be innovative. They want the opportunity to contribute to something that nobody's ever done before." Therefore, individuals in these contexts may resist any practices that are interpreted as diluting that

experience (e.g., Van Maanen & Barley, 1984). Although these studies typically have investigated the psychological experiences associated with incorporating feedback and suggestions that others have given to creators directly, these concerns also likely apply in the case of using an existing input, given that it also is generated by others and as such exists independently of the creative worker's own efforts.

Furthermore, although the notion of building on existing ideas is accepted practice in many creative contexts, creative workers can incur high legal and social costs from imitation. Legally, this typically comes in the form of infringement lawsuits (Oliar and Sprigman 2008; Stebbins 1990). More common than legal costs from imitation are social ones. Oliar and Sprigman's (2008) study of joke theft shows how high transaction costs from infringement lawsuits and difficulty in case documentation contribute to the use of informal sanctions, including reputational damage, social ostracism, loss of contracts, and sometimes even physical violence. Furthermore, once an idea has been deemed an imitation, it can elicit long-lasting social costs, given that when audiences view creative ideas, they tend to evaluate not only the ideas themselves, but also the creative potential and intentions of those who generate them (Elsbach & Kramer, 2003; Kim, 2011; Stevens & Kristof, 1995). Thus, it is not merely the idea that is deemed an imitation, but the individual creator is likewise deemed an imitator (Reilly, 2018). This creates tension between the need for inspiration and the threat of imitation when using existing inputs in creative work.

Navigating Tensions Associated with Using Existing Inputs

A small research stream that considers issues around the ownership and plagiarism of ideas (e.g., Hoppe, 2019; Reilly, 2018; Roessel & Katzenbach , 2018) recently has begun investigating how creative workers consider the use of existing inputs in practice. This work shows that although creative workers struggle with this tension as they use existing inputs to develop their own ideas, they do not perceive all cases of idea use as imitation, nor think that

the practice should be stopped or be regulated further (Reilly, 2018; Roessel & Katzenbach, 2018). However, creative workers in this research did feel that there was a "gray" area or line between inspiration and imitation that was important to find, i.e., different ways of using ideas may be perceived differently. Indeed, research suggests that when evaluating idea theft, individuals look not only at whether an idea's roots lie in another person's idea, but also at how much of the original idea is embedded in the new idea relative to the creator's own efforts (Hoppe, 2019).

For example, in their study, Roessel and Katzenbach (2018) found that video game developers were quite comfortable using existing inputs as long as they did not ultimately elicit a wholesale reproduction of the existing idea. For example, one game developer in the study said:

> If you take a game and just rip out the graphics and put other graphics in, there's no question: It's a clone. If you take the same art assets and do a similar game, that's a clone. And from there, the gray areas begin, I guess. If you take a game, make it slightly different in game design, put new graphics in that don't look like you made them in a week, it starts to get away from the original […] so, somewhere in between, the cloning stops.

The lack of wholesale reproduction implied that some of the individual's own efforts went into producing an idea, and as such, the idea did not merely reflect the efforts of another (e.g., Hoppe, 2019). It then may be that using ideas in ways that are not wholesale reproductions of existing inputs may be a path through which creative workers navigate tensions related to using existing inputs in creative work. However, given the paucity of research investigating how creative workers experience and navigate tensions around creating with the use of existing inputs, we have a limited understanding of how creative workers extract aspects from existing inputs and emerge new ideas, and how this allows them to balance tensions between inspiration and imitation. In this study, I consider how creative workers navigate tensions between inspiration and imitation when drawing on existing inputs. In so doing, I

also consider how creative workers make sense of their own experiences and relationships to ideas during this process.

4.2 Methods

Given the paucity of research investigating tensions related to using existing inputs in creative work, I used an inductive, grounded-theory approach (Glasser & Strauss, 1967; Strauss & Corbin, 1990; Gioia, Corley, & Hamilton, 2013) to develop theory on the process of navigating tensions between inspiration and imitation when using existing inputs in creative work. This approach is well-suited when the research question focuses on process, or understanding *how* something occurs, and theory needs to be developed or elaborated (Creswell, 1998). It also allows researchers to "to make sense of or interpret phenomena in terms of the meanings people bring to them" (Denzin & Lincoln, 2008: 4), which is useful for understanding how people experience and respond to tensions at work.

Research Setting

I performed an in-depth, qualitative study of architects in the United Kingdom. Architecture is viewed widely as a context characterized by creative work, given that an architect's primary role is to conceptualize, design, and oversee the construction of buildings and other structures (Rahman & Barley, 2017; Vough, Cardador, Bednar, Dane, & Pratt, 2013). The creative process in architecture includes concept design, schematic design, design development, and construction administration. Potential clients typically approach architects to request their services to design and develop ideas for a structure. Most architectural firms are geared toward turning out an original design for each commission. Although this process involves some steps that can be routinized, each commission is different, and solutions are typically evaluated in terms of how unique and original they are (Blau & McKinley, 1979).

Getting inspiration from external sources is an important component of the creative process in architecture. Prior research suggests that architects spend a lot of time studying

and analyzing reference projects (precedents), so the study of precedents is a crucial step that precedes the concept-design stage of most architectural projects (van der Voordt & van Wegen, 2007). Furthermore, architecture students at universities are trained to study precedents (Kuhn, 2001). However, architects also have strong creative identities that are tied to their ability to produce novel ideas. Indeed, many architects view themselves as "god-like" beings who can bring to life ideas that others cannot, and they take tremendous pride in their ability to author novel ideas (Cohen, Wilkinson, Arnold, & Finn, 2005). Furthermore, architects are extremely competitive and work hard to ensure that their designs are unique and not mere replications of existing work (Rahman & Barley, 2017). Therefore, architecture represents an ideal setting within which to examine the tension between inspiration and imitation in creative work, and for systematically investigating how creative workers navigate this tension.

Data Collection

Data for this study were collected over a two-year period (2019-2020). I initially noticed architects grappling with the question of how to get inspiration without risking imitation when conducting interviews as part of a broader study of practices associated with continuous creative work in which 30 architects participated. A return to the literature on creativity and inspiration led to a sharpened focus and articulation of the tension between inspiration and imitation. Given that initial participants voiced this tension voluntarily in the broader study, I contacted them again and invited them to participate in this additional study. Altogether, 20 architects from the original sample agreed to participate in the second study, so I conducted a second round of interviews with them. I also sought to recruit an additional set of participants who had not participated in the original study.

For the initial study, I had theoretically sampled and selected architects who were responsible for the conceptual development of novel ideas for new buildings and structures

(distinct from those who worked primarily as project managers or contractors). I determined that it would be important for all additional participants to meet this criterion as well. I recruited architects who fit this criterion using three main strategies. First, I contacted membership-based architectural organizations in the United Kingdom and asked them to put me in touch with architects who fit the criterion. Second, I looked through several U.K. architecture firms' websites and contacted architects whose profiles suggested a fit with the requirements. Third, during the interviews, I asked all informants to suggest the names of colleagues who might fit the criterion as well, which yielded 18 additional architects who were recruited for the study using these methods, resulting in a total of 38 participants. (Table 4.1 provides a breakdown of the participants' demographic characteristics).

Interviews. In-depth, semi-structured interviews served as the primary data source for this study, but I also triangulated the findings using archival data sources. I conducted interviews with all 38 participants either in person or through the videoconferencing platform Zoom. Interviews lasted 30–60 minutes each on average, were recorded with permission, and were transcribed verbatim. During these interviews, I focused on participants' shared experiences that were related to idea development and the use of existing inputs in creative work. The interviews initially followed a common protocol (see Appendix B) that, consistent with prescriptions for inductive research (Graebner, Martin, & Roundy, 2012), evolved as data collection progressed. During the initial interviews, some participants directed my attention to their websites and other documents (e.g., project-planning documents, personal portfolios, articles in media trade magazines, and awards submissions) containing project summaries, drawings, and images of ideas they had developed and referred to them during our conversations.

Archival Data. Over the course of conducting interviews, I recognized the potential for triangulating my findings from the interview data using archival data. Specifically, while the

interviews elicited rich descriptions of idea development processes and boosted understanding of creative workers' own experiences during the process, project documents allowed me to see initial and final ideas, and on occasion, images of inspiration sources. Furthermore, they provided access to descriptions of projects that were created closer to the actual occurrence of events, given that many of these documents were prepared during or immediately after project completion. This helped offset concerns about retrospective sensemaking. I started collecting archival data more systematically, asking participants during interviews to direct me to project descriptions on their websites or to provide archival documents that pertained to any of the projects they discussed with me. In addition to project descriptions available on company websites, I also obtained two sets of project-planning documents, five personal portfolios, four press releases, and two award submissions.

Data Analysis

I analyzed the data using grounded theory methods consistent with Strauss and Corbin (1990), as well as Gioia, Corley, and Hamilton (2013). The analytical procedure was highly iterative in nature, involving multiple rounds of coding and moving between the data, emerging themes, and relevant literature. Below, I outline four key analytical stages.

Stage 1: Mapping different borrowing episodes. I began my analysis by examining accounts of how creative workers viewed the use of existing inputs, what aspects of the practice they valued, and what aspects of the practice were viewed as problematic. I then created case studies of different idea development episodes in which creative workers borrowed existing inputs. I conducted this analysis early on, largely relying on interviews with initial participants in the research, supplemented by archival records of some of these episodes that I was able to access. I refined the analysis through subsequent interviews as informants shared additional examples of times when they used existing inputs within their

own projects, and I secured access to more archival data. This yielded 32 borrowing episodes, as presented in Table 4.2.

Stage 2: Coding borrowing practices in different episodes. Next, I turned to an open coding of textual data from both interviews and archival documents to surface first-order codes (Van Maanen, 1979). For instance, the first-order codes related to exploring ideas within architecture included words and phrases that conveyed searching for ideas in surrounding buildings ("looking for ideas in the built environment"), examining social media and other places to survey trendy designs ("looking at recent trends"), and searching for ideas in high-quality architecture textbooks ("studying the works of masters"). In a subsequent coding step, I aggregated these first-order codes into a broader, second-order construct, namely, "exploring inputs inside the domain." I used these second-order constructs as building blocks for the grounded model. Consistent with prescriptions for grounded theory, data collection and analysis partly overlapped. I engaged in the preliminary coding of data collected from approximately half the participants in the study, while data collection from the other half was still in progress.

Stage 3: Comparative coding across episodes. In moving from first-order to second-order coding, I initially produced a tentative framework highlighting a set of common patterns of idea use across different participants. However, a further round of data collection and analysis suggested that this model obscured important variations in how creative workers used inputs from inside the architecture domain vs. inputs from outside the domain. Following this realization, I recoded the data to unpack this variation. These analyses revealed two types of practices that creative workers used to navigate tensions between inspiration and imitation. I labelled these practices *idea translation* and *idea customization*. The first practice entailed looking for inspiration in sources outside the domain, extracting intangible elements in the form of personal interpretations and emotions from these sources,

and emerging new ideas by reincarnating these intangible elements using resources within the domain. The second practice was used when creative workers turned to inputs from sources within the domain for inspiration, in which they extracted certain tangible elements from inputs and reconfigured them to fit the requirements of the specific project on which they were working. In a further round of coding, to uncover an explanation of how these two practices allowed creative workers to manage the inspiration-imitation tension, I examined the psychological experiences associated with each of these practices and uncovered the distinct authorship experiences associated with each practice.

Stage 4: Uncovering sources of variation. In a final analytical step, I searched the interview and archival data for clues about what led to the use of one practice over another in any given episode. As I examined the contextual differences between different borrowing episodes, the level of constraint that creative workers experienced when working on a given project proved to be a critical factor in shaping creative workers' tendency to explore inputs within the domain vs. inputs outside the domain. I recoded the data to capture three different types of constraints that creative workers experienced, as well as understand their influence on the use of different borrowing practices. Through these rounds of coding and analysis, the key theoretical constructs and grounded model emerged. Following Gioia and Corley's (2004) illustrative visualization of qualitative data structures, the relationships between the final first-order concepts, second-order themes, and aggregate dimensions that emerged from my analysis are illustrated in Figure 4.1.

4.3 Findings

I begin this section by providing evidence of the tension between inspiration and imitation that creative workers in my sample experienced when using existing inputs in their creative work. I then discuss how creative workers navigate this tension. The main focus of

the findings section is oriented toward highlighting the two types of practices that creative workers used to navigate this tension, the circumstances under which one practice was used over the other, and key psychological experiences associated with each of these practices. Table 4.3 provides additional evidence for each of these themes, and Figure 4.2 illustrates the observed relationships comprising the emergent model.

Tension Between Inspiration and Imitation

The creative workers in my sample were quick to acknowledge that inspiration was an extremely important part of their creative processes and that they looked for existing inputs that they could use as sources of inspiration on an ongoing basis. As Architect A4 explained:

> I kind of tend to do it, like, non-stop. So yeah, as I came up from the bathroom, I was sitting down and I put my coat on the back of the chair. And I started thinking about the bended wood on these chairs. Not that that's proved to be an inspiration for any of my projects yet … but this is actually an innovation in the use of material for design. So, I sat down and I was kind of thinking about that when you started speaking. So, inspiration can, because I'm always switched on to it, it can be anything.

Creative workers depend on these sources of inspiration at various points in their creative processes, such as when they felt uncertain about starting points, experienced creative blocks, or had difficulties making decisions when working on projects that demanded novel and useful solutions to problems. Architect A12 explained this:

> And often, the one thing you do when you get stuck, and as a designer, you often get stuck and go, "How am I going to do this?" and then you go looking in books or in magazines, or you go wandering around and spot something and see the funny bit of a corner and the edge of a roof and you go, "Oh, that's the way to do it."

However, architects also acknowledged that using existing content was not particularly straightforward, given that as creatives, there was an expectation that they would produce something original through their work. As Architect A14 said, "The need to be original is always there. You always want to do something which is cool, which is different, which is interesting [...]. And therefore, originality is important above all things." Given this need for originality, creatives who work in creative contexts and are expected to and aim to produce

novel and useful ideas of their own struggled with the idea of using existing inputs in their work, concerned about producing mere imitations of existing content. When pushed for further clarification, Architect A17 said:

> It's a small world, unfortunately, like the industry. And it's not great for your reputation, and it's not great for your progress and like growth, I think … like, if you copy things or if you get very recognizably inspired by another design or another design, I wouldn't feel I'm pushing myself very hard. OK? And I think I got into architecture and design to be creative, to do things differently and to try to come up with my own ideas. Yeah, so I always really consider myself and where the ideas are coming from.

As such, architects had strong views and emotionally charged reactions to the prospect of developing ideas that were close to what already exists. Architect A11 said:

> I would feel really emasculated. What's the point if I'm just going to copy that project? There is no need for my brain to contribute to the project. You don't need a creative designer to do that. You can have another member of the design team just take plans for another project and just repeat it. Our role [as architects] is to provide creativity to the construction. That's the root one. It's existential! But also, things have moved on since the way it used to be. And nothing's perfect, so why would you repeat it?

He puzzled further: "Let's put it this way – for whatever reason, you are hoping to do original work because it's the way you're going to get your own body of work is to do something in your own voice. But I've certainly learned, it's been my training to observe what has come before" (A11). Thus, the architects in my sample had to contend regularly with the tension between inspiration and imitation when using existing content in their creative projects. Architect A20 summarized this tension succinctly:

> It's interesting because I think it can be a little contradictory. Like people tell you, "Go look up references," and you need to make sure you know the reference and know the precedents. But at the same time, they also tell you, "Well, this looks exactly like what already exists." And then you're kind of stuck in the middle of being like, "How do I navigate this sort of space?"

Borrowing Practices

As illustrated in Figure 4.2, architects handled the tension between inspiration and imitation through two types of borrowing practices, neither of which involved the wholesale use of an existing idea. Instead, each practice involved examining different sources of inputs,

extracting specific aspects from them, and emerging new ideas by building on these extracted kernels. I labeled the two practices *idea translation* and *idea customization* based on how creative workers moved ideas away from original inputs. The findings also suggest that these practices are associated with unique psychological experiences and are influenced by project constraints. In the following sections, I draw from compiled case studies of creative projects discussed with the architects in my study to illustrate the dynamics associated with each of these practices and the distinctions between them.

Idea Translation

One borrowing practice that creative workers used to navigate tensions between inspiration and imitation was the translation of inputs from sources outside the architectural domain into architectural forms. For example, when he received an important commission to work on an architectural installation in Dubai, Architect A30 turned to a novel by Italian writer Italo Calvino, *The Invisible Cities*, for inspiration. The following extract provides a snapshot of my discussion with A30 about how he developed new ideas using inputs from this novel, a source outside the architectural domain:

> *A30*: We were working on an artistic installation in Dubai, and we kind of started by imagining to write to add a chapter to a book. There was *The Invisible Cities* by Italo Calvino. And so, by creating this new narrative, we were then trying to create illustrations of that. And then we were trying to use architecture as a three-dimensional illustration of a chapter of a book, you know. So, instead of, like, sketching something, sketching in illustration, we were, like, imagining what to build to represent the narrative.
>
> *Interviewer*: So, how did you create something new from the book?
> *A30*: So, it was a very evocative, evocative image, very allegorical and metaphorical. And in our case was a bridge to, like, a link to refer to a city like Dubai. So, we were, like, creating the symbolism between the shapes that we were making […]. And then we thought about how we can build this image architecturally.

A30 went on to explain during the interview that he abstracted from this book the notion of "transient fragility." A new idea then was composed from this abstract concept by using architectural tools to develop a concrete representation of this idea. A30 directed me to

his company website for a more detailed description of the process used for emerging a new idea in this particular case. Among other information, the project summary provided on the website described how elements extracted from the book were transformed "into real spatial and temporal relationships and architectural forms":

> [W]e used architecture as a tool, as a form of three-dimensional representation, as a medium to express a narrative, which allowed the concept to retain its powerful role. The installation is made of 50 black balloons, 500m of black ropes, and 50 foam bricks. These elements are combined together, generating a floating landscape that belongs to, and is in dialogue with, the desert, the origin of everything. These flimsy structures evoke a sense of transient fragility and at the same time inform [this project's] bold and distinctive character [A30, company website].

In the sections below, I break this case down in detail and use it alongside other illustrative cases to explain the sub-practices of translation.

Exploring inputs outside the domain. One of the first things creative workers did in their efforts to seek inspiration without risking imitation was to draw from inputs outside the architectural domain. For example, Architect A30 above sought inspiration from a novel to develop an architectural installation to represent the City of Dubai. Another said, "And that could be an artwork. It could be a photograph of the way light comes through a window… Even sort of a sentence, something that really helps to set up a narrative about a project and that not only helps to steer and guide the project through, but it also helps to talk about it to other people and to help describe it" (A37). The architects asserted that this could be a fool-proof way of navigating the tension between inspiration and imitation because to make an input from outside usable within a domain, they must change it because it is unlikely to be in the form it needs to be to be useful within their context (i.e., a book written on paper is in a very different form than a building or other structure). As Architect A3 explained:

> You can be inspired by things that are not from other architects or from architecture. Actually, it's totally allowed. It's tricky to copy another architect. If I'm going to copy from nature, that's not a problem at all. Also, I think it's because you can't use it literally. You cannot build a tree as a house. You can start with the idea, but it's going to change so much! And it's OK even if I just copy a tree. The problem is with [copying from] architecture.

Creative workers typically relied on serendipitous encounters, personal experiences, and interests outside of work to gain access to inputs from outside the architectural domain. As Architect A4 said, "I think you can get inspiration from anything. I really like reading, and I like nature. I like to roam the beach and watch the sea, mountains, natural landscape, actually." Many individuals turned this sub-practice of exploring inputs outside the domain into a routine or ritual. As Architect A33 said, "And I think it's about, I mean, going to more remote areas and sort of seeing things there. I love antiquity. I mean, there are always clues in there [for my own projects]." Therefore, he tried to schedule trips to rural locations whenever possible to examine design inspirations that he can use as inputs for his creative work without being overly concerned about imitation.

Extracting intangible elements. As discussed in the previous section, translation begins with exploring inputs outside the domain in which one primarily works. A key reason for doing this, according to the architects, is that inputs from outside the domain seldom could be adapted directly. As Architect A29 said, "I generally tend to look at abstract art and other things that are, and why I do that isn't necessarily because I'm looking for a shape or I'm looking for a type of way to arrange things and looking for that feeling." He went on to explain that it was abstract art that makes him "look within, and it has the ability to transmit emotion and puts you in a state of experience very quickly." Like A29, creative workers in my sample typically focused on extracting from these inputs intangible elements that they could use in their own projects. To illustrate, here is how one architect, A32, responded when I asked her about how she used fiction novels, a personal interest outside of work, in her architectural projects:

> *A32:* Sometimes simple things are described [in a book], like a situation like because it's not very literal, but for example, say there is a situation where someone is meeting a friend in this kind of place because they like it, because they feel that it's intimate enough for them to have that sort of conversation, for example. Or maybe there are

> situations where someone decided to meet someone else on, like, a really crowded place because they want to avoid having a conversation.
> *Interviewer:* What do you take away from reading about situations like this?
> *A32:* So, these kind(s) of things start making you think like, "OK, what is this space going to be used for? Is (it) to have conversations? Is it like a table that is quite like (a) round small table with the seats quite close together? Or is it like a more of a performance hall where it's empty and people are just coming and going or like big crowds go there?"

As A32 described above, creative workers typically extracted, from books and other inputs outside the domain, abstract concepts that could provide them with a theme and "make them think" about the space along those lines. Sometimes, this theme could be based on one's own emotional reaction to the input. Other times, it is one's subjective interpretation of inputs. Architect A37, director of an award-winning architectural practice, described drawing from the work of the artist Roland Kiesel by extracting subjective interpretations of the artist's work to develop a structure to house a fashion photography exhibition:

> He makes these objects which feel almost Aboriginal, and then he translates those the sort of the way that it creates the different colors on the block into a painting. […] So, it helps to break up the space really beautifully. And that was the one image that we kept going back to in terms of inspiring this exhibition (A37, company website).

During our discussion, he confirmed that what he extracted from these paintings was the notion of being in "continuous flux," which he felt applied to fashion and, thus, used as a theme for the exhibition structure. This was summarized on his company website:

> The design of the exhibition takes the notion of fashion being in continual flux and the view that fashion photography is about establishing a narrative that can be seen as a reflection of the world. This is manifested in the spatial journey, taking cues from the genres to provide different ways to view and experience the photography.

Interestingly, he and other architects confirmed that these interpretations were not objective at all, and that someone else may extract an entirely different element from the same input based on their own interpretations. As A35 said, "And it's different [across people] what I'm interested in might be one layer. What you're interested in might be another layer." He explained this further by comparing the experience to viewing a Mark Rothko painting: "From (a) distance, it might look like a block of one color, like black. But when you

get up close to it, you start to see actually it's been made not just from a block, a single block of one color, but from multiple boxes to get this density of color." Creative workers could then draw from any of those "layers" and use their experiences, interpretations, and emotions to build up their own ideas.

