

# Kill your darlings? Experiencing, maintaining, and changing psychological ownership in creative work

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**KILL YOUR DARLINGS? EXPERIENCING, MAINTAINING, AND CHANGING  
PSYCHOLOGICAL OWNERSHIP IN CREATIVE WORK**

by

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DISSERTATION

Submitted in partial fulfillment of the  
requirements for the degree of Doctor of Philosophy in Management and Organization  
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## ABSTRACT

The psychology of ownership literature suggests that creation is one of the most powerful processes through which people may come to feel a sense of possession over ideas. Yet, because the task of making a new product is often too large for one individual, ideas are often transferred between, as well as discussed and shaped by, many different people across a range of departments during creative work. Thus, in organizations, shifts in responsibility over ideas are inevitable and the ability for ideas to be shaped by multiple people and successfully move from person to person is critical for organizations. However, we know relatively little about how people, particularly creative workers, respond to changes in responsibility over their ideas. To understand this phenomenon, I conducted an inductive, qualitative study of two teams at a video game design studio, using interviews, weekly diaries, and observations as my data sources. Through grounded theory analysis, I developed theory around how creative workers experience psychological ownership and how this experience is impacted when ideas are handed off between creative workers. Specifically, I describe task characteristics and individuals differences that impact ownership scope (exclusive or shared ownership) and strength. I also delimit outcomes associated with adopting a particular ownership scope for individual creative workers and the collective product. Then, I describe the key psychological conditions that impact how handoffs occur by describing 4 handoff scenarios and the ownership outcomes for both creative workers involved in each scenario. Together these scenarios demonstrate how ownership can be formed, maintained, and changed through social interactions via handoffs. I build on these findings to develop a relational model of ownership which highlights how psychological ownership impacts and is impacted by social interactions and interpersonal relationships. Practically, this research provides insights on how creative workers can experience and manage

ownership over ideas in ways that facilitates engagement in creative work, as well as an organization's ability to benefit from the results of creative workers' labor.

## ACKNOWLEDGEMENTS

Most people don't realize that new ideas are clumsy. They're clumsy, awkward and covered in blood. They need a little while to grow; and they need to be protected while they're growing. I think if you're prepared to go through that process with someone, they're very grateful. People really need that help. They need somebody to be engaged.

- *Brian Eno (in Baccigaluppi & Crane, 2011, pointed out to me by a study participant)*

Thank you to my colleagues, friends and family for being engaged with me and my ideas throughout this process. There have been so many conversations that have shaped how I think and how this dissertation evolved—too many to list.

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My parents – Jan and Warren Rouse

My grandfather – Henry Getz

I see this work as ours.

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## CHAPTER 1 INTRODUCTION

Wallach had now spent more than a decade working on computer equipment. He'd had a hand in the design of five computers – all good designs, in his opinion. He had worked long hours on them. He had put himself into those creatures of metal and silicon. And he had seen only one of them come to functional life, and in that case the customer had decided not to buy the machine. When EGO-2 [a version of the minicomputer] got shut down, Wallach went home again, in a rage. Once more, he stayed away for two weeks, but when he came back, he was still angry. He got angrier when West suggested that he create the architecture for a 32-bit Eclipse [another version of the minicomputer], because the constraints upon Eagle [the codename for the Eclipse during development] seemed imprisoning. Eagle would be backward and messy. What a comedown working on it would be! Clearly, however, Wallach was a man ready to get a machine out the door. (Kidder, 1982:71)

In a changing, tumultuous, and increasingly competitive marketplace (Amabile, 1988; Ford & Gioia, 1995), an organizational focus on efficiency and productivity is not enough (Daft & Marcic, 2009). Instead, organizations must also focus on their ability to create and innovate (Takeuchi & Nonaka, 1986). As Florida (2002: xiii) suggests “human creativity is the ultimate economic resource. The ability to come up with new ideas and better ways of doing things is ultimately what raises productivity...” Thus, it is not surprising that organizations are continually seeking new ways to harness the creativity of employees, employees like Steve Wallach of Data General described in the opening quotation. In fact, it is estimated that approximately one-third of the American workforce is comprised of creative workers—those who are hired to create new ideas, technology, or creative content (Florida, 2002, 2011).

Likely because of this heightened importance on creativity in organizational contexts, management scholars have focused significant attention in the last 30 years on understanding how people create within organizations. Towards this end, scholars have focused on describing the individual creative process, or the process creative workers use to arrive at creative ideas, and

have identified key individual-level factors, such as personality and intrinsic motivation, which impact the creative process and affect the idea's level of creativity (see reviews by George, 2007; Shalley, Zhou, & Oldham, 2004; Zhou & Shalley, 2003). However, in order for an idea to be useful for organizations not only does it need to be created, but implemented as well (Levitt, 2002). Throughout the creation and implementation processes individual creative ideas come together and become collectively generated products: "Innovation, no matter how individually it may have been initiated, always becomes a collective undertaking at some point in its implementation. The unique contributions of various individuals may become blurred" (Angle, 2000: 141). Thus, the complexity of generating new products requires that many creative workers contribute ideas to any one product; this suggests that responsibility of an idea likely shifts from an individual creative worker to a collection of individuals and creative workers may need to "let go" and possibly psychologically detach from their ideas at some point within product development. Throughout this dissertation, I argue that we know relatively little about how people, particularly creative workers, respond to changes in responsibility over their ideas; and, specifically, we do not know if, how, or when creative workers psychologically detach from, and specifically lose ownership over, their ideas.

As the opening quotation and other examples from the popular press and research suggest, the process of psychological detachment is not easy and may result in psychological pain, or "the introspective experience of negative emotions" (Shneidman, 1999: 281) such as anger, despair, or hopelessness. It is clear from the opening quote that Wallach felt anger, a form of psychological pain, but we do not know if or how he psychologically detached, from the creative ideas that were abandoned. Creative workers have also described the painful emotions they experience when they move onto new projects or when they watch other people change

their ideas. In other words, psychological pain may result from letting go even when the idea itself is a success. As filmmaker Miranda July explained about her reluctance to talk about past successful films, “It’s a little bit like someone saying, ‘Let’s talk about your ex-boyfriend...and you’re, like, ‘I loved him, I learned a lot from him, but I had to move on, and it’s kind of painful’(Defore, 2011).” Further, as more and more organizational members become involved with shaping ideas throughout the course of bringing a product to market, having ideas modified by others is likely a common experience for creative workers. While July speaks of moving on from creative ideas as being painful, watching others change your ideas might also be a source of pain. For example, in an interview I conducted<sup>1</sup> with an entrepreneur, he claimed, “It hurt me tremendously when we gave up the name. I had trademarked [GP] Inc. and when we transitioned the company, he changed it to [GP] LLC.” In this case, even the change in name from Inc. to LLC was experienced as a loss.

Because psychologically detaching from creative ideas may be a painful experience, creative workers may seek to maintain responsibility of their ideas. For example, one designer in a study by Elsbach and Flynn (2008) commented:

Sometimes I have a tough time letting my ideas go on to the next stage, and knowing that someone else is going to run with the idea, because I worry that they won't see the concept the same way I do. I've even had times when I just saved an idea, because I didn't think the person that was going to take it on was really on the same wave-length as me. And I thought, I'll wait and give it to someone else, who understands it better.

Thus, in failing to let go of ideas, creative workers may impede the implementation process. This suggests that a certain level of territoriality around creative ideas may arise. As Brown, Lawrence, and Robinson claim, “[l]ife in organizations is fundamentally territorial. We make claims on and defend our control of a variety of organizational objects, spaces, roles and

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<sup>1</sup> I conducted this interview as part of the preliminary study described in Chapter 3.

relationships.” (2005: 577). Territorial claims of ownership may lead individuals to avoid collaboration and pursue individual rather than collective or organizational goals (Brown et al., 2005). In other words, rather than letting go, individuals may try to preserve their ownership over their ideas. Taken in aggregate, creative workers’ inability to detach from their ideas may impact the organization’s ability to implement creative ideas and truly leverage the creativity of individuals. Therefore, in promoting the creativity of individuals, organizations’ subsequent need for individuals to detach from their creations may unintentionally generate negative experiences which may impact how a creative worker creates in the future.

The purpose of this dissertation is to understand how creative workers respond to changes in responsibility over their ideas. Specifically, I am focusing on how modification of ideas impacts changes in responsibility which force creative workers to intentionally or unintentionally manage their attachment to their ideas. To understand how attachment between a creative worker and their idea changes throughout the course of and following the creative process, I draw from the lens of psychological ownership (Pierce & Jussila, 2011; Pierce, Kostova, & Dirks, 2001, 2003). Psychological ownership is a specific form of attachment in which individuals feel that a specific target is theirs (Pierce et al., 2003). As I will describe in the next chapter, theory suggests that control over and creation of a target are two of the key mechanisms through which individuals develop a sense of psychological ownership over that target, making psychological ownership a particularly relevant theory in studying changes in responsibility associated with creativity. The bulk of the literature on psychological ownership focuses on how individuals claim ownership over their jobs and organizations (Pierce & Jussila, 2011). While it has been theoretically proposed that in creating individuals develop a sense of psychological ownership over their creations (Pierce et al., 2001), little if any empirical work has explored the relationship

between the creative process and psychological ownership, nor ideas (rather than jobs, organizations, or issues) as the target of psychological ownership, nor the processes involved with losing a sense of ownership (c.f. Belk, 1988). In this dissertation, I extend existing theory by explicitly considering creation and psychological ownership to understand how creative workers respond to changes in responsibility over ideas.

Practically, this research offers the opportunity to understand how creative workers, who represent a large segment of the working population, can own and lose ownership over their ideas in ways that minimize negative outcomes such as psychological pain, decreased job satisfaction and job commitment, and potentially intention to turnover. While not the primary focus of this study, this research also has implications for how organizations manage creative workers in order to improve creative and implementation processes. Further, in studying and developing theory around how creative workers respond to changes in responsibility over their ideas, I extend theory on psychological ownership by articulating the processes through which creation relates to the experience of ownership over ideas and the processes through which creative workers potentially lose a sense of ownership during and following creation. I summarize this research agenda around 4 questions introduced next and explored in greater detail through the literature review in chapter 2. I organize these questions around 4 potential “phases” in the response process (1) the generation of ideas and psychological ownership (2) idea modification and shifts in responsibility (3) ownership responses (4) potential outcomes of ownership responses.

### **(1) Generation of ideas and psychological ownership**

Theory on psychological ownership suggests that through the process of creating, individuals likely come to feel a sense of ownership over their creations (Pierce & Jussila, 2011;

Pierce et al., 2001, 2003). When individuals create they invest their time, energy, values, and identity into their ideas, which potentially causes an overlap between self and creation (Pierce et al., 2001). In other words, a creative idea may come to be viewed as part of a creative worker's extended self (Belk, 1988; James, 1890). Thus, through the creative process an overlap may develop between a creative worker's identity and their idea which leads to a sense of a specific form of attachment—psychological ownership.

Within the creativity literature in psychology and management, scholars have outlined the key stages in the creative process (e.g. Amabile, 1983, 1988; Lubart, 2001); they have also begun to outline within-individual internal processes, such as motivation and emotion, that occur during the creative process (see George, 2007 for review). For example, Amabile's (1983) componential model, a widely-accepted model of individual creativity within organization studies, proposes that intrinsic motivation might be particularly important during particular phases of the creative process such as "task presentation," when the creative task or problem is presented to the individual and "response generation," when the individual generates a set of solutions or ideas. Similarly, work on affect submits that positive affect may accompany periods of the creative process (Amabile, Barsade, Mueller, & Staw, 2005). While this work begins to suggest that within-individual internal processes, related to motivation and affect, are important to the creative process and that the relationship between creative workers and their ideas is important, it does not address the internal process that relates to the ownership between a creative worker and their idea or how the internal processes of motivation, affect, and ownership might relate to one another.

Taken together, these literatures suggest that creative workers likely form some form of ownership over their ideas through the process of creating. However, only limited research has

explored the relationship between creativity and psychological ownership empirically (Pierce & Jussila, 2011); consequently we only have a cursory understanding of the basic mechanisms and do not know how creative workers experience ownership during and following the creative process. Therefore, I pose the following research question:

**Question 1 (Q1):** How and in what ways do creative workers experience psychological ownership over their creative ideas?

(2) **Idea modification and shifts in responsibility**

During and following the creative process, creative workers may have their ideas modified by coworkers, managers or organizational groups. As they generate and refine their ideas, creative workers likely share their working ideas with others (Hargadon & Bechky, 2006); through these interactions an idea may be modified by someone other than the creative worker. Further, following the creative process, a creative worker may hand off their idea to be shaped, transformed, and ultimately implemented by someone else. This suggests that that shifts in responsibility may take place during creative work. Depending on the circumstances of these social interactions and the manner of the change in responsibility, it is possible that creative workers may respond differently. To address and unearth these key conditions, I pose the following question:

**Question 2 (Q2):** How do the circumstances around shifts in responsibility impact ownership responses?

(3) **Ownership responses**

Because of the change of responsibility that may occur when an idea is either modified or handed off, it is possible that the ownership relationship between creative workers and their ideas changes. However, we have little understanding of how this relationship changes throughout the creative and implementation processes, if it does. In the literature review, I focus on the two

most distinct ownership responses: continue to psychologically own the idea or lose ownership; however it is also possible that a creative worker may increase their ownership or that they may experience some form of mixed response. Regardless, we do not know when and how these ownership responses unfold over the creative and implementation process. Thus, I pose question 3:

**Question 3 (Q3):** When and how do creative workers maintain or change ownership following shifts in responsibility?

**(4) Potential outcomes to ownership responses**

Research on psychological ownership only begins to consider the loss of ownership (e.g. Shu & Peck, 2011). However, if possessions are incorporated into a creative worker's sense of self, Belk (1988) does suggest that a loss of ownership should be associated with a loss of self or identity. Yet, we do not know how identity loss relates to processes of losing a sense of ownership or continued ownership. Further, research on territoriality suggests that creative workers may resist losing ownership over their ideas if they already feel a sense of psychological ownership (Baer & Brown, 2012; Brown et al., 2005; Brown & Robinson, 2011). In the literature review, I outline a sample of potential outcomes based on extant literature, but suggest that there are likely more outcomes. Also, it is unclear when positive or negative outcomes, from the perspective of the creative worker, will be associated with a given ownership response.

Therefore, I pose the following question:

**Question 4 (Q4):** What are the outcomes, for the creative worker, associated with particular ownership responses and what are the conditions that lead to positive or negative outcomes for the creative worker?

Next, I examine the theoretical underpinnings of each of these questions in more detail. I first draw from the creativity literature to articulate key definitions used throughout the proposal.

Then, I draw together the literatures on creativity and psychology of ownership to theoretically ground my research questions.

## **CHAPTER 2**

### **THEORETICAL FOUNDATIONS AND LITERATURE REVIEW**

The purpose of this dissertation is to understand how creative workers respond to changes in responsibility over their ideas. Specifically, I focus on how shifts in responsibility impact a creative worker's ownership over their ideas and the outcomes associated with particular ownership responses. As described in the introduction, this research is targeted around four sub-questions, illustrated in Figure 2.1. While these questions are broad and cover a wide scope, they were designed to map out a framework or guide with which to enter the field. The purpose of this theoretical chapter is to ground each question in the extant literature in order to articulate what we currently understand about the phenomena and how investigating the proposed research questions can build or extend theory. In this chapter, I work with insights from both the creativity and psychology of ownership literatures to unpack each sub-question in turn.

#### **DEFINITIONS**

Before discussing each of the questions, however, I draw from the creativity literature to articulate key definitions, which I will use in the dissertation. I include definitions of creative workers, creativity, and implementation.

#### **Creative Workers**

I define creative workers as employees whose jobs involve the development of creative ideas. Drawing from Florida's (2002: xiii) work on the creative class, I focus on "people who are paid principally to do creative work for a living." While some scholars have argued that creativity may be a characteristic or trait of particular individuals (e.g. 1999; 1972) and that certain people may have higher potential for generating creative outcomes (Gough, 1979), my focus is not on determining the creativity associated with particular individuals or assessing the creativity of particular outcomes, but rather on understanding how people respond to changes in

responsibility over their ideas within organizations. This phenomenon is relevant to all workers tasked with developing creative ideas as part of their jobs, whether they have a higher potential for creativity based on their personality or not. Thus, my focus is on creative workers in organizations because they are likely impacted by changes in responsibility over ideas.

## **Creativity**

As noted, the primary focus of this dissertation is not on assessing the creativity of ideas, but rather on understanding the processes that occur in service of the development of creative ideas or creative work. This perspective follows Drazin, Glynn, and Kazanjian (1999: 287) who define creativity as “engagement in creative acts” and are concerned with attempts at creative action. This definition focuses on creativity as a process, regardless of the outcome. However, drawing on earlier organizational scholarship (Amabile, 1983; Amabile, Conti, Coon, Lazenby, & Herron, 1996; Oldham & Cummings, 1996; Zhou & Shalley, 2003), recent reviews of creativity (George, 2007; Shalley et al., 2004) claim that creativity concerns the generation, development, or production of ideas which are both novel and useful. While these definitions acknowledge the creative process (i.e. generation, development, production), they are outcome-focused in that creativity is determined by particular characteristics of the product, the novelty and usefulness, of the outcome or resulting idea, rather than engagement in processes. At the same time, a review by Shalley et al. (2004) argued that because so much attention has been paid to creativity as a product or outcome in the study of organizations, we know relatively little about the processes that are critical to generating an outcome in the first place and additional process-focused research is warranted. Recent scholarship (e.g. Hargadon & Bechky, 2006; Perry-Smith & Shalley, 2003) has also called attention to the social nature of the creative process to emphasize how social interactions play a fundamental role in the unfolding of the creative

process. In this dissertation, I adopt this process-perspective to focus on when changes of responsibility occur throughout the creative process to understand the impact on creative workers.

Scholars have also been interested in the scope of creative work, as creativity may range from incremental adaptation and problem-solving to the development of more radical breakthroughs (Gardner, 1993, 1999; Shalley et al., 2004); however many organizational scholars focus on more routine, every-day forms of creativity found in organizations (c.f. George, 2007), such as the everyday improvement of products, services, or procedures that might occur in research and design departments, rather than on the development of products, such as the telephone or television, that revolutionize practices (Axtell et al., 2000). For the purposes of this research, I am primarily concerned with the processes that creative workers use to develop ideas in the course of their everyday jobs, since this type of creativity is broadly applicable to many people in many different types of creative jobs (Florida, 2002). Thus, while in the field I was open to either the incremental or radical, I found more incremental processes given my focus on everyday work. Later, I will delve into how scholars have conceptualized the specific processes related to creativity.

## **Implementation**

Many creativity scholars agree that the implementation of creative ideas should be distinguished from the creative process (Amabile et al., 1996; George, 2007; Oldham & Cummings, 1996; Rank, Pace, & Frese, 2004; Shalley et al., 2004)<sup>2</sup>. Scholars concerned with research and development speak of implementation as the process of moving a creative idea to

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<sup>2</sup> While this theoretical distinction is common in the literature, in practice this distinction may be more blurry. For example, in organizations such as IDEO, prototyping is commonplace (Hargadon, 2005; Sutton & Hargadon, 1996) and creative workers iterate frequently between generating and implementing ideas facilitating a blurring between creativity and implementation processes.

market—getting support for it, testing it, refining it, and packaging it to sell (e.g. Utterback, 1971). Amabile (1988: 162), for instance, describes a testing and implementation phase when “prototypes may be perfected, technical tests and market tests conducted, and input from every area of the organization considered.” Mumford (2000) also conceptualizes implementation as the time when the organization, more broadly, becomes involved with turning the idea into a product or service. It is important to note that scholars concerned with continuous process improvements or innovation adoption speak of implementation from an organizational change perspective, describing how organizations adopt and implement an idea to change the organization itself (e.g. Klein & Sorra, 1996; Rogers, 2003; West, 2002; West & Farr, 1989); however, in this dissertation, I use the definition of implementation that concerns the steps necessary to bring a creative idea to market, as depicted in Figure 2.2. As I will describe, during implementation and the creative process, individuals’ ideas have the potential to be modified by other organizational members leading to changes in responsibility over ideas.

### **PSYCHOLOGICAL OWNERSHIP BETWEEN CREATIVE WORKERS AND THEIR IDEAS**

One of the initial assumptions of this dissertation, prior to entering the field, was that during the creative process creative workers develop some form of psychological attachment, and specifically psychological ownership, over their ideas. Further, it is because of this ownership that changes in responsibility over ideas prompts ownership responses. In this section, I draw from extant literature to argue why this is a fair assumption, but also to suggest how this dissertation can elaborate theory around this assumption. I first describe research that speaks to what George (2007) labels within-individual internal processes that take place during the creative process. Primarily this work has focused on processes related to motivation and emotion. While this research in creativity does not speak to ownership explicitly, it does suggest the importance

of the psychological connection between individuals and their ideas. Another stream of research focusing on psychological ownership (a specific form of psychological attachment), however, does explicitly relate internal processes of attachment to creativity. Therefore, I introduce the literature on psychological ownership to suggest the need to understand how psychological ownership occurs in the creative process and introduce my first research question.

### **Within-individual Internal Processes in Creativity**

Recently Amabile and Kramer (2007, 2011b) have called attention to the importance of understanding “inner work lives” or the interplay of perceptions, emotions, and motivations that people experience as they work, since the quality of inner work life may be key to harnessing the productivity of workers. While they focus on these three components, Amabile and Kramer acknowledge that inner-work lives involve complex mental activities and there may be other components that relate to inner-work lives (Amabile & Kramer, 2011b). In regards to creativity specifically, though, scholars have studied the role of mood, affect and motivation most extensively (c.f. George, 2007).

***Mood and affect.*** Broadly speaking, the study of mood and affect is the first area of research that most directly relates to how people might feel when they create. This research has been primarily directed at uncovering antecedents related to creativity, rather than understanding how people feel about what they create. For example, a key question behind this research is “Are people more creative when they are in a positive or negative mood?” Scholars have found that positive moods lead to greater cognitive flexibility and creative problem solving (e.g. Ashby & Isen, 1999) and two recent meta-analyses (Baas, De Dreu, & Nijstad, 2008; Davis, 2009) found that indeed positive moods were more associated with creative performance than neutral-moods. However, Davis (2009), in a meta-analysis, found that the strength of the effect of positive mood

depended on whether the comparison condition (neutral versus negative mood state) and the creative task type (whether the task focused on ideation rather than problem solving) and Baas, De Dreu and Nijstad (2008: 797) concluded that more research is necessary as “the relationship between mood states and creative performance is still poorly understood.” This lack of clarity after 25 years of research suggests that the relationship between mood and creativity may be highly context dependent (George, 2007).