Emerging ideas through reincarnation. After extracting intangible elements from inputs outside the domain, "… the next step is to visualize that, because that actually takes that idea and makes it tangible" (A34). In other words, the next step involves taking something abstract like an interpretation or emotion and reincarnating it within the domain of architecture by giving it a new physical form. For example, in the opening example of illustrating the practice of idea translation, A30 and his associates had to manifest the notion of transient fragility that he derived from the book *The Invisible Cities* into an architectural installation. He described this process below:

> So, we were, like, creating the symbolism between the shapes that we were making. They were, like, balloons, inflated balloons. They were black and floating. And we were, like, using these as a symbol to talk about the future of Dubai because the balloons were the oil. They were, like, growing from the desert. And then they were creating this narrative of, like, that this fragile city that was floating in the air. You could cut the strings that were connecting these balloons to the ground, and the entire city would just fly away.

Creative workers typically reincarnated ideas using tools and techniques specific to the domain. In the case of architecture, this might mean trying out different materials or ways of representing distinct parts of a structure (e.g., doors, windows, floors, ceilings). For example, one architect described a project that he was currently working on that drew inspiration from James Joyce's book *Dubliners*. Specifically, it drew on the notion of sections and seamless transitions between them, much like Joyce's descriptions (according to the architect) of the City of Dublin. He explained how to emerge an idea from this, he was "trying to investigate the technical aspects of how it might happen maybe using concrete. So, I'm actually in the

process of looking for a place to do it. And because (it is) quite messy and also, like, technical" (A28).

This may not happen in one shot, as indicated by A28's description. Indeed, creative workers often had to try out different techniques and materials, and speak to different people, to get it to feel "just right" (A34). However, across several iterations, this could lead to a new structure that represents some intangible insights from an external source of inspiration. This was the case with the fashion photography exhibition center that A37 designed, in which ideas about fluidity and flux from Roland Keisel's artwork were manifested in a unique "spatial journey," through different rooms of the exhibition as summarized on his company's website:

> This is manifested in the spatial journey, taking cues from the genres to provide different ways to view and experience the photography. The sculpted forms and arrangement of walls help to guide people through the space without a strictly defined route, intended to promote a sense of exploration and discovery. Framing views through to adjacent rooms help to blur the lines between the groups, setting up connections that both tie and react against the varying styles and inter-generational photographs in the show.

Ultimately, through this process, creative workers used existing inputs in ways that were, as A33 put it, "… not just abstract, but it almost seems like it's your interpretation of what those things are like. It doesn't seem to be literal in any way." The lack of "literal" use was one way in which creative workers navigated tensions between inspiration and imitation.

Idea Customization

A second way that architects navigated tensions between inspiration and imitation was by customizing inputs, particularly inputs from within the architectural domain to the unique specifications of the project and site that they were working on. During our conversation, Architect A35 explained that one of the things that individuals are taught in architectural school is the typology of buildings and building parts that already exist with the expectation that architects would use these in their own work: "So, it's like any other language, like, you

know, in architecture school, you learn vocabulary through architecture books.… You take pride in trying to hunt down the architecture book, and you find these obscure architects who are doing interesting projects.... But actually, what's important is that you don't memorize ideas. The most important thing is changing them" (A35). He then explained how he used this approach of taking inputs that exist within the architectural domain and changing them, quite successfully, across several projects. To illustrate this approach, he directed me to his website, where I could see the drawings and descriptions of the outdoor space for a house that he developed by drawing elements from existing architectural forms and adapting them into an award-winning outcome that several professional bodies heralded as unique. The following descriptions of the outdoor space were provided on the website:

> The beams above are slightly exposed to create a shallow coffer. Although contemporary in appearance, the filigree relief is reminiscent of Victorian orangeries and traditional conservatories.
>
> Color and polychromy are used as a way to mute the surface articulation of the ceiling and express the separate order of the ceiling coffers, roof lights, and fittings to add richness, depth, and atmosphere.
>
> Working to a limited budget, we proposed to work where possible with "off the shelf" components. Where elements needed to be put together on-site, like blockwork and timber joists, we proposed to put more effort into the design and elaboration of these assemblies to generate a character and atmosphere for the house.

The descriptions above hint at a process of taking a traditional form (e.g., a conservatory) and adapting it to fit the specific circumstances around a single project (e.g., location, lighting, client needs, budgets). A35 explained that this practice allowed him to draw on existing inputs for inspiration without risking imitation. Specifically, he took the idea of a traditional conservatory, a form that exists within the architectural domain, and turned it into what *Architects' Journal* described as "an exploratory garden extension" (Architects' Journal, 2019). Given the focus on taking inputs from within the domain and adapting them to specific circumstances underlying a particular project, I use the *idea customization* label to describe this practice, and I explain customization sub-practices below.

Exploring inputs inside the domain. Although many creative workers described looking to inputs outside the architectural domain and translating them into their domain as a way of drawing inspiration without risking imitation. creative workers also explained that it was extremely common to turn to inputs within architecture, as well as during the creative process. As architect A5 said:

> We look at facades, shapes, and materials that exist in other buildings…. I think there is nothing that can stop you from copying shapes, facades. Because (in) the end, when you think about it, what is architecture? If you think about it as shapes, the shapes you work with exist. The materials you work with exist. You combine shapes; you combine materials. But it's like you use available things, and everybody has access to them.

Sometimes architects "found" these inputs simply by examining buildings around them. As A12 said, "As an architect, you have a huge amount of reference in the built environment." At other times, they engaged more systematically in studying the work of "masters" or prominent architects in the field by reviewing architectural books: "What we have here is quite a wide library of other architects' work, historical buildings, history, landscapes, so sort of a technical library. But we also have a material library which is materials that we, like, we have a pattern book that we use for inspiration. So, we use it all, all the time. There isn't, like, one book" (A11). The architects explained that this practice actually was part of their training, both during their university studies and at firms where they completed apprenticeship-type work contracts in their initial years. For example, A20 said:

> There is a culture where you are taught to use precedents and what that basically means in some cases is that you are given a list of buildings or projects, architects, that are adjacent to the ethos of the studio, of the master of that studio.

This does not mean that architects consider all internal inputs to be equal. For example, Architect A3 said, "I have my favorite architects that are alive, and I would like to be them. I envy them! For example, Kazuyo Sejima, I really admire her and I have her books. Here are my favorites. So, I have her books, and I will see them, and I will study them." For Architect A7, the English architect Edwin Lutyens was an important source of inspiration:

> As I mentioned before, when I worked on that castle project … it directly references the same architect, Edwin Lutyens. It's very much, like, by no means copying the ideas of his work, but certainly taking the spirit of it and put it into different contexts and different timeframes and doing something slightly different with it.

Indeed, the project that A7 ultimately developed was by no means a mere replica, as borne out by the architect receiving an award for the design. In giving A7 this award, one of the judges acknowledged that the project drew "heavily" on Lutyens' work, but that "nonetheless, the effort was painstaking," declaring it to be "an epic work, more evocative for its ruined fantasy viaduct and with a beautiful sense of composition and repose throughout." In the sections that follow, I describe how creative workers drew from inputs from within the domain and turned them into "evocative" new compositions.

Extracting tangible elements. As discussed in the introduction to this practice, customization involved drawing from inputs within a domain. For architects, this involved using structural forms, materials, and techniques used by other architects in their own projects, or what architects referred to as "tangible" elements. Interestingly, architects seldom drew wholesale from one building. Instead, they extracted select elements from a given source of inspiration. Architect A12 explained this with an example:

> A simple example might be the building that I have built and live in has a front that's made of a material called Corten, which is like rusty steel. There is [another creator] who uses Corten…. The material is very interesting because it weathers very beautifully. And the building I've built contextually is next to a church. It's actually between two historic buildings. Corten is contemporary, but it sits happily between historic buildings because it has this older, more worn-out effect. So, even though you're saying you want some of that, you're not using his form.

A2 provided another example of this sub-practice:

> *A2:* One example is for the Bartlett building for 22 Gordon Street, where we spent a lot of time thinking about the external elevations and the articulation of the windows and the proportions of the windows. And we looked at the references of the Georgian townhouses next to it.
> *Interviewer:* How did you use these references?
> *A2:* The elevation, the patterns on the windows, there was a functional requirement for daylight and shade and views in and out of the building, [so] one of the things we were looking at were the Georgian shutters that you see in a lot of Georgian windows, where you get these bits of timber joinery, and we took that idea.

Creative workers made specific decisions about which aspects they would and would not adapt. In the above example, the architect decided to use the elevation and the patterns but to not use timber for this construction. This decision to use structural aspects of an idea, but not the same materials, was similar to the decisions made by several other architects. For example, in the case of the initial example of a conservatory discussed with A35 at the top of this section, the architect in question extracted the structure of a conservatory, but dismissed the materials that traditionally were used to construct conservatories, i.e., glass. Creators made these decisions about aspects of an initial input that they did not appreciate as much as the other aspects. For example, Architect A3 described how she and her colleagues drew from the legendary British architect Zaha Hadid's work, drawing on the shape of her buildings, but not the materials: "In that project, where we used Zaha's curves, we used brick. It's, like, whoa, Zaha never used brick. That's a very good idea actually. So, you're using a nice shape, but you are never using a normal material. You can criticize Zaha's work because it's very expensive what she was proposing. So, you can say, 'OK, I appreciate the design, but I don't appreciate the materials she was using.' " This, as A3 elaborated further, was a first step toward drawing inspiration from a source within the domain without imitating it: "You are not exactly copying. You are drawing from a really good design, but you are using it (in) a contemporary way." The final step actually was thus "using" the extracted elements in a different way. I describe this final sub-practice of customization below.

Emerging ideas through reconfiguration. The final sub-practice in customization involved taking the extracted inputs and reconfiguring them to adapt them to the specific set of circumstances around a project. This was par for the course when it came to balancing inspiration and imitation in the field of architecture, in which, as A3 put it, "I'm going to have a different plot, different size, different family, so even if my plan was to copy, I'm going to end up doing something different. So, I can feel relief that I'm not really copying.

Also, you might do things in another time, or in another context!" In the conservatory example provided by T35 and described in the sections above, this meant adapting to the budget that was available, as well as the natural lighting in the space. To adapt the conservatory to the budget on hand, A35 and his team abandoned glass and decided to "make it out of blocks, very ordinary block work that any builder can buy and use. And so, it keeps the costs down.... And then we were looking at paint as a line, and so paint as a way of color." They also adapted the space to accentuate some of the building's positive features, as described on A35's company website:

> The plant and utility spaces are located in an outhouse in the garden. A wall connects this room back to the main house. The rhythm of the pilasters is continued along this edge, but the wall between drops to acknowledge the lower boundary condition. The pilasters extend beyond the wall to form five exposed columns. This extended wall frames a new garden court with the columns protruding to hold the cross-joisted ceiling structure, which is now fully exposed, forming a new open pergola hung with wisteria to provide shelter and shade.

Sometimes this process involved taking certain tangible elements from existing ideas and using them in a different way in a construction project. A7 explained how her firm used the colors of a drinking glass in different ways in different projects:

> "They have this image of a glass, like, literally a drinking glass that was, like, fruity. Then it had a few colors in it, and they used to put it in every presentation. And you can see different projects it was used differently. Sometimes it was in the paint job. I'm giving you a random example, like a bathroom. And it was how they wanted to treat, like, the door from the bathroom to the bedroom. And sometimes it would be, like, in a landscape design."

At other times, this involved amalgamating inputs from different sources. For example, Architect A13 said it entailed:

> … taking hold of those things you can reorder or refragment them, so taking the best bits of that and perhaps another inspiration and amalgamating them. Taking what's important about it and creating a new variation out of it. [For example], you could take the pictures of three brick buildings and say, why am I drawn to this building, and what details in it are high quality, and can I take the principles of those and create something new rather than copy the entire building?

The notion of taking "what's important" and finding ways of using it along with extracts from other inputs or other original ideas was crucial for emerging new ideas. Architect A33 explained this:

> You look not only at one project; you're then looking at other projects you're looking at because it's vertical and no longer you're going up and you're not going down. You need to have a roof. So, the roof, it's sort of, what other projects are you looking at? So, we looked at the Parthenon, the Pantheon in Rome.... It's not just like a collage of all these things, but it's looking at what those key moments, what those projects created, what their essence is, and trying to distill it and sort of be inspired or reference that.

Each of these techniques could allow architects to use aspects of existing architectural projects that they thought would be useful without imitating them. As A6 summarized:

> There are people that start from computational design and they do funny shapes, funny reiteration of shapes and then they go into the architecture and the way that you live the space, some others, they start from a small element and use exactly the same element to create an original space. Some others, they start from a material inspiration and they move on and challenge the material to get into a specific space configuration.

However, these methods were likely to be successful only if the context, its needs, and opportunity had primacy in the creator's mind. As Architect A29 explained, "Sometimes you fall in love with somebody else's idea and try to make it work within your context, whereas you have to fall in love with your context and adapt your ideas to suit it." The latter, according to creative workers, is more likely to lend itself to a successful balancing act between inspiration and imitation when using ideas within the domain.

The Role of Project Constraints

Up to this point, I have described two sets of borrowing practices through which creative workers navigate tensions between inspiration and imitation when using existing inputs in their projects. What determines which of these two practices creative workers use? Many creative workers explained that exploring ideas outside the domain was a more clear-cut way of navigating the inspiration-imitation tension. And yet, creative workers did not always explore ideas from outside the domain and engage in idea translation. Indeed, customization appeared to be a more common practices, and the creative workers in my

sample provided more examples of ideas customization than translation (see Table 4.2 for a list of cases across both types of practices). So, what leads to the use of both types of borrowing practices? My analysis suggests that project constraints play a critical role in determining which of these two borrowing practices creative workers use. I describe the different categories of constraints that influenced these decisions in the sections below.

Output Constraints. The first category of constraint that determined whether creative workers engaged in idea customization or translation was output constraints. In the literature, output constraints refer to factors that define the end result of the creative process, including constraints on what the output should (not) contain and/or achieve (Rosso, 2014; Acar, Tarakci, & van Knippenberg, 2019). In architecture, output constraints typically were in the form of client desires or standards. These desires typically were a result of something architectural that a client had seen or experienced and wanted the architect to replicate. This constrained what an architect could do and what they can draw from when working on the project. Architect A30, the architect who worked on the *Invisible Cities* project, in which he drew inspiration from the aforementioned book, spoke about output constraints in the form of client desires when he explained why he did not always draw from sources outside the domain as he did with the *Invisible Cities* project:

> *A30:* OK, so that [*Invisible Cities* project] was a very particular project.… You cannot do this sort of design process usually when you work with a client.
> *Interviewer:* What usually happens when you work with a client?
> *A30:* So, clients, they go on Pinterest, and they want to build a staircase, whatever. They just, like, save thousands of images of cool staircases. And they show it to you saying, like, I want this, right?

Often times requests corresponded to recent trends in the industry which clients saw either in actuality or through social media. He went on to explain that in these situations, to please the client and secure their business, the most straightforward option was to build from that input and customize it. "And then you create your own projects out of these inputs. So, in a creative process like this, where you're sort of taking some inputs, getting someone showing

you or that already exists and in some way, and then you sort of recombine it or use it in sort of different ways" (A30). The only option left for architects in these circumstances was to adapt that design in new ways and make it unique to the specific project that were working on. Thus, customization was more likely to take place when creative workers were faced with output constraints.

Process Constraints. The second category of constraint that influenced the type of process that creative workers used was process constraints, which refer to the restrictions that determine the steps to be followed throughout innovation and creativity processes (Liu, Jiang, Shalley, Keem, & Zhou, 2016; Acar etc., 2019). My analysis revealed that architects experienced different levels of process constraints when working on different projects, and as such, this determined whether they looked for inspirations within or outside the domain. In architecture, process constraints entailed the need for upfront communication about what will be built, how much it will cost, and how soon it could be built. Process constraints resulted in creative workers exploring inputs within the domain, and as such, they used an idea customization process to adapt these inputs. As Architect A30 said:

> [I]t's very difficult to find someone that likes that unless they are into art or (they) (are) more open about (these sorts) of creative things. But like, if you are building a house, the client wants to understand how big it is, how much it costs, and how quickly you can build it. So, there is often, like, a level of creativity and that we also almost keep for ourselves. And we reveal it to the people that are interested. But we acknowledge the fact that not everyone is interested in that.

Architect A17 echoed a similar sentiment, explaining that forecasting was easier when working with inputs within the domain: "I think that's been the challenge as well. You're not limited by something that's already represented, like, let's say you present a client in the bedroom. That's what they want. That's what they've seen. They can picture it." This could make it easier to sell a design to a client. On the other hand, it would be challenging to draw from an input outside the domain if creative workers did not have complete autonomy over the process as A17 further explained: "If you present them a sculpture of an artist and then an

image of a denim jacket, and you're like, I'm going to be inspired by these two things. Because they don't know what the end result is … even you don't have a picture in your head." Working with inputs outside the domain was typically possible only when working autonomously or for someone who felt similarly about the ambiguities of the creative process given that often creators could get "lost in translation" (A24) when doing such work. In other situations, creative workers typically had to draw from inputs within the domain and customize them as it was easier to forecast the parameters of the projects including timelines and costs and also communicate what potential outcomes may look like to clients.

Input Constraints. The final category of constraint that determined whether creative workers became engaged in idea translation or idea customization was input constraints. Input constraints include unavailability of resources such as time, human capital, funds, and materials that could be used in the service of creativity and innovation activities (Rosso, 2014; Acar etc., 2019). My analysis revealed that experiencing input constraints typically meant that creative workers were more likely to adopt a customization approach as opposed to a translation approach. Architect A2 explained how time constraints may lead to creative workers adopting a customization approach – taking ideas from within the domain and adapting them:

> If you're doing a competition, and you don't really have time … for example, this short one, we probably used a bit of Pinterest. We wanted to look at something that's glass and translucent, and you look naturally at things that can offer that kind of language.

Architect A3 provided a specific example of a time when she drew from inputs within the domain, preferring those to other potential inputs due to time constraints:

> In my final university project, I was really stuck.… I was thinking in one direction, and I was stuck, and my tutor told me to stop doing what I was doing and do something else. And I only had two months, so I had to do it very quickly, [so] I used a new thing that Herzog & de Meuron had done in the concrete. In the concrete façade that had these pixels. I used those pixels in my project. It changed because the structural engineer told me that it would be better if I made these pixels more vertical.

Interestingly, although input constraints not only necessitated the use of customization, as opposed to translation, certain input constraints – including time, budget, materials, and human capital constraints – also contributed to other sub-practices in customization, making it more likely that creative workers could not use the input as it was, but had to reconfigure it. A35 explained input constraints' role in the ultimate development of the green and pink outdoor space that initially had been based on the idea of a traditional conservatory: "So, rather than trying to make an architectural gesture or reinvent an idea of the space, we go to make a conservatory. And then what becomes interesting is that our budget becomes another layer, and they don't have so much money to make a conservatory. So, we can't make it out of sticks and put them in individual posts and glass because it becomes too expensive." He explained how they had to resort to trying to make it out of blocks:

> And then suddenly, you're making a stick-like building out of blocks. And because you're making a stick-like building out of wood material that starts to have these two layers come on top of each other, they start to contradict each other. And then so you start to have to modify the wall. So, it looks like sticks and then that starts to generate an atmosphere, [and] suddenly the project then is a building that's built from ordinary materials, but starts to look not like what it should be.… It becomes this ambiguous or maybe more complex image, where it's still the idea of a conservatory, but it's made in the picture material of a suburban estate.

Thus, while input constraints also could lead to creative workers preferring customization over translation as a way of balancing inspiration and imitation, much like the other types of constraints discussed in this section, they also could lead to higher levels of customization, as they make it difficult for creative workers to use original versions of ideas directly. Thus, input constraints not only resulted in, but also supported, customization.

Thus, while translation was heralded as a more obvious way of balancing inspiration and imitation, creative workers often used customization, particularly in the face of input, process, and output constraints. Furthermore, it is also important to note that these practices are not mutually exclusive, and that creative workers sometimes used both practices in tandem when working on their creative projects. As Architect A29 said:

> And it's just which way you go about it. And the fun part is that these roads can sometimes intersect. You don't just necessarily have to draw from one direction or the other. You can create hybrid ideas. You can explore both and play with both.

Key Psychological Experiences

As illustrated above, creative workers used two different borrowing practices, translation and customization, to navigate tensions between inspiration and imitation when using existing inputs in creative work. When engaging in translation, creative workers drew from inputs outside the context, developed their own interpretations of these inputs and manifested them using the tools available within their context. However, when engaging in customization, creative workers drew from inputs inside the context, focusing on select aspects of these inputs, and recombined them within their own projects. As illustrated by the quotes in prior sections, each of these practices allowed creative workers to develop ideas that increasingly became removed from their original inputs as creators progressed through these practices.

Importantly, my findings reveal that these practices also lead to a sense of authorship for creative workers. For example, when explaining why it was important for him to not use an existing input directly, but rather to adapt it or abstract from it in some way, one architect said, "I think it's a search for authorship…. I get gratification from it" (A37). Another architect said that it's about "the ego of the author. You wouldn't want to replicate a building that someone else has built just because that building is an expression of someone else…. I guess generally, you want to progress the craft" (A10). As suggested in the quotations above, such an outcome was of critical importance for creative workers, as it allowed them to feel like they were not merely reproducing what someone else has done and actually were making their own contributions to the field of architecture – "progressing the craft," as A10 put it.

In psychological research, authorship is described as the sense that one is the causal source or originator of an outcome (Campbell, 1999; Graham & Stephens, 1994; Stephens &

Graham, 2000). To be the author of an outcome is to feel like I made it happen. Authorship is distinct from other related psychological concepts, such as ownership (this is mine), because it entails a sense of causal agency (I made this happen). Research suggests that psychological ownership can emerge through three mechanisms — controlling the target, associating with and becoming familiar with the target, and investing the self in the target (Pierce & Jussila, 2011; Pierce, Kostova, & Dirks, 2001, 2003). While creation is a strong and powerful path to psychological ownership, individuals also can experience psychological ownership of a target if they have spent time familiarizing themselves with a target or feel like they can control it (Pierce et al., 2003). However, authorship is likely to emerge through priority, consistency, and exclusivity (Wegner, Sparrow & Winerman, 2004). Individuals are likely to feel like they have willed or authored an action when a thought appears in the consciousness just prior to an action, is consistent with the action, and is not accompanied by salient alternative courses of action. Thoughts occurring with such priority, consistency, and exclusivity, all of which signify causal agency for an action, are unlikely to arise in response to others' actions (Preston & Wegner, 2007). Therefore, individuals are unlikely to experience authorship over the actions and outcomes produced by others in normal circumstances, even if they experience ownership of these actions or outcomes through association or control (Bortolotti & Broome, 2008; Seeger, 2015).

As the quotations from A10 and A37 above demonstrate, authorship emerged from the data as an important experience associated with the two borrowing practices discussed above. Furthermore, my analysis revealed that each practice was associated with different authorship experiences. In this section, I illustrated the relationship between the two types of borrowing practices discussed above, as well as the authorship experiences of creative workers as they engage in each practice.