In another line of research, Amabile et al. (2005) explored the temporal relationship between affect and creativity. The authors found that creative thought events resulted in positive affect. For example, many respondents expressed joy at having achieved an outcome. Further, the study suggests that positive affect occurs during the creative process, and the authors note that creating itself is an inherently emotional process: “The feelings of enjoyment that arise in the course of doing an activity creatively may set up a virtuous cycle of enhanced creativity and enhanced intrinsic enjoyment” (2005: 394). This research raises the possibility that what creative workers enjoy is the development of their idea, and that further understanding the relationship between creative workers and their ideas might provide a deeper understanding of the role of emotions in the creative process.

Scholars have suggested that motivational processes might underlie the link between mood and creativity; this reasoning speaks to the acknowledged interplay between emotions and motivations (e.g. Amabile & Kramer, 2007; Amabile & Kramer, 2011b; Madjar, Oldham, & Pratt, 2002). For instance, building on the theory of the mood-as-input-model (Martin & Stoner, 1996; Schwarz & Clore, 1983, 2003), George and Zhou (2002) propose that negative moods may bring attention to a problematic situation which leads individuals to make changes, consequently stimulating creativity. Thus, negative moods may motivate creativity. Further, Baas et al. (2008)

propose that some mood states might affect cognitive flexibility, or the breadth and number of conceptual categories generated, whereas others might affect cognitive persistence or perseverance within a limited number of categories. Thus, through either mechanisms related to flexibility or persistence, different moods may be related to increased creativity. Most recently, Bledow et al. (In press) found that an affective shift, or change from negative to positive affect, positively impacted creativity. Therefore, this work suggests that how people feel when they create may affect their motivation to create, as well as the level of creativity of the output.

**Motivation.** Amabile (1983) highlighted the role of motivation in creativity in her articulation of the componential model (which I describe in more detail in subsequent sections). There she suggested that intrinsic motivation, “a motivational state generated by the individual's reaction to intrinsic properties of the task and not generated by extrinsic factors,” (1983: 365), would be positively related to creativity, whereas extrinsic constraints would decrease creativity. Increased intrinsic motivation may lead to more curiosity, risk-taking, and cognitive flexibility which are beneficial for creativity (Shalley et al., 2004). Intrinsically motivated creative workers enjoy the creative process itself. Amabile argues that individuals who are more extrinsically motivated will likely take the fastest and safest path to complete the task to achieve external rewards, rather than spending time exploring riskier paths which may result in more creative outcomes. As Amabile (1988: 144) describes, “Someone who is intrinsically motivated...is motivated primarily by the interest, challenge, and enjoyment of being in the maze.” Although empirical work has provided mixed results (Amabile, 1979; Amabile, Goldfarb, & Brackfield, 1990; Shalley & Perry-Smith, 2001; Shin & Zhou, 2003), in general, work on motivation suggests that intrinsic motivation is an important internal process related to creativity.

The primary purpose of this work on motivation is to understand antecedents of creativity (are intrinsically motivated people more creative?). However, people may be motivated by generating and engaging with their own ideas. For instance, the items often used to assess intrinsic motivation hint at how engaging in the creative process may be partially explained by creative workers' growing attachment to ideas being created. For example, one of the 7 items Amabile found related to intrinsic motivation was "You get a lot of pleasure out of reading something good that you have written." (1988: 144). Another item - "You enjoy becoming involved with ideas, characters, events, and images in your writing" - suggests that intrinsic motivation likely relates to the attachment between a creative worker and their ideas. These items indicate that part of what creative workers might enjoy is their involvement and relationship to their own ideas. Nonetheless, few, if any researchers, have directly explored how motivation relates to the attachment between creative workers and their ideas.

*Summary.* As George notes, "theorizing and research [in within-individual internal processes] was dominated by a quest to determine singular internal processes responsible for creativity" (2007: 453). Thus, the primary goal of extant research on within-individual internal processes in creativity is to uncover antecedents that relate to creative outputs. However, in addressing within-individual internal processes, a picture of how creative workers might feel when their create begins to emerge. For example, the work on motivation suggests that individuals enjoy participating in creative work, because of the process of engaging with their own ideas. Further, creative workers may experience positive emotions as they work and when they achieve creative outcomes. Even so, we only have a preliminary understanding of how creative workers feel about what they create. Therefore, I turn next to the psychology of ownership literature which considers how individuals form attachments to ideas and other focal

targets and specifically suggests that in creating individuals likely form strong ownership over their ideas.

### **Psychology of Ownership**

Psychological ownership focuses on a specific kind of psychological attachment in which the link between an individual and attachment target focuses on possessiveness (Pierce & Jussila, 2011; Pierce et al., 2001) and speaks to the notion of “my” or “mine.” While other forms of attachment, such as identification and commitment, have been examined in organizational scholarship, psychological ownership is conceptually distinct since the construct has its own related motivations, mechanisms, and consequences (Pierce & Jussila, 2011; Pierce et al., 2001), as I will discuss throughout this dissertation. Psychological ownership provides a foundation to understand how and why people come to feel an idea is “theirs.” In this section, I first define psychological ownership and contextualize the construct in the broader body of work on the psychology of possession. I move on to describe how scholars have considered the emergence of psychological ownership, revealing that, in theory, creating is one of the strongest ways that individuals may come to feel psychological ownership over their ideas.

***Defining psychological ownership.*** Originally, the concept of psychological ownership emerged from the desire to more deeply understand the relationship between formal ownership and performance effects (Pierce & Rodgers, 2004; Pierce, Rubinfeld, & Morgan, 1991). Specifically, it was suggested that psychological ownership is the mechanism through which legal ownership (in which employees have an ownership stake in the organization) improves performance (c.f. Pierce & Jussila, 2011). Later, however, Pierce, Kostova, and Dirks (2001, 2003), drew from a long history of work on the psychology of possession (e.g. Csikszentmihályi & Rochberg-Halton, 1981; Dittmar, 1992; Furby, 1978a, 1991; James, 1890; Litwinski, 1942,

1947) to theoretically articulate the construct of psychological ownership, the individual motives that the construct fulfills, the potential mechanisms for the emergence of the construct, the potential organizational effects of the construct, as well as the conceptual distinctiveness of the construct.

Pierce et al. (2003: 86) conceptualize psychological ownership as “the state in which individuals feel as though the target of ownership or a piece of that target is ‘theirs] (i.e., ‘It is mine!’).” While people may feel psychological ownership over material possessions, this sense of ownership applies to “internal processes, ideas, and experiences, and those persons, places, and things to which one feels *attached*” (Belk, 1988: 141, emphasis added). Recent empirical work, for example, has considered organizations (Mayhew, Ashkanasy, Bramble, & Gardner, 2007; O’driscoll, Pierce, & Coghlan, 2006; Pierce, O’Driscoll, & Coghlan, 2004; Van Dyne & Pierce, 2004), jobs (Mayhew et al., 2007; O’driscoll et al., 2006; Pierce et al., 2004), issues (Pratt & Dutton, 2000), and work problems and goals (Parker, Wall, & Jackson, 1997) as the targets of psychological ownership. Key to the construct is the idea that not only is the state of psychological ownership cognitive, but affective as well (Pierce et al., 2003; Pratt & Dutton, 2000). In other words, calling something “mine” implies an emotional linkage. Pierce et al. (Pierce & Jussila, 2011; Pierce et al., 2001, 2003) outline three primary motives or roots for the development of psychological ownership; (1) a sense of ownership enables individuals to believe that they have control over and can manipulate their environment, fulfilling a need to be efficacious; (2) a sense of ownership helps individuals define themselves and express their identities; and (3) a sense of ownership fulfills individuals’ need to locate themselves in space and time and possess a territory or place.

At the root of the construct of psychological ownership is a sense of possession and the relationship between the target and self in which "[p]ossessions come to play such a dominant role in the owner's identity that they become part of the extended self" (Pierce et al., 2001: 299). James (1890: 291) first noted this relationship between possessions and the sense of self, or identity, in The Principles of Psychology, "a man's Self is the sum total of all that he CAN call his" and Belk (1988: 141) went on to suggest that "in claiming that something is 'mine,' we also come to believe that the object is 'me.'" In other words, ideas we feel we own may become incorporated into our extended selves (Belk, 1988) or "extensions of an individual's self-conceptualization" (Pratt & Rafaeli, 2001: 106). Thus, in answering the question "What do I feel is mine?" (Pierce et al., 2001) psychological ownership provides theoretical leverage to understand how creative workers come to feel attached to and a sense of ownership over their ideas, as well as the identity implications that come from attaching and detaching from these ideas and shifting ideas in and out of the extended self.

***Emergence of psychological ownership.*** Three primary mechanisms for the emergence of psychological ownership have been proposed—controlling the target, associating with the target, and investing the self in the target (Pierce et al., 2001, 2003). Thus, while formal ownership may be one route toward psychological ownership (Pendleton, Wilson, & Wright, 1998; Pierce & Rodgers, 2004)—an employee who owns shares of stock may feel psychological in addition to legal ownership for example—a sense of ownership can develop through other means. Building off of earlier theorizing and research (Belk, 1988; Csíkszentmihályi & Rochberg-Halton, 1981; Furby, 1978b; Prelinger, 1959), Pierce et al. (2001, 2003) argue that the more a target can be controlled, the more individuals come to feel the target is a part of the self. For example, the more perceived control employees have in their job (e.g. in the methods they

use or resources they tap into), the more psychological ownership they have for their job (Pierce et al., 2004). This supports early empirical work by Prelinger (1959) who found that the more a target is seen as under control of the individual the more likely they are to categorize the target as part of the extended self. Therefore, through control, a target can be psychologically owned and incorporated into the extended self. This mechanism suggests that psychological ownership may be a particularly appropriate theoretical lens to understand more broadly how creative workers manage their response to changes in responsibility.

Second, through association (Pierce et al., 2001, 2003), a person may become familiar with and come to know the target intimately. The deeper the knowledge of the target, the more psychological ownership will develop since: “the more information possessed about the target of ownership, the more things are felt thoroughly and deeply and in the process the self becomes attached to (one with) the object” (Pierce & Jussila, 2011: 80). In other words, the more an individual has familiarity and knowledge of the target, the more “psychological proximity” there will be between the person and the target (Rudmin & Berry, 1987: 263). In a related fashion, Mead suggests that in interacting and becoming familiar with the physical world we come to know objects and ourselves; through an object’s resistance we come to know our own bounds (McCarthy, 1984). In considering non-physical objects, it is more difficult to determine these bounds. The more we know about an idea, the more difficult it is to determine the boundary between self and idea.

Finally, in investing the self, via time, energy, effort, and attention, into the target a person “causes the self to be one with the object” (Pierce et al., 2001: 302). For instance, Csíkszentmihályi & Rochberg-Halton (1981) talk about how the investment of “psychic energy”

into a target leads that target to be “charged” with energy of the agent. Perhaps most importantly for this dissertation, Pierce et al. (2001: 302) suggest:

The most obvious and powerful means by which individuals invest themselves into objects is by creating them. Creation involves investing time, energy, and even one's values and identity. Academics, for example, invest all of these into their research and, hence, may feel strong ownership toward the outcome of their scholarly pursuits. Similarly, engineers may feel ownership toward the products they design, entrepreneurs toward the organizations they found, and politicians toward the bills they draft.

Following Pierce et al.'s theorizing, through the act of creation, creative workers likely come to feel attached to, and specifically, a sense of psychological ownership over, their ideas. In doing so, their ideas are likely incorporated into their identities and extended selves.

This argument around psychological ownership and creation has its roots in John Locke's philosophy of property (Locke, 1690). Locke claims that “the labour of his body and the work of his hands we may say are properly his” (Becker, 1976:160). In other words, individuals can claim ownership of the things they make. Accordingly, there is a long standing notion that the things that we make, both physical and non-physical, are ours. Also, in creating, creative workers have deep knowledge over their ideas and, for a time, have responsibility over them. If the antecedents of psychological ownership are additive (in the sense that the more routes to psychological ownership at play, the stronger the sense of ownership will be) as Pierce et al. (2003) suggest, then creative workers have the potential to form very strong ownership over their ideas. However, while current research outlines the basic premise that creation and psychological ownership are related, we do not know how psychological ownership emerges over time in tandem with the act of creation or how psychological ownership over ideas as the primary target occurs.

Research on psychological ownership has also explored several characteristics of the target, the individual, and the context as factors that impact the extent to which psychological

ownership emerges. Pierce et al. (2003) argued that the extent to which the target is able to be manipulated, socially esteemed, and revealing of the identity of the individual will all moderate the development of psychological ownership. Further, they submit that development will be affected by the sense of self and personal values of the individual. For example, people are more likely to develop a sense of ownership over objects that they esteem and value. Most recently, Pierce and Jussila (2011) theorized that levels of individualism versus collectivism, job involvement, and organizational-based self-esteem would also effect psychological ownership. In a study of employees in an engineering company, McIntyre, Srivastava, and Fuller (2009) examined the individual difference constructs of locus of control and individualism on motives related to psychological ownership and the relationship of those motives on psychological ownership. Internal locus of control related to an effectance motive, or the desire to be able to control the environment, and individualism was related to a self-identity motive, or the desire to define, express, and maintain a sense of self. These motives, along with the desire to belong or have a sense of territory, were related to psychological ownership. Finally, Pierce et al. (2003) theorized that context and culture will affect the emergence of psychological ownership. In particular, they proposed that in strong situations with high structure, a sense of ownership is less likely to emerge. Empirically, work environment structure, including the role of technology routinization (or systems and procedures), the level of autonomy, and the use of participative decision making has been found to be related to both experienced control and psychological ownership, such that the more structures in place, the less likely people are to experience control and ownership (O'driscoll et al., 2006; Pierce et al., 2004). Additionally, characteristics of the job itself, such as skill variety, task significance, and autonomy, have been theorized (Pierce, Jussila, & Cummings, 2009) and found to be antecedents (Parker et al., 1997). This work, then,

suggests that the characteristics of the creative work, the creative worker, and the contextual factors may all relate to how psychological ownership forms and that psychological ownership is likely to emerge differently under certain conditions of the creative process.

**Summary.** The focus of my dissertation revolves around understanding ownership responses to shifts in responsibility; this review of the emergence of psychological ownership lays important groundwork for understanding these responses by suggesting that initially creative workers likely attach to, and more specifically develop a sense of ownership over, their ideas via the creative process. This review also suggests that there is room for new theorizing around the sense of ownership between creative workers and their ideas. For example, creativity scholars have emphasized the process of generating creative ideas focusing on the development of the product (e.g. Amabile, 1983), but have not addressed the relationship between creative workers and their ideas. In applying a psychological ownership lens, it may be possible to understand how processes related to motivation and emotion in creation relate to ownership. Also, because little, if any, empirical work has addressed this relationship between creation and ownership directly, the fact that a deep investment of self occurs during the creative process has been largely assumed. We do not know whether this investment of self in creative ideas takes place for creative workers or only certain conditions. Therefore, I propose the following question:

**Question 1 (Q1):** How and in what ways do creative workers experience psychological ownership over their creative ideas?

### **CHANGES IN RESPONSIBILITY VIA IDEA MODIFICATION**

The psychology of ownership literature (e.g. Pierce et al., 2001, 2003) suggests that, in addition to the development of a creative idea or product, a simultaneous process is occurring—one in which the individual becomes attached to and claims psychological ownership over their idea through creation. This initial assumption sets the stage for understanding how creative

workers might respond to changes in responsibility. However, it is first necessary to understand when and why responsibility might shift in the course of creative work. As I will outline, the current literature suggests that creative workers' ideas may be modified by other people both *during* and *following* the creative process. I label the potential modification of ideas by others "idea exchange" when it occurs during the creative process and "idea handoff" when it occurs following the creative process. When ideas are modified by others, the creative worker is no longer the only author of the idea and it may be considered more of a collective idea, which potentially leads to a change in responsibility. Because of this shift, I argue that points where ideas are modified by others present opportunities for creative workers to manage, intentionally or unintentionally, if and how they own their ideas. I label this management of a sense of ownership, an "ownership response." In this section, I describe these two different opportunities for shifts in responsibility—idea exchange during the creative process and idea handoff following the creative process, as depicted in Figure 2.3. In doing so, I review organizational scholarship on the creative process to situate the discussion. Finally, I argue that idea modification by others, either via exchange or handoff, may create a shift or change in responsibility that prompts a creative worker's ownership response.

### **Idea Exchange during the Creative Process**

Amabile's (1983, 1988) componential model of the creative process is widely-accepted by management scholars and consequently serves as the framework for many studies of creativity (George, 2007; Shalley et al., 2004). One of the key contributions of Amabile's model is the recognition of the social and environmental influences that are specific to organizations and the articulation of three components or factors (domain relevant skills, creativity relevant skills, and task motivation) that affect various stages in the creative process.

The componential model specifically outlines five stages: problem or task identification, preparation, response generation, response validation, and outcome assessment. In the first stage, the problem is identified by or presented to the individual or small-group (Unsworth, 2001). In preparation, the individual or small-group collects relevant information and resources that can be used to work on the task. In response generation, the individual or small-group generates a collection of possible responses which are then considered for their usefulness and novelty during the stage of response validation. Finally, in outcome assessment, the individual or small-group decides whether (a) the response meets the original goal of the task which terminates the creative process; (b) whether there was complete failure in meeting the goals also resulting in the termination of the process; or (c) whether some progress was made yet the goal was not fully achieved leading the individual back to earlier stages to continue to work on the problem. In Amabile's componential model, then, following outcome assessment, the individual or small-group stops work if an unacceptable solution is derived or if the idea is deemed a failure; they may also cycle back to one of the earlier phases to continue work on the idea. Within this work, Amabile (1988:150), claims that "individual creativity can be powerfully influenced by elements of the organization" via interactions with upper managers who establish the organizational climate, project managers who set goals and provide feedback, and coworkers who vary in skills and experience. This suggests that creative worker's ideas may be modified by others frequently during the creative process and that idea exchange occurs throughout the stages of the creative process.

More recently, studies have focused specifically on how frequent social interactions with coworkers and managers during the creative process are important to the development of individual creative ideas (e.g. Hargadon & Bechky, 2006; Hargadon, 2006; Perry-Smith, 2006;

Perry-Smith & Shalley, 2003; Shalley et al., 2004; Sutton & Hargadon, 1996). For example, in a study of the social interactions of management consultants, product-designers, and consultants within manufacturing firms, Hargadon and Bechky (2006: 489) considered how moments of collective creativity emerge, or when “social interactions between individuals trigger new interpretations and new discoveries of distant analogies that the individuals involved, thinking alone, could not have generated.” The authors found that certain types of interactions, such as help-seeking and help-giving, precipitated moments of collective creativity. As I will discuss later, this suggests that interactions with others opens ideas up for modification and that, in these moments, ideas are more collectively created and less the product of a single creative worker—potentially altering a creative worker’s responsibility over their idea.

### **Idea Handoff Following the Creative Process**

Following the creative process, creative workers may handoff their idea to another coworker or group within the organization to be incorporated into a larger product and implemented. At this point, the creative idea is open to modification by other organizational members. Amabile (1988) provides a comprehensive theoretical model of the relationships between the creative process and organizational implementation. The model, depicted in a simplified and slightly modified form in Figure 2.2 to focus on the relationship between the individual creative process and organizational-level processes, illustrates when the handoff between an individual and other organizational members might take place. In the stages of organizational innovation—setting the agenda, setting the stage, producing the idea, testing and implementing the ideas, and outcome assessment—Amabile suggests that the individual creative process has its dominant effect at the “producing the ideas” stage. It is at this point that the “‘target idea’ comes into being” (151). In the testing and implementing stage “it is inevitable that

other facets of the organization become involved, beyond the initial individual or group that generated the creative ideas. Prototypes may be perfected, technical tests and market tests conducted, and input from every area of the organization considered” (162).

Amabile (1988: 162) acknowledges that her model presents an “idealized sequence,” and that the presented stages may not occur in order and frequent iterations between stages may occur. Thus, while Figure 2.3 implies that this handoff between creativity and implementation occurs only once during the development of a product, in reality this type of handoff may occur more frequently depending on how the work of the overarching product is broken down into creative tasks. In other words, in the development of complex products, rather than one creative task encompassing the entire project, the work is likely broken down into a series of subtasks to be worked on by individual creative workers (c.f. Hight & Novak, 2008). At the completion of each of these creative tasks, ideas may be handed off to others to be incorporated into a larger product. Further, the act of prototyping, that has been studied in design companies such as IDEO (Hargadon & Sutton, 2000) and is acknowledged as part of Amabile’s implementation stage (1988), relies heavily on the notion that the creative process must be repeated cyclically throughout the development of any given product. A study of engineers found new constraints and problems often arose over the course of creative projects (Bakie, 2005). Many of these constraints, such as availability of particular materials, arose in attempts to implement creative ideas, which then forced the engineers to re-think their initial creative solution. Therefore, the transition from creative processes to implementation processes and back again to creative processes may happen often over the course of product development, suggesting that handoffs may be a routine part of creative work.

Models of the creative process are beginning to more explicitly conceptualize this more non-linear, recursive process (DeRue & Rosso, 2009; Lubart, 2001). For example, DeRue and Rosso (2009: 218), in addressing the team creative process specifically claim, “it is quite possible that there may be feedback loops and disjunctures in these processes...a team may find itself abandoning the path they are on and beginning the creative process from scratch, particularly after the introduction of new information, team members, or external demands.” If the creative process is recursive and occurs frequently throughout the course of a given project, we may also assume that individual creative workers frequently need to handoff their ideas throughout a project. Thus, for the purposes of this dissertation, it is useful to relax the assumption that the transition between creativity and implementation is a one-way singular event during the course of a project and instead assume that these transitions occur more frequently and that the actions that take place during implementation may feed back into the creative process.

Making this new assumption allows me to consider the experience of individuals over the course of and following the creative process, during implementation. As alluded to in the preceding definitions, many organizational creativity scholars draw conceptual distinctions between creativity and implementation and focus specifically on the generation of creative ideas, but do not consider how those ideas get implemented in the organization or how creative workers experience implementation (George & Zhou, 2007; Shalley et al., 2004; Zhou & Shalley, 2003). Nonetheless, a few scholars have studied implementation at the level of the individuals, emphasizing the need for coalition building (Kanter, 1988), finding project champions (Mumford, 2000), using networks (Baer, 2012), and harnessing power (Ibarra, 1993) involved with ushering an idea through the implementation process. These studies focus on

individual level factors that are important in the successful implementation of ideas, but they do not address how creative workers experience the ending of the creative process or the modification of their ideas by others during implementation. Further, while the literature on intra-organizational innovation does map out how idea generation or creativity might fit into the broader process of organizational innovation (e.g. Saren, 1984; Staw, 1990; Utterback, 1974), these scholars tend to focus on how organizational level factors shape the innovation process (e.g. Andriopoulos & Lewis, 2009; Dougherty & Hardy, 1996). Therefore, in this dissertation, I consider the experience of individuals as their ideas move through the creative and implementation processes and consider the impact of the creative process beyond its final stage of outcome assessment.

### **The Link between Idea Modification, Responsibility and Ownership Responses**

In the previous section, I suggested that idea exchange and handoff are a routine part of the creative process. Now, I unpack what this means from the perspective of the individual creative worker. Specifically, I suggest that these interactions create opportunities for ideas to be modified by other people within the organization and that creative workers likely need to manage if and how they will own their ideas, given this modification and potential shift in responsibility. Put simply, given the nature of idea modification and changes in responsibility, will creative workers continue to psychologically own or begin to lose ownership?

*Idea exchange.* During the creative process, responsibility of the idea primarily resides with the individual creative worker; however, as noted above, throughout the stages of the creative process creative workers interact with other members of the organization. These interactions have the potential to change the creative idea and consequently the relationship between the creative worker and their idea. As described above, Hargadon and Bechky (2006)

found that help seeking and help giving precipitated moments of collective creativity. In the process of seeking help from a coworker, a creative worker's idea may change; further, because of the collective creative moment that occurs, the creative worker's relationship to the idea likely changes as well. Hargadon and Bechky describe, for instance, how a consultant was struggling with a problem of inventory management. A coworker, working in another department, commented that they had grappled with a similar problem when working with another client. This interaction led the consultant to reframe the problem and approach it differently. Ultimately, the consultant's view of their idea for solving the problem changed in response to the interaction with their coworker. Creative workers may vary in their willingness to accept changes to their ideas (Elsbach & Flynn, 2008). One participant in the study by Elsbach and Flynn (2008) noted "You never know who's going to have a good idea. I've become very open that way. It's just part of the way I design now, to take lots of input and ideas." (30), while another claimed:

I have a tough time when somebody in design says they want me to change something because I think what I am doing is brilliant, and I know that I am wrong, but the point is I put my stake in the sand. So on a lot of it I push back on in terms of taking help. I just really reject it [in my mind] and finalize around it" (31-32).

The latter quote suggests that this willingness to take suggestions, have your ideas modified by others, and allow for changes in responsibility may be related to the initial psychological ownership that a creative worker develops toward their idea.

***Idea handoff.*** Following the creative process, once a creative idea is developed, the idea may be handed off to another individual. This transition is pivotal from the point of view of the creative worker, since it marks a point where their work on the idea ends—or "terminates" in the language of the componential model (Amabile, 1983)—and other organizational members continue to shape and change the idea until the final product is completed or abandoned.

Whereas responsibility over the final shape of the idea primarily resides with the creative worker

during the creative process, at the end of the creative process, the responsibility resides with other members of the organization. Therefore, it is at this point that the creative worker most likely loses some responsibility over their idea; others have responsibility to modify the idea going forward, and the relationship between a creative worker and their idea likely changes. During implementation individual contributions become “blurred” and are incorporated into a collective product (Angle, 2000: 141). Thus, at the start of implementation, the individual creative worker most likely loses at least some responsibility over their creative ideas as their ideas are open to modification by other facets of the organization. As I suggested in the previous section, this type of idea handoff likely occurs frequently over the course of the development of a single product and creates the opportunity for creative workers to manage their ownership over their ideas.

This discussion of the relationship between idea modification and their ideas suggests that throughout and following the creative process, creative workers must respond to shifts in responsibility of their ideas. Handoffs represent the clearest opportunity for a shift in responsibility to take place, however idea exchange suggests that these shifts may be happening in more incremental ways throughout the creative and implementation processes. Further, the specific conditions that take place around the shift in responsibility likely impact ownership responses. Through this dissertation, I identify conditions around shifts in responsibility which impact creative workers’ ownership responses to answer the question:

**Question 2 (Q2):** How do the circumstances around shifts in responsibility impact ownership responses?

### **OWNERSHIP RESPONSES AND POTENTIAL OUTCOMES**

In this section, I begin to outline potential ownership responses and potential outcomes associated with these responses. I suggest that in experiencing changes in responsibility over

their ideas, creative workers may continue to psychologically own their ideas or possibly even develop stronger ownership over their ideas. Alternatively, creative workers may lose ownership over their ideas. I discuss each of these possibilities and their potential outcomes in turn to pose questions 3 and 4.

### **Continued Ownership**

In earlier sections, I suggest that creative workers likely form psychological ownership over their ideas. The first potential ownership response, then, is for a creative worker to continue to maintain psychological ownership despite a change in responsibility. For example, in a study of toy car designers, Elsbach noted how designers continued to post drawings of their original designs (instead of images of the finished product) in their work areas long after their idea had been altered and implemented by the organization. She claimed, “[t]he fact that the designers themselves displayed these drawings prominently underscored the importance of these independent and idealistic designs to affirming the designers’ identities. That is, rather than displaying the finished cars here, the designers chose to display their original renderings” (Elsbach, 2009: 1858). This suggests that designers continued to own the idea, despite the idea moving beyond their responsibility. Theory on threat rigidity argues that an impending threat may cause individuals to restrict information processing and constrict control (Staw, Sandelands, & Dutton, 1981). Therefore if a shift in responsibility is perceived as a threat, creative workers may actually form stronger ownership as a response. However, because the literature to date only addresses ownership and, to a limited degree, losing ownership, in discussing potential outcomes, I do not distinguish between maintaining and increasing ownership, but recognize that this increased ownership response may be possible.

While scholars of psychological ownership have focused primarily on the development rather than the waning of psychological ownership, the broader literature on the psychology of possession does speak in a limited way to the individual experiences of possession loss when someone continues to maintain a sense of ownership over that possession. For example, scholars have observed that “when organization members witness the radical alteration of targets toward which they feel strong ownership, they may experience *loss*, frustration, and stress (Bartunek, 1993; James, 1890)” (Pierce et al., 2001:304, italic added for emphasis). James (1890: 291) noted how an individual’s emotions are tied to their possessions and that “If they wax and prosper, he feels triumphant; if they dwindle and die, he feels cast down.” Not only may a loss of ownership be experienced negatively, it may also affect how individuals view themselves. Belk (1988: 142), who stresses how possessions become viewed as part of the self, suggests that loss of possessions “should be regarded as a loss or lessening of self.” In other words, a loss of possession may alter the sense of self, or one’s identity. Belk (1988: 151) goes on to argue that, a “creator retains an identity in the object for as long as it retains a mark or some other association with the person who brought it into existence.” Therefore, if individuals continue to have a sense of ownership, they may experience a sense of loss as their ideas continue to be changed by others.

Work in creativity suggests that creative workers may grow frustrated with having their ideas changed if they continue to feel ownership over them. For example, Amabile et al. (2005) found that many people described negative emotions, either anger or sadness, following the creative process when sharing their ideas with others. For example, one person described: "Had a meeting to describe the process we will be going through for the remainder of design. Very frustrated because I was not getting my ideas across. I still don't feel that the whole team is on the same page." (2005: 394). In this example, the person must share his/her idea with a group to

continue the design process, but becomes frustrated in this process of sharing and exchanging ideas. This illustrates the potential frustration that occurs when individuals share their ideas in more collective settings when they continue to feel ownership. This sentiment was also echoed in Elsbach and Flynn's (2008: 31) study of toy designers, one of whom claimed:

It is a very difficult place to be here when you specialize in the finished product or you have made it a goal to specialize at that. You do the research, you spend the time doing it and then you have a person come in and say it is all wrong. Just to almost fill the room with words to say what you are doing is wrong. I just put a year into a project that went down the toilet at the very end because it was mishandled by others -- and it had real potential. But they just couldn't keep out of it when they should have let me just finish it.

Amabile et al. (2005) found that when ideas were evaluated, often in the context of meetings or through interactions with coworkers, creative workers often felt frustrated or sad, in contrast to the positive emotions which predominated during the actual act of creating. This suggests that during the creative process creative workers tend to feel positively, but when their ideas are modified by others they may feel negatively. In a related way, Baer and Brown (2012) found that sense of loss and negative affect are the key mechanisms that explain why individuals who claim psychological ownership may or may not incorporate changes to their ideas.

One of the initial potential outcomes of psychological ownership is territoriality or *behavioral expressions of ownership* "for the purposes of constructing, communicating, maintaining, and restoring one's attachment to an object" (Brown et al., 2005: 579). It has been proposed that in attempting to maintain control and prevent others from taking control, territoriality may distract employees from in role performance, decrease teamwork and cooperation, and lead to escalation of commitment (Brown et al., 2005; Pierce & Jussila, 2011; Pierce et al., 2001). Recently, in a study of open-ended survey responses, Brown and Robinson (2011) found that employees described feeling ownership over and experiencing territorial infringement in dealing with work products, projects, and ideas, in addition to physical objects.

Further, infringements resulted in anger and reactionary defenses that ranged from facial expressions of dislike to physical confrontations. Thus, claims of ownership may be detrimental to organizations as they may lead employees to avoid collaboration and pursue individual rather than collective or organizational goals (Brown et al., 2005). Recent theoretical work argues that feeling of ownership are likely related to intrinsically motivated behaviors, as individuals will be motivated to nurture and protect ideas for which they feel ownership in order to enhance feelings of self (Pierce & Jussila, 2011). This work suggests, then, that creative workers may actively seek to maintain ownership. Further, this continued ownership may result in anger and deleterious behaviors associated with territoriality.

At the same time, psychological ownership and its related territorial behaviors have been associated with positive consequences. In emphasizing these potential positive consequences (Avey, Avolio, Crossley, & Luthans, 2009), scholars have proposed that psychological ownership and territorial behaviors may lead to increased stewardship, citizenship, personal sacrifice, and assumption of risk (Brown et al., 2005; Hernandez, 2012; Pierce et al., 2001, 2003). Empirically, psychological ownership over one's job and organization has been found to relate to job satisfaction, organizational commitment, while being conceptually distinct from these attitudinal states, (Mayhew et al., 2007; Pendleton et al., 1998) and also to relate to citizenship (O'driscoll et al., 2006) and extra role behaviors (Vandewalle, Van Dyne, & Kostova, 1995). It is not surprising, then, that Brown (1989) advocated that instilling a sense of psychological ownership, generally, in employees was the key to competitive advantage. Therefore, continuing to maintain ownership may be associated with increased job satisfaction and commitment, among other positive consequence. Further, by continuing to own their ideas and continuing to view their ideas as part of their extended selves, creative workers may be able

to maintain a sense of coherence in sense of self and identity, or identity stability, which would not be possible if ideas were detached from the self, resulting in the experience of identity loss.

### **Lose Ownership**

Rather than maintaining ownership, creative workers may also respond to changes in responsibility by losing ownership over their ideas. Extant literature speaks to the process of detachment to only a limited extent (Ashforth, 2001; Ebaugh, 1988; Pratt, 2000; Vaughan, 1986). For example, Ebaugh (1988) and Ashforth (2001) describe a four stage process in which individuals detach from a role that is central to their self-concept and Pratt (2000) describes, in his study of Amway distributors, how when the organizational practice of sensebreaking and sensegiving failed, organizational members' identification with the organization broke and they deidentified. While this initial work addresses the centrality of identity in detachment processes, it does not speak to how people decrease their sense of ownership over their ideas. Because of this lack of attention on detachment processes, in comparison to attachment processes (Ashforth, 2001), this dissertation potentially makes a significant contribution in exploring this loss of ownership process.

While individuals may experience loss when their ideas are changed and they remain attached, it is unclear whether people will also experience loss if they begin to lose ownership over their ideas. Recent work is only beginning to empirically consider the loss of psychological ownership (e.g. Baer & Brown, 2012; Brenner, Rottenstreich, Sood, & Bilgin, 2007; Shu & Peck, 2011). Moreover, the majority of the studies that do consider ownership and loss are primarily focused on consumer psychology and do not address the identity implications of possession loss. Nonetheless, these initial studies suggest that it is not only important to consider whether loss is perceived, but also the level of emotional intensity of the loss (Shu & Peck,

2011). In other words, people may experience a loss of ownership differently. Because of the relative dearth of research regarding ownership loss, there are opportunities to more thoroughly understand the mechanisms associated with loss of ownership and how creative workers experience ownership loss and let go of their ideas. In addition, as psychological ownership over jobs and organizations is related positively to job satisfaction and organizational commitment (Mayhew et al., 2007; Pendleton et al., 1998), one might imagine that the loss of ownership might result in decreases in job satisfaction, job commitment, and possibly increased turnover.

More positively, an ownership loss response may result in adaptation and the development of resiliency, which may serve as a psychological resource for the future. Resiliency has been conceptualized as the ability to positively bounce back from adverse or stressful events or as flexible adaptation (Fredrickson, Tugade, Waugh, & Larkin, 2003). Work on resiliency suggests that people who are able to successfully cope with adverse events, such as losing responsibility over ideas, may develop new skills and confidence which help them to cope with future adverse events (Fredrickson et al., 2003; Richardson, 2002). In other words, people who are able to positively cope with change may be able to use that experience to learn and grow for the future and come to see these changes as routine and less disruptive (Richardson, 2002). Luthans (2002: 702) argued that “highly resilient individuals tend to be more effective in a ‘fuzzier’ world, as organizations now find themselves.” Thus, the little research that has addressed ownership loss has predominantly conceptualized the outcomes as negative for the individual, yet there are opportunities for positive outcomes as well.

## **Summary**

While the flow of work through the creative and implementation processes suggests that ideas are modified by others during and following the creative process which possibly alters the

ownership relationship between a creative worker and their idea, we have little understanding about how creative workers respond to changes in responsibility or how they manage their ownership over their ideas. More specifically, we do not know *if* creative workers ever psychologically lose ownership over their ideas. It is possible, for instance, that employees continue to claim ownership over their ideas long after the original ideas have been changed or the product has been sold in the marketplace (c.f. Elsbach, 2009). While I have focused on the most straightforward responses to begin to unpack the literature, people might experience a range of responses such as forming stronger ownership over their ideas or some form of mixed ownership in which they own certain parts of the idea, but disown from others. If creative workers do lose ownership, we do not know *when* creative workers begin the process. As the section on idea modification suggests, ownership loss may begin as early as idea exchange in the creative process. We do not know the strategies, intentional or unintentional, that creative workers employ to create psychological separation, in other words *how* they psychologically lose ownership or seek to maintain it. Therefore, I pose question 3:

**Question 3 (Q3):** When and how do creative workers maintain or change ownership following shifts in responsibility?

Further, while the psychology of attachment literature purports that in undergoing changes to their ideas people may experience identity loss (Belk, 1988) and may need to redefine their sense of self, we do not know if or how creative workers manage their identities in handing off their ideas to other organizational members. In this section, I have drawn from existing literature to suggest both positive and negative outcomes for various ownership loss responses; however, there are likely additional outcomes and we do not know when positive versus negative outcomes are associated with a given ownership response. Therefore, I pose question 4:

**Question 4 (Q4):** What are the outcomes, for the creative worker, associated with particular ownership responses and what are the conditions that lead to positive or negative outcomes for the creative worker?

### SUMMARY

From the organization's perspective an idea is only useful if it can be implemented. As Levitt in a Harvard Business Review article entitled "Creativity is not enough" claimed:

Ideas are useless unless used. The proof of their value is their implementation. Until then they are in limbo. (2002: 7)

Further, because the task of making a product is often too large and complex for one individual, ideas are often transferred between, as well as discussed and shaped by, many different people across a range of departments throughout the creative and implementation processes. Thus, shifts in responsibility over ideas are inevitable and the ability for ideas to be shaped by multiple people and successfully move from person to person is critical for organizations. At the same time, though, the psychology of ownership literature suggests that creation is one of the most powerful processes through which people may come to feel possession and attached to their idea (Pierce et al., 2001, 2003). As a result, the process of losing responsibility over an idea may have profound negative effects on a creative worker, if they view the idea as their possession (Belk, 1988; Dittmar, 1992). Therefore, the organizational process of developing products, from creation through implementation, generates situations in which creative workers must manage their ownership over their ideas and they are set up to potentially experience identity loss or a lessening of self. Because of this, creative workers may resist input on ideas, struggle during the transfer of their ideas, and may even resist handing off their ideas (c.f. Pierce & Jussila, 2011). Thus, the literature on the psychology of ownership reveals a potential tension for creative workers. On the one hand, creative workers are expected to generate creative ideas, investing their time, energy, and selves. On the other hand, in order for new ideas to be developed and

implemented, creative workers are expected to share responsibility with other people in an organization. Therefore, this tension creates a situation ripe for a potentially painful sense of loss. In general, we know relatively little about the ownership and ownership loss processes between creative workers and their ideas and the outcomes associated with engaging in such processes.

In order to begin to unpack these processes I oriented my literature review and study around four questions to understand how losing responsibility of ideas impacts creative worker's ownership over their ideas and the repercussions of these ownership responses. In answering these questions which were most salient in my data, I build theory that considers creative workers' ownership responses to the changes in responsibility that are inevitable in the course of creative work.

### CHAPTER 3 METHODOLOGY

I conducted an inductive qualitative study to understand how creative workers respond to changes in responsibility over their ideas. At the heart of this question is a process—the psychological ownership and loss of ownership between a creative worker and their idea as the creative process unfolds over time. Qualitative methods are, therefore, appropriate for at least two reasons. First, Creswell (1998) suggests that qualitative research is appropriate when the research question focuses on process or how something occurs. The concern in this study is how creative workers make sense of changes in responsibility over their ideas. Additionally, qualitative researchers attempt “to make sense of, or interpret, phenomena in terms of the meanings people bring to them” (Denzin & Lincoln, 2008:4). While qualitative methods are appropriate given my research question, an inductive approach is appropriate as my purpose was not to test but to build and elaborate theory (Strauss & Corbin, 1990) around the unfolding of ownership responses to changes in responsibility, as theory in this area is underdeveloped.

In theory elaboration, preexisting theoretical concepts drive the research design (Lee, Mitchell, & Sablynski, 1999), however, drawing on grounded theory methods, data collection, analysis, and theoretical development may occur iteratively throughout the research process (Glaser & Strauss, 1967; Locke, 2001; Strauss & Corbin, 1990). Before entering the field, I drew from the psychology of ownership literature, as described earlier, to begin to form a theoretical frame for the study. This literature provided a sensitizing framework (Charmaz, 2006) that provided ideas for initial exploration. However, as Charmaz (2006: 17) suggests, these concepts “provide a place to *start*, not to *end*,” as the data collection and analysis provided the guide for developing theory. Using constant comparison throughout the data collection and analysis, I iteratively moved between data and themes that emerged from analysis adjusting data collection

procedures as needed (Locke, 2001; Miles & Huberman, 1994). I will detail these methods more throughout this chapter. First, I describe a preliminary study that informed the methods for the dissertation. Then, I describe the research setting and sampling strategy. Finally, I outline the data collection, reduction, and analysis methods I employed.

### **PRELIMINARY STUDY**

Before describing the methods for this dissertation, I first describe a preliminary study I conducted that shaped my thinking regarding the sample and methodology for this study. From June 2010 until January 2012, I conducted interviews with 32 entrepreneurs, 18 of whom I was able to interview again a year after the initial interview. The purpose of this study was to understand how entrepreneurs psychologically “let go” of the organizations they found. This study focused specifically on the organization as the target from which people detached. I chose entrepreneurs because they represent an extreme case (Yin, 2009), as they likely form strong attachments to the organizations they create (Cardon, Zietsma, Saporito, Matherne, & Davis, 2005) and exit, in the form of selling the business, is an explicit part of the entrepreneurial process (DeTienne, 2010). Through the study, I identified two occupational rhetorics (Fine, 1996), hunter and gatherer, that related to how entrepreneurs told narratives of letting go. Further, I suggest in this work that occupational rhetorics act as a resource which individual’s draw upon to psychologically decouple and let go.

The methods and sample emerged from this preliminary study in two ways. First, the methods for the dissertation study attempt to rectify some of the methodological limitations of the preliminary study. In relying on interviews as the sole data source, the preliminary study relied on retrospective accounts of the “letting go” process. While some entrepreneurs exited organizations in close proximity to the interviews (some even within the same month), other entrepreneurs described exits that occurred up to ten years prior, therefore the retrospective

accounts in the interviews often provided an overview of how the informant now made sense of the exit and not the fine-grained details necessary to truly map out a process of “letting go.” Consequently, the key findings of the preliminary study address *narratives* of letting go, rather than the letting go process itself. The methods proposed here, including the use of diaries and observations, attempt to capture more of the fine-grained psychological processes as they occur in real-time, rather than focusing exclusively on stories told after the fact. Second, entrepreneurs may be considered an extreme case of creative worker, as in addition to creating products and services, they also create the organizations in which they work. In this dissertation, I focus on creative workers hired by organizations to focus on the more prototypical creative worker rather than the extreme case. These more typical creative workers, who represent nearly a third of the American and European workforce, are charged with solving complex problems in service of larger organizational goals (Florida, 2002). Therefore, I am able to understand the psychological loss of ownership, as well as the ownership processes that occur in more typical day to day creative work in organizations. Further, in the preliminary study, entrepreneurs described creating and feeling some sense of ownership over a broad range of targets including products, relationships, cultures, and processes (or ways of doing things), in addition to the organization. Consequently, in letting go of their organizations, they needed to manage detachment from multiple targets simultaneously. Because of the complexity and the relatively small size, it was difficult to parse out patterns in the process of detachment. In this dissertation, I focus on the specific relationship between a creative worker and their idea in order to eliminate some of the complexity of detaching from multiple targets in order to reveal more clearly these attachment dynamics.

## **DESCRIPTION OF RESEARCH SETTING & SAMPLING**

In qualitative research, the choice of research context must be theoretically-driven in order to provide the opportunity to understand the key phenomenon of interest (Creswell, 1998; Marshall & Rossman, 1989). In other words, there must be congruence between the research question and the chosen context. Therefore, I developed a series of theoretically-driven criteria for assessing whether the research context would allow me to observe the phenomenon of interest (in this case, how creative workers respond to changes in responsibility over their ideas). Questions like “do creative workers engage in both creative and implementation processes?” and “do creative works frequently exchange ideas and transfer ideas to others?” helped me assess whether idea exchange and handoffs would likely be frequent in the context. As I was interested in understanding the ownership and the loss of ownership that occurs in everyday processes of creative work, I sought a context that would be typical and representative (Yin, 2009) in regards to how creative work takes place within organizations. For example, creative workers are often brought together into teams to work on projects within the bounds of a larger organization (Cain, 2012; Wuchty, Jones, & Uzzi, 2007); thus, I sought a context that was project-driven in which creation was structured in teams. After considering a number of context possibilities, I ultimately decided that game development would allow me to study creative workers’ responses to changes in responsibility, because the complexity of making a game that is both novel and marketable requires that several different types of creative workers frequently exchange and handoff ideas over the course of making a collective product, as I describe more next.