Idea Translation and Contextual Authorship. As described earlier, idea translation involves drawing intangible elements, such as interpretations and emotions from inputs outside the domain, as well as using tools within the domain to give it form. The primary task for creative workers is to make the connection between an input from outside the domain and their own domain, and finding a way to give new form to concepts that hitherto had been missing from the domain. As Architect A5 said, " … if you use things that are from other fields, you might come up with something completely different. Again, it's about connecting things in a different way because nobody in the past connected things in that particular way." By connecting something from outside the context or domain or architecture to their own context, creative workers felt that they had causal agency to bring something into the architectural context. I describe this as a sense of *contextual authorship*. Architect A33 provided an example of experiencing contextual authorship when he explained how when drawing on the works of the artist Francis Bacon in his own architectural project, he felt like he was bringing a new way of thinking about light to architecture:

> My thesis project was a church. I looked at the work of Francis Bacon to think about light – what reflection means, what direct light means – and you start to create these sort(s) of moments using materials, using openings, using polish to either reflect, refract or give you direct light.… I do feel like it's an addition because this approach to light did not exist in architecture before. So, it adds to the canon [of architecture] at large.

Creative workers explained that this sense of authorship came in part because what they brought to architecture through a process of translation was likely to be exclusive, i.e., it was unlikely that they were doing exactly what their contemporaries and competitors were doing. As Architect A11 said:

> Certainly, it doesn't feel very creative to use inspirations that come from your peers. It's good to know what other offices are doing, but it doesn't feel very creative to use their work as inspiration…. It's about competition also. You don't want to be stealing from your peers. It seems very weak to be repeating what your contemporaries are doing, and how do you make a point of difference even for your clients if you are just going to do the same things that your competitors can do?

Creative workers emphasized that the personal and subjective nature of the idea translation process meant that whatever came out of the other end would be unique to them. This meant that even though the original input was birthed by another, the new output was brought to the context as a result of their "own way of looking at the world," i.e., they could experience a sense of authorship over a way of using the input within the context. As Architect A15 said:

> I usually paint, and I look at things outside my field and I read. And I feel like that's my own way of looking at the world – my observational skill. Therefore, when I am asked to design something, I think it will be personal and, therefore, I will have a sense of authorship…. With this sense of authorship, I'm not anxious about [imitation] because I realized that I am the person that is weaving the idea, and I am the only reference point, and it's very personal.

These quotes illustrate how idea translation was associated with contextual authorship, a sense that one was bringing into the context something that did not exist previously, and which, due to the interpretive nature of the process, was unlikely to have been thought up by another one of their peers or competitors in exactly the same way.

Idea Customization and Temporal Authorship. Unlike idea translation, in which the focus was on finding a way to materialize something from outside the context within the architectural domain, during customization, creative workers focus on taking something that was established within architecture and building something from it. As Architect A10 explained, "So, there are things that are typological…. They are part of the architectural language … columns, arches, pitched roofs…." However, through customization, creative workers focus on moving that concept or typology to the next level by adapting it to fit the specifications of the project at hand. Therefore, the practice of customization was associated with a sense of *temporal authorship*, or a feeling of contributing to a specific idea's journey: "It's like you're continuing the long history of architecture," Architect A25 said. "You're just part of the development throughout history, so it's a little bit like there's some connections to some things, but it's also deliberately new."

Through customization, creative workers were bringing something new to an established idea, challenging its use or giving it depth in some way. As Architect A20 explained, "So, I think it is that it doesn't stop at kind of looking at [an input] and taking it just as a copy-paste…. If you sort of take it and retouch and rework, then you find that it's actually celebrated, and it's something that brings depth to the actual component. So, it has the exact opposite effect!" A15 described it as a process of adding a new chapter to a book, even if you were not writing a whole new book yourself:

> You are the author of something new. It's a new chapter, but I'm not saying that how it looks is completely new or like something that you haven't seen before. I think it's difficult to describe ... [But] it's a sense of authorship.

With temporal authorship, creative workers viewed themselves as part of a longer journey, in which what they brought to an idea through customization potentially could set the stage for another round of idea borrowing and customizing by someone else. As Architect A29 said:

> [E]verything is built off of the back of previous ideas and interpretations. And the previous ideas lead to new ideas. And I'm sure that the work that we do in our lifetime is going to help define, or at least shape in part, the next set of ideas that come. I think that this whole debate of imitation versus creativity, I think it literally boils down to the fact that you have the same building blocks that you can rearrange in different ways. The thing is that you're rearranging these blocks on top of other blocks underneath and so on and so forth.

This notion of contributing to the broader journey of a particular concept was evident in how Architect A33 viewed the process of customizing rococo mirrors: "It's [changing] the volume, the ornamentation, and then looking at current ways of how you would do it, whether you would engage with a young craftsman and let them then design it, that there's no point in sort of putting cherubs all around it. [Asking] what is the new rococo? So, there was this great exhibition (held) at the Cooper Hewitt about rococo and how it's continued changing up until now." By changing different elements of a traditional rococo mirror, such as volume and ornamentation, one potentially could establish a "new rococo" and, thus, be

part of the rococo's journey. Thus, through customization, creative workers felt that although they were using something established within the domain, they were bringing something new to the idea itself, and this could determine how this very concept is used in the future.

4.4 Discussion

Figure 4.2 illustrates how the two different borrowing practices that creative workers use to navigate tensions between inspiration and imitation when using existing inputs (contained in the central shaded area of the figure) unfold. Figure 4.2 also depicts how these practices are associated with different authorship experiences (in the white boxes above the arrows depicting the unfolding practices). Taken together, these paths reveal that creative workers navigate tensions between inspiration and imitation by avoiding the wholesale use of existing inputs and instead focusing on extracting specific elements from existing ideas and building on them in different ways to emerge new ideas. While the first practice entails drawing from inputs outside the domain and giving them new form within the domain, the second practice entails the use of inputs from within the domain and adapting them to move away from initial ideas gradually. Furthermore, the two different practices were associated with different authorship experiences. While the first practice of idea translation was associated with *contextual authorship* derived from bringing unique resources into the domain, the second practice was associated with *temporal authorship*, in which creative workers felt like they were part of and contributing to an idea's broader journey by moving it to the next phase. In other words, even though both practices were focused on using ideas in ways that were not wholesale recreations of the original, different sub-practices within each of these practices led to different psychological experiences – specifically, different types of authorship experiences.

Theoretical Contributions

Taken together, this emergent model and theory offer several implications that challenge and extend existing scholarship. I elaborate on each of these contributions below.

Expanding Our Understanding of the Use of Existing Inputs in Creative Work. Existing literature on creative work is concerned with the implications of using existing inputs in the development of creative ideas, particularly ideas that allow creative workers to diverge from their own knowledge base and expertise (Dugosh et al. 2000, Nijstad, Stroebe, & Lodewijkx, 2002; Dugosh and Paulus 2005, Hargadon & Sutton, 1997; Perttula and Sipilä 2007). This research focused on outlining how inputs can support divergent thinking and creativity, as well as understanding how individuals can access existing inputs from different sources (e.g., Hargadon & Sutton, 1997), attending less to the psychological tensions associated with using existing inputs in creative work. This research highlights that although creative workers recognize the benefits of using existing inputs in their own work, or the draw of inspiration, they also struggle with the drawbacks of using ideas that they did not generate, i.e., the threat of imitation. The process model that surfaced in this paper provides insight into how creative workers navigate the tension outlined in the paper's opening quotations, whereby creative workers are aware of and advised about the benefits of using existing inputs, yet also need to generate ideas that are truly original. Specifically, it demonstrates that this tension leads to different ways of using existing inputs.

This offers important implications for research on the use of existing inputs in creative work. A literature review reveals that scholars typically have considered the use of existing inputs – and inspiration in general – to be effortless, to a point in which individuals have little to no control over what they are inspired by and decide to use in their own work (Dugosh & Paulus, 2005; Thrash & Elliot, 2003). My findings revealed that in navigating the line between inspiration and imitation, creative workers engage in a fairly effortful process of deciding what to extract from a source, what to leave out, and how to use it in developing a

new idea. This insight prompts a reexamination of conceptualizations of idea use and inspiration use as being uncontrollable and effortless (Thrash & Elliot, 2003), arguing instead that the process can be deliberate and effortful.

My findings also emphasize the importance of how creative workers use resources. Creativity resources typically are conceptualized as fixed attributes of contexts (Amabile & Pratt, 2016; Woodman, Sawyer, & Griffin, 1993). While the creators in this study turned to existing inputs, they did not view them as fixed, and did not use them directly. Instead, they extracted tangible or intangible elements, thereby making these inputs usable through their own actions. This implies that in the context of creative work, a resource is not fixed; the same resource can be used over and over again in different ways, in different projects, and it may never get depleted. This is in line with the resourcing perspective (e.g., Feldman, 2004; Sonenshein, 2014), which argues for a shift from viewing resources as stable antecedents to action, toward a reciprocal view of the relationship between actions and resources. Therefore, future research on creativity should examine how different types of inputs and other resources can be used more dynamically within the creative process, focusing on the actions that creative workers take when using them. My findings also show that inputs from within and outside the context can be used for creative work if they are resourced in different ways. Furthermore, using inputs from within the domain can be particularly important in the face of constraints that make it difficult to draw from sources outside the domain. However, this may not preclude one's ability to ultimately produce an idea that is distinct from the source. This insight contrasts with prior research that primarily has emphasized the benefits of using inputs from outside the domain (e.g., Dane, 2010; Mannucci, & Yong, 2018) and has focused little on how inputs from within the domain may be used creatively.

Bridging research on authorship and creativity. More specific to the psychological experiences associated with the tension between inspiration and imitation, and the practices

associated with navigating this tension, the findings from this study, which show that authorship is a key psychological experience associated with the borrowing practices of idea translation and customization, contribute to and extend recent research on the psychology of creativity and the psychological consequences of creative work (Amabile, Barsade, Mueller, & Staw, 2005; Fisher & Barrett, 2018; Khessina, Goncalo, & Krause, 2018). This growing body of work has revealed that creative work can elicit positive and negative psychological consequences, ranging from short-term behavioral consequences (e.g., unethical behavior) to longer-term changes to one's identity and personality. My research investigates the psychological experiences associated with a type of creative process that has not been investigated through this research – a process in which existing inputs are used. The findings from this study suggest that authorship (Campbell, 1999; Graham & Stephens, 1994; Stephens & Graham, 2000) can be an important consideration for creative workers as they develop ideas, and a consequence of certain types of creative practices.

By bridging the literature gaps on authorship and creativity, this study also provides insight into how authorship can be developed over time, even when starting with an existing input. While prior research has suggested that people tend either to experience or not experience authorship over an outcome (e.g., Wegner, Sparrow, & Winerman, 2004), my findings alternatively suggest that authorship of an idea can be experienced either at the outset or over time as an idea is adapted into a new composition, i.e., the degree of authorship that an individual experiences can evolve through the idea development process. Furthermore, in bridging these two previous studies, this study also deepens scholarly understanding about the psychology of authorship by shedding light on different types of authorship experiences. Specifically, by introducing the concepts of contextual authorship and temporal authorship, the findings specify several different ways in which authorship can be experienced during the course of creative work. Thus, this study offers insights into how

and in what way different borrowing practices influence the psychological experiences of creative work.

Reconsidering the Boundaries of an Idea. Although studies of creative work make it clear that the process of developing an idea can be complex and messy, what constitutes an idea is assumed to be stable and clear. Thus, in several earlier studies, researchers focused on surfacing typologies of different types of ideas (Litchfield, Gilson, & Gilson, 2015), and on examining how individuals react to and evaluate different types of ideas (Mueller, Melwani, & Goncalo, 2012; Mueller, Melwani, Loewenstein, & Deal, 2018). In contrast, the findings of this study show that when considering an existing idea within the context of another creative project, the boundary between the original idea used as an input and the idea that ultimately is developed through the creative process becomes blurry, and it is unclear when the old idea ends and the new one begins. Researchers should examine these boundaries between ideas more deeply in future research by investigating other circumstances in which creative workers and others must grapple with boundary blurring with respect to ideas, responses to blurred boundaries around ideas, and reactions to different ways of dealing with blurred idea boundaries. Finally, while my findings in this regard are only suggestive, they indicate that boundary blurring can be beneficial to an idea's progress. Over time, repeated blurring of boundaries may lead to an idea ultimately looking very different from what it was when it started. Future research could investigate further when, how, and to whom these benefits may accrue.

Limitations and Additional Directions for Future Research

This study focuses on one occupation, architecture, and uses descriptions of idea use from architects to develop a model of idea borrowing in creative work. As such, the insights developed in this paper are grounded in my choice to focus on a profession like architecture, which does not have particularly strict prescriptions about idea use, and because both

students of architecture and practicing architects generally are encouraged to study other architects' works, as well as work done outside the domain. Furthermore, architects also emphasized that it is often a matter of pride and prestige for them if their ideas are used as references by others, to the point at which, as architect A10 said, it's actually a good thing for an architect's reputation "when an idea is so great and so well-resolved and so fantastic that people start using it widely.... So, you are only a good architect when you are stripped of your authorship!" While the choice to focus on architecture enabled me to examine the borrowing practices associated with both types of inputs and surface a model that focused on two different borrowing practices, stricter prescriptions around idea use, and differing reputational consequences of having one's ideas used by others, may limit the use of one or both of these practices in other contexts. Future research may look for opportunities to build on the process model of borrowing that surfaced in this study by examining how formal and informal idea-use prescriptions and reputational consequences may influence these practices.

Additionally, some unique characteristics of architects must be acknowledged that potentially limit the transferability of this study's theory (Lincoln & Guba, 1985). Architects typically have strong creative self-identities that are tied to their ability to produce novel ideas, and they take pride in coming up with ideas that are unique to themselves. However, creative workers' identities generally vary, with some having more pragmatic creative identities in which the focus is on problem solving rather than personal expression (Elsbach, 2009; Elsbach & Flynn, 2013). Therefore, how creative workers who have more pragmatic identities experience and navigate these tensions remains an open question. Also, architects often have exclusive control over the design of a project, and in most small-scale construction projects, there is only one lead architect. Having multiple architects responsible for the design and conceptual development of a structure is fairly rare in the field. Thus, an important direction for future research lies in examining how these findings apply to contexts

characterized by group creativity. Such explorations will allow us to determine both similarities and differences across different contexts in building a deeper theoretical understanding of borrowing practices.

4.5 Conclusion

By highlighting how creative workers navigate tensions between inspiration and imitation when using existing inputs, I elaborated a theory on idea borrowing in creative work. In so doing, this research expands our understanding of how people think, act, and feel when drawing on existing inputs in their own creative processes. This study also reveals that to understand why people use different borrowing practices, we need to understand how people experience a sense of causal agency over outputs that are developed. Without understanding the different ways in which people borrow ideas, and the important role that these practices play for people's understanding of their sense of authorship during the creative process, we fail to fully understand how people navigate competing prescriptions for originality and for drawing from existing inputs during creative work.

Tables

Table 2.1 Participant Demographics

Participant Code	Occupational Arrangement	Designation	Professionally Qualified[1]	Gender M/F	Years of Experience
T1	Company	Theater Maker[2]	Yes	M	9
T2	Freelancer	Playwright	Yes	F	5
T3	Freelancer	Theater Maker	Yes	M	4
T4	Company	Artistic Director	Yes	M	13
T5	Freelancer	Theater Maker	Yes	F	8
T6	Freelancer	Theater Maker	Yes	F	3
T7	Company	Theater Maker	Yes	F	5
T8	Freelancer	Theater Maker	Yes	M	8
T9	Company	Theater Maker	Yes	F	5
T10	Company	Theater Maker	Yes	F	13
T11	Freelancer	Playwright	Yes	F	12
T12	Freelancer	Playwright	Yes	F	10
T13	Freelancer	Playwright	Yes	M	18
T14	Freelancer	Playwright	Yes	F	3
T15	Freelancer	Director	Yes	F	10
T16	Company	Director	Yes	M	18
T17	Freelancer	Theater Maker	Yes	F	12
T18	Company	Choreographer	Yes	F	6
T19	Freelancer	Theater Maker	Yes	F	2
T20	Company	Director	Yes	M	32
T21	Company	Theater Maker	Yes	F	1
T22	Company	Theater Maker	Yes	M	2
T23	Company	Director	No	F	11
T24	Company	Director	Yes	M	19
T25	Company	Writer–Director	Yes	F	8
T26	Freelancer	Composer–Director	Yes	M	11
T27	Company	Director	Yes	M	17
T28	Freelance	Director	Yes	M	36
T29	Freelance	Composer–Director	Yes	M	4
T30	Company	Composer–Director	Yes	F	12
T31	Freelance	Choreographer	Yes	M	2
T32	Company	Director	Yes	M	19
T33	Freelance	Playwright	No	F	2
T34	Company	Theater Maker	Yes	F	6
T35	Company	Playwright	Yes	F	5
T36	Freelance	Playwright	Yes	M	9
T37	Freelance	Playwright	No	M	1

T38	Freelance	Playwright	Yes	F	12
T39	Company	Theater Maker	Yes	F	7
T40	Company	Playwright	No	M	3
A1	Company	Architect	Yes	F	6
A2	Company	Associate Partner	Yes	F	11
A3	Company	Architectural Designer	Yes	M	3
A4	Company	Associate Architect	Yes	F	19
A5	Company	Architect	Yes	F	6
A6	Freelance	Architect	Yes	F	3
A7	Company	Partner	Yes	M	13
A8	Company	Associate Partner	Yes	F	12
A9	Company	Architect	Yes	M	6
A10	Company	Associate Architect	Yes	F	9
A11	Company	Architectural Assistant	Yes	M	1
A12	Company	Architectural Assistant	Yes	M	2
A13	Freelance	Architect	Yes	F	3
A14	Freelance	Architect	Yes	M	22
A15	Freelance	Architect	Yes	F	14
A16	Company	Founding Director	Yes	M	9
A17	Company	Founding Director	Yes	F	15
A18	Company	Associate Director	Yes	M	11
A19	Company	Partner	Yes	M	21
A20	Freelance	Architect	Yes	F	18
A21	Company	Associate Architect	Yes	M	9
A22	Freelance	Architect	Yes	M	5
A23	Company	Founding Director	Yes	M	25
A24	Company	Architect	Yes	F	8
A25	Freelance	Architect	Yes	F	17
A26	Freelance	Architect	Yes	M	11
A27	Company	Senior Architect	Yes	M	8
A28	Company	Founding Director	Yes	M	16
A29	Freelance	Architect	Yes	M	3
A30	Company	Architectural Assistant	Yes	M	3

1. In the sample, 94.3 percent completed at least one professional degree in the relevant creative field. The remaining 5.7 percent did not have a professional qualification at the undergraduate or graduate level but received formal training designed to kickstart a creative career in that field (e.g., theater participants completed the Royal Court Introductory Playwrighting program, which was designed to launch the careers of new playwrights).
2. A theater maker or theater practitioner is someone who creates theatrical performances. A theater maker may be a writer, director, dramatist, actor, designer, or a combination of these roles. Those who referred to themselves as theater makers in our sample typically performed a combination of these traditionally separate roles.

Table 2.2 Examples of Stockpiled Ideas

Strategically Stockpiled Ideas	Symbolically Stockpiled Ideas
Seeds An idea inspired by images of people using their phones on public transport (T34) A story arc about family dynamics inspired by an episode of Sopranos (T37) Images of buildings encountered when browsing the internet or when walking around, but were not connected to a specific task or project (A1) Snatches of materials including pink terrazzo tiles that the architect found interesting but had no project to use in at the time (A24)	***Investments*** A theatre project developing a play about heroin and drug abuse which was 70% done and reached the rehearsal stage but didn't get funding (T28) A fully written play about Islamaphobia within the Pakistani community which producers have overlooked (T33) Plans for an aesthetically pleasing but complex tower that was deemed too expensive relative to the function it served (A5) Plans, drawings, and models for a decommissioned university building project (A3)
Ambitions An expensive opera with a large number of actors, singers, dancers and musicians (30) A complicated epic about grief and aliens that involves merging two different themes (T40) An idea for a building with a rotating roof using bamboo sticks which would be sustainable but technologically complex (A3) A mobility integrated school building which requires resources and strong, supportive networks to implement (A21)	***Original prototypes*** Notebooks filled with excerpts from plays that were not included in final scripts (T33) Original scripts for plays that changed quite a lot during the workshopping process and therefore never saw the light of day (T29) Memphis style post-modern house with black metal which was changed during the process of seeking planning permission (A16) Original drawings and plaster model for a castle project with a scalable installation (A22)
Unfinished drafts Few acts of a play about a bicultural individual in Hampshire, a southern England county stalled due to lack of time (T29) A 10-minute piece of a play about sexuality and relationships between 4 lead characters stalled due to difficulties developing the story (T12) Drawings for an underground station stalled due to technology challenges (A15) Plans for a VR integrated art exhibition put on hold to work on pressing projects with tight deadlines (A12)	***Early career experiments*** Restoration comedy ideas developed in the first few years of being a theatre artist (T15) An idea for a post-modernist pornography written when the theatre artist was a student at university (T29) A university dissertation project which integrated modern day cityscape architecture with Central African designs (A30) Childhood drawings for buildings and structures that were based on the principle of caves (T29)

Table 2.3 Data Table for Stockpiling Practices

Strategic Stockpiling	
Saving by withholding selection	**Capturing seeds** T29: The ideas that make it into the list [in] the first category [are] where there is a line or two in my head… For example, I think one idea at the moment is Media Circus. Could you actually present what is happening with the media at the moment in the form of a circus? A24: We have collected loads of material samples to develop our finishes boards. Not all of them were relevant for this project but some were really good for other types of project. We have kept those samples in our material library for future uses. (diary) **Conserving drafts** T12: Yeah, so I had written a short 10-minute piece which was a pretty good 10-minute piece [but] I had to change a lot about it in order to expand it an explore it as a full-length play. I gave it a go, but… I was writing into a black hole. So, I decided to put it away for a long time. A15: [I] developed the plans for a beautiful house, but we didn't have the budget in the end… if another client comes and says they want something like this, maybe I will propose this. **Holding off on ambitions** T40: This idea about fairy tales… it requires two movement people, one director [and] musicians on board. So, under 10 people. And I wouldn't say the aims are small but each fairy tale would be about 10 minutes. So, if we had a week's residency we could develop it. A5: A project which was actually my thesis, where the people of your area can help you design it instead of your designing it yourself… I would pursue this when I have my own practice!
Storing systematically	**Documenting details** T40: This week has been full of storing ideas. I've had quite a few, which I've written on scraps of paper or on a notebook page… I plan on either typing them up—some… have started to be written in a Word document. (diary) A12: A lot of these are quick ideas which I have at the time. So, I record it, put it down on paper. **Creating filing systems** T14: I also have an ideas slate on my computer. It's like 20 pages at the moment of ideas that I would like to develop… it's like a PowerPoint document in landscape and each page has pictures and a paragraph of what the idea is. A18: I do have, everyone has sketchbooks… We also have a digital file that people can start to input into... I've also got a personal sketchbook at my home. **Making ideas accessible** T39: We've got like a little… we call it an "ideas box." It's on a Google drive, so it's a figurative box… I suppose it is quite a safe space because ideas can go in there. A1: I keep these ideas on the company server, because it keeps it safe and it means that I can access it from anywhere. I can access it from New York… If I kept files on my personal computer here, on my desktop, I won't be able to access it from New York. **Creating shorthands** T29: I had some ideas about character monologues I wanted to do relating to various forms of captivity… I wrote down short descriptive titles 'Michael's Trumpet Holder', 'Erlk• _nig in the Iron', 'The King and The Anarchist', and left it at that for written storage. (diary) A12: Each of these ideas is organized in a folder and has a name… I have about 3 hard drives where these are stored, so hopefully there is no fire that will destroy them.
Experiencing attraction	**Experiencing interest and excitement** T31: I was really passionate about the culture in Japan. So, I decided to make a short film about a modern-day Geisha. I'm still really passionate about that. But things haven't kind of aligned for me to do anything about that. A1: This idea is put on hold because of time constraints however I would love to come back to it in the near future and the thought of it makes me excited. (diary) **Seeing potential in an idea**