### **Description of Game Development**

The earliest electronic or video games began to appear in the 1970’s (Bakie, 2005); since that time the game development industry has grown tremendously, with a recent article estimating that the current global video-game market worth an estimated \$65 billion (Bishop,

2013). It is predicted that video games will be the fastest-growing media form in the next several years (Economist, 2011). In this increasingly competitive market, however, it is difficult for games to make money due to the costs associated with developing and marketing a hit game (Bethke, 2003). In order for a game to make money it must stay on-time and on-budget and most importantly it must be novel. As Schell (2008: 404) argues, “people buy new games because they are new” and “the quest of the game designer is forever a quest for the new.” Thus, in making a game, developers must strike a balance between products which are novel, but also reach the market in a timely fashion—a balancing act necessary for most creative industries (Caves, 2000; Tschang, 2007) and teams tasked with creative work (Amabile et al., 2005).

The development of a game is a complex process that, in an ideal world, involves pre-production in which a game is conceived and planned, production, testing, and release (Chandler & Chandler, 2011). Throughout the process, the team creates the procedures, rules, story, look, and feel of the game, as well as the technology that makes playing of the game possible. Because of the complexity, it is necessary to bring together a team of highly skilled creative workers to work on components of the project (Bethke, 2003; Schell, 2008). Typically, three groups of creative workers are involved—(1) designers who are responsible for the key aspects of game play including the rules and structure, (2) programmers/software engineers who write the code of the game, and (3) artists who bring alive the visual and auditory components (Hight & Novak, 2008). The complexity of the product also necessitates breaking up the process into small manageable and measurable tasks (Hight & Novak, 2008). Therefore, throughout the process, an idea is frequently transferred between different people to accomplish different types of creative work. For example, in order to make a tree in game world, designers decide the purpose of the tree and how it will be involved with game play, programmers write code that guides how users

interact with the tree via game play, and artists craft the look of the tree and the sound effects associated with interacting with the tree. While many big-picture decisions are made during pre-production, “hundreds of tiny decisions get made all the time – not by the designer, but by the programmers, artists, and executives working on the game” (Schell, 2008: 376) and “most often the final implementation is a blend of designers’, programmers’, and artists’ collective vision” (Bethke, 2003: 41).

The context of game development, therefore, provides a rich context that theoretically suits the key research questions for my dissertation. First, in making games, developers must create novel products that reach the market, engaging in both creative and implementation processes. Therefore, handoffs were a necessary part of creative work. Second, designers, programmers, and artists all engage in work in which the output is both novel and useful, thus the context allowed me to observe several different types of creative workers. Third, in the process of development, ideas frequently move from individual to individual and department to department allowing for frequent opportunities to understand how creative workers responded to changes in responsibility. Finally, as my primary unit of analysis is the individual and their ownership responses, gaining access to a single game development organization allowed me to hold some of the organizational factors that may influence the process relatively constant.

Further, in my preliminary work to understand the suitability of the context, I spoke with several individuals currently working in game development (including producers, designers, programmers, and artists) and read “how to” books (Bethke, 2003; Schell, 2008) targeted at budding game developers, all of which noted that issues related to changes in responsibility and were present in game development. For example, as one of his recommendations for successful prototyping, Schell (2008: 87) argues that you must not get too attached to your ideas, “Of

course, you won't throw out everything – you'll keep little pieces here and there that really work and you'll combine them to make something greater. This can be painful. As designer Nicole Epps once put it, 'You must learn how to cut up your babies.'" A game developer with whom I spoke and a blog (Durall, 2011) also mentioned the idea of "killing your babies." In other words, part of the game development process is learning how to separate yourself from what you produce. This anecdotal evidence suggested that not only is game development a theoretically appropriate context for this dissertation, but in answering my research questions I would be able to offer practical insights that address a concern in this context. Appendix 1 contains a glossary of context-specific terms.

### **Description of Organization and Teams**

Central Studio [a pseudonym] is an independent game design studio based in the Northeast United States with approximately 225 employees. The company was founded in the mid 1990's and had released approximately 25 games as of 2012. The company primarily produces console-based games, video games that are designed to be played on game consoles such as the Xbox, PlayStation, or Wii. These games usually cost multiple millions of dollars to produce. For example, games for the PlayStation 3 cost between about 18-28 million to produce (Agnello, 2013). I gained access to study two teams, Oz and Tools, and I actively engaged in field research of these two teams for approximately 9 months.

Central Studio assembled the Oz team to develop a new console game which would be published by an external publisher. In order to honor the non-disclosure agreement arranged with the organization, I have re-cast the game as a game based on the Wizard of Oz, though the actual content of the game was different. I have done by best to preserve the meaning of the content (consistency of game levels, characters, ideas across my descriptions), while disguising the

actual content. When I began studying the team, they had been working on ideas for the game for approximately a year and had recently completed a greenlight meeting with a publisher. At a greenlight meeting, a sample prototype, or demo, of the game is presented to a publisher in order to get buy-in from the publisher to continue to fund game production (Hight & Novak, 2008; Sloper, 2005). The demo often includes some of the key game design ideas and visual concepts, but is a very rough representation of what the game might be. After this meeting, the publisher continued to fund the game. Four months later, the team successfully completed another greenlight demo with the publisher, though the demo presented was vastly different from the previous one both in terms of game mechanics and visual design. Six months later the team and publisher decided to extend the timeline for the game an additional 3 months, placing the deadline for a completed game 8 months away. I formally exited the field several weeks after this decision was made. At that point in time, much of the actual content presented at the prior greenlight meeting had been discarded and re-conceived and a new demo of the game was being completed for presentation at a conference for industry professionals. Therefore, I was able to observe a complete cycle from completing one greenlight demo to prepping for another public demo of the game. Throughout my time in the field, team members moved on and off the Oz team and the boundaries of the team were somewhat fluid. At its maximum number of people (when I left the field), the Oz team had approximately 75 internal people, as well as 25 contract workers working outside of the organization. Much of the work within the team was structured on smaller sub-teams, though the nature and composition of these teams shifted and changed with changing project needs. When describing the sample, I will provide more details about the composition of the team and who within the team participated in my research.

The other team I studied, Tools, was not a game project team, but rather a development and support team for the software system that is used to create and develop games. More specifically, the system provides tools that facilitate the development of graphics, sounds, and physics, as well as other functions. This team was responsible for developing and modifying features that addressed the specific needs that the game teams encountered as they made the games, as well as developing features that might be beneficial for the development of future games. The team worked closely with Oz, as well as the other game teams within Central Studio. The work of the Tools team was structured around releases in which updated versions of the system were made available to the project teams. During my time within the field, the team had 6 releases. Like the Oz team, the team was structured into sub-teams. These sub-teams remained relatively stable and included user interface and architecture, but, like Oz, team members moved on and off of the Tools teams throughout my study. At its maximum, this team included approximately 20 people. Because of the need to negotiate an additional non-disclosure agreement with this team, official study of this team began 2 months following Oz and ended after 7 months.

### **Informants & Sampling**

When I began the research, I invited all of the current team members to participate in the study and reached out to new members as they joined the team for the first four months of the study. Overall, I approached 80 people to participate in the research. Of these, 38 people from the Oz team and 18 people from the Tools team, actively participated in the study, either by completing interviews or weekly diaries, as described below. Overall, I used a sampling approach to collect maximum variation along key dimensions in order to capture common patterns that emerge despite variations (Patton, 1990), as well as investigate differences that

occurred within subgroups along particular dimensions. In order to capture maximum variation, at the start of the study, I invited the entire intact groups to participate in the study to achieve maximum variation. In doing so, I was able to capture maximum variation along at least two critical dimensions—discipline type and leads versus individual contributors—described next.

My sample included people from all of the representative role disciplines—art, audio, design, engineering, management, production, and quality assurance as detailed in table 3.1 (each informant was assigned a code that took the form “CSnumber”). Therefore, in addition to the designers, programmers, and artists described earlier, my sample also included management, production, and quality assurance. I identify managers as people who were either part of the Central Studio senior management team, but also had a role on the teams, or project managers of the teams. Producers were responsible for the production timeline and managing individual and team tasks to ensure that the projects met deadlines. Quality assurance testers, tested working prototypes, identified bugs, and, on occasion, offered working solutions to these bugs. These testers often had the most in depth knowledge of the game from a player perspective and were included within sub-teams. Also, within my context, visual artists and audio designers had vastly different work, so I have distinguished between the two. Thus, I was able to capture a range of creative workers who potentially had different responses to changes in responsibility. Each of these types of worker worked with different kinds of ideas and used different tools and media to accomplish their work. Further, the output for each different type took a different form.

Within these disciplines, I also included both “leads” and individual contributors. Discipline leads tend to be more senior employees who are charged with developing and maintaining the overall vision for the discipline and guiding individual contributors’ work. Lead designers, programmers, artists, and audio designers have more openness to discover creative

problems and determine how they will solve them than more than entry level or individual contributors who are assigned creative tasks by the leads (Bethke, 2003; Tschang, 2007). Unsworth (2001) describes this distinction between discovered and assigned problem when she distinguishes between open and closed problems as a way of thinking about differences in creativity. Whereas with an open problem, the creative worker discovers the problem and the solution, in a closed problem, the creative worker is presented with a problem that they need to solve. It is possible that creative workers may initially feel more ownership over problems they discover, since they will have invested more energy, be more knowledgeable about the problem, and have more control (Pierce et al. 2001). Therefore, I ensured that the informants ranged from junior to senior-level employees as a way of potentially capturing variation in the openness of the creative task and ownership.

### **DATA COLLECTION**

I used multiple sources of evidence to understand the phenomenon. This allowed me to understand the phenomenon from multiple perspectives to triangulate the data (Yin, 2009). Specifically, I used semi-structured in-depth interviews and informant diaries, as my primary data sources, and observations as a secondary data source. I detail each of these sources below.

#### **Semi-structured In-depth Interviews**

Semi-structured interviewing fits well with grounded theory methodology as both are “open-ended yet directed, shaped yet emergent, and paced yet unrestricted” (Charmaz, 2006: 28). I conducted all interviews in-person at Central Studio. I conducted initial interviews with 49 creative workers and 43 follow-up interviews. I attempted to conduct follow-up interviews with all 49 informants, but 6 were either unavailable or had left the organization. One of the key strengths of interviews is that they allow targeted investigation around particular themes and allow informants the opportunity to offer their perceived explanations of phenomenon (Yin,

2009). In the spirit of grounded theory (Charmaz, 2006; Corbin & Strauss, 2008; Locke, 2001), questions were semi-structured and evolved depending on the information acquired during initial interviews. However, the initial interview began with grand and mini-tour questions (Spradley, 1979) designed to understand what the informant did on a day-to-day basis and how they see their role within the creative and implementation processes. Other questions addressed how the informant worked with ideas, how they viewed their relationship to their ideas, and how ideas changed over time. This initial protocol is included in Appendix 2.

Within the follow-up interviews, questions primarily focused on key themes that emerged in prior interviews, diaries, observations and via my preliminary analysis. I began each of these interviews by following up on ideas discussed within diary entries and initial interviews to find out how ideas had progressed or changed. Based on my preliminary analyses, I also developed a task to probe specifically around how creative workers talked about ownership. In the initial interviews, I noticed that creative workers talked about feeling a sense of ownership, a lack of ownership, and disownership (a negative form like “not mine”), that sometimes they used “I” when talking whereas other times they used “we,” and that the target of ownership varied from being an isolated *piece* of work to the game or system as a *whole*. To probe further into these emerging distinctions, I created cards for each variation (e.g. “I feel ownership over a piece...” “We feel disownership over the whole...”) and used these cards as a basis for a series of questions. For example, I asked informants to use the cards to describe how they currently felt, why they felt the way they did, whether these feelings had changed over time, what were the positive and negative outcomes associated with how they felt, and, in an ideal world, how they would like to feel and others they work with to feel. Midway through the follow-up interviews, I realized that the distinction between “piece” and “whole” was better captured by a distinction

between concrete implementations and abstract ideas and adjusted the cards accordingly. Thus, I continued to modify and refine the protocol as I iteratively engaged in data collection and analysis. The final version of the follow-up protocol is included as Appendix 3.

### **Informant Diaries**

One of the primary limitations of relying on interview data is that often there is a significant time lag between the reflection of the event and the occurrence of the event, causing the informant account to be colored by retrospective sensemaking. Diary methods offer a way of reducing this time lag and focus more on the retelling of ongoing experiences (Bolger, Davis, & Rafaeli, 2003). Therefore, the method is most appropriate for considering within-person changes over time and individual differences in these changes over time (Bolger et al., 2003). As this study focuses on how creative workers respond to changes in ownership over time, employing the use of informant diaries allowed me to better capture the process as it unfolded in real-time.

In designing the diary methods for this study, I drew from organizational scholarship that has successfully used these methods. As part of a multi-study longitudinal research program, for example, Amabile and colleagues administered daily electronic questionnaires to study affect and creativity (Amabile et al., 2005), leader behaviors and creativity (Amabile, Schatzel, Moneta, & Kramer, 2004), and “inner work life” more generally (Amabile & Kramer, 2011b). The questionnaires included a mix of both quantitative-scale measures and questions that allowed for open-ended responses. As I took a qualitative, inductive approach, I focused on capturing open-ended responses. Based on the questions posed by Amabile and colleagues (described in Amabile et al., 2005), my questionnaire consisted of two-questions. While Amabile and colleagues asked participants to describe an event related to a particular project, I tailored the question to focus the respondent’s attention on events related to their ideas. As Amabile et al.

acknowledge, more targeted, rather than broad, questions allows the possibility of capturing more instances of the focal phenomenon. The first question, then, I asked was: "Briefly describe one event from the past week that stands out in your mind as relevant to the lifecycle of your ideas (i.e. generation, development, and/or closure around your ideas) and your reactions to that event." The second was "add anything else you would like to report about this past week," in order to capture any other information that was particularly salient for the informant. While these questions made participants aware of their ideas and relationships to them, they did not speak directly to issues related to ownership, allowing informants to speak freely about what they felt was most salient about their ideas at that time.

One of the key considerations in using informant diaries is how frequently informants should complete a diary entry. In order to determine the schedule it is important to consider both theoretical and practical concerns. Theoretically, it is important to reduce the lag between the experience and reflection of the experience and also capture the relevant processes at the speed at which they unfold for the complete duration of the process (Bolger et al., 2003). Practically, the more frequently the informant is asked to complete entries, the more burden it places on them, potentially reducing response rates and increasing the likelihood informants develop habitual response style as well as the likelihood that the act of reflection will alter event impressions in the future (Bolger et al., 2003; Wheeler & Reis, 1991). Thus, while Amabile and colleagues and others (e.g. Bakker & Xanthopoulou, 2009; Claessens, Van Eerde, Rutte, & Roe) administered daily questionnaires, other researchers have administered questionnaires multiple times a day (e.g. Fleeson, Malanos, & Achille, 2002; Siemer, 2005), twice a week (e.g. Binnewies, Sonnentag, & Mojza, 2010; Luchies, Finkel, McNulty, & Kumashiro, 2010; Sonnentag, Mojza, Binnewies, & Scholl, 2008), weekly (e.g. Fleeson et al., 2002; Hayes et al., 2007) and every

other week (e.g. Finkel, Burnette, & Scissors, 2007; Luchies et al.). Thus, the diary intervals were determined by both theoretical and practical concerns of the individual study and research question.

For this dissertation, I collected weekly diary entries. In my preliminary conversations with creative workers in game development, people described that the full development of a game may take several years; however, progress on ideas was often tracked in weekly project meetings. This echoed Bethke's (2003) emphasis on breaking up larger tasks into smaller tasks that can be accomplished between one and ten days. Therefore, collecting diaries at weekly intervals mapped onto the typical time frame it takes to complete small tasks in creative work and allows for multiple time points within bigger tasks. Further, collecting weekly, opposed to daily, diaries decreases the burden placed on informants engaged in time-pressured creative work. I also completed the diaries myself to track my own experience and ensure that the experience of completing the diaries was not overly burdensome.

While the interval chosen takes into account the burden placed on informants, I also employed the following tactics to motivate informants to complete the diaries, thereby increasing response rates. First and foremost, the questionnaire was as short as possible, containing only 1 required question. As part of the informed consent process, I met with each informant to ensure that they understood the diary process and were committed to completing the entries for the duration of the study. At this meeting, I began to establish trust and rapport with each informant by emphasizing that the informant's help was critical to the research process (Dillman, Smyth, & Melani Christian, 2009). In conjunction with follow-up interviews, I also did mid-study check-ins to discuss any concerns or questions about the procedures (Amabile et al., 2005). Finally, I

followed-up with any informants who developed a pattern of not completing the diaries (Amabile et al., 2005).

The diary portion of the study ran for 29 weeks, resulting in 829 diary entries (N=57). As I have noted, informants joined the study at various times depending on when they joined the teams, thus the total number of weeks varied somewhat from individual to individual. However 42 informants completed 10 or more diaries over the course of the study period; of those, 16 informants completed 20 or more. 15 informants completed some diaries, but less than 10 each. 7 informants completed more than 10 diary entries, but chose not to participate in the interviews, and I have included these creative workers as part of my sample in Table 3.1.

### **Observations**

Throughout the period of data collection, I conducted 38 hours of overt, non-obtrusive, non-participant observation of informants engaging in work practices and meetings. These observations were intended to provide me with a richer, nuanced understanding of the relationship between creative workers and their ideas. I was primarily interested in understanding how informants interacted around project ideas, therefore I observed formal meetings concerned with reviewing ideas and setting goals for future work, as well as more informal meetings that took place around people's computers to discuss ideas. Table 3.2 lists the meetings I attended in chronological order. In terms of formal meetings, I tried to observe a range of types of meetings that involved a range of groups of people to understand a broad range of interactions. These are a few examples of meetings I attended to convey a sense of what these meetings entailed: an Oz design meeting in which designers reviewed current design challenges and set immediate goals, an Oz visual development meeting in which concept artists met to discuss their ideas for a new level, a meeting with 3 people from the Tools team to spec out a new feature, a Tools team-wide

meeting to set priorities for the next release. At the end of the data collection, I also attended an Oz meeting run by several designers and a quality insurance tester intended to help new team members understand the history of the team's ideas. In this meeting, each old demo was reviewed and the key learnings from each was described, thus this meeting provided a summary of idea development that occurred on the Oz team over the course of my study. In-sum, observations provided the opportunity to watch creative works engage with ideas in real-time to supplement my understanding from my primary data sources (Yin, 2009).

### **DATA REDUCTION**

As I engaged in data collection, I employed several data reduction tools to begin to capture and make sense of the data including the use of contact summary forms, a field journal and memos. A contact summary form (Miles & Huberman, 1994) was completed with every interview. I used these forms to document main themes and reoccurring topics as data was collected. I also kept track of all my interview and observation notes in a field journal. The journal provided a space to record stream of conscious observations, as well as reflections and reactions (Eisenhardt, 1989). Using a more structured, less stream of conscious approach, I also wrote research memos to explore themes and trace ideas throughout the data collection and analysis process (Charmaz, 2006). Early memos focused on what was happening within the data and began to consider any developing themes or potential coding categories; whereas, later memos attempted to connect and work with theoretical categories to form a theoretical model (Charmaz, 2006). Also, memos provided a way to integrate codes generated from interviews and diaries with observations and to triangulate data from multiple sources (Jick, 1979; Yin, 2009).

### **DATA ANALYSIS**

While I describe the data analysis steps in a linear fashion, in reality I moved through these steps iteratively in conjunction with data collection and data reduction. The following steps

(adapted from Pratt, Rockmann, & Kaufmann, 2006) were used to move from the data to a theoretical model and provide a clear chain of evidence (Yin, 2009).

### **Provisional Coding**

In the first stage of coding, codes were very close to the data and I remained open to exploring whatever theoretical dimensions emerged from the data (Charmaz, 2006). At this stage, one segment of data may have had many different codes. I compared across data fragments and across interviews to determine which codes were most relevant for certain data fragments (Corbin & Strauss, 2008; Locke, 2001). This process generated a set of provisional codes.

### **Axial Coding**

In the second stage of analysis, I consolidated the provisional codes to create broader theoretical categories through axial coding. The purpose of this stage was to sort and synthesize provisional codes to move from the descriptive to conceptual level (Charmaz, 2006). As a first step, I consolidated these codes by type of creative worker and lead vs. individual-contributors. Within these broad segments of data, first order categories were compared for similarities and differences in order to clarify relationships that existed between codes (Locke, 2001). Also, at this stage, I compared codes to broader conceptual categories.

### **Delimiting Theory**

At this final stage of analysis, I considered theoretical categories together in order to understand how the concepts related to one another, so that underlying theoretical dimensions could be determined. Then, I used these theoretical dimensions to form a broad theoretical picture of the data. Once a particular framework was chosen, I reconsidered the data and how it aligned with the theoretical story I created.

## **Theoretical Saturation**

While I conducted a modified grounded theory approach, using maximum variation sampling rather than more traditional theoretical sampling (Charmaz, 2006; Corbin & Strauss, 2008), I did modify and adjust my interview protocols to refine emerging categories and themes. In other words, rather than planning and following a prescribed data collection strategy, “the researcher follows the analytic trail” (Corbin & Strauss, 2008: 146) and my questions were driven by emerging concepts. In grounded theory, a researcher strives to reach theoretical “saturation,” or the point when no new categories or themes emerge (Corbin & Strauss, 2008; Locke, 2001). However, practically, a “researcher has to say this concept is sufficiently well developed for purposes of this research and accept what has not been covered as one of the limitations of the study” (Corbin & Strauss, 2008: 149). Therefore, once the major concepts and categories were well-developed and told a compelling theoretical story, in addition to having reached a logical stopping point within the game project (one cycle of finalizing one demo to the next), I stopped data collection.

## CHAPTER 4

### OWNERSHIP IN CREATIVE WORK: A FOCUS ON SCOPE & STRENGTH

Essentially, it's hard for me to say which parts of the music are mine and which aren't; the music isn't wholly mine, but all of it is partly mine, and fully my responsibility. And I struggle with the desire to have written every note of the music, and the understanding that it's important to let other people contribute, both for their sakes and the project's sake. CS10<sup>3</sup>

As I have outlined in previous chapters, research on psychological ownership has predominantly focused on if and under what conditions psychological ownership will emerge. The current literature suggests that creative workers will develop a sense of ownership over their ideas since creative work likely involves the key mechanisms (control, investment of self, and familiarity) that have been related to the development of ownership. Nonetheless, we only have a preliminary understanding of how creative workers experience ownership over their ideas. Further, the majority of research on psychological ownership has focused on ownership exclusive to the individual or ownership characterized as a state of “my” or “mine.” However, in the context of organizations, where much work is conducted in teams, it is possible that individuals may claim ownership more inclusively as a state of “we” or “ours” (Pierce & Jussila, 2011). Given that creative workers likely do develop psychological ownership, rather than focusing on *if* ownership forms, I focus on unpacking and *characterizing* the ownership that individuals experience as they work together to generate collective products. In other words, given the likelihood that creative workers form psychological ownership, I am able to explore nuances around the qualitatively different ways they experience ownership, as well as the intensity of that experience in the context of interdependent work.

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<sup>3</sup> I assigned each participant a unique numerical identifier that starts with CS for Central Studio.