	T27: Have I rejected an idea? No, no I haven't. I most definitely haven't… Because I think it's got legs. Often, it's about finding the budget and resources to make things happen. A29: Because there is a lot of potential. A lot that you can develop and expand... I know what 10 percent of it will look like. I would like to see other inputs." **Thinking repeatedly about an idea** T29: I find myself thinking about them reasonably often. Part of the reason I keep them on the list is because I find myself going through those notebooks and thinking, oh that's interesting! A20: There's always projects that are held in terms of they would be so cool to do but there's no time now. I think it's natural for creatives to incubate those ideas in their head all the time... you can't stop these ideas from being there all the time.
Symbolic Stockpiling	
Saving by withholding rejection	**Holding on to investments** T33: I think this idea of the first play which is about Islamophobia in the Pakistani community. And this is a play that is done. Nobody wants to produce it… But there is something about that play… A3: We were trying to do something really difficult [but] we couldn't achieve what the client wanted within what the borrower would allow. And that decision wasn't mine. It was when someone who was above me went guys it's over. You have been working on this for a year and a half … you spent so much of your time, not just 8AM – 7PM [it] is 24X7. And in that case, it's just in the archive. **Securing original prototypes** T29: The creative process is a process of trial and error… if you were drawing a map of that, a cognitive map rather than a geographical map, you would sort of see a node which would suddenly have lots of lines spiraling off of it… [I keep] a record of that. A22: … a way of doing an idea. In relation to the castle project that we were just talking about. I think you might have seen it, but there is a big [original] installation which people can climb inside. And there's a set of drawings and a plaster model. **Retaining early career experiments** T29: The extreme end of that is the postmodernist pornography. And that was when I was a student. As I student I used to think that sort of extreme and also slightly dirty thing is doubtlessly hilarious. A3: So, the idea of my earlier thesis. I designed an investment bank merged with a sports arena in China.
Storing emblematically	**Preserving physical manifestations** T35: I think there's a couple of plays that I've written that haven't ever really gone into production. And those ideas are physically on the top drawer. A12: There was one project which we had in our office which we were working on for, I want to say six months… we found that the building we had planned to demolish at the time was grade listed… But you don't really get rid of anything, it's there in archives **Selectively displaying fragments** A25: Sketches for things are different to collecting precedents… you scan them. Then you can throw away the paper. A5: They stay, some of them I even keep in my portfolio. And your portfolio, it's who you are. It's physical. It's like a book, its either printed or it's just a PDF on screen which summarizes your work. **Housing details in deep storage** T29: The folder that we are talking about, it's called "sketches that should never see the light of day." I don't use it for plays weirdly. There's an improvised play in it which when I tried it in a workshop version it didn't quite work. A30: I keep my old sketchbooks… But I don't [look at them] often because my sketchbooks are in Cyprus. Whenever I go back [at] Christmas I take the filled-in ones and I store [them].
Experiencing attachment	**Experiencing affection** T29: Even if it's a "junk" idea… it's [still] my baby.

	A25: I know that there are lots of architects who keep all their sketchbooks and everything is so precious **Desiring to keep ideas close** T30: A creative idea I would probably get quite protective about. I would rather [hold it]. A6: I think there is a comfort in knowing they are not gone. **Experiencing or anticipating anxiety at the prospect of discarding ideas** T34: On the one hand, they are just there and I don't really think about it. I don't necessarily need to work on them … I just don't want to lose them. A23: I was joking with the guys when we moved, I wish I had the guts to tell the van driver who had a whole van full of stuff, which was old models, books, files, and sketches that we can't get rid of. [But] we just can't physically bring ourselves to do it.
Synchronizing Project Streams	
Matching	**Deploying ideas against opportunities** T36: So, for example, the hacker thing, yesterday I was in conversation with some people at [a theatre], and we were brainstorming I suppose, and I kinda thought, oh this idea would come in useful now, finally, but I've had this idea for several years… The creative skill is about deploying an idea at the right time, for the right function. A2: So, we had this great idea for rotating them as the roof. And it was a super great idea and there were fantastic sketches! But in the end, the client didn't want it... But the same concept was used later on. It was shaped in a different way, in other environments. **Releasing ideas with trends change** T29: There are a couple of plays on [my] list… I think it really makes sense in the [current] context. One piece is about invigilating school exams and the way we examine children because of what we think they should ideally be like and how that's changing now in society. And that play I want to write fairly quickly. And that's me being fairly strategic A21: I guess in architecture what I'm realizing is there are trends ... But now green building is a trend, so green roofs and green terraces. So, you might have pitched an idea for a green terrace, the client did not like it, but [now] you can use the idea. **Revisiting ideas when circumstances improve** T32: The first time that I felt like [idea] was a relevant play I think it was 10 years ago the first time… the seeds of the ideas were there. I was the assistant director at the Young Vic and I also did some street theatre. Forward 10 years later… When I finally materialized it I not only achieved my vision but it was nourished by how I had evolved. T29: {A] director that I know who is in his sixties… said because he has now reached a point where people will come to him and say we now want you to do a show, doesn't really matter what the show is, I'm doing all the shows I wanted to do in my twenties.
Elaborating	**Overcoming creative blocks** T40: It might not necessarily be the same idea, but it could always trigger something. T21: Everything becomes part of a box from where you can have inspiration. Everything becomes useful. **Adding layers to other ideas** T40: Yes, I read two treatments this week, because I had a new idea which felt a little empty and wanted to take elements of those stories and put it in this new one. One of the treatments, I decided to use wholly and created a story-within-a-story aspect to this idea. With one of the others, I only took a small portion of the treatment. (diary) A15: And when I was developing this project I had some ideas that I didn't use in that project... It was related to fragmenting… I still had it in my mind that I would like to use it later. I ended up using them in a competition later. **Pivoting in process** T22: [I]t's in the last one or two weeks that the work [for a play] gets done… [If] you have like a collection of ideas that you can pull out… you're not starting on a blank slate. A27: Having these ideas and the basket of things has allowed me to help lots of people here… It's more about putting these things together to solve a problem **Collaging ideas together**

	T25: And what I tend to do in my creative journal is that I collect things and start cutting and pasting them over each other. And it created sort of a weird relationship between ideas. So, this, is an on-going way for me to create instead of it being in stops and starts. T34: On the one hand a lot of the plays I have made are based on snatches of material I've come up with. So, in some sense [stockpiling ideas] builds the play.
Structuring	**Focusing on high priority ideas** T26: There have been several ideas which I have had to stop working on in order to work on ideas of higher priority... The Chinese-American opera project will remain at the back of my mind as a subject I'd like to explore. (diary) A1: [L]ack of time and priorities. Recent days, whenever I have an idea, I talk about it with a friend or my partner and then I keep saying: 'I will do this, when I finish with [this big project] so this is some sort of an indication that the idea is on hold. (diary) **Scheduling time to revisit stockpiles** T36: I have recently just submitted a play for a competition. So, I can put it aside for the moment… I hope to extend a short play that I wrote a few years ago. I think now would be the right time. (diary) A16: I have an idea of how I want to execute our portfolio of work and how that is published. It's a long-term project so it will start in February next year. (diary) **Taking "productive" breaks** T26: In all cases it happens to be that I thought about these ideas as a productive form of distraction. [For example] I had downloaded a few albums the previous week as part of my research into dance music and hiphop, so I listened to them again while travelling. (diary) A1: I have several ideas on hold (mentioned above) which I revisit every now and then when I stumble upon something that reminds me of these ideas. (diary)
Dissimulating discontinuities	
Disentangling	**Separating ideas from outcomes** T12: I think it's good to take things as a whole. [Initially] I was only mapping my success based on what was being produced [but then] you're just writing based on what other people want from you. And then you're going to start running dry on ideas. T29: [It's about] saying just because you didn't choose it, it doesn't mean it was bad… you know when people say "I think this idea might be stupid but…" instead you can stop saying that and just say "I've had an idea." **Justifying investments in ideas** A6: Maybe their value is only in me doing them to get my hands dirty. I keep them mainly to justify the amount of effort I have put in. A23: I just feel it's on the shelf, its catalogued. It's something. It is a project. So, it's almost like the investment we made, its actually physically realized. The time that we invested is not totally wasted! **Feeling free to experiment** T24: You dream ideas and you think everything could come to fruition until you start to write. Until you research extensively a particular culture or a person or a job. It's really difficult, but that's the process. A30: I feel like with architecture its quite hard, because you might have a really good idea but your client has a different agenda. So, you have to just put the idea to the side. In architecture, you have to always be prepared to [pivot].
Distancing	**Passing on responsibility for decisions** T40: I've never fully erased them. I haven't looked at them since November, but I'm able to talk to you about them today. So, I don't have to physically look at them. A23: Sometimes holding an idea is just about hanging onto it. Sometimes you've worked very hard on developing an idea in a certain way. But it's really not working or someone else tells you that it's not working. But it's really painful to throw... So, you just keep it to one side. **Avoiding the pain of losing ideas** T12: I think writers find it quite difficult to get rid of their ideas.

	A22: Usually the things that I've spent a lot of time on, and gone through a 1000 iterations, it's really hard to let go. **Delaying decisions** T1 Having tried this week to 'unload' some of my ideas means that I've had to through lots of my old ideas… It's like opening an old favourite book only to realize the memory of the book was better than the original story. (diary) A8: I am a weird hoarder, I like to hoard things and I let them go. My character is very ambivalent. I think I have a tendency to archive and collect. But I like living light and being very minimal. I think as I get older I want to have fewer material things.
Constructing	**Evidencing creativity and productivity** T26: [I] feel very productive, as I clearly spend a lot of time playing with ideas though often don't have anything tangible to show for it. (diary) A13: With every competition project that we do, we post it on our website because at the end of our day it's our work and we are proud of it… it's really encouraging for people to see that despite winning or losing, we did this amount of work, and we did it to such a high level. **Showcasing variety** T29: There is a part of me that is wondering whether they are there to prove that you were there, that you did the learning thing. A10: Once when I was in Italy for a few months I was working on the renovation of the interiors of one apartment. [But] the client just decided to not follow anything... So, I kept the idea in my portfolio [to] prove that I worked on different things, a variety of projects. **Demonstrating ambition and risk-taking** T1: I think artists have a responsibility that is to actually question the society in which he or she is and that is through challenging what is already there, what is already established. And trying to shine is [doing] what is already there. A15: I think if you try to do something very experimental or very new or risky, it shows your ambition… a belief that you could do something different. **Surfacing growth** T12: It also gives me a sense of achievement reading something you've written years ago and seeing how you have developed… you feel like you can tackle a particularly difficult project. A22: I often look back at projects that I did two years ago or five years ago and go "god what were you thinking. That's incredibly naïve" … I think it's reassuring to know that you've moved on or that you have progressed.
Projecting Possibilities	
Anticipating	**Envisioning working on new ideas** T40: I dreamcast as well. For example, there is this script that I refer to as my Viola Davis-Meryl Streep buddy comedy. So, if I'm talking to anyone, that's how I will talk about it. A20: I think you are allowed to dream about them. You are allowed to dream that they can come true one day. It's wishful thinking and it's like something could happen someday. **Accelerating project completion** T14: There's usually some things that I need to do before I can get to the page. So, I'll look at my board… that gold silver bronze A20: There's another site, it's kind of an abandoned site. The owners are looking for things to do with that. and I've been meaning to contact them, but I'm holding off [till I complete] things on my plate. **Planning out new projects** T36: I stored my ideas on the note section of my phone. If the idea is solid enough I keep adding to the notes making them more detailed. (diary) A12: Currently right now I want to start working on some of them. Certainly not all of them, but I've looked into these folders and said, why not give it a go now?
Cultivating	**Attuning to information** T14: But in advance of doing that course I went to Vietnam for two weeks with the British Council. And I gathered a lot of research and gems and I knew that that world was really resonating with me and the next piece of work I want to make.

	A1: For example, I came across some images on one Instagram account last night which I found inspiring and immediately thought of one of the ideas I have. I saved those images to my Instagram profile. I also searched for similar accounts and followed them. (diary) **Cultivating networks** T9: You come up with the idea first. So many of my friends and colleagues, they start with an idea and they say, "Who wants to try this idea with me?" And if you want to and you can, you say, "yeah," and you start working on it. A20: It's important [to hold these ideas] because you can find common ground with people. With some people nothing happens, but with others something might spark [and] something about that little project starts becoming more prominent. **Sharpening and developing new skills** T26: I didn't spend any time consciously developing any new ideas. Though as it happens, I did some reading around [an idea]. (diary) A3: So, the idea of my earlier thesis. I designed an investment bank merged with a sports arena in China. And I don't think I have the knowledge to design it. But I can spend my time in between reading something that is related to that.
Centering	**Abstracting themes across ideas** T12: Some of them are manifestations of lifelong themes. They are themes that keep coming up… It helps you that way in seeing which themes you're definitely obsessed with. A22: I think for me particularly, the projects all have a consistent theme. Like a really big umbrella theme around heritage and conservation and how to progress it. **Reconnecting with personal interests and styles** T37: If you look at those [stockpiled] ideas, I guess they would tell you a lot about me. A11: [H]alf way through my final year when I went back through my first-year portfolio… I genuinely felt like I had muddied a lot of my ideas by the time I got to my third year. So, looking at these ideas I think helped me refocus on what I think worked for me. **Countering external influences** T38: It's not just about keeping it because I will go and use it… its partly just about [looking through] and going, ahhh I see where I've come from. It's just so you can see [yourself]. A30: I think it's really important to look at ideas form your past… [otherwise] it's really hard to see what your interests are. Because that represents who you are. If you don't see your past, you're just doing things that other people tell you.
Guideposting	**Contextualizing past decisions** T34: It's nice to be able to go back sometimes and just think about what you were thinking about at a certain time… you remember exactly why you thought of that or where you were. A22: I just find it to be a very useful archive of everything I have done [and] occasionally to go back through and figure out what I was thinking about at a particular time. **Holding up exemplars** T29 - It may be that one day I want to revisit that because as I explained it is possible to become calcified over time and then you can look at old ideas and go "I used to think that this was possible, what changed?" and then actually have to challenge myself. A25: [I]t's a nice way to see a design development visually. You can trace a sequence, you can see a design developing… It could be interesting to see how the design for a space developed comparatively to the time that it takes. **Guarding against mistakes** T29: I find it useful occasionally to go back and say, "This is something you pursued and this is a mistake you made," because sometimes, I can go back and remind myself that this was something I focused on and remember why it didn't work. A8: I hold onto the things that have failed and I talk about the things that have failed... you look at a failed project and think, "Remember, this didn't work there." We must learn from that because we never managed to make this work.

Table 4.1: Participant Demographics

Participant Code	Occupational Arrangement	Designation	Professionally Qualified[1]	Gender M/F	Years of Experience
A1	Company	Associate Architect	Yes	F	19
A2	Company	Associate Director	Yes	M	11
A3	Freelancer	Architect	Yes	F	14
A4	Company	Architect	Yes	M	6
A5	Company	Architect	Yes	F	6
A6	Company	Associate Partner	Yes	F	11
A7	Freelancer	Architect	Yes	M	5
A8	Company	Founding Director	Yes	M	15
A9	Company	Architectural Assistant	Yes	M	3
A10	Company	Associate Partner	Yes	F	12
A11	Company	Founding Director	Yes	M	25
A12	Freelance	Architect	Yes	M	22
A13	Company	Senior Architect	Yes	M	8
A14	Company	Founding Director	Yes	M	9
A15	Freelance	Architect	Yes	M	3
A16	Company	Director	Yes	M	18
A17	Company	Architect	Yes	F	8
A18	Company	Partner	Yes	M	21
A19	Company	Architectural Designer	Yes	M	3
A20	Freelance	Architect	Yes	F	18
A21	Freelance	Architect	Yes	F	3
A22	Company	Founding Partner	Yes	F	15
A23	Company	Architectural Designer	No	F	6
A24	Freelance	Architect	Yes	F	1
A25	Company	Senior Associate	Yes	F	6
A26	Company	Partner	Yes	M	15
A27	Company	Director	Yes	M	12
A28	Freelance	Architect	Yes	M	8
A29	Company	Architect	Yes	M	10
A30	Company	Director	Yes	M	12
A31	Company	Founding Director	Yes	M	30
A32	Company	Senior Designer	Yes	F	3
A33	Freelance	Architect	No	M	11
A34	Company	Architect	Yes	M	14
A35	Company	Architect	Yes	M	18
A36	Company	Architect	Yes	M	17
A37	Company	Founding Director	Yes	M	9
A38	Company	Director	Yes	F	13

Table 4.2: Summary of Idea Borrowing Cases

Case	Informants and Data Sources	Case Overview
		Translation Cases
1	Architect A2 Interview Company Website Article in Trade Publication	A project for creating spaces for artistic studios. Inspiration for the layout of the studios came from historic Cabinets of Curiosity, which collected seemingly unrelated artefacts that defied categorization.
2	Architect A8 Interview	Designs for a tourist information center. Inspiration for the project came from a poem by Tupac Shakur about a rose that grew out of a crack in the concrete.
	Architect A8 Interview	Project for an administrative building in the Middle East. Inspiration for the external façade came from rock formations in the surrounding desert.
4	Architect A15 Interview	Designs for a cenotaph for the queen. The project built on the story of Snow White, specifically from the quote "magic mirror in my hand" to reflect the role of the queen in the cenotaph.
5	Architect A17 Interview	Designs for an eclectic hotel in the countryside. Inspiration for the door handles in the hotel came from scenes in the movie Toy Story.
6	Architect A17 Interview	Designs for an eclectic hotel in the countryside. Parts of the interiors, including the wardrobes were inspired by the work of the sculptor Brancusi.
7	Architect A24 Interview Personal Portfolio	Early designs for a fabric warehouse using linen and the interplay between heavy and light materials in the fabric linen as inspiration for materials used in the design.
8	Architect A28 Interview	Early designs for a set of buildings developed using inspiration from James Joyce's descriptions of movement and interactions in the city of Dublin to determine placement and connections between rooms.
9	Architect A29 Interview Personal Portfolio	Designs for a building to be used by a cult for a digital detoxifying program. The design of the interiors consisted of a set of sleep pods which was drew from a series of sculptures by Romanian sculptor Brancusi titled Bird in Space (L'Oiseau dans l'espace).
10	Architect 31 Interview Company Website	Development of an architectural installation in Dubai. The design which ultimately consisted of 50 black balloons anchored by was conceptualized as a final chapter for the book

	News Articles	Invisible Cities by Italo Calvino which was an important source of inspiration for the design.
11	Architect A33 Interview	A thesis project of a church building. Work by the artist Francis Bacon was used as inspiration for the placement of altars.
12	Architect A35 Interview	A residential project which was constructed with a giant staircase as a central element of the design. This concept was inspired by landscapes consisting of hills with houses on top of hills.
13	Architect A37 Interview Company Website	Designs for a fashion exhibition in Hong Kong. The lead architect used the work of German artist Roland Keisel which uses striped colours as inspiration for designing the placement and connection between different sections of the exhibition.
		Customization Cases
14	Architect A2 Interview Article in Trade Publication	A project for a university building, specifically for the university's architecture department. The designs featured 'shop front' windows to display student work which was inspired by the shuttered window designs from Georgian townhouses.
15	Architect A3 Interview	Design for an architectural competition. Parts of the submission drew from the architect Kazuyo Sejima's designs from architectural books.
16	Architect A3 Interview	A competition submission featuring prominent curves in the facade inspired by the architect Zaha Hadid's work.
17	Architect A3 Interview	Designs for a university project which used pixelated facades drawn from the architect Herzon de Meuron's work.
18	Architect A7 Interview Company Website Award Announcement	A set of award-winning plans for a tower that would be constructed above the existing façade of Castle Drogo. The plans were developed by drawing on both the architecture of the original castle building as well as other projects developed by the architect Edwin Lutyens.
19	Architect A10 Interview	A residential project which was developed using designs from different brickwork buildings in Chelsea as reference.
20	Architect A11 Interview Company Website	A series of retail units designed specifically to attract independent operators rather than large chains. The designs drew on construction techniques used in commercial buildings of the early 20th century as inspiration for the upper façade.
21	Architect A12 Interview	Designs for a residential property. A key material used for the exteriors was Corten,

		which was inspired by the construction of an existing building.
22	Architect A14 Interview	A competition submission with designs for a café. The design drew on space utilization techniques in designs for Japanese tea houses.
23	Architect 20 Interview Personal Portfolio	Designs for a small summer house in Greece by drawing from Japanese and Australian architecture, including the architecture of cattle sheds and developing it using sustainable materials and techniques.
24	Architect 24 Interview	Designs for a residential project in Belfast. The designs built on traditional architecture in the area and used them as inspiration for the façade.
25	Architect A25 Interview	A project for designing an administrative building in the Swedish capital Stockholm. The design that was developed for the project drew inspiration from church towers in Sweden.
26	Architect A31 Interview Company Website	A conversion project to transform an old granary into an art gallery. The project used prison construction techniques to design secure walls and display areas within the building.
27	Architect A33 Interview	A design project focused on the interiors of a building. The design drew from traditional rococo to develop different fittings.
28	Architect A33 Interview	A project to develop a folly in Portugal. The architect used ancient networked steps from Rajasthan as the design prompt for the structure.
29	Architect A34 Interview	Designs for a cultural heritage center in London. The design drew from different architectural traditions in Africa and combined them to develop the overall concept for the building.
30	Architect A35 Interview Award Submission	A set of award-winning plans for a house extension project which used designs of Victorian conservatories as a reference with alternate materials and colour palettes.
31	Architect A37 Interview Planning Document	A housing development project which drew from the brickwork patterns and materials from designs developed by a Swiss firm for the external façade.
32	Architect A37 Interview	Designs for a new construction school in the Olympic Park in London which used designs from the Ricola factory building as inspiration for the materiality of the new structure.

Table 4.3: Data Table for Idea Borrowing Practices

Idea Translation	
Exploring inputs outside the domain	**Exploring inputs in everyday life** A24: Creativity in architecture is taking inspiration from everyday life, things you enjoy, music and just understanding how architecture can fit into so many other disciplines. A17: We have a client who came to us and it was like, oh, last week I watched Toy Story with my son and there's a door handle, apparently, that's like amazing. And he was like, I want to use this door handle to do the shape of the bomb. **Exploring inputs in the midst of unique circumstances** A36: : We took a year off and we travelled around India and Malaysia and Sri Lanka. A37: You always using something that you've experienced. And at least that's the way that I think of it, because I travel and I and I see things. And then when I come back to the studio and I design. **Looking for ideas when pursuing interests** A32: Yeah, I mean, reading is also something, but it's quite personal because I like reading like fiction. So, you know, in some books you might find things that are interesting and you keep them. A8: I used to read poetry when I was younger, I read this poem about a rose that grew from concrete. We were given a task of building like a tourist information center. And, for some reason that poem came into my head. So, we first devised the tourist information center to be in the form of a rose that grew from concrete. So that is an example of a time when, from a poem, I made something physical that reflected the ideas in that poem. **Looking for inputs in other occupational domains** A11: I would be comfortable getting inspired by artists who are exploring spatial ideas about light and texture and colour, perception and experience. And they have quite a fresh, clean, strong point of view. Because they are not worried about hinges and door handles and pipes. They are also in a different league A24: Looking into other worlds, for example, I recently completed a project on linen and probably thinking like, what the hell has them got to do with architecture? I just like exploring, like, such key words, like opened up like a whole new world of like the way textile and architecture, what I think drawing inspiration from different disciplines.
Extracting intangible elements	**Coming up with subjective interpretations** A15: We used a quote from magic mirror in my hand, who is the fairest. And it was just a quote which triggered an idea. It was for a cenotaph for the queen. The connection was that the queen is constructed through the individuals who surround her. The state and the crown and all these things have a sense of exaggerated self. They look at the mirror, they take selfies. And that's how we use this quotes to say here's our project. A29: So, I started to look through a Romanian sculptures sculpting porcelain. He had a lovely series on movement and he had the sculpture… But just by looking at the reflections and the courage that it had, it just brought me in to a point where I thought, oh, wow, this is a feeling I'd like to have in my project, a feeling of flow, of multilayeredness, of having something that is somewhat of a journey to go through. **Focusing on personal reactions** A29: Abstract art is a medium that transmits a different feeling and a different thought to every other person that's looking at it based on the sum of experiences that has come to their life. I might look at a painting differently than you do differently than 10 people standing in a room. It's going to give me something different. [It's] going to provoke a reaction that's unique in me when I find out more about how I feel or how I emote or how I relate to something. A34: It's very difficult to do something without knowing experientially the effect it can have on you, so often you draw from it, but you not only physically draw, you figuratively draw from things that you've experienced, whether it's trips or visits. **Focusing on emotions**

	A29: And I find that in abstract art, that kind of makes you look within and it has the ability to transmit emotion and. Puts you in a state of experience very quickly. It helps to look at that to kind of get your head together... And so, you're looking for something that's going to be associated to that feeling when you see something and that that image in turn gets translated into either a positive or a negative affirmation of that feeling. A34: I think it's a very fundamentally different creative process, whereas as an artist, you are perhaps absorbing things from the world and responding to your emotional reaction to it or, you know, or providing a political response to something.
Emerging ideas through reincarnation	**Experimenting with architectural materials** A34: The next one was about tactile or tactility, might try to represent materials authentically so you could see how they were made and ideally sense that they had been or see the touch of a hand. I mean, it's really interesting because like, for example, if you look at the rough texture on the wall here, like, you know, now I'm engaging with lots of different manufacturers who might, you know different classes of materials. A28: It's quite like choosing one who and see how that book challenges me. One specific reading, trying to manifest the book in a building that was something that I already did and it was quite challenging. Or a song or a book and how that becomes a building. How certain aspects of it will help define how many rooms you will have in the building… And it was studying the concrete, how we could do it. **Trying out different tools and techniques** A29: So, I then decided, OK, so what does that mean architecturally? OK, so I want my space not to be a series of rooms that you walk in and out of it, but a corridor in itself, that is the rooms that you kind of flow through and the logical progression of the spaces that make sense with that flow. And there you have something that was born from a feeling that you try to contextualize within your own with your own design tools. For architecture, you have to think about heights with light, width, height, orientation. You have to use the tools that are essentially native to your design process. And these are the base tools. A29: Members of the cult rest in minimalistic cubicles with the sole intention of sleep. The member progresses past each bunk with each day in the cult [Archival] A2: [We] created what we called a “cabinet of curiosities” for the Bartlett which was referenced a bit from the John Soane museum. A2: Along its western elevation the new façade is articulated with orange balconies, and attached to the eastern elevation is the Gantry, a gridded structure originally designed to house ventilation kit for the broadcasting equipment on the building’s exterior. This has been repurposed as a ‘21st century cabinet of curiosities’, which will soon see it populated with small studio-sheds. [Archival]
Experiencing contextual authorship	**Bringing in resources that do not exist the context** A5: I would be super comfortable taking ideas from other fields. Because when you use things that exist in your field only, there is nothing innovative. A7: It’s something unexpected [in architecture]. In a way not everything needs to be like that, but I think the ultimate goal. Maybe it’s the same as writing a paper. As an author, I’m sure you feel the need to contribute to knowledge with a new insight. **Offering resources that are unique to the self** A14: You know you have this subjective view of an object. And I sort of think that it manifests itself in the object; I think the attraction, the thing that the viewer is drawn towards is an echo of the uniqueness that comes from the designer. A29: It also it gives me that sense of that is in a way unique to me. So I'm going with something that is at my core that I get to learn about through the process of doing this. And it's extremely interesting to me because it's kind of like a journey of self-discovery as you're going through it. The first is your interpreting, your own feeling and you're running with it. The second is you're looking at somebody at the end of their journey from feeling to end result, and then you're trying to interpret the feeling there and take it on. **Offering resources that are different from peers**

	A2: So a practical point with reference your peers, you don't want to be doing a competition and referencing somebody who might be your competitors I suppose. In case they are in the competition as well! A10: Because you in a position of competition, individual expressions you are literally competing with individual architects. Literally competing. If there is a project, the library for Calgary for example, you're going to have these people be a part of that competition. This is a very insular world.
Idea Customization	
Exploring inputs inside the domain	**Looking for ideas in the built environment** A10: For this project that we are doing, we have been doing a lot of brick. And we have just been taking photos of all the brick work in Chelsea. Because terracotta, and the project is in London and its near Chelsea so we are trying to find examples around. A11: On the office project that we did, we looked at other examples of recent office buildings as a way of providing a 3D façade. And we actually referenced those in the public consultation that we had where we showed, these are our inspirational projects, this will give you an atmosphere of what we would do. A11: Our architectural inspiration was the elegant commercial buildings of the early twentieth century. These buildings explored the mechanization and mass production of elements of architecture without overlooking proportion, detail and the value of three-dimensional relief. [Archival] **Studying the works of masters** A9: For me the architect Kisho Kurakawa is a Japanese architect. I draw a lot of inspiration from him. Because of the way he has taken culture and embodied it into his architecture. A10: I think there is a degree of acceptance on borrowing from historical precedents. The romans really did know how to use a brick. And because they were developed in a completely different time frame, there is so much time embedded, you just can't reinvent certain things. You just have to borrow them. No one is going to raise their eyebrows if we said we were looking at the way romans build pavements. **Looking at recent trends** A13: There's digital inspirations like l magazines and Instagram and Dezeen and Pinterest. So there's this sort of wealth of tried and tested ideas. And then what I've been doing also is going out to trade fairs and exhibitions and trying to see what new in the marketplace, so we can as an office keep current, but also as a designer try to propose things that the client has never seen before. A29: I often try to keep my ear to the ground and just see what's happening in the architectural world and see I like this space or I like this project, this design, or this architect does stuff that I like versus something else that I might not like… You've also got Architectural Digest building all of those types of websites that put out projects and different things.
Extracting tangible elements	**Focusing on specific aesthetic elements** A7: The example here, we just took the branding of Faberge and made something for its façade. I think this is original. This basically is plywood with a gradient finish so it was initially a temporary building, but they wanted to keep it for longer. This hadn't been done basically by anybody else. But, the ideas itself were taken from Faberge – the brass, rope and everything – that basically came from Faberge's branding booklet, the brass rope and everything. It's how they design an egg. A22: OK, so that's one thing. Second thing, of course, is if you go to the British Museum and you find a detail you like and you sketch it, I mean, if it's let's say if it was a detail of a plinth, you're going to make a plinth now. You may use it as the leg of a table. You're going to change the proportion, you're going to change the material. That's going to change the dimensions. **Examining certain material elements**

	A12: There is a relationship between the material you are using now and somebody else's use of that material. But the other thing about it is in the same building the front façade has a sort of bottom which is slightly rough compared to the top which is smooth. A37: I think you just become more aware that you don't need you're not necessarily copying that reference. You're just taking bits from it. You're taking an idea. Maybe it's just the material. **Extracting some technical elements** A10: You also use case studies to analyze light and circulation in buildings. So, in that way having these case study reports, it's like an accumulation of drawings, to evaluate design decisions. A17: We went to Whitstable last weekend and it was very interesting because by the sea, there's like this wooden protection because the sea is pushing the cobbles and that's dangerous for the houses in front of the beach. And I thought, OK, that's a really nice detail. And I took a few photos of how the wood is meeting the metal to hold the post. And I was like, oh, that could be great for joinery.
Emerging ideas through reconfiguration	**Using an idea in a different part of the composition** A1: I would try to investigate different ways of doing that particular technique – so changing the pattern, changing the size, reinventing the same idea in different ways. We would always try many options. If we like this very long brick that was used, we would take it and say let's see how it can be applied in different ways. So, we would try different patterns and different arrangements, so it looks different from what was originally seen. A5: I always look at what already been done, that's the way I do it. For example, today, I had to work on a presentation. Let's say I have a slide in front of me. I know what the message should be but I didn't quite know how to design it. I opened an old presentation-somebody else's-presentation and saw a page. The message was completely different, but I thought the design might be suitable so I copied and pasted it, I moved things around. Also, if it's the first draft of the slide, I know that next week I will do back and change things, and if I have time I might keep changing things and in the end, it will look very different. **Adding or subtracting from an idea** A3: Doing something a bit different. Using Sejima's materials for example, but they are maybe introducing recycling plastic. Sejima never thought of that, but these other architects are younger so they have new values and for them there are other things that are really important, so they are mixing materials like recycling plastic with this design. A25: I'm a traditionalist trying to draw from context on what's already signaling to me architecturally as something that's important to me. The first thing I keep in mind is the towers. The towers are quite distinct and there are quite tall, the roofs are pretty still playing with the different forms. **Combining ideas from different sources** A5: You can see three things that you like in three different buildings. And you think, let's take that thing from that building and that thing from this other building and you put them together. It's just what I've read, but they say there are no new ideas. It's about how you put things together. You take ideas from the past and its basically how you connect the dots. A20: I don't know if I have told you about this one built project that I have which has gotten a bit of publicity and won awards... I do have a set of references for that project. But they are not obvious. They are only obvious when I speak about them. For example, there are references to a Japanese way of building. So that means thinking about thresholds and transitions between inside and outside. And those would be obvious to a Japanese viewer but not to others… Also references to Australian architecture by using these shingles that you see a lot in the Australian outback. I [also] have references to Greek architecture. **Adjusting it to project specifications** A1: For example, the previous project I was working on, part of the development was made of brick, and that's a material that's used in traditional architecture. But looking at different ways of making the same materials more contemporary is I think a good example.

	A2: Instead of putting shutters in front of the window, we pushed that back by a meter and a half. So it created this meter and a half shop front zone with shutters in the back so you could have displays or models, almost like a shop front to sort of display the work at the Bartlett. So it wasn't sort of a pastiche. Those ideas became unique based on the required function, the required occupants and the way they were going to use it. And also materials as well. They inherently become different when you use modern materials and modern construction technology. We weren't using old oak joinery, we were using plywood and for the windows we were using a hybrid aluminium and timber system.
Experiencing temporal authorship	**Contributing to the journey of an idea** A9: To be a true designer I believe you have to take aspects of loads of people's work and create something that has your own identity or stamp on it. Because there's going to be 1000s of ways that people have created things in the past, and that's the only way we can move forward, by looking at what's been done in the past and developing that. A15: It's a weird thing. With a sense of authorship, there is also a sense of ego coming into the equation. If a process is personal … there are new things, but I think they are always interconnected. There is a history of words, a history of things, a history of objects that relates to the past and is moving forward. **Offering new ways of representing an idea** A34: I mean, I would still say that in there, still in my mind, the same degree of authorship, I think just because it's a collage... I don't think diminishes that level of authorship. So I think you're always, in a way, taking this approach of creating slash curator where you're where you're curating a series of ideas that come together. A10: I think it's a progression to the craft… you will always try to imprint your own version of your own reading of a specific typology or a specific use of materials. **Offering critiques of an idea** A6: Everything is a source of inspiration, but it's not like you copy a piece, especially with the young generation of architects you appreciate what they have done and you know that it exists but you combine them and you bring them into your ideas… there is nothing that is perfect. [Your efforts help] criticize and emphasize. A8: Because you're challenging something, you are challenging how this initial thing can be used and you are challenging it in a particular context. So I would find that acceptable.
Project Constraints	
Input Constraints	**Time constraints** A2: If you're doing a competition and you don't really have time… for example this short one, we probably used a bit of Pinterest. We wanted to looked at something that's glass and translucent and you look naturally at things that can offer that kind of language. A3: In my final university project, I was really stuck because it's my final project, and you really have to do well... And I only had two months, so I had to do it very quickly. And I had inspiration and so you could see more obvious influences in that project. in that project, I used a new think that Herzog de Meuron had done in the concrete. In the concrete façade that had these pixels. I used those pixels in my project. **Resource constraints** A35: no one talks that conservatories anymore because that's a bad word or it's being seen as a bad thing. But if you go back to that as a type and the conservatory will then back to you, that might become interesting. So rather than trying to make an architectural gesture or reinvent an idea of the space, we go to make a conservatory. And then what becomes interesting is that our budget becomes another layer and they don't have so much money to make a conservatory. So we can't make it out of sticks and put them in individual posts and glass because it becomes too expensive. A16: I think there's a certain flavor of originality that's accepted and celebrated. And I'm not convinced that the originality that's celebrated is all that original. I think to a certain degree we are always restricted by materials and the skills of the craftsmen who can build for the designer… you could dream of doing a single family house very differently, but whether or not you would be able to deliver that in reality is very hard to say.

	Human capital constraints A35: Things like bad craftsmanship come into play. So the builders tend to be the cheapest way to build for the building to put it up really quickly enough to have a very good craftsman. A33: So I think that and you see, let's say in the Middle East, you would like, oh, I love Versailles. I'm going to recreate that. There is no way in hell you can create a site that doesn't exist anymore. That kind of craftsmanship does exist. It's not part of day to day life.
Process Constraints	**Need to estimate parameters** A14: I think with buildings at their heart they are always quite functional, and they always cost a lot of money. So I think the tension is one to do with fear… I'm feeling the tension that we are talking about in my day-to-day work. Because sometimes I'll have to accept jobs where the commissioning person wants me to do things that are very repetitive or reproductive and they don't want me to do anything original. A2: I instinctively would say that I feel more comfortable drawing from historical references…. So, you get these buildings that over time have a legacy, I suppose, so you feel…. Aalto, for example, the Finnish architect between the '30s and '50s – a huge architect, and now we use his work as inspiration. It has the same weight and the same gravity, and there is a comfort. **Need to communicate outcomes** A1: One of the hardest things is showing people work in progress. Showing something tangible when it's in progress when you are basing it on something very different. Because it takes time to get to a specific point and it's always changing. A33: So I'm doing a folly for a client in Portugal, and the brief was just that he's also a good friend and we understand each other and he's also creative, but he's in fashion. And so what's quite nice about that is a dialogue, because it's sort of like this is a loose brief. Go explore and do what you want. If its let's say, someone who's not from a creative background, they tend to be much more granular from the outset about everything, so it makes your work more difficult.
Output Constraints	**Stakeholder templates** A25: Usually our clients would give us ideas on what other houses they like. And we'll take cues from that we will probably present three ranges related to what they asked from and they will probably just let us know which one they would like to go through with. And they we like to tie in personal details, symbols relating to their family or whatever. A29: So it's the same thing, in my view, with your design, just because they want something similar to something that they've seen. Clients can do this, by the way, as well. They come to you and they say, my friend just built this house. I want something like that… they like certain elements from there that they would like to incorporate. They still want to make it their space, their own. **Industry trends:** A14: There's a lot of peer pressure within the industry to conform to what is considered to be tasteful within the moment; anything outside of that is kind of frowned upon at the moment… So I'll give you an example. In my university, there was a really intelligent guy who was very keen on designing buildings in a [unique] style... But the whole university's tutoring system was set up to favour designs of a modernist angle. So the poor guy would always be criticized when he presented his work because it was so alien. A7: For instance, the trend at the moment is arches. There is an architect who used this in a social housing project, and everyone really admires this project, because it's a really good project, and in doing so it's kind of saturated the social media so much that everyone's drawing from that reference and then they're referencing each other.

Figures

Figure 2.1: Data Structure for Stockpiling Practices

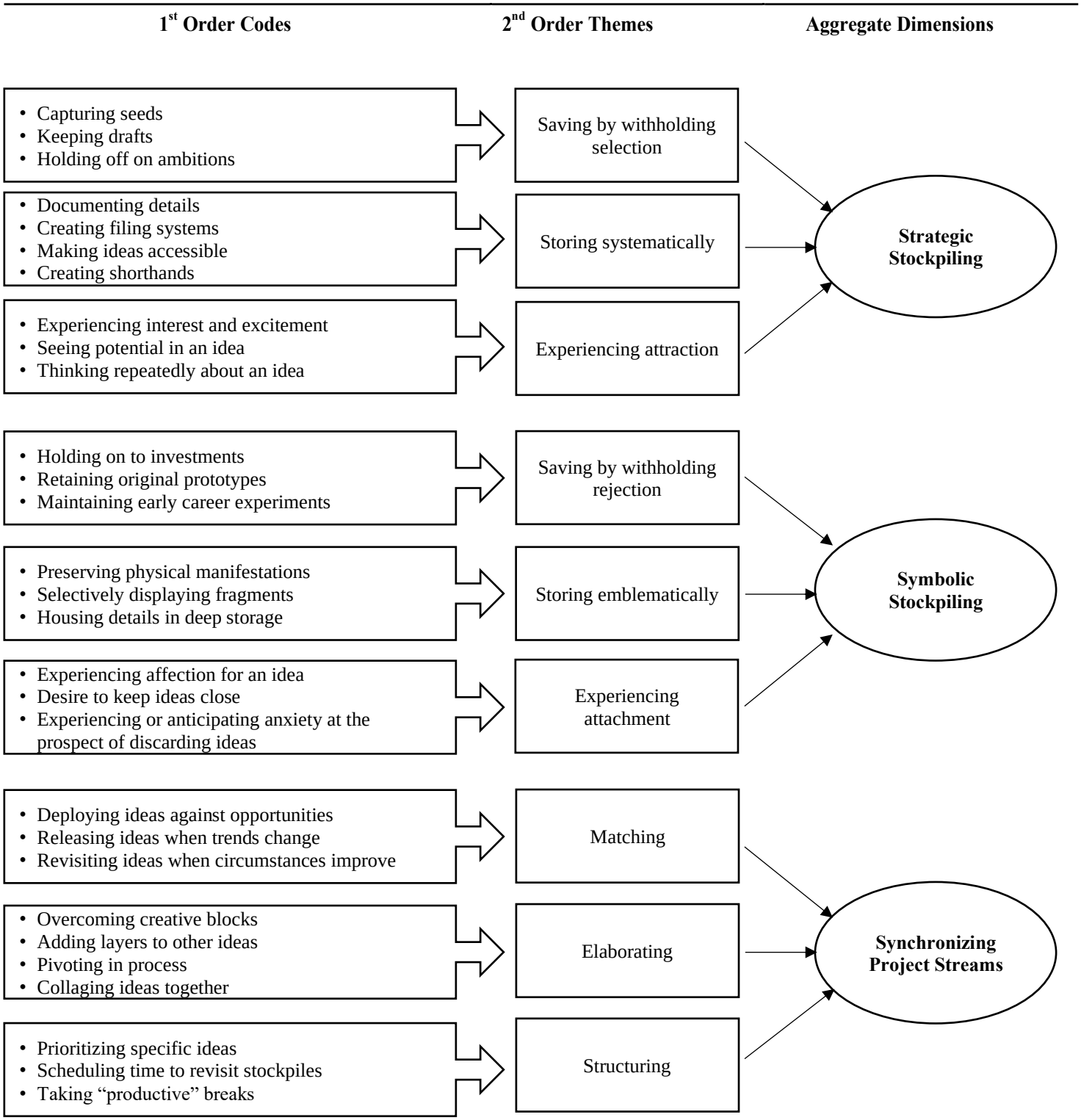


Figure 2.1: Data Structure for Stockpiling Practices (continued)