In articulating this experience, I focus on differences in ownership scope, which ranges from shared to exclusive, and ownership strength, which ranges from no ownership to strong or intense ownership. In focusing on ownership scope, I describe the paths that lead to developing a particular scope and the outcomes associated with each scope. I also suggest individual factors that compel creative workers to deviate from these paths, altering the ownership scope they develop. In focusing on ownership strength, I unpack salient factors that impact the intensity of ownership that a creative worker experiences, given a particular ownership scope. Together, scope and strength describe different ways creative workers experience a sense of ownership in their work to broadly answer the question, “How and in what ways do creative workers initially develop psychological ownership over their creative ideas?” In considering, the outcomes of ownership scope, this chapter also broadly addresses the research question, “What are the outcomes, for the creative worker, associated with particular ownership responses and what are the conditions that lead to positive or negative outcomes for the creative worker?”

### **Ownership Scope**

In describing their ideas, creative workers tended to focus either on their individual contributions using words like “my,” “mine,” or “I” or they focused on the contributions of the group of which they were a part and used words that invoked a sense of the collective like “our,” “ours,” or “we.” Ownership scope, then, articulates how a creative worker thinks of themselves in relation to their idea and the other people with whom they work on ideas—either as an individual contributor (exclusive) or as a collective contributor (shared). For example, an audio designer (CS47) described this more exclusive ownership scope:

I could load up [a game] and be, “I made all these sounds, hey check it out, I did this” ... there’s specific parts of it, but that’s how it is. It’s like you work on specific parts, everyone works on a specific thing and then it all kind of comes together right? So that’s like your little part is in there. And as a whole yeah I mean you are represented by the

box you know what I mean? Like the disc in the box, so it's "I worked on this, but specifically I did these things."

In this case, the audio designer recognizes the collective nature of the work, but focuses on and can identify his individual contributions. He also emphasizes a one-to-one relationship between an individual and an idea when he claims "everyone works on a specific thing." Similarly, a software engineer (CS52) described how in generating code, "I feel like, yeah, I fully understand what is going on in every line of this file, like that's mine." In using words like "I" and "mine," then, creative workers focus on the unique relationship they have with a particular idea.

Alternatively, creative workers focused on how ideas were the result of collective activities to the point where it became difficult to identify individual contributions. An artist (CS44) described this phenomenon:

It really is like a 'we' thing. Like we would just bounce ideas off each other and then when you come in, everybody else would have their feedback about them ... It's weird because it's hard to distinguish what your individual impact is because you can be like oh, that was my idea, but then everybody else is going to modify and make it better. That's why we're all here [Central Studio].

Here, the artist recognizes that they made individual contributions ("that was my idea"), but instead focuses on the collective nature of the work. An audio designer (CS07) echoed the collective nature through which ideas are generated, rather than a more individual focus, "You've got an artist, an audio guy, a coder and a designer in the same room and they try to come up with the solution, so that each can bring their side of the story to it and then you end up with this kind of, 'Hey we made this.' rather than... there's only one way to do it." This sense of "we made this" epitomizes a shared sense of ownership. Next, I discuss two paths that emerged from the data that describe the development of shared and exclusive ownership focusing on task type (managerial, conceptual, or production), task target (abstract or concrete), and task coordination (interdependent or autonomous), as well as the outcomes associated with

developing a particular sense of ownership scope. Figure 4.1 illustrates this model of the development of ownership scope. As this model indicates, individual differences also enabled creative workers to deviate from these paths, as I will describe in subsequent sections. Table 4.1 provides additional illustrative data.

### **Path to Shared Ownership**

The path to shared ownership began with working on either managerial or broad conceptual tasks. The focus of these tasks was on abstract targets, such as visions and concepts for elements of or the whole game or Tools set. In working with these abstract targets, creative workers engaged with others to work interdependently and this interdependence enabled a sense of shared ownership, as I detail next.

*Managerial and broad conceptual tasks.* Managerial tasks involved communicating with Central Studio-wide senior management, communicating with the external publisher, assigning personnel, and developing and tracking project timelines and budgets. Typically these tasks were assigned to, what I label in my sample, managers and producers. While these tasks were not explicitly creative, in communicating and managing, these tasks involved articulating vision and priorities that shaped game and Tools content. Also, in order to complete these tasks, managers and producers participated in meetings to shape conceptual elements. Broad conceptual tasks, as opposed to narrow which I describe in the path to exclusive ownership, involved generating multiple concepts or initial ideas or some sort of unifying vision for particular elements of the game or Tools and provided a foundation for work on multiple other tasks. These conceptual tasks were often assigned to managers, concept artists (a specific type of artist), audio designers, designers, and discipline leads. Both managerial and broad conceptual tasks tended to focus on abstract targets.

*Abstract targets.* In the course of managerial tasks, creative workers had to focus on the abstract sense of what the game as whole, particular game elements, or Tools feature might be in order to communicate that broad idea to others or plan for the future. A manager (CS09) claimed, for example:

I don't feel exclusive ownership of anything. But the areas that I feel sort of creatively committed to.... I would say the overall sort of aesthetic ambition of the game, like the art direction of the game. Like not specific calls but sort of like this through the overall thrust of the ambition of like what it could be as a cultural artifact. Because I think it has that potential to transcend video games and be sort of a cultural statement and I'm invested in that. I want to make it into the New Yorker magazine where people are like "Well check out this crazy thing [the video game]; that's like more than we expected a video game could be."

Rather than focusing on specific elements within the game, the manager focuses on the "aesthetic ambition" and the "art direction." Another manager (CS01) claimed:

I think we had a really great idea in terms of the overall shape of the game. What we wanted to do kind of inspirationally ... So I sort of see my job as keeping this creative potential harnessed to the big picture. Making sure that the stuff that the team is doing is in line actually with the stuff that our publisher is paying us to do.

In working with the outside publisher, the manager needed to keep track of how elements of the game aligned with the "big picture" for the game.

Similar to managers, producers also needed to focus on the big picture for the game or Tools set in completing their managerial tasks. Whereas managers were focused on the vision of the game as a whole and conveying that vision to others outside of the project team at Central Studio, as well as the external publisher, producers primarily focused on managing the task list, time and budget. A producer (CS03) described, "a lot of my direct input is in terms of scoping or options that are available to us and making sure that we are prioritizing so that we get the stuff that we really want." In other words, producers helped team members make decisions about prioritizing certain tasks over others by presenting the sub-teams options and plans that fit in to

the overall picture of what the team was hoping to achieve. Thus, in completing managerial tasks, creative workers focused on the more abstract or bigger picture elements of their work.

Similarly, broad conceptual tasks could lead to a focus on abstract targets. For example, discipline leads were tasked with maintaining the overall vision for the discipline (art, audio, design, software engineering) of which they were in charge and ensuring that there was synthesis broadly across elements within that discipline. As a manager (CS22) described:

When you start getting into like disciplinary leads like art lead, code lead, design lead and stuff like that they are -- their job is to make sure that the folks on a project in their discipline are doing the best job they can right. So for each discipline that means different things. Now for art lead it specifically means like figuring out what the artistic style should be and having that be well-defined. So it's almost like a vision for the art style. What does the thing look like, what are the animations like, what is the -- is there a style guide, that kind of informs all the artists on the project like what look they're supposed to be doing.

In other words, in focusing on the overarching vision for a given discipline, discipline leads crafted and generated an abstract framework to guide other team members' work.

The tasks of concept artists also focused on more abstract ideas to convey a mood or feel for a particular element of the game, even if they used physical drawing to explore and convey those ideas. For example, an artist (CS12) described:

Concept art is a way of communicating what you are going to be eventually seeing and you explore, you know, and that's really cool because you can explore all like styles of art and environments like what is this scene going to actually look like, you can explore characters based on you know descriptions of the game.

Often concept artists would create a collage of images that tried to hint at directions a particular level or character might go. Similarly, audio designers created concepts for musical themes and ideas that roughly sketched what a final musical element might be. Through developing concepts, then, creative workers focused on more abstract elements of what something might be

to convey possible directions for idea development, even if that concept was conveyed through concrete images, sounds, or prototypes.

*Interdependent tasks.* Developing and working with these abstract ideas often required working interdependently to collectively discuss and shape these abstract ideas and move them to the next stage of development. As an engineer (CS53) explained:

I always feel like I own the implementation, but I mean it shouldn't just be like 'I own it' when it comes to the idea...If you are just serving yourself with the idea then eventually like you are doing it to convince other people that it's a good idea and eventually it will become a 'we' thing.

Here the engineer claims that all ideas need to be discussed and bought into; because of this discussion abstract ideas, opposed to implementations, are almost always shared. Similarly, a designer (CS05) described how he thought about his own ability to influence creative ideas:

I'm a creative person but I don't see my creativity existing in a vacuum. Right, like I rely on other people. I used to feel really bad that I'm not a programmer, that I'm not an artist. ...so what this means at the end of the day is that communication is like the only real skill I have. I can't do anything by myself so like I need to be able to communicate with people because artists and programmers and everybody else they are like my hands. I mean I can't do anything without them.

For this designer, he needs to communicate these more abstract ideas to other people, so he focuses on how everyone collectively contributes, enabling a more shared sense of ownership. In one interview, I noticed that another designer (CS11) only spoke in the collective, describing all of his work with word "we." I asked him about this and he responded:

My sort of philosophy about my role on this team is that I'm just sort of facilitating a discussion and trying to make sure that we are talking about the right stuff. And so I never would have arrived at this idea on my own, and so I think I rely on the people on the team to have conversations. I guess that's why I've been using "we" all the time I see myself as more of a like facilitator and craftsman.

Therefore, because he sees himself as a guide who focuses on the abstract and works with ideas through discussions, the designer views his work as part of a collective undertaking and his sense

of ownership is rooted in this collective, more shared sense. In summary, certain types of tasks focus on more abstract ideas that necessitate working interdependently. In the course of working interdependently, creative workers actively witness how their ideas are part of a collection of ideas that are shaped through interaction which enables a creative worker's sense of shared ownership.

### **Path to Exclusive Ownership**

The path to exclusive ownership (or feeling “my” or “mine”) tends to start with the engagement in either production or narrow conceptual tasks. The focus of these tasks is on concrete implementations, and the development of these more concrete implementations requires working autonomously. This more autonomous work enables a sense of exclusive ownership, as I detail next.

*Production and narrow conceptual tasks.* Production tasks involved materializing, or physically making, assets or features, and integrating these discrete elements with one another. An asset is an isolated component of a game, such as a tree or audio clip that can take the form of a computer file. A feature is particular function of software (e.g. track changes in word processing). These production tasks were often completed by artists, software engineers, and audio designers that were team members or individual contributors, rather than leads. In addition to enabling shared ownership as described in the prior path, conceptual tasks could also enable exclusive ownership when they were narrow in the sense that they were smaller in scale and applied to specific assets or features. These conceptual tasks were often completed by individual contributors, as well as discipline leads and designers. Thus, sometimes creative workers were not only tasked with producing assets or features, but also conceptualizing those assets or

features. In completing these tasks, creative workers were required to focus on the more concrete elements of the games or Tools, as described next.

**Concrete targets.** With these types of tasks, many artists, software engineers, and audio designers, viewed their job as primarily creating and executing specific concrete implementations. Consequently, the target of the task could be much more concrete, rather than abstract, focusing on a piece of code, a specific drawing, or a game asset. For instance, a software engineer (CS55) described, “The whole [browser is] just about all my code. Whenever something gets added to it goes to me – it’s like [the browser is] a gigantic piece of [the tool] that is just all mine.” An artist (CS12) described working on a character for a former project, “My first character was [Neal] and he is kind of this main character, and I felt a very strong connection towards him, like I called him [Neal]-y Poo the entire time I was painting his face like oh what’s wrong [Neal]-y Poo, we didn’t get your nose color right. Like I had a very strong connection with him.” In contrast to focusing on the more abstract idea of Neal, the artist focuses on the physical manifestation of Neal. This suggests that the type of task impacts the target, and this target can range from more abstract to more concrete, as described here.

In cases where creative workers were responsible for conceptualizing and producing an asset or feature, the creative workers tended to focus primarily on concrete targets. For example, in a diary entry, an artist (CS08) claimed, “I executed an unexpected concept for an important game UI [User Interface] system that managed to gain support from key players. It was one of the first times I've felt on this project that I was able to make a contribution that was true to my own point of view and not someone else's.” Here the artist generated both the “unexpected concept” and the execution of that concept, but he focuses on the concrete manifestation. Creative workers also claimed that concrete implementations were critical to being able to

understand a more abstract idea, so it was necessary to focus on the concrete. For example, a designer (CS17) described how focusing on the abstract could take you further away from the problem the group was actually trying to solve. Therefore, he preferred to focus on concrete solutions:

I would rather spend the time building something, opposed to just like spending hours in a meeting with a whiteboard and it's like abstract mental soup, like just solving problems that are in many cases aren't even applicable to the problem -- they are not the problems that we need to be solving, they are usually like ten steps ahead of the basic problems right....In this game it's just like everyone has ideas and they are so amazing in their heads and it's like nothing matters until its proven, until they are built.

Together, these examples illustrate how the focus of production and narrow conceptual tasks was often concrete targets.

***Autonomous tasks.*** Given the nature of these tasks and their focus on materializing something concrete, work on these tasks was often conducted autonomously, enabling a sense of exclusive ownership. For example, a software engineer (CS54) described in a diary entry:

I've had the time and space to really go deep on my project of improving load times. It's been frustrating spending 3 days on this, 3 days on that. The "lone genius" who gets to lock themselves up in a room for weeks on end definitely has that advantage.

In being able to go deep on the project, as a "lone genius" might, the engineer considers the work "my project" and calls attention to the autonomous nature of his work. Similarly, an audio designer (CS16) described in an interview how he, "just decided [I] was going to make [a puzzle] and then started it," and continued to work on it for several months. In a later diary entry, he commented "Had a review of my [puzzle], got a lot of ideas of where to take it. Kind of tired of working on it, but whatever helps it get picked to be in the game is good." In using the word, "my" to describe the puzzle he indicates a more exclusive sense of ownership over the work, even though he received input from others near the end of the task. A designer (CS17) described this relationship between physically making things alone and exclusive ownership:

When I made assets for the game it was like pretty clear I was like, “Oh that’s that sound I made”....I can say like I remember making a sound. No one else did it. I just implemented it myself and made the asset.

In physically making assets, creative workers view the work as exclusively their own, since they made it, “no one else did.” Thus, they focus on their autonomous completion of the task, even though they often interact with others and receive feedback. However, in their minds, no one else physically manifested the asset. Taken together, production and narrow conceptual tasks enable a sense of exclusive ownership by focusing on concrete implementations that are conducive to working autonomously.

### **Outcomes of Shared and Exclusive Ownership**

In the prior section I described pathways that led from particular tasks to the development of either shared or exclusive ownership. Next, I focus on the outcomes associated with shared and exclusive ownership, taking into account both the individual creative worker and the product.

*Shared ownership’s impact on creative workers.* Shared, opposed to exclusive, ownership was more consistently related to positive outcomes for the creative worker. For instance, in describing a sense of shared ownership, many creative workers described the positive experience of feeling that their work contributed to the greater whole and that in working together they were able to produce something better than what they could on their own.

As an artist (CS48) described in a diary:

This work was even more fulfilling because it wasn't mine alone; it was the result of working on a team that has really begun to work well as a cohesive unit over the past few weeks. The ability to develop a creative idea as a group is one of my greatest pleasures in this job (as opposed to my former life alone in my studio). Since I've always been more about the success of a creative project than its association with me or my ideas, the ability to see ideas grow and become more creative through input from many people is wonderful and makes me feel very satisfied.

In an interview, this same artist emphasized, “I’m getting from this connection a sense of connecting to a larger whole. Making a part that I know it’s going to fit into this larger machine and then be able to watch the whole machine work a little bit better because my part is in it.”

This notion of connecting to a larger whole relates to the concept of transcendence put forth by Pratt and Ashforth (2003: 322) who argued that “connecting to something greater than oneself,” one element of transcendence, may foster meaningfulness at work. In this case, when a creative worker believes their idea is contributing to the greater product, they may experience this sense of transcendence and meaningfulness. At the very least, a creative worker’s idea contributes to the aggregate whole and consequently the creative worker experience successes associated with that greater whole. Another artist (CS18) claimed:

Here it’s just sort of the thrill I’m working on something that’s much bigger than anything I could ever hope to do by myself. So it’s pretty thrilling to see a bunch of talented people sort of put their ideas together and come up with a product that’s unique and that critics like. At home it’s much more about self-expression.

Like this artist, often in describing this sense of their work being part of a greater whole, creative workers drew contrasts to their experience in working on their own personal creative projects; rather than seeing this more commercial interdependent work as “less-than” because they were unable to truly express themselves, these creative workers focused on the opportunities that this collective work enabled in allowing their work to be part of something bigger and experienced by a larger audience. In working with other people and having a shared sense of ownership, creative workers are able to achieve more and form pride in owning and being part of something that is beyond what they could do on their own.

Also, when ideas were modified or cut, this shared sense of ownership enabled creative workers to focus on the collective whole or how the next idea would serve the collective whole, fostering a sense of resiliency. Particularly on the Oz team, extensive prototyping occurred

during which many ideas were pursued and abandoned. For example, a designer (CS31) talked about reacting to having the game mode for which he had worked on for several months cut:

Part of making games is this notion that every time you believe that you're making this fantastic interactive experience that's going to change peoples' lives ... So for me losing the mode or having it not get worked on wasn't a difficult time for me. I understood the motivations behind it and we needed to move on and I wasn't going to get too upset about that.

Here the designer is able to focus on the “fantastic interactive experience that's going to change peoples' lives” rather than the implementation of a specific game mode and is able to recognize that they collectively need to focus on the next idea in order to make that interactive experience a reality; even though he worked for several months on the game mode that was ultimately cut. In other words, the designer is able to positively bounce back from the stressful experience, acting resiliently (Fredrickson et al., 2003). This same designer (CS31) also indicated that caring more about the way the pieces fit together, allowed him to more easily edit those pieces:

I try to keep, like build everything like Lego. I think like everything is very modular. We can snap all [the pieces] together lots of different ways and if we need to throw out some bits out and put pieces in some new pieces, I think that is fine we should go for that. ... I think I tend to see things more as systems first and spaces second which can be really confusing ... [for someone who is] more of a visual thinker.

The visual image of the game as a Lego structure captures the creative worker's lack of ownership over the specific pieces, as the pieces are all somewhat homogenous and easily interchanged and replaceable in his mind. The designer also uses “we” indicating his more collective focus. Thus, having shared ownership over the abstract may enable the ability to move on following a cut, since the idea may live on in an abstract form and contribute to the greater whole in less tangible ways. In other words, shared ownership may enable a form of flexible adaptation, characteristic of resiliency. A manager (CS22) echoed this sense of resiliency that

may occur from developing a shared sense of ownership, rather than focusing on individual contributions:

What you'd like I think is for someone to think that, "Hey I made that game, not I made that tree. But I was part of the team that made the whole game." If you can get people to think that way, I think that's better because then you might not be too concerned about the tree that didn't make it into the game. But hey you were still part of the team that made the game.

In sum, a shared sense of ownership is associated with the positive outcomes of enabling a sense of resiliency in face of the uncertainty of creative work and developing a sense that individual work is contributing to a greater collective product.

***Shared ownership's impact on the product.*** These benefits are tempered by the costs of shared ownership. Specifically, the coordination costs of enabling shared ownership is one of the negative outcomes for the product. For example, in describing the outcomes of a shared approach, creative workers described the benefits of having many ideas that come together to inform the product, but also the time it takes to make decisions more inclusively. An audio designer (CS07) described:

It's really cumbersome to have a lot of people kind of like in all these big [meetings] but that's where we are trying...It can be slow because sometimes you have to consider all these ideas, you are in this room and you have to be sensitive to how everyone is thinking and you have to -- and sometimes it's faster to arrive at a place if one or two people are making the decision right just kind of shoot down and whatever. So I think the fact that it's a little slow and is one of the negatives.

Therefore, given the tight production time line, this added time spent on enabling shared decision-making may lead to the group's failure to achieve other less prioritized tasks, negatively impacting the product. As I will describe more in the next section, shared ownership may also negatively impact the product, in contrast to an exclusive ownership scope, since it may be more difficult for people to claim responsibility and invest as deeply in their work. Hence, while a

shared sense of ownership may lead to positive consequences for individual creative workers; it may be less beneficial for the collective product.

***Exclusive ownership's impact on creative workers.***

For some people saying, "I own this thing" can be a good thing if they don't mind that they might not eventually own it at some point. It can be positive because it can cause better quality in their work and how they deal with it, but it can also have emotional backlash if it gets cut or something bad happens to it, which has happened a lot in this project, and then you see real, negative mental problems in people and that's bad for the project. There has been some of that; people had to take time off and that's rough. In cases where you do feel that, it can go both ways, depending on how the project goes. (CS44, artist)

This quote suggests that, for creative workers, there may be both positive and negative outcomes associated with claiming "I own this thing" or an exclusive sense of ownership. The internalization of the task's fate was the most salient outcome in my data associated with this scope of ownership. In other words, when the implementation, or the outcome of the task, was included in the game or the tool set, or was more generally considered successful, then the creative worker felt positive emotions such as excitement, satisfaction, and happiness; when the implementation was not as successful the creative worker felt more negative emotions such as anger, disappointment, and frustration. The artist in the above quote acknowledges the intensity of the "emotional backlash" that can occur when she refers to a creative worker who needed to take time off because of negative reactions associated with implementations being cut.

Within interdependent work, the majority of the reactions in the data associated with this internalization of task fate were negative, while positive outcomes were also possible. Within game development, ideas and implementation rarely move through interdependent creative work without being modified or cut at some point and, on the Oz team, this iterative process was the norm. Hence, it is not surprising that with exclusive ownership, creative workers would predominantly experience changes negatively, both emotionally and motivationally. As an audio

designer (CS10) described in a diary entry, “The narrative specs for our [Kansas level] (which we built for the greenlight demo) have changed, which means we’ll be scrapping much, if not all of the music I wrote for it. Though it’s no surprise, it’s demoralizing.” A designer (CS34) described feeling similarly when implementations are repurposed:

I was just thinking like there have been times like I am working on a particular game mechanic or aspect of this game that is either removed or repurposed for something else and not at all what I initially had understood it to be. If you become too emotionally attached to the things that you do that can really torture you.

This suggests that even modifications (e.g. repurposing), that are not as dramatic as a cut, can be experienced negatively if there is an exclusive sense of ownership. These outcomes were not just emotional, but related to motivation, as well.