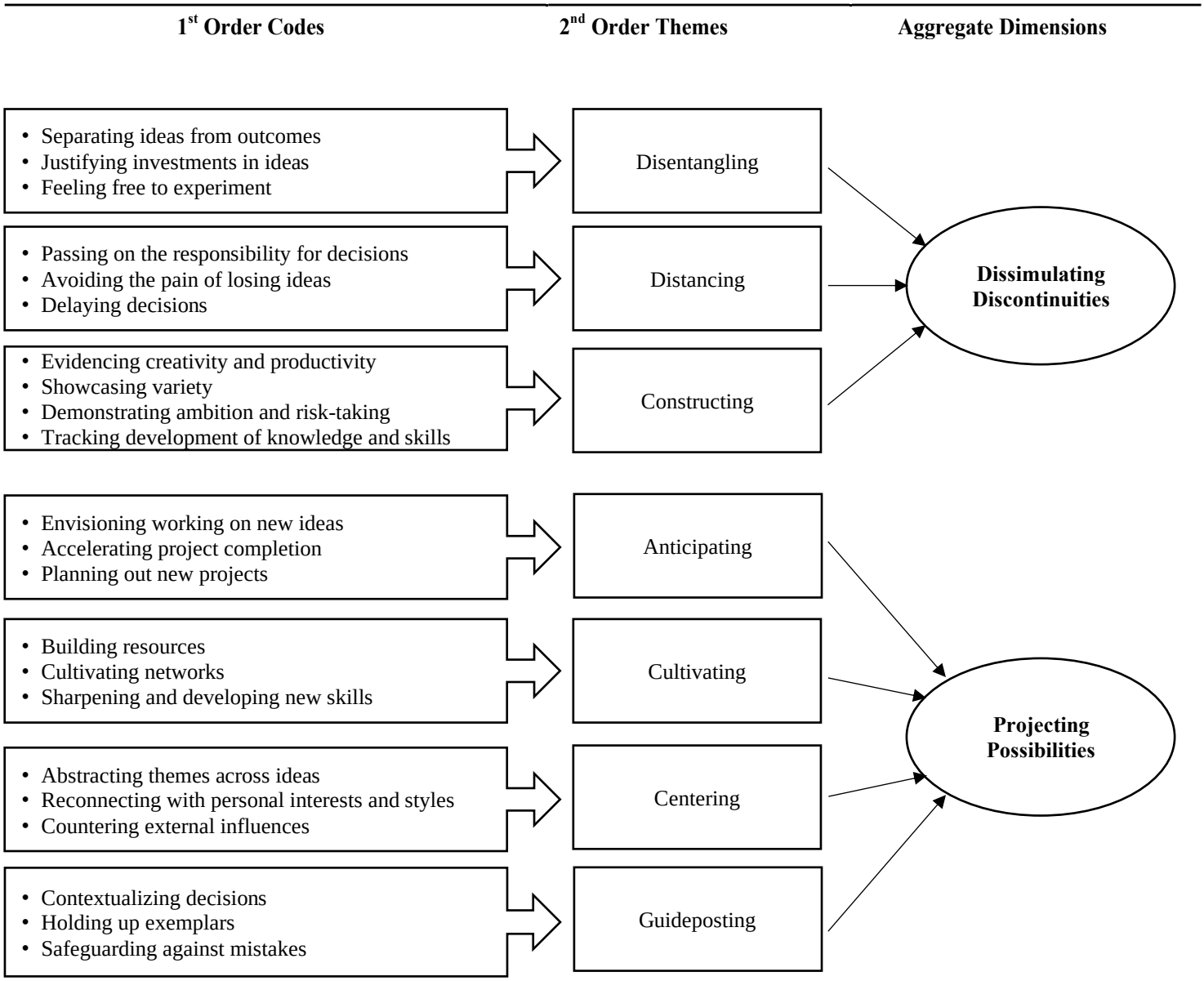


Figure 2.2: Model of Stockpiling in Continuous Creative Work

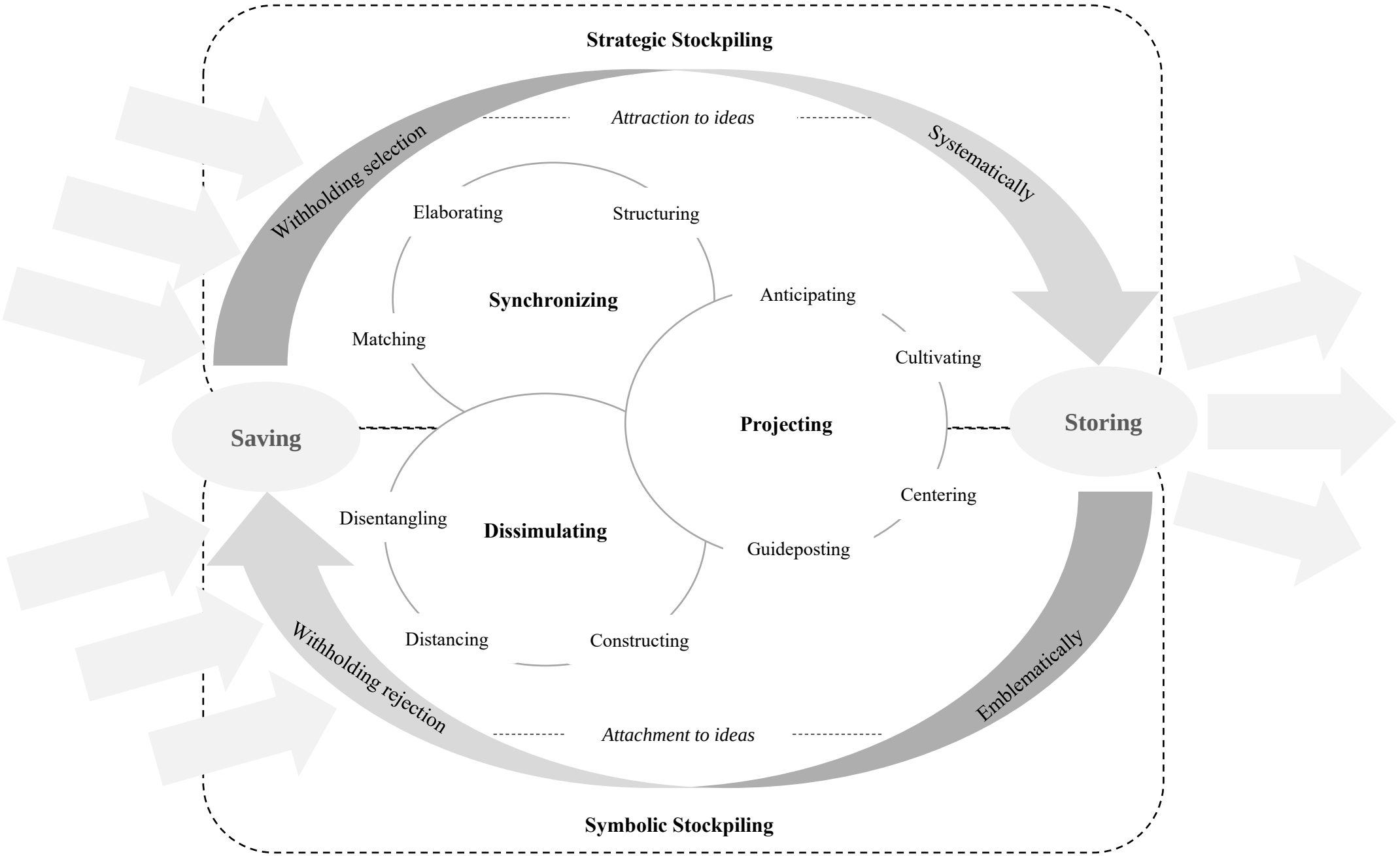


Figure 3.1: Model of Enduring Creative Engagement

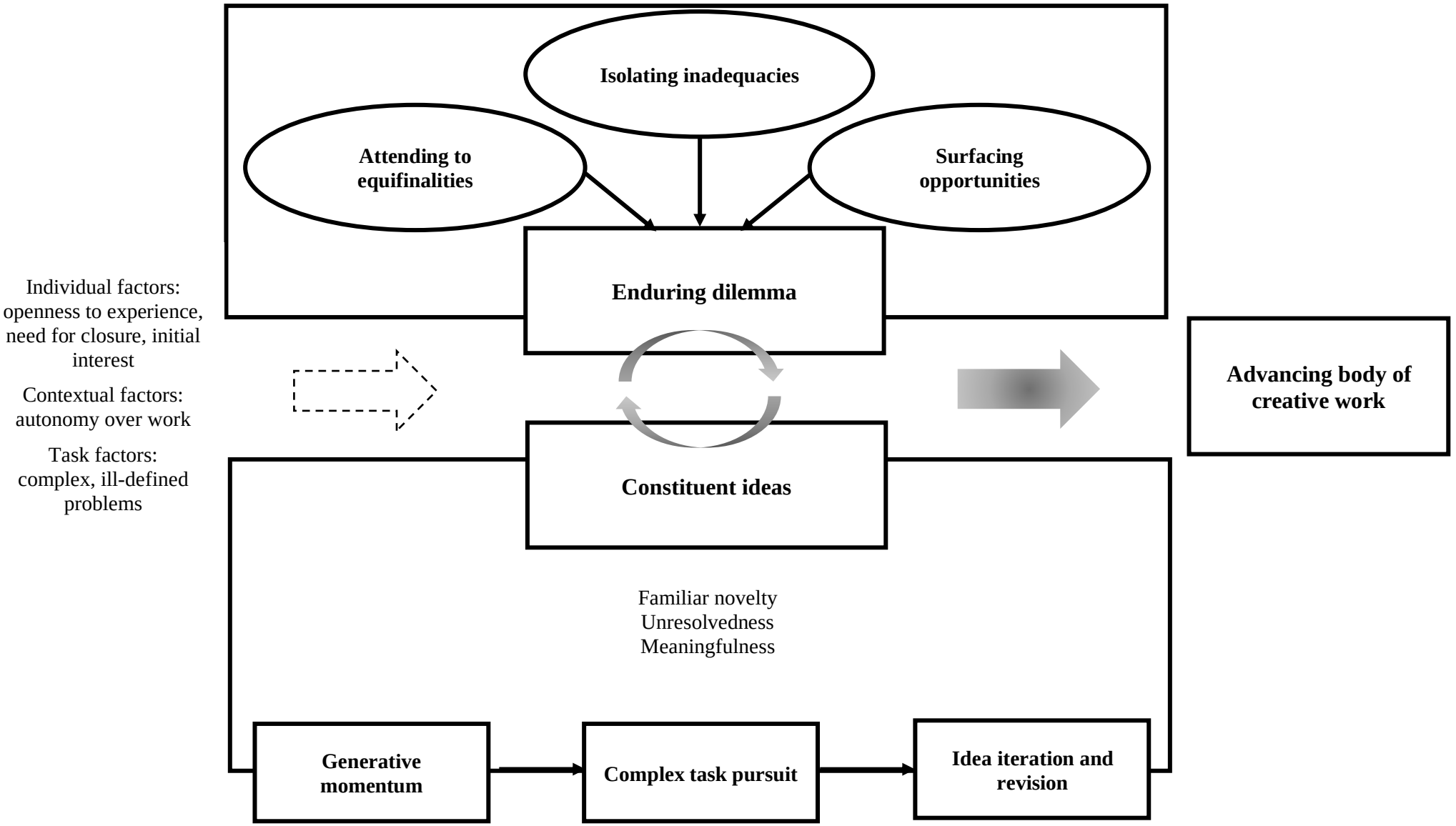


Figure 4.1 : Data Structure for Idea Borrowing Practices

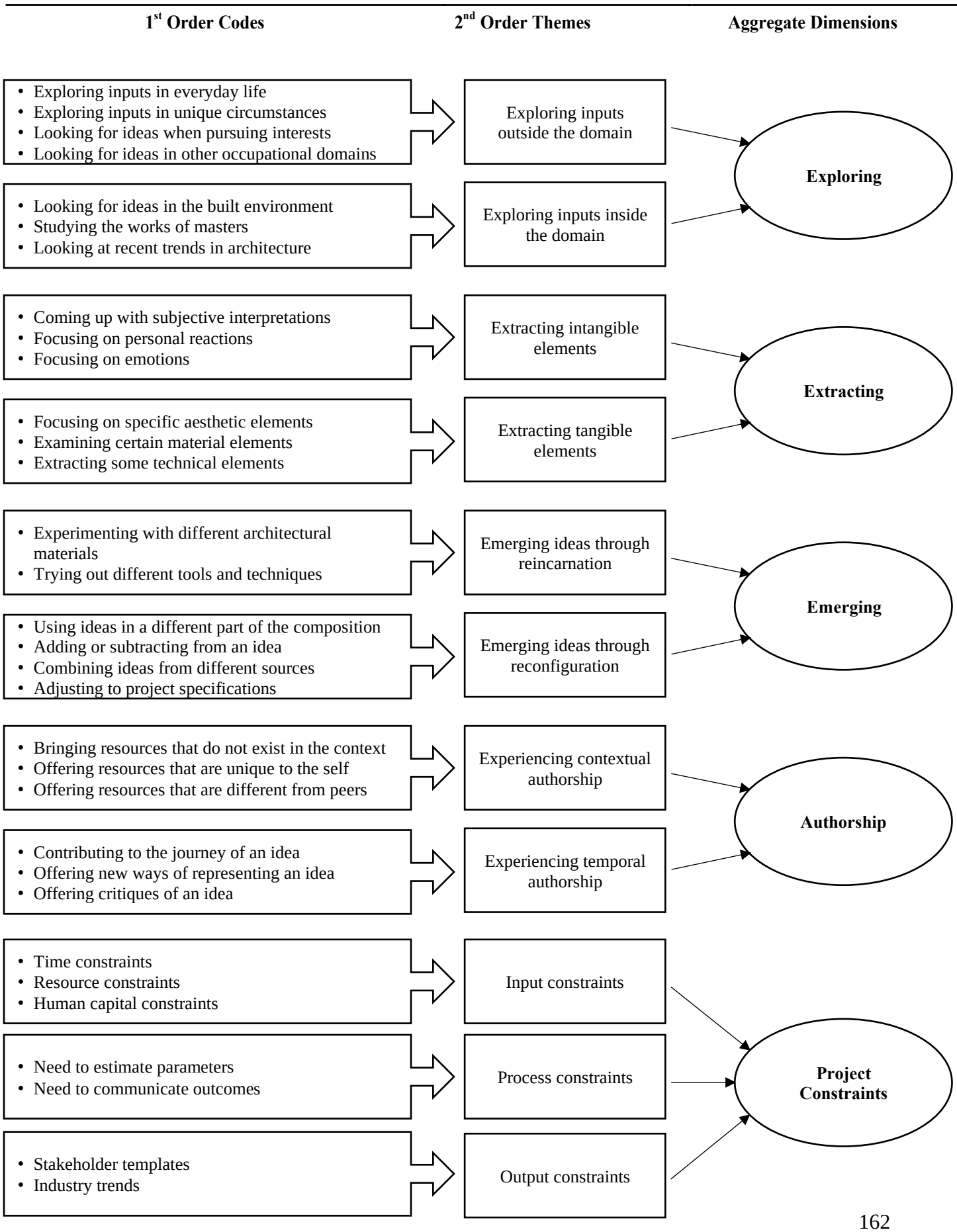
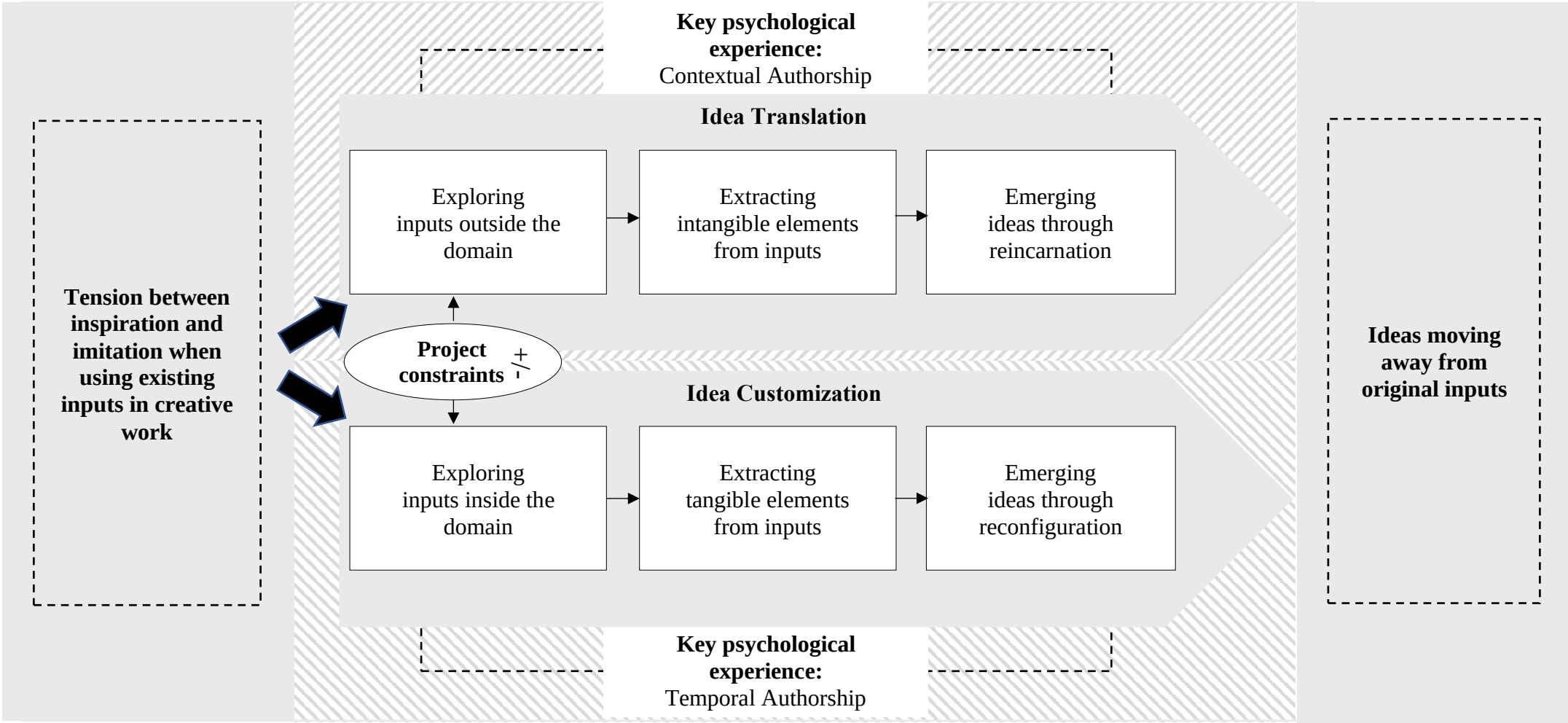


Figure 4.2: Model of Two Types of Idea Borrowing Practices



References

Abell, P. (2004). Narrative explanation: an alternative to variable-centered explanation?. *Annual Review Sociology*, 30, 287-310.

Acar, O. A., Tarakci, M., & van Knippenberg, D. (2019). Creativity and innovation under constraints: A cross-disciplinary integrative review. *Journal of Management*, 45(1), 96-121.

Alvarez, S. A., & Barney, J. B. (2007). Discovery and creation: Alternative theories of entrepreneurial action. *Strategic entrepreneurship journal*, 1(1-2), 11-26.

Amabile, T. M. (1983). The social psychology of creativity: A componential conceptualization. *Journal of personality and social psychology*, 45(2), 357.

Amabile, T. M. (1988). A model of creativity and innovation in organizations. *Research in organizational behavior*, 10(1), 123-167.

Amabile, T. M. (1996). *Creativity In Context: Update To The Social Psychology Of Creativity*. Hachette UK.

Amabile, T. M. (2001). Beyond talent: John Irving and the passionate craft of creativity. *American psychologist*, 56(4), 333.

Amabile, T. M., & Pratt, M. G. (2016). The dynamic componential model of creativity and innovation in organizations: Making progress, making meaning. *Research in organizational behavior*, 36, 157-183.

Amabile, T. M., Barsade, S. G., Mueller, J. S., & Staw, B. M. (2005). Affect and creativity at work. *Administrative science quarterly*, 50(3), 367-403.

Amabile, T. M., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). Assessing the work environment for creativity. *Academy of management journal*, 39(5), 1154-1184.

Amabile, T., & Kramer, S. (2011). *The progress principle: Using small wins to ignite joy, engagement, and creativity at work*. Harvard Business Press.

Anand, N., Gardner, H. K., & Morris, T. (2007). Knowledge-based innovation: Emergence and embedding of new practice areas in management consulting firms. *Academy of management journal*, 50(2), 406-428.

Anderson, N., Potočnik, K., & Zhou, J. (2014). Innovation and creativity in organizations: A state-of-the-science review, prospective commentary, and guiding framework. *Journal of Management*, 40(5), 1297-1333.

Anderson, P., & Tushman, M. L. (1990). Technological discontinuities and dominant designs: A cyclical model of technological change. *Administrative science quarterly*, 604-633.

Anteby, M., Chan, C. K., & DiBenigno, J. (2016). Three lenses on occupations and professions in organizations: Becoming, doing, and relating. *Academy of Management Annals*, 10(1), 183-244.

Arthur, W. B. (1989). Competing technologies, increasing returns, and lock-in by historical events. *The economic journal*, 99(394), 116-131.

Attneave, F. (1959). Stochastic composition processes. *The Journal of Aesthetics and Art Criticism*, 17(4), 503-510.

Audia, P. G., & Goncalo, J. A. (2007). Past success and creativity over time: A study of inventors in the hard disk drive industry. *Management science*, 53(1), 1-15.

Austin, R. D., Devin, L., & Sullivan, E. E. (2012). Accidental innovation: Supporting valuable unpredictability in the creative process. *Organization Science*, 23(5), 1505-1522.

Baer, M. (2012). Putting creativity to work: The implementation of creative ideas in organizations. *Academy of Management Journal*, 55(5), 1102-1119.

Baer, M., & Brown, G. (2012). Blind in one eye: How psychological ownership of ideas affects the types of suggestions people adopt. *Organizational Behavior and Human Decision Processes*, 118(1), 60-71.

Bamberger, P. A., & Pratt, M. G. (2010). Moving forward by looking back: Reclaiming unconventional research contexts and samples in organizational scholarship.

Barasz, K., John, L. K., Keenan, E. A., & Norton, M. I. (2017). Pseudo-set framing. Journal of Experimental Psychology: General, 146(10), 1460.

Bateman, T. S., & Barry, B. (2012). Masters of the long haul: Pursuing long-term work goals. *Journal of Organizational Behavior*, 33(7), 984-1006.

Belk, R. W. (1988). Possessions and the extended self. Journal of consumer research, 15(2), 139-168.

Benner, M. J., & Tushman, M. L. (2003). Exploitation, exploration, and process management: The productivity dilemma revisited. *Academy of management review*, 28(2), 238-256.

Berg, J. M. (2016). Balancing on the creative highwire: Forecasting the success of novel ideas in organizations. *Administrative Science Quarterly*, 61(3), 433-468.

Berg, J. M. (2019). When silver is gold: Forecasting the potential creativity of initial ideas. *Organizational Behavior and Human Decision Processes*, 154, 96-117.

Berlyne, D. E. (1960). Conflict, arousal, and curiosity. New York: McGraw-Hill

Berscheid, E., & Hatfield, E. (1969). *Interpersonal attraction* (Vol. 69, pp. 113-114). Reading, MA: Addison-Wesley.

Bessemer, S. P., & O' Quin, K. (1987). Creative product analysis: Testing a model by developing a judging instrument. In S. G. Isaksen (Ed.), *Frontiers of creativity research: Beyond the basics* (pp. 341-357). Buffalo, NY: Bearly Limited

Bessemer, S. P., & Treffinger, D. J. (1981). Analysis of creative products: Review and synthesis. *Journal of Creative Behavio*rs, 15, 159-179.

Blau, J. R., & McKinley, W. (1979). Ideas, complexity, and innovation. *Administrative Science Quarterly*, 200-219.

Boje, D. M. (2001). *Narrative methods for organizational & communication research*. Sage.

Bolger, N., Davis, A., & Rafaeli, E. (2003). Diary methods: Capturing life as it is lived. *Annual review of psychology*, 54(1), 579-616.

Bortolotti, L., & Broome, M. R. (2008). Delusional beliefs and reason giving. *Philosophical Psychology*, 21(6), 821-841.

Bridgstock, R. (2005). Australian artists, starving and well-nourished: What can we learn from the prototypical protean career?. *Australian journal of career development*, 14(3), 40-47.

Brook, P. (1996). *The empty space: A book about the theatre: Deadly, holy, rough, immediate*. Simon and Schuster.