In the short-term these negative reactions may lead to feelings of apathy, or a lack of interest or concern, toward ideas and tasks. For example, an artist (CS30) claimed, “I went from having an opinion about those sorts of things, or knowing what was going on, to just being a work monkey, like just make it who cares.” Another artist (CS08) wrote in a diary entry, “The danger with so much iteration and required buy-in is that it retards a creative person’s inspiration and motivation to see their ideas through to their conclusion, as they are almost always left unadopted.” Both of these examples demonstrate a shift from investing in implementations, and likely having a strong sense of ownership over them, to not caring and having a weaker sense of ownership. A designer (CS05) described how constant iteration can lead to a form of learned helplessness in which creative workers stop investing in implementations:

When I first got here, it was like basically there were people who were seriously traumatized—they were like a dog who you want to pet and the dog is like it’s been hit too many times. And you’re like no it’s okay I’m actually not going to hit you, what’s going on? So I think that people were just traumatized because apparently before I got here and before some of the other designers got here there was like a year where artists were told to be creative but then their creativity was like slapped down. They created whole stories, they created all that stuff and then people were like we can’t do that....They are scared.

Also, people don't want to put personally themselves into something if they feel like it's going to be shutdown.

In contrast to the resiliency with which creative workers with shared ownership bounce back from setbacks, creative workers with exclusive ownership internalize this negative experience and carry it forward into their future work. A manager (CS50) described how, in sharing the responsibility, this burden of responsibility that comes from internalization of task fate is mitigated:

If it's we...so I used to play in bands and I used to play in trios a lot. In the trio if you drop out for a second, everyone notices. But if you are on a five piece band and you are one of the guitar players, if the other guy is playing the rhythm bar you can drop out and take a swig of something or whatever. You can get away with a lot more, so "we" has the benefits of not feeling so personally responsible. So heavy about it which can be, really positive for peoples' work environment and even their ability to get things done.

Thus, unlike shared ownership, with exclusive ownership creative workers must shoulder the burden of project failures (and successes). Consequently, when implementations fail creative workers may develop a sense of apathy, learned helplessness, or fear of investing the self that impacts how they invest in future work and how they develop ownership in the future.

Alternatively, as the first example indicated, when implementations are successful, this exclusive ownership may be associated with positive reactions. A designer (CS17) said:

The old me would have either responded like ...become really apathetic and just like helpless and stuff. But I honestly I still get those small moments of like reward where in like out of the 20 ideas that I had this one made it... If I didn't have that then I would I think get checked out and apathetic which I do see happening to people around me.

Thus, the designer is able to still feel a sense of reward, when an idea "makes it," but, as he described, this is not particularly common (1 out of 20) in the game development process. The rewards of exclusive ownership were much more commonly described in the Tools team where creative work was less interdependent and more modular (and consequently required fewer handoffs). In this situation creative workers can more easily tie success to their efforts, since they

are responsible for an idea from start to finish. For instance, a software engineer (CS61) working on a new tool described in a diary entry:

The last couple of weeks have been spent implementing my design for [a new tool]... So far it's looking good and people (especially the artists) are looking forward to start using it. It's rewarding to see, and show other people, the visual result of an idea that up until now I could only visualize in my head.

In the relatively rare situations on game teams when creative workers were able to maintain exclusive responsibility of their idea from start to finish, there was a similar effect. An artist described how in a former project, in contrast to Oz, he was able to have exclusive responsibility for particular assets:

[In this project,] we need a ([tree, building] etc), then they give me a drawing a concept artist did and I proceed to make it. It used to be that the artists had a piece of the game that they were responsible for... then we would proceed to concept it out from start to finish, we worked a lot faster and it was much more fulfilling to come into work every day.

Therefore, at times, creative workers may be more motivated by exclusive ownership. As one software engineer (CS59) claimed:

I tend to get really invested in it when it's all the parts, because it's like you know when you only own part of it, it's easy to get a little I don't want to say like detached but it's easy to kind of say well you know this part is their problem and you don't have a fire under your butt to like really make it like super fantastically amazing.

Thus, creative workers with an exclusive sense of ownership likely experience shifts in responsibility negatively; however, when work is more modular, and shifts less frequent, there may be more opportunities to experience positive outcomes in internalizing a task's fate. This suggests that some of the negative outcomes of exclusive ownership may be mitigated when implementations are successful and when work is more modular; though this was not as prevalent in my data given the iterative and interdependent nature of the creative process.

In addition to this internalization of a task's fate, territoriality, as described in the literature (e.g. Brown & Robinson, 2011), was also associated with exclusive ownership. For example, a designer (CS11) described in a diary entry working with another coder who had become territorial about a particular feature:

Have I talked about my struggles with the [feature]? Because that continues to be a source of great pain and discomfort for me. The coder I'm working with is holding the feature hostage. He claims he "hates" the enhancements the artists who use the tool are asking for, and is using this as a way to stonewall the development of the feature. I'm largely at his mercy, because if he doesn't want to do the work, I have no real way to force him to do it - nor am I interested in forcing anyone to do their job. But this daily unpleasant interaction has seeped in to everything else I do - the sense of failure and constraint has had a deleterious effect on the rest of my work as well. I've probably felt this terrible about my job here in the past, but I can't put my finger on a worse time period. This is relevant to the lifecycle of my ideas in that I feel creatively stifled by this person's dogged refusal to pivot on relevant customer feedback.

In describing how the software engineer is "holding the feature hostage" and his "dogged refusal to pivot," the designer articulates how territoriality can develop with an exclusive sense of ownership and how this territoriality impacts the coder's ability to take feedback to develop the feature. The diary also indicates how negatively territoriality impacts other coworkers—the designer feels "creatively stifled" by the engineer's territoriality. Another designer (CS68) similarly described trying to give feedback on a particular implementation that in which artists had "emotionally" invested. The artists refused to listen and the designer claimed, "there was a lot of really negative reaction to that like I was trying to kill this baby; and maybe I was trying to kill this baby." Thus, territoriality may inhibit the ability of creative workers to take feedback and improve their ideas.

***Exclusive ownership's impact on the product.*** Territoriality also seems to encourage creative workers to think about their specific implementation rather than how the implementation serves the greater whole or others' needs. As one audio designer (CS34) described, territoriality

generates problems when there is a misalignment between “my” and “the best,” “If you are personally and emotionally attached to it. At that point, you might fight for it when ... why you fight for it is because it is your idea, not because it is a better idea. I think that causes problems.” Another audio designer (CS10) described his own reactions to having an external person brought into the team and how this infringement colored his ability to assess the quality of work, “We were kind of inclined to dislike what he did.... My instinct is that anybody coming in taking any work from us would be perceived as a threat... like taking away work from us.” In other words, because the external person was viewed as infringing on the audio designer’s territory, the external person’s work would be disliked, regardless of how good it was.

However, exclusive ownership was also associated with positive outcomes from the perspective of the product. For instance, creative workers suggested that the collective product itself may be better if creative workers infuse their personalities through their individual contributions:

Our best games have been games that reflect the personality of the people who work on them. That’s not my personality, it’s in the details that the artist, that sort of fly under the radar. They are the things that are truly personal, the fact that people’s home addresses are on landmark sign posts and stuff like that. That there is sort of an attention to detail that reflects who these people are....I want the pieces that they own to have character.  
(CS01, manager)

As noted above, creative workers may also be more likely to invest more into their work if they have exclusive ownership over a particular piece, since they are not able to hide behind the collective efforts of others, “I would like every person who works on the [team] to feel “I” about something...they feel “I” because that’s what’s going to make them take the most responsibility and pay attention to that work the most” (CS50, manager). Managers, then, may wish to enable a sense of exclusive ownership because they believe that people may work harder and invest more in order to make a better product.

*Balancing outcomes.* Taken together, both shared and exclusive ownership have differing outcomes which brings forth a tension between what is good for the individual creative worker and what is good for the collective product. For example, exclusive ownership may lead to negative emotions, but it may cause creative workers to invest more of themselves into the work leading to a better product. Shared ownership may make creative workers more resilient in the face of change, but it takes time to coordinate inclusive decision-making which may negatively impact the product. Even considering the motivational outcomes of exclusive ownership represents a tension—when the project is going well or ideas are changed infrequently, creative workers may be highly motivated by exclusive ownership, but when the project is struggling or iteration is frequent, creative workers may develop apathy. Thus, shared ownership may provide more consistent positive outcomes for the creative worker over the course of iteration, but it may not offer the more momentary boosts of motivation found with exclusive ownership.

Regardless of the ownership and outcomes they enable, all of the task types (managerial, conceptual, and production) are critical for the development of ideas. Thus, having a mix of creative workers, some with shared ownership over abstract elements and some with exclusive ownership over concrete elements, facilitates the management of breadth and depth that is critical to any complex, interdependent product. In other words, some people need to have deep knowledge of concrete pieces, while others need to have a broad, more abstract understanding of how those pieces fit together. For instance, a software engineer (CS52) described how he has to focus on and have a deep knowledge of only small concrete elements:

It's pretty big and it's just too hard to look at it at from a broad level and a deep level. We've got to focus on one [feature] at a time.... Narrowing you get to look really, know it well and I think that's important to have a depth of understanding. The nice part of that is we can spread that across the team so that across everyone like the system is well

understood because something this complex, I don't think anyone can really have a deep understanding of. People probably think about things more broadly. I just can't really even imagine what that means.

Here, the creative worker describes the importance of having deep understanding and familiarity, which relates to exclusive ownership, but also notes that no one can have deep knowledge of the complex whole. Therefore, it is critical that some creative workers are focused on the broad complex whole, even if their knowledge of individual pieces is not as deep. In a diary entry, a quality assurance tester (CS21) also acknowledged the difficulty in managing breadth and depth:

It has given me a lot of perspective on how hard it is to think outside your little corner of the game, because I've been so concerned with just making my songs the best they can be, not contributing anything outside of that... It is important to make sure there are enough people in the right roles looking at the big picture.

Here he clearly indicates this more exclusive ownership over concrete pieces ("my songs") and how this is in tension with any need to think more abstractly about the game as a whole. He also suggests why roles and tasks are so important to maintaining this critical balance of breadth and depth. In summary, while all tasks might be necessary for the sake of the collective product, the sense of ownership that develops through those tasks carries its own set of outcomes and consequences.

### **Individual Differences that Cause Path Deviation**

Thus far I have described two relatively direct paths from tasks to ownership scope to outcomes. However, there were several individual differences that caused a deviation from these paths. Specifically, prior individual experience, in the form of training and a background in production work, enabled a focus on concrete tasks, whereas learning around ownership seemed to re-focus attention on the abstract. Work style preferences also pushed creative workers to focus on working interdependently or autonomously, even if the task did not warrant that style of work. These deviations carried through to impact the ownership scope that emerged.

*Experience.* First, a lack of experience in commercial creative work may lead creative workers to focus on the concrete in completing conceptual tasks. For example, a manager (CS01) described:

I feel like that's where I've worked with junior people and we have some on this staff who are just trying to impress and they feel like if enough of their ideas don't get in, then they're not pulling their weight and that's not actually the point. When I think it just takes, I think it does take experience to understand that and to sort of appreciate that and to remove your personality from that to conversation.

Therefore, junior creative workers may have more of a need to prove their worth and ability, that leads to a focus on the concrete. Further, training and education in both music and the arts emphasizes self-expression through concrete products, rather than contributing to a more abstract whole, where your contributions may not be as easily identified. Another manager (CS09) described:

There's a classic paradigm where people in school, in art school or music school and whatever, there's a strong emphasis on self-expression. You really grade it on the facility with which you express your ideas, that's the whole -- particularly in art school, that's the metric. We're doing commercial art, collaborative commercial art.

He went on to claim that the metric, in game development, was whether you contributed to the greater whole and the quality of the final collective product. This understanding of the metrics in commercial game development occurred through on the job experience. So, junior creative workers tended to be concerned with whether their specific contribution, in the form of some concrete implementation, made into the game or Tool set, rather than on the quality of the game or Tool set as a whole. This emphasis caused a continual focus on the concrete that enabled more exclusive ownership, even in broad conceptual tasks.

Second, in some cases prior work on production tasks reinforced this training, such that even more senior creative workers continued to focus on the concrete and autonomous elements of their work. For example, most discipline leads and managers were once individual

contributors who focused on production tasks; in completing more managerial and conceptual tasks, creative workers relied on this past experience to focus on the concrete elements to do their tasks. For example, a manager (CS50) described how he often “coded up” first versions of particular features to scope out his vision and consequently felt like “I do feel a little bit of ‘I’ ownership over the whole of that pipeline, but it’s very small and very up at the top.” Thus, rather than working interdependently to discuss more abstract ideas, he wrote code for a semi-working prototype on his own to convey his vision to others. A lead artist (CS29) also described, “I certainly feel ownership over the visual aspect of the [gameplay] plan.” In talking about how he worked on these visual or more abstract aspects, he described:

I work better when I can focus in on something and get my hands on it to do some prototyping and actually bring stuff forward through direct contact with it myself... I tend to think with my hands as much as with my head. It's easier for me if I can get my hands on something.

Thus, managers and discipline leads used concrete tasks to complete more conceptual work that led them on a path to more exclusive ownership. In other words, in relying on the skills associated with their previous work experience (completing production work, focusing on concrete implementations), managers and leads could develop exclusive ownership, despite the task type.

Finally, some creative workers explicitly described learning how to manage their relationship with their ideas, or learning around ownership. Through experience these creative workers learned to focus on the abstract, even in more production oriented work. Specifically, creative workers in more junior roles, whose primary job was to generate individual assets, learned to focus on the abstract and shift from exclusive to shared ownership. An artist (CS36), for example claimed that she had learned how to manage her relationship with her work to focus on and develop a sense of ownership over the abstract elements:

I think it's more being aware. I think that the longer you work at something the more you get attached to it. So if you have an idea and you get it out and you keep it in its base form as much as possible, where it's still like you haven't like, oh this is exactly what's going to happen and it's going to be just like this and the color is going to be orange and that's exactly how it needs to be. It's easier if someone is like oh this would be great if there's an [umbrella] in it. And you're like oh yeah it could be cool if there was [umbrella] in it. So it's best to keep things loose and don't over define things in your own head or outside. Because then it's a lot harder to let go of the little details.

This artist suggests that the concrete details that go into an implemented prototype may be more difficult to “let go of” when the idea is realized and modified. Therefore, it may be easier to focus on the idea at a very abstract level or “base form,” so that the details can emerge and change throughout the process. Similarly, an audio designer (CS32) claimed:

You don't really want my voice. I think you don't want any individual's voice that much in the game. ... There are so many other people it's going to have to integrate with, there are so many other artists to integrate with too many other creative people that you can't be like, I am the one and everybody is going to make this like my music.

This audio designer suggests that this focus on “my” may be detrimental to how everyone's ideas can be integrated; if a creative worker focuses on their individual impact and is concerned with their individual influence, they may actually hurt the overall end product. One artist (CS48) went so far as to say that, “As soon as this context starts to be personal expression I think it's actually more of a recipe for larger failure rather than success.” Thus, rather than developing a more exclusive sense of ownership over an individual piece, learning involves focusing on the collective and abstract whole and developing a shared sense of ownership.

***Work style preferences.*** Creative workers described having a personal preference for either working alone (more autonomously) or collaboratively (more interdependently). For example, an engineer (CS13) explained, how in contrast to his own preference to work collaboratively, others preferred to work more autonomously:

I think it's almost a conscious preference of certain people as well. Like they don't really - they're not interested in working very closely with an artist or a designer. It's more like

the type of coding that's putting your headphones on at 10:00 a.m. and taking them off at 6:00 p.m. and having developed a cool chunk of whatever. So I mean, yeah, I think it's -- I don't know if it's a personality thing as much of just a personal goal kind of thing.

Similarly, another engineer (CS61) explained, "I probably prefer to work alone ... I'm just much more linear, I don't like to multitask too much and for me it's better to focus on one thing at a time." Therefore, some creative workers, regardless of the task prefer to work alone. In contrast, an engineer (CS14) claimed:

I was self-employed for about five years and stuff and part of why I wanted to like come back into the office world and such is to have that back and forth with people. Sort of I like to think I have good ideas but other people even have better ideas and then they inspire me and I inspire them. That back and forth and stuff.

An artist (CS48) also described how he chose to work in a more collaborative environment, because he preferred working more interdependently:

I came out of many years of being alone in my studio and so everything was all me. And I got a lot of that. For me being in a situation in which there's this concept in collaboration in snow balling and building I love it for all the reasons that I don't have a studio anymore. I love coming here. For me that sense of a collaborative effort in which the big picture we're interested in and we're bouncing ideas over each other and things are building is really exciting. And I find to be really creatively engaging.

Therefore, creative workers arrived at a task with their own personal preferences on how they would like to complete the task, and this preference influenced how they completed the task either more autonomously or more interdependently and consequently the scope of ownership they developed over the task.

### **Ownership Strength**

Up to this point, I have described the quality of ownership that emerges focusing on scope; the dimension of strength describes the amount or intensity of ownership. In other words, given a particular ownership scope, exclusive or shared, a creative worker may feel strong intense ownership or less intense ownership. Next, I describe factors that begin to explain why a

creative worker may develop more or less intense feelings of ownership. Table 4.2 provides additional data related to ownership strength.

*Idea affinity.* My analysis revealed that people were attracted to particular ideas because they related to their interests, related to a particular expertise, or offered an opportunity to consider a problem they found interesting, whether or not they originated the idea themselves. This attraction or affinity for an idea related to a stronger sense of ownership. For instance, an audio designer (CS10) described in a diary entry how he was tasked with developing music based on a particular song, “I’ve begun working on [a composition based on], one of my favorite songs when I was growing up. It’s honestly a thrill to be able to rework such an iconic piece of music.” He went on to describe all of the different ways he would use the piece of music as an inspiration for his composition. Thus, even though he didn’t propose the music, he had an affinity for and invested in the idea. A designer (CS17), also, described how he felt more attached to ideas that represented him claiming “I felt more attached to that idea because I’m like well this is pretty much like a representative of my personality. People are responding positively to it and like oh I have so much validation now.” These examples suggest that strength of ownership may be related to how much an idea relates to who the creative worker is as a person, their interests, and how they think of themselves. In other words, if the idea relates in some way to their identity, stronger ownership may be more likely to form.

Creative workers also developed affinity for an idea if working on the idea allowed them to use a particular expertise or to work on an interesting problem. For example, an artist (CS36) described how she thought a good leader should assign people particular ideas, especially those they excel at:

That’s definitely something that comes up between artists because everybody can draw, but people do have these things that they excel at and don’t. A good leader would...read

how that person feels about it, whether they want to keep doing that. I really wanted those [munchkins]... You do want your artists to be happy and so sometimes you need to let them have *their* thing.

In this case the artist really wanted to draw the munchkins and viewed them as her thing.

Software engineers often described how solving and working on features that solved

“interesting” problems made them the happiest. For example, an engineer (CS61) described the types of ideas on which he preferred to work, “For me if it is something that is a bit challenging or that I at least feel like I am learning something.” Therefore, creative workers may be drawn to ideas for different reasons, but, as the artist above suggests, creative workers may be more likely to develop a strong sense of ownership over things on which they want to work.

***Project phase expectations.*** Within game development, creative workers are cognizant of how the phase of the project impacts the stability of work—during phases that emphasize prototyping more work is likely to be thrown out, whereas in phases that emphasize polishing work is more likely to make it into the game. These expectations impacted the intensity of ownership the creative worker developed. For example, an engineer (CS28) described how he thinks about prototyping:

I know that I’m going to have to redo something when I do it the first time anyways, so I do it superfast and I know that I’m throwing it away. Especially when I’m prototyping and I don’t even know what’s going to become I know that I’m going throw 10 things up and like one might stick. It’s just... I’m just used to it.

These expectations about work being thrown out or changed appeared to influence how strongly a creative worker developed ownership: “I think in this context you can’t be too married to an idea or from the birth of it, you know what I mean? Because it’s going to change especially in this prototype kind of phase right, like it’s going to change. There’s pretty much no other way unless magically it sticks” (CS47, audio designer). In prototyping, then, creative workers may be

less likely to develop a sense of strong ownership because they know their work will likely go through much iteration and may not be used.

In polishing phases, there is a greater chance that work will make it into the game. As an artist (CS12) described:

I know that at this point in time, concept art that is being made is not going to get cut, like we are not wasting anybody's time with the you know, like oh come up with eight variations of a [tree] and we will choose one, you know. It's like here is a [tree], make it in the style, go, you know. And it's like you know, because there is no time.

An engineer (CS28) described how during these polishing phases, it is safer to invest in your idea because there is a greater chance the idea will not be cut:

When you're in the prototyping phase where you don't know what you're making then you should assume that your work can just get thrown away. I think that when you get to that final polish phase, our designs are locked and we're really creating final art, that's when you should you know consider being invested.

Given the established connection between investment and sense of ownership, it is likely that this greater investment during polishing, rather than prototyping, will be related to the development of a stronger sense of ownership. In talking with managers and leads, they were aware of this investment that takes place and the frustration that occurs when people invest in and develop a sense of ownership over ideas only to have them cut. Therefore, an audio designer (CS07) described how team leads try to be clear about what phase of work they are in, to clarify expectations and prevent this premature over investment and strong ownership:

We try to manage and we try to make it better. We try to separate the kind of work you do when you're trying to prove a concept versus trying to polish. And make it so that you don't start polishing something and having it be "here is your final piece" before we've actually proven what we're going to use it for.

Therefore, expectations around project phase may influence how much a creative worker invests in their ideas and consequently the strength of ownership they develop during a particular phase of creative work.

***Duration of investment.*** As I have described, investment is one of the routes through which ownership forms. I found that duration of investment related to the strength of ownership that formed. For example, a software engineer (CS13) described how the duration of investment related to his strength of ownership over particular pieces of code, “There's some code here that I wrote and I will maintain for the length of the project likely. And so in that sense I feel a pretty tight ownership over those. Other people end up being clients of that code using that tool, feature or whatever for something.” So while other people may interact with and use the code, he will likely be responsible for the code for the duration of the project, leading to a strong sense of ownership. This relationship between duration of investment and strength of ownership was echoed by others. As a quality assurance tester (CS06) claimed: “some of them were things that I had spent months on, so there's that sort of attachment to them...so I felt like they were a little bit more mine and things that I had sort of just helped test or whatever.” In summary, then, my analysis revealed that creative workers could develop more or less intense feelings of ownership and this strength was impacted by idea affinity, project phase expectations, and duration of investment.

### **Implications of Dimensionalizing Psychological Ownership in Creative Work**

Within this chapter, I have explored ownership scope and intensity to reveal the complexity of psychological ownership as it occurs in creative work. In doing so, these findings open up several avenues for new theorizing around psychological ownership that moves beyond thinking about if ownership develops to unpacking its scope and intensity, as well as the tensions that result from outcomes for the creative worker and collective product associated with scope. First, I develop theory on how conditions of the task, as well as individual differences, impact the scope of ownership, as well as specify conditions that impact the level of intensity of

ownership that develops in creative work. Second, in focusing on the role of tasks and ownership scope, I build on the Job Characteristics Model (Hackman & Oldham, 1975) to consider outcomes, from both the employee and product perspectives, that emerge from considering tasks that might be considered “enriched,” as well as those that are not. Third, I demonstrate that ownership is bound to particular tasks and, therefore, can shift over the course of a job. In doing so, I also consider ideas, as the targets of ownership, rather than jobs or organizations. Finally, I reveal tensions in creative work and highlight how understanding ownership helps better understand and manage these tensions. I detail these contributions next.

***Delineating ownership scope and strength.*** As noted in prior chapters, research has focused primarily on conditions that lead to the emergence of ownership and has not fully considered how the experience of ownership may range for individuals. Thus, while Pierce and Jussila (2011) have suggested that ownership may be shared, most measures of ownership lump this experience into a unitary construct. For example, one of the most commonly used scales to measure ownership includes items that focus on this more exclusive ownership scope “This is my organization”, alongside items that emphasize a more inclusive, shared scope “This is our company” (Pierce & Jussila, 2011; Van Dyne & Pierce, 2004). My research reveals that ownership may range in scope from exclusive to shared and these different scopes result in different outcomes for the individual. Therefore, failing to distinguish between these different ownership scopes, fails to capture the complex ways that ownership impacts worker experience. If possessiveness is at the core of the psychological ownership construct (Pierce & Jussila, 2011), scholars need to be clear about at what level this possessiveness is experienced— at the individual or collective level.

Within this chapter I propose a theoretical model (figure 4.1) that illustrates key conditions that impact the development of particular ownership scopes and the outcomes of ownership scope. While Pierce and Jussila's (2011) theorizing focused on the impact of the single individual difference of individualism/collectivism, my study reveals new individual differences that impact scope—experience and work-style preferences—indicating that scholars need to consider individual differences that are work specific, not just personality differences, to understand variations in ownership. More importantly this research suggests the fundamental role that task characteristics play in shaping ownership scope. Specifically, I suggest that the task characteristics of task type (managerial, concept, or production), target (abstract, concrete), and coordination (autonomous, interdependent) all impact ownership scope. In other words, I articulate how particular characteristics of tasks, in combination with individual differences, shape ownership scope. This model also articulates how ownership scope impacts the individual creative worker and the collective product, by delineating a specific set of outcomes.

In addition to the conceptual model of ownership scope, I delineate key factors in creative work that relate to the strength of ownership. By focusing on the emergence of ownership, scholars have paid less attention to the strength or intensity of ownership. In creative work, where ownership is likely to emerge given the ability to control, be familiar with, and invest the self in, ideas, the question of “how much” becomes more important than “if.” Similar to the case of emergence, I found that strength related to investment, specifically the duration of investment. I also found that both idea affinity and project expectations related to strength of ownership. The construct of idea affinity begins to suggest that in considering ownership, it is also critical to understand the relationship between the individual and the target and that the nature of this relationship has an impact on the strength of ownership that develops. My analysis

revealed that part of what draws a creative worker to a particular target is how the target relates to who they are as a person. In other words, people are drawn to particular targets based on their backgrounds, skills, and motivations and each individual may relate to the same target differently. This finding relates to and builds on theorizing that argues that ownership will emerge for targets that relate to the sense of self and personal values (Pierce et al., 2003). The importance of project phase expectations indicates that timing, or when an individual encounters a target, may also impact the strength of ownership that develops. In articulating and unpacking ownership scope and strength this research explains new ways of understanding how psychological ownership relates to worker experience.

***Links to job design and enrichment.*** The focus of the model presented here (see figure 4.1) is to explain how creative workers develop different ownership experiences; because of this focus, I did not initially approach this study from a job design perspective. However, the theory that emerged does share related elements to the job characteristics model (JCM) and job enrichment (Hackman & Oldham, 1975). Initial work on job design arose out of scientific management's focus on efficiency and productivity and the realization that poorly designed jobs might have negative consequences for the worker (Dewe & Cooper, 2012). The JCM suggests that enriched jobs (that include the job characteristics of skill variety, task identity, task significance, autonomy, and feedback) impact certain psychological states (experienced meaningfulness, experienced responsibility, and knowledge of results) that improve employee work outcomes such as motivation, satisfaction, and performance (Hackman & Oldham, 1975). Given research that questions the mediating effects of the originally proposed psychological states (e.g. Fried & Ferris, 1987), Pierce et al. (2009) proposed a revised job characteristics model that replaces the original psychological states with psychological ownership of the job and

specifies how the original job characteristics relate to the mechanisms that enable ownership (control, intimate knowing, and investment of self). This model further indicates that in addition to positive outcomes, these seemingly positive job characteristics may enable negative outcomes associated with ownership such as resistance to change and territorial behaviors. Taken together this research suggests that the design of jobs impacts individual outcomes and has focused primarily on the role of 5 job characteristics. Rather than focusing on how managers can design jobs to improve employee experience in order to increase productivity, my intent was to understand how a sense of ownership develops through creative work. Further, while some of the jobs at Central Studio were highly specialized, all of the jobs I studied were concerned with generating a new creative product and any one job involved a complex array of tasks. Thus, the work I studied varied greatly from the efficiency-focused, factory-type work that was the concern of initial job design ideas and, consequently, the model developed here takes several key departures from the JCM to elaborate new theory.

While the JCM describes task characteristics, the model does not focus on individuals' experience in completing individual tasks – rather on the gestalt of these task experiences (i.e., one's perception of one's job). Also, as I have noted previously, most of the empirical work on ownership has focused on the job or organization level. While there is certainly merit in understanding ownership at this level, this approach falls short of explaining more momentary ownership experiences. This research, then, first departs from the JCM by focusing on the experience of working on and completing particular types of tasks, rather than the experience of jobs more broadly (i.e., job satisfaction), to suggest that depending on the task type different ownership scope may develop – even within the same job – and that a sense of ownership is bounded to a particular target and associated with a particular task. In focusing on the importance

of individual tasks, rather than the bundle of tasks that makes any one job, this research explains how ownership is experienced more ephemerally over the course of work. Specifically, my research suggests that as creative workers complete different tasks throughout their day they experience different senses of ownership at different scopes and intensities depending on the task and its target. For example, an artist might work within a concept team to develop ideas for a new game level and an hour later be responsible for producing an animation by him- or herself, leading to different experiences of ownership. Further, these different experiences of ownership relate to different outcomes (e.g. task motivation, positive or negative emotions, resiliency) that impact how people experience their work. Therefore, this description of the experience of ownership is vastly different than the implicit assumption in current literature that ownership is persistent throughout a single job. This research takes a more fine-grained approach to experience than the JCM and highlights how ownership shifts with completion of different tasks.

Also, rather than focusing only on the role of autonomy, as is the case in the JCM, the model proposed here also considers the results of interdependent work. Aligning with ideas from the JCM, scholars within the creativity literature have emphasized how work that is challenging and is associated with a certain degree of freedom enables intrinsic motivation and creativity (Amabile, 1988; Amabile et al., 1996). This dissertation extends this focus on autonomy to illustrate how job enrichment may also occur through interdependent (and therefore less autonomous) creative work. While Pierce et al. (2009) highlighted that enriched jobs may result in negative employee outcomes in addition to positive ones, I show that the interdependent, rather than autonomous, tasks may actually have their own unique path that works through shared ownership to engage and motivate employees. Thus, enrichment may happen through developing a shared sense of ownership by fostering a sense of transcendence and resilience and

there may be different mechanisms through which different types of task coordination (autonomous vs. interdependent) positively impacts worker experience. This suggests that we may need to reconceptualize our theoretical understanding of enrichment, especially in contexts, like creative work, that have a higher “motivating potential score” (Hackman & Oldham, 1975) as opposed to factory work, for example. This research, then, builds on the notion that work design must be reconsidered in contexts where creative output is critical (Elsbach & Hargadon, 2006).

Additionally, rather than just focusing on outcomes for the employee, I also consider outcomes from the perspective of the collective product. For example, I describe how territoriality and task investment, associated with exclusive ownership, and coordination costs, associated with shared ownership, impact the product. In considering these outcomes for the product, I describe outcomes that lie outside the traditional purview of the JCM to reveal tensions that managers face in balancing the needs of employees and the needs of the product that have been relatively absent from considerations of job design.

***Ideas as targets of ownership.*** In focusing on tasks, and the targets of these tasks, this work also demonstrates variations in experience that arise based on the nature of the specific target – i.e., ideas. While the majority of work on psychological ownership has focused on jobs and work as the primary targets, scholars recognize that psychological ownership can develop over a range of targets from physical objects, to ideas, to relationships (Pierce & Jussila, 2011; Pratt & Dutton, 2000). In fact, Van Dyne and Pierce (2004:455) have called for more research exploring a greater range of targets, claiming it “would be interesting to develop theoretical predictions specifying when certain targets of possession would be salient to employees.” This study focused on ideas, as the primary target, revealing that the level of abstractness of the idea

was a salient dimension through which people developed a sense of ownership and that task type related to the nature of the target (abstract to concrete). Through the creative process, as ideas are realized, they move from more abstract to more concrete. Thus, rather than conceptualizing ideas and physical objects as separate categories (Pierce & Jussila, 2011), it may be more meaningful to consider a dimension of ownership that ranges from abstract to concrete. For example, Brown and Robinson (2011) found that employees were more likely to experience territorial infringement over physical objects than ideas. This hints at the possibility that territoriality may be associated with concreteness. My research suggests that rather this association being simply a matter of intensity (e.g. people feel more ownership over concrete objects) ownership scope also plays a role (e.g. people feel more exclusive ownership over more concrete objects). Thus, understanding specific tasks, and the targets of those tasks, deepens our understanding of ownership experience, as well as behavioral expressions of that experience.

*Managing for creativity.* This study reveals several tensions that managers might consider in managing for creativity. The first tension I describe revolves around whether exclusive or shared ownership is beneficial for the experience of creative workers. When creative workers repeatedly participate in the creative process, which is often uncertain and filled with iteration, they seem to experience different outcomes depending on what kind of ownership scope they adopt. In the context of a single task, exclusive ownership may result in task motivation, as creative workers are able to take responsibility and pride in their efforts. However, looking beyond this initial task to how the idea moves throughout the development process suggests that creative workers with exclusive ownership may develop apathy, learned helplessness, and negative emotions, if they repeatedly watch their ideas changed or discarded. Nonetheless, on the off chance that an idea does make it into the final product, the creative

worker can claim exclusive ownership over that success. Thus, exclusive ownership may have short term gains, but in the long-term given the iterative nature of creative work, it is a high-stakes strategy. In contrast, shared ownership seems to lead to a more consistently positive experience with fewer ups and downs as creative workers focus on the collective product and develop a sense of resiliency to changes. Therefore, there is a tension around whether creative worker should adopt a more high-stakes ownership strategy (exclusive) or low-stakes (shared) to have a better experience at work.

Secondly, ownership also potentially generates a tension between what might be good for the creative worker and good for the product. For example, shared ownership might lead to more consistent positive experiences for creative workers, yet working interdependently takes significant coordination costs and creative workers may actually invest less into the individual pieces that make up the game. Therefore, in order to produce a collective creative product, it may be necessary for some creative workers to form this more exclusive ownership, as it enables a sense of responsibility and investment of self that generates more unique and high-quality individual components that are critical to the creativity of the overall product, despite the potential for negative outcomes such as territoriality and apathy when ideas are iterated upon. Further, a mix of creative workers, some with a more exclusive sense of ownership and others with a more inclusive sense, enables that management of breadth and depth that appears critical to creative work. Given the complexity of the product, it is nearly impossible for a single individual to have deep knowledge of every element of the product. Therefore, some workers need to have deep knowledge of isolated elements (related to exclusive ownership) and others need to have a broader understanding of how all the elements fit together (related to shared

ownership). Consequently, this study reveals a tension that may be inherent in collective creative work between individual needs and collective products.

The final tension which has already been raised in the creativity literature revolves around the need to maintain individual creative voices, yet find synergy between those voices in order to generate collective work. For example George (2007: 467) called for more research on “how groups manage the fundamental paradox of needing both a coming together and meeting of the minds that fosters collective endeavors and divergent opinions and perspectives, meaningful dissent, and distinctive contributions that enable the achievement of real synergies and creative approaches.” Ownership provides a new framework for understanding and working with this tension. In my research, creative workers form exclusive ownership when they work autonomously, but shared ownership when they work more interdependently. In other words, this research suggests that how creative workers individually develop a sense of ownership over what they produce impacts how they work with other team members to produce a collective product. It also suggests that maintaining an individual voice, through exclusive ownership, may prevent the ability to for others to contribute and generate a collective product. Therefore, while it may be necessary to have exclusive ownership in generating ideas, it is critical for creative workers to eventually develop shared ownership over their ideas if they are to have the “meeting of the minds that fosters collective endeavors.”

In summary, these findings suggest the importance of understanding the range of ownership that creative workers experience, both in scope and intensity. These findings also highlight that task characteristics, individual preferences, the relationship between the individual and the target, and timing, all likely impact an individual’s sense of ownership. In the next section, I focus on ownership outcomes that occur when a target is handed off to another person

and demonstrate how the scope and strength of ownership impacts worker's experience in meaningful ways. Therefore, simply considering if ownership emerges, fails to capture important dimensions that impact worker experience.

## CHAPTER 5 HANDOFFS' IMPACT ON PSYCHOLOGICAL OWNERSHIP

When three people have really strong opinions about how something needs to work and each one of them feels ownership over it ... I think that can cause problems. (CS04, producer)

### **Overview and Prevalence of Handoffs in the Game Development Process**

In the prior findings, I focused on how ownership scope and strength are experienced through creative work. However, as I have suggested, creative work involves social interactions through which several creative workers may interact with the same target, or idea. In this chapter, I explore how ownership changes during the course of a specific type of social interaction—a *handoff*. I define a handoff as a shift in formal responsibility, or organizational accountability, that takes place between creative workers for the purposes of continuing the development of the target. Producers and discipline leads initiated handoffs in consultation with creative workers involved in the handoff. However, in reality, most of the handoffs were forced, as the creative workers had very little choice in whether the handoff occurred or not. As I will discuss below, handoffs may not always result in a shift in control, or influence, over the ideas – and alignments and misalignments of formal responsibility, control, and other ownership factors lead to a wide range of outcomes. Handoffs occurred frequently throughout creative work at Central Studio. Given that game development requires integrating the work of several types of specialized workers, this is not surprising. As one participant (CS18) described, the work flow is more like a “precious relay baton,” in which a series of individuals are responsible for phases of creative work. For example, a senior designer may come up with an initial idea for a game level which they handoff to a group of concept artists to brainstorm visual possibilities. These possibilities are then handed off to individual artists to continue to concept. Once the concepts are more finalized, the ideas may be handed off to other artists to model, texture, and animate

individual elements of the level. Then, these artists handoff elements to a technical artist to hook up into the game. Thus, through a series of handoffs ideas become more and more realized.

To specify and characterize handoffs in my data and theorizing, I distinguish between work done before and after a handoff, as *specification* and *realization*. Initially one person or group is granted primary responsibility for the idea, “the originator,” and, at a certain point in creative work, they handoff the idea to another person or group, “the receiver,” to continue to realize the idea. Following the handoff, the receiver is granted primary responsibility. I characterize the initial work done by the originator(s) as “specification,” as it involves both generating ideas and specifying requirements and constraints around how an idea is realized. Following the handoff, the receiver continues to realize the idea in more concrete terms with the eventual goal of incorporating the idea into the game or what I label “realization.” As my focus in this study is on understanding how handoffs impact ownership, and not on how ideas are realized over time, I do not address cycles or series of handoffs within this chapter. However, I acknowledge that the output of realization may serve as an input for the next specification. Therefore, specification may be quite abstract and focus on outlining initial parameters or constraints around the idea or it may be more concrete, taking the form of a rough prototype. I draw the findings within this chapter from both within discipline (e.g. engineers to engineers) and across discipline (e.g. designers to engineers) handoffs; however all of the handoffs occur between project team members, either within the Oz or the Tools team (i.e. never across teams). In other words, the overarching product was the same for the originators and receivers participating in the handoff. Throughout the chapter, when I describe particular handoffs I indicate the disciplines of the originators and receivers.

In focusing on the handoff process, this chapter broadly answers the research questions “How do the circumstances around shifts in responsibility impact ownership responses?” and “When and how do creative workers maintain or change ownership following shifts in responsibility?” First, I describe the conditions that I found impacted the handoff process, focusing on both the originator and receiver’s perspectives. Then, I bring the originator and receiver perspectives together to describe different types of handoff scenarios, that take place and result in different ownership outcomes for originators and receivers. Figure 5.1 maps out the key conditions and dynamics within any given handoff scenario, which I describe next. Table 5.1 provides additional illustrative data.

### **Originator Psychological Conditions**

*Initial ownership.* As I introduced in the prior chapter, ownership can be more exclusive, focusing on “I” or “mine,” or may be more shared focusing on “we” or “our” or how multiple people may collectively shape ideas. I found that the originator’s ownership scope prior to handoff impacted how an idea proceeded through a handoff. For example, some originators entered the handoff with a more exclusive sense. An artist (CS44) described a handoff:

I was working on that ... and I’m like here are like 14 possibilities, what do you think? They would be like, “oh we think this, do more.” And so I did more. And then I got pulled back [onto another project], so I have no idea what’s happened. After a few days I was like “I don’t know if they finished that.” So I messaged them and I was like, “are you guys okay?” They’re like, “yeah, we like some of the things; we’re going to move forward on that.” So now it belongs to somebody else and I was stalking it a few days ago and some other person had posted their ideas and it was nothing like mine.

The artist uses “I” to describe the possibilities she generates and, in saying, “it now belongs to somebody else” and “it was nothing like mine” draws attention to the exclusive sense of ownership she has over her ideas. Also, her “stalking” of the idea, emphasizes the exclusivity she felt over the idea.

Alternatively, creative workers claimed shared ownership. Within the handoff process, this shared ownership was often described as a feeling of “shared” control over the resulting feature or asset. For example, in describing the development of a particular feature, a software engineer (CS50) commented in an interview, “I coded up the first versions of that, but immediately turned them over to other people. So ...I feel shared ownership over those code elements. Because I was involved with the design that means I’m involved with the ramifications of them. So I feel some ownership over the consequences.” In other words, because the software engineer is “involved with the design” he influences, or controls, the final output of those designs. Therefore, an originator could enter a handoff with a more exclusive or shared sense of ownership over the idea being handed off.

In describing their experiences with handoffs, creative workers also drew attention to how the originator’s strength of ownership impacted how originators entered handoffs. For example, an artist (CS18) claimed that handoffs are often made without taking into account how much ownership the originator already has over the ideas and that stronger ownership can make the handoff more “depressing” for the originator. For example, he described how ideas were handed off in order to spread work around:

There are definitely circumstances where it’s sort of depressing...because even though they’re told like, “Oh, it’s nothing personal. It’s just that we need to shuffle the schedule around.”...I mean, I think in this circumstance the other guy was off another project so they were just looking for something, anything for him to do. So they thought this is something they could use to fill the time. But they didn’t really take into consideration that the person who had built 90% of it might be emotionally attached to it, and doing a really good job on it, so maybe we should just let him finish that and start this other guy on a task that hasn’t started yet.

This example implies that a creative worker may enter a handoff with different strengths of ownership, depending on how long they have invested in the idea prior to handoff, and that a stronger sense of ownership may make an originator more reluctant to engage in the handoff and

attempt to maintain control following the handoff. In my data, when creative workers discussed handoffs, they primarily talked about how strong ownership generated a sense of reluctance in entering a handoff, rather than the role that weak ownership played. This suggests that ownership strength is particularly salient in handoffs when a stronger sense of ownership is present.

**Trust.** In addition to the originator psychological conditions that directly related to ownership, creative workers also spoke often about originators' trust as an enabler of handoffs. I focus on trust as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (Mayer, Davis, & Schoorman, 1995:712). Here, the other's action is specifically related to how the receiver continues to develop the idea following a handoff. For example, software engineer (CS13) who had recently been given more supervisory responsibilities commented on the importance of trust in handing his ideas off to others:

That's a little difficult. That's one of the things that I've had to be very conscious about, is give it over and then stop worrying about it and trust that that person will -- I don't want to micromanage them and be second guessing every decision they make. So it's kind of like, have faith in their engineering and design skills and let them make it their own thing. And the more ownership they feel over it, the more effort that they'll put into it.

In other words, the software engineer realized that once he handed an idea off to other people, he needed to trust them and stop controlling the idea in order to let them use their skills to develop the idea. Informants often described how trusting that others were competent, one factor of perceived trustworthiness (Colquitt, Scott, & LePine, 2007; Mayer et al., 1995), facilitated this willingness to handoff ideas. For instance, a designer (CS11) described the role of trusting other colleagues' expertise in the development of a game character:

It's part of the advantage of working in a place where there are so many like super talented people so that I have a kind of implicit trust in the artists like both on our team

and on the team the larger [Oz] team... When we first started talking about this [character], the character was actually taken from a graphic novel that I just had in my house. So it was a pretty random thing and then the character artist drew this picture where he essentially like took that girl and gave [her]...this determined look on her face. And it was not necessarily who I immediately had in my head but it was better than that - it just made me understand the character more.... I feel less like I have ... to make sure people are rendering this character in the way that I have the character in my head. Again it's like it's much more important to me that the aspect of the character that relates to the story are kept in place. Like how she looks, obviously if she's in like a playboy bunny outfit like that has nothing to do with the character we've drawn. But like within a spectrum which I know these artists are going to stay, because they've helped develop her, like they had their own idea of her in their head. So I think that helps like the shared ownership thing, it doesn't always work but I think with this team it's worked really well and we've developed a kind of trust.

In other words, the designer trusts that artists may have different viewpoints than his own and that rather than degrading his ideas, these different viewpoints strengthen the final output. While this example is a retrospective account of the importance of trust, creative workers also talked about trust more in the moment, before they could assess the results of the handoff. For example, a manager (CS01) described:

I actually trust him to make good decisions; I just want to make sure that he's incorporating-- at a certain level we have a customer that is paying us phenomenal amount of money. They are keeping all of us employed to deliver, something that they've been pretty specific about. I just want to make sure that [Nate] is taking that into consideration. I think he is.

In using the phrase, "I think he is" the manager indicates both his vulnerability in handing over ideas, as well as his lack of ability to really control the results of the handoff. He also denotes that he thinks Nate can do the job – thus indicating trust in his ability. Also in an interview, I asked a software engineer (CS55) about his willingness to handoff the idea on which he was currently working, hypothetically. He responded, "I probably would be okay with it. I'd be okay with like knowing that it was in safe hands." The use of "safe hands" implies that he trusts his other team members to move ideas along. Together, these examples indicate that trust likely enables handoffs by allowing originators to give up control.