Brown, G., & Baer, M. (2015). Protecting the turf: The effect of territorial marking on others' creativity. *Journal of Applied Psychology*, 100(6), 1785.

Brown, J. S., & Duguid, P. (1991). Organizational learning and communities-of-practice: Toward a unified view of working, learning, and innovation. *Organization science*, 2(1), 40-57.

Brown, V., Tumeo, M., Larey, T. S., & Paulus, P. B. (1998). Modeling cognitive interactions during group brainstorming. *Small group research*, 29(4), 495-526.

Buchanan, R. (1992). Wicked problems in design thinking. *Design issues*, 8(2), 5-21.

Buckner, R. L., & Carroll, D. C. (2007). Self-projection and the brain. *Trends in cognitive sciences*, 11(2), 49-57.

Campbell, D. J. (1988). Task complexity: A review and analysis. *Academy of management review*, 13(1), 40-52.

Campbell, D. T. (1960). Blind variation and selective retentions in creative thought as in other knowledge processes. *Psychological review*, 67(6), 380.

Campbell, J. (1999). Schizophrenia, the space of reasons, and thinking as a motor process. *The Monist*, 82(4), 609-625.

Carpenter, H. (2000). *JRR Tolkien: a biography*. Houghton Mifflin Harcourt.

Carton, A. M. (2018). "I'm not mopping the floors, I'm putting a man on the moon": How NASA leaders enhanced the meaningfulness of work by changing the meaning of work. *Administrative Science Quarterly*, 63(2), 323-369.

Catmull, E., & Wallace, A. (2014). *Creativity, Inc: overcoming the unseen forces that stand in the way of true inspiration*. Random House.

Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. Sage.

Chia, R. (1994). The concept of decision: A deconstructive analysis. *Journal of management studies*, 31(6), 781-806.

Chia, R., & Langley, A. (2004). The first organization studies summer workshop: Theorizing process in organizational research (call for papers). *Organization Studies*, 25(8), 1486.

Churchman, C. W. (1971). *Design of inquiring systems: basic concepts of systems and organization*. Basic Books

Churchman, C. W., & Buchanan, B. G. (1969). On the design of inductive systems: some philosophical problems. *The British Journal for the Philosophy of Science*, 20(4), 311-323.

Cohen-Shalev, A. (1993). The Development of Artistic Style: Transformations of a Creator's Core Dilemma. *Human Development*, 36(2), 106-116.

Cohen, L., Wilkinson, A., Arnold, J., & Finn, R. (2005). 'Remember I'm the bloody architect!' Architects, organizations and discourses of profession. *Work, employment and society*, 19(4), 775-796.

Commons, J. R. (1950). *The Economics of Collective Action*, ed. Kenneth H. Parsons, Madison: University of Wisconsin Press (Reprinted in 1970).

Corley, K. G. (2015). A commentary on "what grounded theory is…" engaging a phenomenon from the perspective of those living it. *Organizational Research Methods*, 18(4), 600-605.

Corley, K. G., & Gioia, D. A. (2004). Identity ambiguity and change in the wake of a corporate spin-off. *Administrative science quarterly*, 49(2), 173-208.

Creswell, J. W. (1998). *Quality inquiry and research design: Choosing among five traditions*. Thousand Oaks.

Cronin, M. A., & Loewenstein, J. (2018). *The craft of creativity*. Stanford University Press.

Csikszentmihalyi, M. (1990). The domain of creativity. In M. A. Runco & R. S. Albert (Eds.), *Theories of creativity* (pp. 190-212). Newbury Park, CA: Sage

Csikszentmihalyi, M. (1997). *Flow and the psychology of discovery and invention*. HarperPerennial, New York, 39.

Csikszentmihalyi, M., Abuhamdeh, S., & Nakamura, J. (1990). Flow. In A. J. Elliot & C. S. Dweck (Eds.), *Handbook of competence and motivation* (pp. 598–608)

Dailey, L., & Mumford, M. D. (2006). Evaluative aspects of creative thought: Errors in appraising the implications of new ideas. *Creativity Research Journal*, 18(3), 385-390.

Dane, E. (2010). Reconsidering the trade-off between expertise and flexibility: A cognitive entrenchment perspective. *Academy of Management Review*, 35(4), 579-603.

Dane, E. (2010). Reconsidering the trade-off between expertise and flexibility: A cognitive entrenchment perspective. *Academy of Management Review*, 35(4), 579-603.

Davies, R., & Talbot, R. J. (1987). Experiencing ideas: Identity, insight and the imago. *Design studies*, 8(1), 17-25.

Davis, M., & Troupe, Q. (1990). *Miles*. Simon and Schuster.

Deichmann, D., & Ende, J. V. D. (2014). Rising from failure and learning from success: The role of past experience in radical initiative taking. *Organization Science*, 25(3), 670-690.

Dennis, W. (1966). Creative productivity between the ages of 20 and 80 years. *Journal of Gerontology*, 21(1), 1-8.

Denzin, N.K. and Lincoln, Y.S. eds., 2011. *The Sage handbook of qualitative research*. sage.

Dewey, J. (1913). *Interest and effort in education*. Forgotten Books.

Dillon, J. T. (1982). Problem finding and solving. *The journal of creative behavior*.

Dillon, P. (1998). The next small thing. *Fast Company*, 15, 93-113.

Drazin, R., Glynn, M. A., & Kazanjian, R. K. (1999). Multilevel theorizing about creativity in organizations: A sensemaking perspective. *Academy of management review*, 24(2), 286-307.

Dugosh, K. L., & Paulus, P. B. (2005). Cognitive and social comparison processes in brainstorming. *Journal of experimental social psychology*, 41(3), 313-320.

Dugosh, K.L., Paulus, P.B., Roland, E.J. and Yang, H.C., 2000. Cognitive stimulation in brainstorming. *Journal of personality and social psychology*, 79(5), p.722.

Eckert, C. M., Stacey, M. K., & Clarkson, P. J. (2000). Algorithms and inspirations: creative reuse of design experience. In *Proceedings of the Greenwich 2000 international symposium: Digital creativity* (pp. 1-10).

Eckert, C., & Stacey, M. (1998). Fortune favours only the prepared mind: Why sources of inspiration are essential for continuing creativity. *Creativity and Innovation Management*, 7(1), 9-16.

Elitzur, A. C. (1989). Consciousness and the incompleteness of the physical explanation of behavior. *The Journal of Mind and Behavior*, 1-19.

Elsbach, K. D. (2009). Identity affirmation through signature style': A study of toy car designers. *Human Relations*, 62(7), 1041-1072.

Elsbach, K. D., & Flynn, F. J. (2013). Creative collaboration and the self-concept: A Study of Toy Designers. *Journal of Management Studies*, 50(4), 515-544.

Elsbach, K.D. and Kramer, R.M., 2003. Assessing creativity in Hollywood pitch meetings: Evidence for a dual-process model of creativity judgments. *Academy of Management journal*, 46(3), pp.283-301.

Fayard, A. L., Gkeredakis, E., & Levina, N. (2016). Framing innovation opportunities while staying committed to an organizational epistemic stance. *Information Systems Research*, 27(2), 302-323.

Fayard, A. L., Stigliani, I., & Bechky, B. A. (2017). How nascent occupations construct a mandate: The case of service designers' ethos. *Administrative Science Quarterly*, 62(2), 270-303.

Feist, G. J. (1997). Quantity, quality, and depth of research as influences on scientific eminence: Is quantity most important?. *Creativity Research Journal*, 10(4), 325-335.

Feldman, M. S. (2004). Resources in emerging structures and processes of change. *Organization Science*, 15(3), 295-309.

Filo, K. R., Funk, D. C., & O'Brien, D. (2008). It's really not about the bike: Exploring attraction and attachment to the events of the Lance Armstrong Foundation. *Journal of Sport Management*, 22(5), 501-525.

Fink, A., Grabner, R. H., Benedek, M., Reishofer, G., Hauswirth, V., Fally, M., ... & Neubauer, A. C. (2009). The creative brain: Investigation of brain activity during creative problem solving by means of EEG and fMRI. *Human brain mapping*, 30(3), 734-748.

Fink, A., Grabner, R. H., Gebauer, D., Reishofer, G., Koschutnig, K., & Ebner, F. (2010). Enhancing creativity by means of cognitive stimulation: Evidence from an fMRI study. *NeuroImage*, 52(4), 1687-1695.

Fisher, C. M., & Barrett, F. J. (2019). The experience of improvising in organizations: A creative process perspective. *Academy of Management Perspectives*, 33(2), 148-162.

Fisher, C. M., Ananth, P., & Demir Caliskan, O. (forthcoming). A winding road: Teresa Amabile and creative process research. In R. Reiter-Palmon, C. M. Fisher, & J. Mueller

(Eds). *Creativity at Work: A Festschrift in Honor of Teresa Amabile*. London, UK: Palgrave Macmillan.

Fisher, C. M., Pillemer, J., & Amabile, T. M. (2018). Deep help in complex project work: Guiding and path-clearing across difficult terrain. *Academy of Management Journal*, 61(4), 1524-1553.

Fisher, H. E. (1998). Lust, attraction, and attachment in mammalian reproduction. *Human nature*, 9(1), 23-52.

Fletcher, W. (1999). Tantrums and talent: *How to get the best from creative people*. Admap Publications.

Florida, R. (2004). *The rise of the creative class and how it's transforming work, leisure, community and everyday life* (Paperback Ed.). GEN, New York: Basic Books.

Fredrickson, B. L. (1998). What good are positive emotions?. *Review of general psychology*, 2(3), 300-319.

Funk, D. C., & James, J. (2001). The psychological continuum model: A conceptual framework for understanding an individual's psychological connection to sport. *Sport management review*, 4(2), 119-150.

Genette, G. (1994). *The work of art, Immanence and transcendence*. Threshold.

George, J. M. (2007). 9 Creativity in organizations. *Academy of Management annals*, 1(1), 439-477.

George, J. M., & Zhou, J. (2007). Dual tuning in a supportive context: Joint contributions of positive mood, negative mood, and supervisory behaviors to employee creativity. *Academy of management journal*, 50(3), 605-622.

Getzels, J. W. (1975). Problem-finding and the inventiveness of solutions. *The Journal of Creative Behavior*.

Getzels, J. W. (1979). Problem finding: A theoretical note. *Cognitive science*.

Gibson, E. J. (1988). Exploratory behavior in the development of perceiving, acting, and the acquiring of knowledge. *Annual review of psychology*, 39(1), 1-42.

Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2013). Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. *Organizational research methods*, 16(1), 15-31.

Glaser, B., & Strauss, A. (1967). *The discovery of grounded theory*. London: Weidenfeld and Nicholson, 24(25), 288-304.

Godart, F., Seong, S., & Phillips, D. (2020). The Sociology of Creativity: Elements, Structures, and Audiences. *Annual Review of Sociology*, 46.

Goffin, K., & Mitchell, R. (2016). *Innovation management: effective strategy and implementation.* Macmillan International Higher Education.

Gold, D. B., & Wegner, D. M. (1995). Origins of ruminative thought: Trauma, incompleteness, nondisclosure, and suppression. *Journal of Applied Social Psychology*, 25(14), 1245-1261.

Goncalo, J.A. and Katz, J.H., 2020. Your soul spills out: The creative act feels self-disclosing. *Personality and Social Psychology Bulletin*, 46(5), pp.679-692.

Graebner, M. E., Martin, J. A., & Roundy, P. T. (2012). Qualitative data: Cooking without a recipe. *Strategic Organization*, 10(3), 276-284.

Graham, G., & Stephens, G. L. (1994). Mind and mine. In *Philosophical Psychology* (Graham, G. and Stephens, G.L., eds) pp. 91–109, MIT Press

Gray, S. M., Knight, A. P., & Baer, M. (2020). On the emergence of collective psychological ownership in new creative teams. *Organization Science*, 31(1), 141-164.

Gresov, C., & Drazin, R. (1997). Equifinality: Functional equivalence in organization design. *Academy of management review*, 22(2), 403-428.

Grimes, M. (2018). The pivot: How founders respond to feedback through idea and identity work. *Academy of Management Journal*, In press.

Gruber, H. E. (1981). *Darwin on man: A psychological study of scientific creativity*. University of Chicago Press.

Gruber, H. E. (1988). The evolving systems approach to creative work. *Creativity Research Journal*, 1(1), 27-51.

Gruber, H. E. (1989). The Evolving Systems Approach to Creative Work. In Wallace, D. B., & Gruber, H. E. (Eds.). (1989). *Creative people at work: Twelve cognitive case studies*. Oxford University Press on Demand.

Hagtvedt, L. P., Dossinger, K., Harrison, S. H., & Huang, L. (2019). Curiosity made the cat more creative: Specific curiosity as a driver of creativity. *Organizational Behavior and Human Decision Processes*, 150, 1-13.

Håkonsen Coldevin, G., Carlsen, A., Clegg, S., Pitsis, T. S., & Antonacopoulou, E. P. (2019). Organizational creativity as idea work: Intertextual placing and legitimating imaginings in media development and oil exploration. *human relations*, 72(8), 1369-1397.

Hargadon, A., & Sutton, R. (2000). Building an Innovation Factory. *Harvard Business Review*, 78(3), 160-161.

Hargadon, A., & Sutton, R. I. (1997). Technology brokering and innovation in a product development firm. *Administrative science quarterly*, 716-749.

Harrison, S. H., & Rouse, E. D. (2014). Let's dance! Elastic coordination in creative group work: A qualitative study of modern dancers. *Academy of Management Journal*, 57(5), 1256-1283.

Harrison, S. H., & Rouse, E. D. (2015). An inductive study of feedback interactions over the course of creative projects. *Academy of Management Journal*, 58(2), 375-404.

Harvey, S. (2014). Creative synthesis: Exploring the process of extraordinary group creativity. *Academy of management review*, 39(3), 324-343.

Harvey, S., & Kou, C. Y. (2013). Collective engagement in creative tasks: The role of evaluation in the creative process in groups. *Administrative science quarterly*, 58(3), 346-386.

Hatfield, E. (1988). Passionate and companionate love. In R. J. Sternberg & M. L. Barnes (Eds.), The psychology of love (pp. 191-217). New Haven, CT: Yale University Press.

Heintzelman, S. J., & King, L. A. (2014). Life is pretty meaningful. *American Psychologist*, 69(6), 561.

Hogarth, R. M. (1980). *Judgment and Choice: Strategies for Decision*. New York.

Holmes, F. L. (1989). Antoine Lavoisier and Hans Krebs: Two styles of scientific creativity. *Creative people at work: Twelve cognitive case studies*, 44-68.

Holton, G. (1971). On trying to understand scientific genius. *The American Scholar*, 95-110.

Hoppe, A. D. (2019). License to tweak: Artistic license at first-tier Indian apparel suppliers. *Poetics*, 76, 101365.

Howell, J. M., & Higgins, C. A. (1990). Champions of technological innovation. *Administrative science quarterly*, 317-341.

Huang, L., & Pearce, J. L. (2015). Managing the unknowable: The effectiveness of early-stage investor gut feel in entrepreneurial investment decisions. *Administrative Science Quarterly*, 60(4), 634-670.

James, W. (1890). The principles of psychology (Vol. 1). New York: Henry Holt and Co, Inc.

Jarmush, J. (2013). Things I've learned: Jim Jarmush. *Movie Maker Magazine*, June 5. Retrieved from https://www.moviemaker.com/jim-jarmusch-5-golden-rules-of-moviemaking/

Jonassen, D. H. (1997). Instructional design models for well-structured and Ill-structured problem-solving learning outcomes. *Educational technology research and development*, 45(1), 65-94.

Joyce, C. K. (2009). The blank page: effects of constraint on creativity (Doctoral dissertation, UC Berkeley).

Judge, T. A., & Cable, D. M. (1997). Applicant personality, organizational culture, and organization attraction. Personnel psychology, 50(2), 359-394.

Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of management journal*, 33(4), 692-724.

Kahneman, D., Slovic, S. P., Slovic, P., & Tversky, A. (Eds.). (1982). Judgment under uncertainty: Heuristics and biases. Cambridge university press.

Kaminski, M. (2008). The Secret History of Star Wars. Kingston, Ontario.

Kaufman, S. B., Christopher, E. M., & Kaufman, J. C. (2008). The genius portfolio: How do poets earn their creative reputations from multiple products?. *Empirical Studies of the Arts*, 26(2), 181-196.

Kaufmann, G. (2001). Creativity and problem solving. *Creative Management*, 44-63.

Kaufmann, G. (2003). What to measure? A new look at the concept of creativity. *Scandinavian Journal of Educational Research*, 47 (3), 235-252.

Keegan, R. T. (1989). How Charles Darwin became a psychologist. *Creative people at work: Twelve cognitive case studies*, 107-125.

Kelley, T., & Kelley, D. (2012). Reclaim your creative confidence. *Harvard business review*, 90(12), 115-118.

Khessina, O. M., Goncalo, J. A., & Krause, V. (2018). It's time to sober up: The direct costs, side effects and long-term consequences of creativity and innovation. *Research in Organizational Behavior*, 38, 107-135.

Kim, S. (2011). *Selling Out: How Impressions Of Materialism Influence The Evaluation Of Creativity And Creative Performance*. (Doctoral dissertation, Cornell)

Klein, K. J., & Sorra, J. S. (1996). The challenge of innovation implementation. *Academy of management review*, 21(4), 1055-1080.

Klinger, E. (1975). Consequences of commitment to and disengagement from incentives. *Psychological review*, 82(1), 1.

Klinger, E. (1978). *Modes of normal conscious flow. In The stream of consciousness* (pp. 225-258). Springer, Boston, MA.

Koestler, A. (1967). *The act of creation: A study of the conscious and unconscious in science and art*. Dell Publishing Company.

Koestler, A. (1969). Beyond atomism and holism—the concept of the holon. The rules of the game: *Cross-disciplinary essays on models in scholarly thought*, 233-247.

Koppman, S. (2016). Different like me: Why cultural omnivores get creative jobs. *Administrative Science Quarterly*, 61(2), 291-331.

Kruglanski, A. W., & Webster, D. M. (1996). Motivated closing of the mind:" Seizing" and" freezing.". *Psychological review*, 103(2), 263.

Kuhn, S. (2001). Learning from the architecture studio: Implications for project-based pedagogy. *International Journal of Engineering Education*, 17(4/5), 349-352.

Kuhn, T. S. (1970). *The structure of scientific revolutions*. University of Chicago press.

Lang, GE, & Lang, K. (1988). Recognition and renown: The survival of artistic reputation. *American journal of sociology* , 94 (1), 79-109.

Langley, A., & Tsoukas, H. (2010). Introducing perspectives on process *organization studies*. Process, sensemaking, and organizing, 1(9), 1-27.

Lehman, H. C. (1960). The age decrement in outstanding scientific creativity. *American Psychologist*, 15(2), 128.

Lehman, H. C., & Heidler, J. B. (1949). Chronological age vs. quality of literary output. The *American journal of psychology*, 62(1), 75-89.

Leonard, D., & Sensiper, S. (1998). The role of tacit knowledge in group innovation. *California management review*, 40(3), 112-132.

Leonardi, P. M. (2011). Early prototypes can hurt a team's creativity. *Harvard Business Review*, 89(12): 28.

Lepisto, D. A., & Pratt, M. G. (2017). Meaningful work as realization and justification: Toward a dual conceptualization. *Organizational Psychology Review*, 7(2), 99-121.

Levin, S. G., & Stephan, P. E. (1989). Age and research productivity of academic scientists. *Research in Higher Education*, 30(5), 531-549.

Levin, S. G., & Stephan, P. E. (1991). Research productivity over the life cycle: Evidence for academic scientists. *The American Economic Review*, 114-132.

Levitt, T. (1963). Creativity is not enough. *Harvard Business Review*, 41(3), 72-83.

Lewin, W. (1954). Cerebrospinal fluid rhinorrhoea in closed head injuries. *British Journal of Surgery*, 42(171), 1-18.

Lifshitz-Assaf, H. (2018). Dismantling knowledge boundaries at NASA: The critical role of professional identity in open innovation. *Administrative science quarterly*, 63(4), 746-782.

Liikkanen, L. A., & Perttula, M. (2010). Inspiring design idea generation: insights from a memory-search perspective. *Journal of Engineering Design*, 21(5), 545-560.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry* (Vol. 75). Sage.

Lingo, E. L., & O'Mahony, S. (2010). Nexus work: Brokerage on creative projects. *Administrative science quarterly*, 55(1), 47-81.

Lingo, E. L., & Tepper, S. J. (2013). Looking back, looking forward: Arts-based careers and creative work. *Work and occupations*, 40(4), 337-363.

Litchfield, R. C. (2008). Brainstorming reconsidered: A goal-based view. *Academy of Management Review*, 33(3), 649-668.

Litchfield, R. C., & Gilson, L. L. (2013). Curating collections of ideas: Museum as metaphor in the management of creativity. *Industrial Marketing Management*, 42(1), 106-112.

Litchfield, R. C., Gilson, L. L., & Gilson, P. W. (2015). Defining creative ideas: Toward a more nuanced approach. *Group & Organization Management*, 40(2), 238-265.

Liu, D., Jiang, K., Shalley, C. E., Keem, S., & Zhou, J. (2016). Motivational mechanisms of employee creativity: A meta-analytic examination and theoretical extension of the creativity literature. *Organizational behavior and human decision processes*, 137, 236-263.

Lubart, T. I., & Sternberg, R. J. (1995). An investment approach to creativity: Theory and data. *The creative cognition approach*, 269-302.

Madjar, N., Greenberg, E., & Chen, Z. (2011). Factors for radical creativity, incremental creativity, and routine, noncreative performance. *Journal of applied psychology*, 96(4), 730.

Mainemelis, C. (2002). Time and timelessness: Creativity in (and out of) the temporal dimension. *Creativity Research Journal*, 14(2), 227-238.

Mainemelis, C. (2010). Stealing fire: Creative deviance in the evolution of new ideas. *Academy of management review*, 35(4), 558-578.

Mainemelis, C., Nolas, S. M., & Tsirogianni, S. (2016). Surviving a boundaryless creative career: The case of Oscar-nominated film directors, 1967-2014. *Journal of Management Inquiry*, 25(3), 262-285.

Manguso, S. (2017). In the era of digital composition, what should a writer keep? *New York Times*, August 1. Retrieved from https://www.nytimes.com/2017/08/01/books/review/what-should-a-writer-keep.html.

Mannucci, P. V., & Yong, K. (2018). The differential impact of knowledge depth and knowledge breadth on creativity over individual careers. *Academy of Management Journal*, 61(5), 1741-1763.

Margolis, J. D., & Molinsky, A. (2008). Navigating the bind of necessary evils: Psychological engagement and the production of interpersonally sensitive behavior. *Academy of management journal*, 51(5), 847-872.

McLeod, C., O'Donohoe, S., & Townley, B. (2011). Pot noodles, placements and peer regard: creative career trajectories and communities of practice in the British advertising industry. British *Journal of Management*, 22(1), 114-131.

Mednick, S. (1962). The associative basis of the creative process. *Psychological review*, 69(3), 220.

Menger, P. M. (2006). Profiles of the unfinished: Rodin's work and the varieties of incompleteness. *Art from start to finish: Jazz, painting, writing, and other improvisations*, 31-68.

Mete, F. (2006). The creative role of sources of inspiration in clothing design. *International journal of clothing science and technology*.

Mintzberg, H., & Waters, J. (1990). Studying deciding: An exchange of views between Mintzberg and Waters, Pettigrew, and Butler. *Organization Studies*, 11(1), 001-6.

Mueller, J. S., Melwani, S., & Goncalo, J. A. (2012). The bias against creativity: Why people desire but reject creative ideas. *Psychological science*, 23(1), 13-17.

Mueller, J., Melwani, S., Loewenstein, J., & Deal, J. (2017). Reframing the decision-maker's dilemma:Towards a social context model of creative idea recognition. *Academy of Management Journal*. 61(1), 94-110

Mumford, M. D., & Gustafson, S. B. (1988). Creativity syndrome: Integration, application, and innovation. *Psychological bulletin*, 103(1), 27.

Mumford, M. D., Baughman, W. A., Maher, M. A., Costanza, D. P., & Supinski, E. P. (1997). Process-based measures of creative problem-solving skills: IV. Category combination. *Creativity Research Journal*, 10(1), 59-71.

Mumford, M. D., Reiter-Palmon, R., & Redmond, M. R. (1994). Problem construction and cognition: Applying problem representations in ill-defined domains. In M. A. Runco (Ed.), *Problem finding, problem solving, and creativity* (pp. 3 – 39). Norwood, NJ: Ablex.

Musselin, C. (2009). *The market for academics*. Routledge.

Nijstad, B. A. (2000). *How the group affects the mind: Effects of communication in idea generating groups* (pp. 151-2). (Doctoral Dissertation Universiteit Utrecht)

Nijstad, B. A., & Stroebe, W. (2006). How the group affects the mind: A cognitive model of idea generation in groups. *Personality and social psychology review*, 10(3), 186-213.

Nijstad, B. A., Stroebe, W., & Lodewijkx, H. F. (2002). Cognitive stimulation and interference in groups: Exposure effects in an idea generation task. *Journal of experimental social psychology*, 38(6), 535-544.

Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organization science*, 5(1), 14-37.

O'Mahony, S., & Bechky, B. A. (2006). Stretchwork: Managing the career progression paradox in external labor markets. *Academy of Management Journal*, 49(5), 918-941.

O'Reilly, C. A., & Chatman, J. (1986). Organizational commitment and psychological attachment: The effects of compliance, identification, and internalization on prosocial behavior. *Journal of applied psychology*, 71(3), 492.

Oldham, G. R., & Cummings, A. (1996). Employee creativity: Personal and contextual factors at work. *Academy of management journal*, 39(3), 607-634.

Oliar, D., & Sprigman, C. (2008). There's no free laugh (anymore): The emergence of intellectual property norms and the transformation of stand-up comedy. *Virginia Law Review*, 1787-1867.

Parales, J. (1996). A re-inventor of his world and himself. *New York Times*, November 17. Retrieved from https://www.nytimes.com/1996/11/17/arts/a-re-inventor-of-his-world-

and-himself.html.

Patton, M. Q. (1990). *Qualitative evaluation and research methods*. Sage Publications, inc.

Perry-Smith, J. E., & Mannucci, P. V. (2017). From creativity to innovation: The social network drivers of the four phases of the idea journey. *Academy of Management Review*, 42(1), 53-79.

Perttula, M., & Sipilä, P. (2007). The idea exposure paradigm in design idea generation. *Journal of Engineering Design*, 18(1), 93-102.

Petriglieri, G., Ashford, S. J., & Wrzesniewski, A. (2019). Agony and ecstasy in the gig economy: Cultivating holding environments for precarious and personalized work identities. *Administrative Science Quarterly*, 64(1), 124-170.

Phelps, C. C. (2010). A longitudinal study of the influence of alliance network structure and composition on firm exploratory innovation. *Academy of management journal*, 53(4), 890-913.

Pierce, J. L., Kostova, T., & Dirks, K. T. 2001. Toward a theory of psychological ownership in organizations. *Academy of Management Review*, 26: 298-310.

Pierce, J. L., Kostova, T., & Dirks, K. T. 2003. The state of psychological ownership: Integrating and extending a century of research. *Review of General Psychology*, 7: 84-107.

Pinheiro, D. L., & Dowd, T. J. (2009). All that jazz: The success of jazz musicians in three metropolitan areas. *Poetics*, 37(5-6), 490-506.

Pratt, M. G., Lepisto, D. A., & Dane, E. (2019). The hidden side of trust: Supporting and sustaining leaps of faith among firefighters. *Administrative Science Quarterly*, 64(2), 398-434.

Pratt, M. G., Sonenshein, S., & Feldman, M. S. (2020). Moving beyond templates: A bricolage approach to conducting trustworthy qualitative research. *Organizational Research Methods*, 1094428120927466.

Prenzel, M. (1992). The selective persistence of interest. In K. A. Renninger, S. Hidi, & A. Krapp (Eds.), *The role of interest in learning and development* (pp. 71–98). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc

Preston, J., & Wegner, D. M. (2007). The eureka error: Inadvertent plagiarism by misattributions of effort. *Journal of Personality and Social Psychology*, 92(4), 575.

Puccio, G.J. and Cabra, J.F., 2012. Idea generation and idea evaluation: Cognitive skills and deliberate practices. In *Handbook of organizational creativity* (pp. 189-215). Academic Press.

Quinn, B. (2005). Arts festivals and the city. *Urban studies*, 42(5-6), 927-943.

Raaijmakers, J. G., & Shiffrin, R. M. (1981). Search of associative memory. *Psychological review*, 88(2), 93.

Rahman, H. A., & Barley, S. R. (2017). Situated redesign in creative occupations–An ethnography of architects. *Academy of Management Discoveries*, 3(4), 404-424.

Ranganathan, A. (2018). The artisan and his audience: Identification with work and price setting in a handicraft cluster in Southern India. *Administrative Science Quarterly*, 63(3), 637-667.

Reilly, P. (2018). No laughter among thieves: Authenticity and the enforcement of community norms in stand-up comedy. *American Sociological Review*, 83(5), 933-958.

Reiter-Palmon, R., Mumford, M. D., O'Connor Boes, J., & Runco, M. A. (1997). Problem construction and creativity: The role of ability, cue consistency, and active processing. *Creativity Research Journal*, 10(1), 9-23.

Rescher, N. (1996). *Process metaphysics: An introduction to process philosophy*. Suny Press.

Rietzschel, E. F., Nijstad, B. A., & Stroebe, W. (2010). The selection of creative ideas after individual idea generation: Choosing between creativity and impact. *British journal of psychology*, 101(1), 47-68.

Rietzschel, E. F., Nijstad, B. A., & Stroebe, W. (2014). Effects of problem scope and creativity instructions on idea generation and selection. *Creativity Research Journal*, 26(2), 185-191.

Rittel, H. W., & Webber, M. M. (1973). Dilemmas in a general theory of planning. *Policy sciences*, 4(2), 155-169.

Roe, A. (1946). Artists and their work. *Journal of Personality*. 15, 1–40.

Rosso, B. D. (2014). Creativity and constraints: Exploring the role of constraints in the creative processes of research and development teams. *Organization Studies*, 35(4), 551-585.

Rosso, B. D., Dekas, K. H., & Wrzesniewski, A. (2010). On the meaning of work: A theoretical integration and review. *Research in organizational behavior*, 30, 91-127.

Rouse, E. (2013). *Kill your darlings? Experiencing, maintaining, and changing psychological ownership in creative work* (Doctoral dissertation, Boston College).

Rouse, E. D. (2016). Beginning's end: How founders psychologically disengage from their organizations. *Academy of Management Journal*, 59(5), 1605-1629.

Rouse, E.D. (2020). Where you end and I begin: Understanding intimate co-creation. *Academy of Management Review*, 45(1), pp.181-204.

Runco, M. A. (2003). *Critical creative processes*. Hampton Press.

Runco, M. A. (2004). Everyone has creative potential. Sternberg, R. J., Grigorenko, E. L., & Singer, J. L. (2004). *Creativity: From potential to realization* (pp. 21-30). American Psychological Association.

Runco, M. A. (1994). *Problem finding, problem solving, and creativity*. Greenwood Publishing Group.

Ryan B. (1992). *Making Capital from Culture: The Corporate Form of Capitalist Cultural Production*. Walter de Gruyter, New York

Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of personality and social psychology*, 57(6), 1069.

Saavedra, R., & Van Dyne, L. (1999). Social exchange and emotional investment in work groups. *Motivation and Emotion*, 23(2), 105-123.

Sandberg, J., Loacker, B., & Alvesson, M. (2015). *Conceptions of process in organization and management* (pp. 318-348). Oxford, UK: Oxford University Press.

Schneider, B. (1987). The people make the place. *Personnel psychology*, 40(3), 437-453.

Schrage, M. (2013). Just how valuable is Google's '20% time'. *Harvard Business Review*, 20.

Scott, S. G., & Bruce, R. A. (1994). Determinants of innovative behavior: A path model of individual innovation in the workplace. *Academy of management journal*, 37(3), 580-607.

Seeger, M. (2015). Authorship of thoughts in thought insertion: What is it for a thought to be one's own?. *Philosophical Psychology*, 28(6), 837-855.

Seligman, M. E. P. (2003). Foreword: The past and future of positive psychology. In L. M. Keyes & J. Haidt (Eds.), *Flourishing: A positive psychology and the life well–lived* (pp. XI–XX). Washington, DC: American Psychological Association.

Shafir, E. (1993). Choosing versus rejecting: Why some options are both better and worse than others. *Memory & cognition*, 21(4), 546-556.

Shalley, C. E., Zhou, J., & Oldham, G. R. (2004). The effects of personal and contextual characteristics on creativity: Where should we go from here?. *Journal of management*, 30(6), 933-958.

Shin, J., & Grant, A. M. (2019). Bored by interest: How intrinsic motivation in one task can reduce performance on other tasks. *Academy of Management Journal*, 62(2), 415-436.

Silvia, P. J. (2001). Interest and interests: The psychology of constructive capriciousness. *Review of General Psychology*, 5(3), 270-290.

Silvia, P. J. (2008). Interest—The curious emotion. *Current directions in psychological science*, 17(1), 57-60.

Silvia, P. J. (2017). Curiosity. In *The science of interest* (pp. 97-107). Springer, Cham.

Silvia, P. J., & Kashdan, T. B. (2009). Interesting things and curious people: Exploration and engagement as transient states and enduring strengths. *Social and Personality Psychology Compass*, 3(5), 785-797.

Simonton, D. K. (1992). Leaders of American psychology, 1879–1967: Career development, creative output, and professional achievement. *Journal of Personality and Social Psychology*, 62(1), 5.

Simonton, D. K. (1997a). Creative productivity: A predictive and explanatory model of career trajectories and landmarks. *Psychological review*, 104(1), 66.

Simonton, D. K. (1997b). Historiometric studies of creative genius. *The creativity research handbook*, 3-28.

Simonton, D. K. (1999). *Origins of genius: Darwinian perspectives on creativity*. Oxford University Press.

Simonton, D. K. (2000). Creativity: Cognitive, personal, developmental, and social aspects. *American psychologist*, 55(1), 151.

Simonton, D. K. (2003). Scientific creativity as constrained stochastic behavior: the integration of product, person, and process perspectives. *Psychological bulletin*, 129(4), 475.

Simpson, R., Irvine, K., Balta, M., & Dickson, K. (2015). Emotions, performance and entrepreneurship in the context of fringe theatre. *Organization*, 22(1), 100-118.

Sonenshein, S. (2014). How organizations foster the creative use of resources. *Academy of*

Management Journal, 57(3), 814-848.

Sonenshein, S., & Dholakia, U. (2012). Explaining employee engagement with strategic change implementation: A meaning-making approach. *Organization Science*, 23(1), 1-23.

Spradley, J. P. (2016). *Participant observation*. Waveland Press.

Stasser, G., & Titus, W. (1985). Pooling of unshared information in group decision making: Biased information sampling during discussion. *Journal of personality and social psychology*, 48(6), 1467.

Staw, B. M. (1990). An evolutionary approach to creativity and innovation. In M. West and J. L. Farr (eds.), *Innovation and Creativity at Work: Psychological and Organizational Strategies*: 287–308. New York: Wiley.

Stephens, G. L., & Graham, G. (2000). *When self-consciousness breaks: Alien voices and inserted thoughts.* The MIT press.

Sternberg, R. J. (1998). A balance theory of wisdom. *Review of general psychology*, 2(4), 347-365.

Sternberg, R. J., & Lubart, T. I. (1991). An investment theory of creativity and its development. *Human development*, 34(1), 1-31.

Stevens, C. K., & Kristof, A. L. (1995). Making the right impression: A field study of applicant impression management during job interviews. *Journal of applied psychology*, 80(5), 587.

Stigliani, I., & Ravasi, D. (2012). Organizing thoughts and connecting brains: Material practices and the transition from individual to group-level prospective sensemaking. *Academy of Management journal*, 55(5), 1232-1259.

Stjerne, I.S. and Svejenova, S., 2016. Connecting temporary and permanent organizing: Tensions and boundary work in sequential film projects. *Organization Studies*, 37(12), pp.1771-1792.

Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Procedures and techniques for developing grounded theory*. Sage Publications

Suddendorf, T., & Corballis, M. C. (2007). The evolution of foresight: What is mental time travel, and is it unique to humans?. *Behavioral and brain sciences*, 30(3), 299-313.

Summerfeldt, L. J. (2007). Treating Incompleteness, Ordering, and Arranging Concerns. In M. M. Antony, C. Purdon, & L. J. Summerfeldt (Eds.), *Psychological treatment of obsessive-compulsive disorder: Fundamentals and beyond* (p. 187–207).

Summerfeldt, L. J., Huta, V., & Swinson, R. P. (1998). Personality and obsessive-compulsive disorder. *Obsessive-compulsive disorder: Theory, research, and treatment*, 79-119.

Sutton, R. I., & Hargadon, A. (1996). Brainstorming groups in context: Effectiveness in a product design firm. *Administrative science quarterly*, 685-718.

Svejenova, S., Mazza, C., & Planellas, M. (2007). Cooking up change in haute cuisine: Ferran Adrià as an institutional entrepreneur. *Journal of Organizational Behavior*: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior, 28(5), 539-561.

Tam, P.W. (Y2005). Next Case for Palm Creators: The Brain. *The Wall Street Journal*. Retrieved from https://www.wsj.com/articles/SB111162113027988157

Tan, V. (2015). Using negotiated joining to construct and fill open-ended roles in elite culinary groups. *Administrative science quarterly*, 60(1), 103-132.

Thrash, T. M., & Elliot, A. J. (2003). Inspiration as a psychological construct. *Journal of personality and social psychology*, 84(4), 871.

Thrash, T. M., & Elliot, A. J. (2003). Inspiration as a psychological construct. *Journal of personality and social psychology*, 84(4), 871.

Throsby, D., & Zednik, A. (2011). Multiple job-holding and artistic careers: some empirical evidence. *Cultural trends*, 20(1), 9-24.

Torrance, E. P. (1995). Insights about creativity: Questioned, rejected, ridiculed, ignored. *Educational Psychology Review*, 7(3), 313-322.

Townley, B., Beech, N., & McKinlay, A. (2009). Managing in the creative industries: Managing the motley crew. *Human relations*, 62(7), 939-962.

Tsoukas, H. (1996). The firm as a distributed knowledge system: A constructionist approach. *Strategic management journal*, 17(S2), 11-25.

Tversky, A., & Kahneman, D. (1981). The framing of decisions and the psychology of choice. *Science*, 211(4481), 453-458.

Unsworth, K. (2001). Unpacking creativity. *Academy of management review*, 26(2), 289-297.

Uzzi, B., & Spiro, J. (2005). Collaboration and creativity: The small world problem. *American journal of sociology*, 111(2), 447-504.

Vallacher, R. R., & Wegner, D. M. (1987). What do people think they're doing? Action identification and human behavior. *Psychological review*, 94(1), 3.

Van de Ven, A. H., & Poole, M. S. (1995). Explaining development and change in organizations. *Academy of management review*, 20(3), 510-540.

van der Voordt, D. J. M., & van Wegen, H. B. (2007). *Architecture in use*. Routledge.

Van Maanen, J. (1979). Reclaiming qualitative methods for organizational research: A preface. *Administrative science quarterly*, 24(4), 520-526.

Van Maanen, J., & Barley, R. S. (1984). Occupational Communities: Culture and Control in Organizations, *Research in Organizational Behaviour*. 287-365

van Roessel, L., & Katzenbach, C. (2020). Navigating the grey area: Game production between inspiration and imitation. *Convergence*, 26(2), 402-420.

Vangkilde, K. T. (2017). Foretelling the future: The fashion designer as shaman. *Anthropology Today*, 33(2), 15-18.

Vasconcelos, L. A., & Crilly, N. (2016). Inspiration and fixation: Questions, methods, findings, and challenges. *Design Studies*, 42, 1-32.

Vough, H. C., Cardador, M. T., Bednar, J. S., Dane, E., & Pratt, M. G. (2013). What clients don't get about my profession: A model of perceived role-based image discrepancies. *Academy of Management Journal*. 56(4), 1050-1080.

Wallace, D. B., & Gruber, H. E. (Eds.). (1989). *Creative people at work: Twelve cognitive case studies*. Oxford University Press on Demand.

Wallas, G. (1926). *The art of thought*. J. Cape: London.

Ward, T. B., Patterson, M. J., & Sifonis, C. M. (2004). The role of specificity and abstraction

in creative idea generation. *Creativity Research Journal*, 16(1), 1-9.

Waterman, A. S. (1993). Two conceptions of happiness: Contrasts of personal expressiveness (eudaimonia) and hedonic enjoyment. *Journal of personality and social psychology*, 64(4), 678.

Webster, D. M., & Kruglanski, A. W. (1994). Individual differences in need for cognitive closure. *Journal of personality and social psychology*, 67(6), 1049.

Wegner, D. M., Sparrow, B., & Winerman, L. (2004). Vicarious agency: experiencing control over the movements of others. *Journal of personality and social psychology*, 86(6), 838.

Weick, K. E. (1979). *The social psychology of organizing* (2nd ed.). Reading, MA: Addison-Wesley.

Weick, K. E., & Quinn, R. E. (1999). Organizational change and development. *Annual review of psychology*, 50(1), 361-386.

Weisberg, R. (1986). *Creativity: Genius and other myths*. WH Freeman/Times Books/Henry Holt & Co.

Weisberg, R. W. (2004). On structure in the creative process: A quantitative case-study of the creation of Picasso's Guernica. *Empirical Studies of the Arts*, 22(1), 23-54.

Welch, L. (1946). Recombination of ideas in creative thinking. *Journal of Applied Psychology*, 30(6), 638.

Weschler, L., & Irwin, R. (2008). *Seeing Is Forgetting the Name of the Thing One Sees: Expanded Edition.* University of California Press.

Willig, C. (2017). Reflections on the use of object elicitation. *Qualitative Psychology*, 4(3), 211.

Woodman, R. W., Sawyer, J. E., & Griffin, R. W. (1993). Toward a theory of organizational creativity. *Academy of management review*, 18(2), 293-321.

Woodward, C. E. (1989). Art and elegance in the synthesis of organic compounds. *Creative people at work: twelve cognitive case studies*. Oxford University Press, New York, 227-254.

Wright, H. F. (1937). *The influence of barriers upon strength of motivation*. Duke University. Contributions to Psychological Theory.

Yee, N. (2006). The psychology of massively multi-user online role-playing games: Motivations, emotional investment, relationships and problematic usage. In *Avatars at work and play* (pp. 187-207). Springer, Dordrecht.

Zeigarnik, B. (1927). On the retention of completed and uncompleted activities. *Psychologische Forschung*, 9(1-85), 1.

Zhou, J., Shin, S. J., Brass, D. J., Choi, J., & Zhang, Z. X. (2009). Social networks, personal values, and creativity: evidence for curvilinear and interaction effects. *Journal of applied psychology*, 94(6), 1544.

Zhou, J., Wang, X. M., Bavato, D., Tasselli, S., & Wu, J. (2019). Understanding the receiving side of creativity: A multidisciplinary review and implications for management research. *Journal of Management*, 45(6), 2570-2595.

Appendices

Appendix A: Chapter 2 Interview Protocol

Initial interview questions

Creative Work Experiences

- Can you describe your career in theatre/architecture?
- What are your main tasks?
- How creative is your job?
- Does the level of creativity stay constant?
- What are some of the main challenges associated with your job?
- You have received training around developing plays/designing buildings. How much does the reality of working with ideas as a professional theatre artist/architect mirror your training?

Creative Process

- Could you tell me about your creative process?
- Where do your ideas come from?
- How do you decide which ideas to pursue?
- At what point in a process do you make decisions about whether or not to pursue an idea?

Specific questions that emerged during data collection and analysis

Engaging with ideas

- What happens to ideas that you do not pursue?
- Reflecting on your decisions about ideas, have you ever changed a decision about an idea? Can you give me an example of a time you reconsidered an idea?
    - What made you change your decision?
    - Is it easy to change your mind/reconsider an idea?
    - Is there anything that helps you reconsider an idea?
    - When do you typically reconsider ideas?
    - What is it like when you revisit an idea from the past?
- Are all instances around revisiting ideas pretty similar?
    - Do you have an example of a different circumstance under which you revisited an idea?

Diary Questions

1. Can you write about any ideas you had this week and what you did with them?
2. Did you decide to hold or store any ideas this week?
3. Did you revisit, think about, or use any ideas that you came up with previously?

Appendix B: Chapter 4 Interview Protocol

Initial interview questions

Creative Work Experiences (new participants only)

- Can you describe your career in theatre/architecture?
- What are your main tasks?
- How creative is your job?
- Does the level of creativity stay constant?
- What are some of the main challenges associated with your job?
- You have received training around developing plays/designing buildings. How much does the reality of working with ideas as a professional theatre artist/architect mirror your training?

Creative Process

- Could you tell me about your creative process?
- Where do your ideas come from?
- What are the different sources you go to when you need to come up with new ideas?

Specific questions that emerged during data collection and analysis

Navigating inspiration and imitation

- Can you tell me about a time when you looked to an external source for inspiration for your work?
    - What was the source?
    - How did you use this source?
    - How did you feel when you were using this source as inspiration for your own work?
    - How do you feel about the idea that was ultimately developed?
- Is this the only way to use an external source for inspiration? If not, could you provide an example of a different way of using inspiration in your own work?
    - *Repeat questions from above*
- How do you distinguish between inspiration and imitation in your work?
- How do others around you draw on and use inspiration in their own work?
- Are there some ways of using inspiration that are more acceptable? If yes, why?
- Are there some ways of using inspiration that are not particularly acceptable? If yes, why?
- What would be your advice to a new architect or architecture student who is looking for sources of inspiration for their own work?