In contrast, a reluctance or hesitation in handing off ideas also emerged from a lack of trust. The role of trust was noted in a diary entry from an artist (CS36), “It looks like soon I'm going to hand off my idea to other people to continue working on, it feels a bit frustrating to not see your ideas through to the end and hard to trust that other people will have a good vision.” Therefore, creative workers may struggle with this ability to trust the people to whom they are handing off their work. Similarly, a software engineer (CS57) commented on how another engineer had difficulty handing off ideas because he did not trust the receivers, “He just checks, double checks all the time. And he knows that, I have told him that. I said at some point you have to trust. You sign off on this feature and you have to trust your team developing it the right way.” Thus, while trust is beneficial to the handoff process, it may be difficult for originators to trust the receivers of their ideas, possibly because of their own ownership of the idea or their past experience with the specific receiver.

***Recognizing limitations.*** Another factor that seemed to enable handoffs was an originator’s recognition of their own limitations in moving the idea to the next stage. In some cases this limitation was around the originator’s skill set. As a quality assurance tester (CS06), who also engaged in design related specification, noted, “by necessity...there would be nothing for me to do. I am not actually a developer I can’t program that thing, like there would be no advantage to me holding that idea for myself. Like I don’t have the capability to really execute on it.” Thus, while the QA tester was the originator of the idea, given his inability to program and design, the idea needed to be handed off to other people for it to succeed. In other cases, limitations revolved around lack of time: “In a vacuum I would like to do it myself. I could certainly do it, but also like I don’t have the time to do all this sh&t, I certainly don’t have time to do all that” (CS60, software engineer). Similarly, another software engineer (CS54) wrote in a

diary entry, “Last week I had an idea for how we could make the physics model better. But I don't have the time to pursue it. So I'm going to try doing a thorough write up of it and pass it off to people who DO have the time to work on it. We'll see how that goes.” In recognizing their own limits, creative workers recognized that ideas needed to be handed off to be influenced by other people with different skills or perhaps more available time.

Alternatively, some creative workers expressed difficulty recognizing their limitations and allowing others to take control for moving ideas along. In a diary entry, an engineer (CS52) stated:

Once I invest in something I feel an ownership of it that I don't want to let go either because someone else wants to come in and work on it (in addition or instead of me) or for me to move off it. Although the last few weeks were rather tough on the team for me and I wasn't enjoying the project I was working on and I didn't feel good enough about it to even want to deal with people asking me to support it, I still don't want to give it up.

Thus, while the engineer recognizes that he is struggling with his idea, he does not want to handoff the idea. Similarly a designer (CS68), in a diary entry, wrote about his unwillingness to handoff ideas, despite being overwhelmed with work:

The [documents] were the last piece of process and work that I created and developed that I still owned. The rest had been ‘taken’ away from me in the spirit of offloading me for other work. I'm aware that it is notoriously difficult to wrench things away from me... I'm not coping well.

Thus, while the designer recognizes that ideas are being handed off in the “spirit of offloading me for other work,” he is not “coping well.” In sum, an originator’s psychological conditions allowed them to be more or less ready to engage in a handoff and impacted their need for control following the handoff’s shift in responsibility, as I will describe more thoroughly in describing particular handoff scenarios.

### **Receiver Psychological Conditions**

**Idea affinity.** Receivers described having more or less affinity for ideas they were receiving and this affinity related to how receptive they were to working on the idea. While in the previous chapter I described idea affinity as one factor that relates to strength of ownership for the originator, here idea affinity relates to a receiver's potential to develop strong feelings related to ownership. This affinity often related to whether the receiver found the idea personally interesting or fun, as well as the alignment of the idea within their skills, expertise, and how they viewed themselves. For example, an artist (CS36) described how she preferred to work on certain levels over others and that because of this affinity for drawing particular assets; she was looking forward to some handoffs more than others:

Yeah, I'm looking forward to [Poppy fields level]. I'm not super enthused about working on [Oz chamber] animation just because it's not as fun as the ones that [Poppy fields] are going to be just because of the nature of things and [these flowers] versus a [chamber] but I know that there's a lot of really fun stuff coming up in [Woods]. [Emerald City] too, that will be fun to animate.

Aside from just finding a task more or less fun, creative workers also talked about how they were interested in tasks through which they got to have an impact on other people, "there's all sorts of stuff that the [end users] will get to use and make their lives better. That's always more interesting to me than these systemic... This particular thing that I'm talking about is making sure that the games stay on, like frame rate" (CS55, software engineer). They were also more interested in work that would be visible and appreciated by others. Thus, one software engineer (CS52) noted that he was less excited to receive tasks where no one notices your effort, "It's not the most glamorous of tasks and especially with a lot of [this work] often the goal of it is to get a system that visibly, from the outside looks the same. Looks like you made no changes, seems like 'what did I really do?'"

In contrast, another software engineer (CS13) described how others may not want to take ownership over certain ideas because they lack an affinity for the idea:

There's definitely areas of our code...that no one really wants to have to be responsible for, either it doesn't work well already or it's a super complicated thing that isn't particularly interesting and that means someone doesn't want to spend the time to figure out how it works and has to fix all the bugs and then whatever.

Here, the software engineer claims that problems may not be interesting or may be too complicated causing an engineer to not want to influence or control the idea during handoff,

In other cases, though, this reluctance to take control following handoff stemmed from a creative worker's lack of confidence in their skills or unfamiliarity with the tools they needed to successfully realize the idea. As yet another software engineer (CS14) described in a diary entry:

Regardless, there is little space for any of my own ideas, since I'm so unfamiliar with the code I'm working in. I largely have to depend on someone else's ideas, try to understand them, and implement them the best I can. I frequently have to bug them again if something goes awry as I code because I'm not good enough to handle the curveballs. All of that amounts to a giant pain in the rear. I long for the day of [features] that I know and love!

Therefore, creative workers differed in the affinity for different ideas and this variation impacted the control they desired over the idea, and consequently the ownership they developed.

***Buy-in to specifications.*** Whereas idea affinity describes a creative worker's preferences for working on the idea more generally, buy-in to specification describes whether the creative worker agreed with the specific specifications they were handed around the idea. In some situations, receivers described being excited to work on an idea because they bought in to the idea specifications. For example, a composer (CS10) described in a diary entry how he was beginning to work from a specification to write music: "We have a direction for the music for [the Woods scene], and I'm starting work on realizing a first pass -- which is a relief after two rounds of concepting. I'm glad to say that I'm excited about the music I'm about to write." In

other words, the composer buys-in to the specifications from which he is working. Consequently, the recipient creative worker seems eager to take control of the idea, because he is excited about the specifications with which they are working. On the opposite side of the spectrum, an engineer (CS14) articulated, “I guess the absolute worst is when I disagree with it. You know it’s like I think it’s boring or it’s silly or I don’t think we need to do it or whatever.” Here the engineer describes how he dislikes realizing ideas when he does not buy in to or disagrees with the initial specifications. Similarly, a designer (CS11) described how he felt a tension in having to work on and take ownership over an idea that he fundamentally disagreed with:

I would never build this this way. If I were to start today and create a narrative out of the vacuum, I don’t think I would make a lot of the decisions that were made that we were sort of like forced into early on and now have put us in [this] place ... that we just built in, built toward that thing so there is no way we can get out of it.

Given the specifications, the designer implies a sense of being trapped within the constraints he has been handed and a lack of ability to change the idea away from those specifications. Thus, if receivers buy-in to the specifications they may focus on their ability to improve the idea, truly taking control of it, whereas if they fail to buy-in they may focus simply on implementing the idea. A software engineer (CS59) claimed that when he doesn’t buy-in to the specifications, “All of my ideas, all my creative energies kind of go towards like how am I going to pull this off not so much like what should it be.” In other words, rather than focusing on how to improve or make the idea better, he simply tries to get the task done or “pull it off.” However, when he does buy-in, he invests more, “I see that it’s like taking shape into something that I think is good...I didn’t generate the idea but I believe in it at this point.” Therefore, how a receiver buys-in to an idea relates to how they engage with the idea. As I will describe more fully in the handoff scenarios section, this buy-in, or lack of, related to the ownership receivers developed over the realized ideas.

In sum, neither originators nor receivers enter into a handoff *tabula rasa*. Each brings with them a set of psychological conditions that impacts how a handoff scenario unfolds. For the originator, these conditions relate to the originator's willingness to engage in the handoff and to give up control following the handoff, and, consequently the ownership they experience following the handoff. For the receiver, these conditions relate to their desire for and ability to assert control following the handoff, and, consequently the ownership they develop following the handoff. As a result, there are a variety of scenarios that can play out when originators and receivers come in with or develop different types of ownership during the handoff process.

### **Integrating Perspectives: Handoff Scenarios**

Thus far, I have distinguished between the psychological conditions that originators and receivers bring in to handoffs. I have suggested that these conditions impact originators' and receivers' desire to control, or influence or manipulate the idea, following the formal shift of responsibility that takes place in a handoff. In this section, I integrate originator and receiver perspectives to focus on how ownership is maintained, changed, or formed during various handoff scenarios. As the opening quote of this chapter suggests, when more than one creative worker feels ownership over an idea, managing this simultaneous ownership can create challenges. An engineer (CS37) claimed, for example, "If multiple people feel that they own something and they're at odds over where it should go, then one of them is going to be disappointed." Thus, understanding different handoff scenarios, the factors that lead to particular scenarios, and the ownership outcomes associated with scenarios enables deeper understanding of the effects of this simultaneous ownership that occurs in creative work. Figure 5.2 illustrates the salient conditions and dynamics for each scenario that I describe next.

These different scenarios also reveal two new constructs related to ownership, that I have yet to discuss—ownership loss and disownership. I describe ownership loss as a change from experiencing a sense of ownership to experiencing no ownership. In other words, ownership loss represents a decrease in ownership strength to the point of neutrality. Disownership, on the other hand, is a state characterized by an individual’s claim that the target is “not mine.” Opposed to no ownership, the person still feels possession over the target but this experience takes on an actively negative tone. Therefore, I define disownership as a negative experience of possession. Both of these constructs are essential to understanding the different results of handoff scenarios. For example, ownership loss is central to clean handoffs, which I describe first.

**Clean handoff.** Within this scenario, the originator loses ownership while the receiver develops exclusive ownership following handoff. In other words, there is a clean transfer of ownership from originator to receiver, in which during realization the receiver but not the originator controls the idea. A software engineer (CS13) described this type of transfer, “In order to let other people feel ownership over their stuff, I feel like I need to not feel ownership over it, right? So relax that back of the mind impulse of, ‘I don't know if I would have done that’ or whatever and just let other people do their thing.” From the originator perspective, then, a clean transfer means moving from a state of ownership to no ownership, or a loss of ownership. In a diary entry (CS09), a manager wrote, “We are handing design leadership to [Nate], in the faith that he will synthesize our best ideas into a coherent whole, and drive the project to a successful conclusion...I am confident that [Nate] has the insight and experience to process this input, so I will now step away and watch it play out.” In this situation, the manager suggests that because of Nate’s insight and experience, he trusts Nate (the receiver) and therefore feels comfortable limiting his involvement with the ideas and abdicating control after the handoff.

In addition to the presence of originator trust, clean handoffs were also enabled when originators felt that they had done all the work they could on a particular idea, they recognized their limits, and it was necessary to hand the idea off to others for it to continue to develop. For example, a concept artist (CS30), described in a diary entry:

This week we finally started to draw our ideas for each [level]. Now that the documents we worked on are out in the open, I'm able to relinquish control over my ideas to the entire team. I feel like we did the best we could to give them a structure to work in, but now that it's out there it's up to them to do what they will with it. Hopefully the team can get behind the ideas rather than changing them all again.

The use of the “relinquish” implies a sense of voluntariness or readiness around the change of control, particularly because “we did the best we could.” In other words, the artist implies that she has reached the limit on what she can contribute to the idea and therefore, for the sake of continued idea development, the idea must shift hands. Thus, from the originator’s perspective a clean transfer of ownership occurs when the originator is ready for handoff, which is facilitated by recognizing their limits and trust.

Trust and recognizing limits enabled the originator to abdicate control following a handoff, which appeared to play an important role in allowing loss of ownership to take place, particularly when ideas change away from the initial specifications the originators proposed. For example, a manager (CS09) described in a diary entry how he continued to make suggestions following a handoff, but did not feel the need to continue to control the idea:

My sense is that they are 2/3 of the way there - there is an initial ramp of exploration and experimentation that is quite satisfying, but then they don't blossom into an experience that is satisfying - they stall out at the level of being [toys]. So I made a few suggestions to [Neil] about how to add some functionality to them to bring them to the next level. I have no idea if my suggestions will be acted upon. But it was fun to discuss, and I am hopeful that these experiences will get the attention they need to get to the next step.

Therefore, while the manager expresses his concerns and offers suggestions, ultimately he sees he has no control over whether or not these suggestions will be realized (“I have no idea if my

ideas will be acted upon.”). Similarly, a software engineer (CS61) described how he had worked out a model with specific parameters and had handed off the model to some other engineers to tweak. However, the idea changed more drastically than he had originally imagined:

At this point it's somebody else's problem. Initially of course I felt like they should do their changes in a certain way...I think time and space definitely played a big role...If I had to look at that code on a daily basis, I would probably get a little annoyed if they're actually doing things differently from how I envisioned it.

In a way, the “time and space” allowed for a clean transfer of ownership, in which the originator lost ownership. Typically, the word “loss” connotes a negative experience, but here it is important to note, that this loss of ownership may be experienced somewhat positively. Specifically, individuals may experience a sense of relief in not needing to continue to work on a problematic idea.

Focusing on the receiver within this handoff scenario, receivers were able to control ideas and change them away from the original specifications. As a software engineer (CS55) indicated, “I practically rewrote the [code] again probably six or seven months ago and then I added [code] to it a month ago and somebody added [more code to it] to it I'd take it over because at that point I had changed so much it might as well be mine.” Thus, in changing ideas, receivers leverage control during realization and develop a sense of ownership, often of an exclusive form, over the idea realization. For example, an artist (CS30) described in a diary entry:

This week I am integrating assets into the scene, and was given full control back over some stuff. Basically they want to see what my ideas are for improving the scene, and let me go with them. It's a very cool task, and so far it's been kind of fun being able to experiment with the arrangement of all the final assets. It's sort of like playing with legos. It gets me thinking more about how decisions will affect gameplay, and I have to be waaay more careful not to break everything.

Here the artist is able to infuse her ideas for “improving the scene” and “how decisions will affect gameplay” because she was given “full control back.” However, there is also a sense that

there was initial idea affinity – noting that “so far it’s kind of been fun.” As I have suggested more broadly, idea affinity for the received idea likely enables stronger exclusive ownership to develop. Buy-in to initial specifications was not salient in the data for clean handoffs, possibly indicating that buy-in is less important because the receiver is able to change the idea as they wish.

Overall, a clean handoff, in which the originator loses ownership and the receiver develops ownership seems to represent a positive type of transfer—the receiver is able to form their own ownership over the idea and the originator is able to lose ownership over ideas for which they no longer want to be responsible or they are able to watch their ideas flourish despite their lack of continued influence. As an originator (CS02) described, “I think it's gone on without me, which means that that was a good transfer of ownership. So I no longer feel ownership, but I feel like those values have been upheld.”

**Receiver-dominated handoff.** In contrast to clean transfers, receiver-dominated handoffs occur when the originator is not ready for handoff and attempts to maintain control, often because of initial strong, exclusive ownership. The result is that receivers develop ownership and originators develop disownership, or a negative experience of possession. An artist (CS36) describes a specific example of how her idea, over-which she felt exclusive ownership changed during realization:

We had a big meeting and we all picked ideas and everyone voted on which one they wanted the [level] to be that we worked on next. And mine got chosen and then from there I was totally out of the process of what to do with the idea at that point. And it was a little weird. You work on it for so long and you decide all this stuff that went along with it and then you just kind of pass it off to a bunch of other people who do their own thing. Like originally when I had done the states of the story ...it was kind of scary... and it's turned more into like, it's become much less emotionally charged and it's more dark which is still kind of spooky but not really scary but just like bright and happy.

This example highlight how being “out of the process” during realization can enable feelings of disownership, if the originator wants to control the idea following handoff. Similarly, a designer (CS17) described how his idea changed so drastically during realization that he later argued against including the idea in the game:

I was thinking with that seed thing I did put that seed out there and then I eventually start arguing against it like months later. People have taken the seed and grown it into like this deformed plant that didn't, I thought it was going to make a beautiful orchid they made it into this like f&cked up [tree] that had like these weird [branches] and stuff. I was like “this isn't what I imagined. If you did that to [the idea], now I don't agree with this anymore.”

Rather than focusing on how the original “seed” was incorporated into a more collective product, here the designer observes how his original idea changed away from what he originally envisioned and views the change as a degradation of his idea to the point where he no longer wants *his* idea included in the game.

Originator disownership was particularly salient when, during realization, the idea changed in a direction with which the originator did not agree, yet the originator continued to want to control the idea. For instance, a manager (CS09) described how an idea changed away from his initial vision, but he still continued to attempt to control the direction:

I had to shift my frame of reference in real-time... So from that perspective, it was just more like, ‘Oh, it's not my vision. It's a different vision and it's kind of spreading its wings in a different direction,’... I tend to think in terms of the craft and symmetry and relation, things having strong relations and that was a lot of my thrust in terms of trying to build these things like, ‘What's the relationship between the first [scene] and the second [scene]?’ They should change on one axis but be similar on the other axis and that would be awesome, which I still believe and then when I stepped away from it, the people who took it over didn't really care about that... to me, that's the interesting thing that would have made it better and maybe they'll actually come back to this because I made this exact criticism in the scrum review... To me, whoever dreamt up those [scenes], he wasn't thinking about that at all. But the whole idea of the -- like the power of a theme was a lost opportunity, so that's where I've felt ‘ugh,’ like disappointed.

In this example, while the manager was not directly involved with the realization, he still wanted to shape and influence the idea to ensure that the idea ended up being as good as it could be. He even criticized the new direction in a scrum review. Thus, his *desire* for control, based on his initial ownership and affinity for the idea, did not decline, but his *ability* to control did. In claiming, “it’s not my vision,” the originator describes his sense of disownership over the vision. While he still experiences an affinity for the idea and views the vision as his possession using the word “my,” he recognizes that he was unable to control the idea. This misalignment in the conditions that enable (e.g. control) and strengthen (e.g. idea affinity) ownership, created a sense of disownership, accompanied by disappointment. This example shows how disownership emerges from a decoupling or misalignment between the conditions that enable ownership. Also, unlike a loss of ownership, where creative workers are at peace with the handoff and do not seek to maintain control following a shift in responsibility, disownership is often associated with negative experiences on the part of the creative worker. It is also important to note that when originators described these feelings of disownership, they never referred to trust or their own limitations, perhaps suggesting a lack of readiness for engaging in a handoff.

Like in clean transfers, receivers were able to change and control ideas during realization, making them their own. For instance, a software engineer (CS14) described in a diary entry:

I'd say most, if not all, of the features are not my ideas. However, working in a code base that is now effectively mine makes me care more about anything related. I guess in some small way I have adopted the ideas and care about them no differently than if they were mine. Of course, I also have the benefit of implementing them my own way, which can leave a lot of wiggle room for me to express my ideas. That probably helps encourage the sense of ownership.

The engineer acknowledges that the ideas were not originally his, but because the freedom he had to express his own ideas within the realization, the ideas became his. In interviews, I asked how receivers perceived the relationship of the originators to the ideas the receivers were

realizing. The following response by a software engineer (CS55) was not uncommon, “Yeah, I guess I don’t think I would consider it any of his which is probably bad considering he’s the person who sat down to do all the leg work to spec it out.” Thus, originators were not wrong in perceiving their lack of control and feeling somewhat “cut out” from the idea even though they had played a big role in its development. As another engineer (CS60) claimed, “I think he wanted to be involved in the implementation and I didn’t particularly want him involved and that’s kind of how it was while I was working on it.” Thus, in receiver-dominated handoffs, there was a tension between the originator and receiver, which resulted in the receiver controlling the idea and developing an exclusive sense of ownership, while the originator developed disownership. Again, buy-in to specifications was not salient in my data for receiver-dominated handoffs, possibly because when the receiver has control during realization, initial buy-in is not important because they have the control to change the idea as they wish.

**Originator-dominated handoff.** Within this scenario, the originator maintains a sense of ownership while the receiver develops disownership following handoff. In contrast to receiver-dominated handoffs, this scenario emerges when the originator is in control during the realization process and the receiver believes they are unable to control or change the idea. For example, an engineer (CS52) described how he was working with a group of artists to implement a feature to facilitate their work. After a series of discussions, a solution was settled upon with which the engineer (the receiver) disagreed:

I definitely feel less committed to it. The only reason that I really got behind the original plan, is because I thought I had come up with something that killed two birds with one stone, right? Like solves problems they wanted solved and does things that they don’t necessarily care about. For me, on the back end to a making it easier to do and set me up for things that I know I have to do anyway later. But with the sort of changes and ideas, it’s like, okay, so I still have to do the things that you want but I get none of those things that I want.

In describing this same interaction from his own perspective, a designer (CS11) who was involved with the initial specification process claimed:

I think why [C52] was so frustrated with this was he felt, you know, these weren't his ideas. In fact, we had these meetings and he got very upset when artists didn't think that the ideas he had come up with would help them. He felt that those were dismissed. That was like because those were part of his creative personality, whereas, I was like well clearly this is what the customer wants. Why don't you just do what they want?

This example illustrates the tension receivers feel in realizing an idea that they want to change in order to improve it, yet need to follow idea originator's specification. This disownership, then, encapsulates a certain negative connection to an idea with which receivers are intimately involved and for which they are responsible. In this example, the engineer had a strong affinity for the idea and felt "committed to it", which appeared to amplify the experience of disownership. In other words, he wanted to control the idea, shaping and influencing it, but felt stifled in his ability to do so. Thus, his affinity for the idea prompted a desire to control the idea, which was restrained by the originator. Without an affinity for the idea, the receiver may not have sought control and may have developed little, if any, ownership; but because of his affinity for the idea, he developed disownership.

Similarly, an audio designer (CS34) described an idea he was responsible for realizing, but felt that ultimately the resulting idea was not his since he did not buy in to the specification of the idea: "There is a conceptual idea but it is not mine it is sort of [MGM's] or the upper management saying we need to bring stuff out of this game mode into this other game mode and so they sort of gel together. ... That is not my idea." Then, he went on to describe what he would do instead. Often these descriptions of disownership arose when I asked informants to describe on what they were currently working. They wanted to ensure that I knew that while they were

formally responsible for the realization, the specification of the idea was decidedly not theirs. Therefore, they felt the resulting implementation was not theirs.

Focusing on the originators in this scenario, originators continued to have strong ownership over the idea and controlled the realization of the idea, despite the receivers often feeling like the originators were overstepping their bounds. For example, a software engineer (CS59) described handing an idea off to others in a diary entry:

But giving this person this kind of responsibility has proven to be unsuccessful- too many people were on different pages, this person doesn't understand our [tool] or any of its inner workings, and more often than not, the wrong people are in meetings that are meant to define critical components of this new system (me being one of them)...I think I needed to be in the meetings to call out the parts that were missing, but never was, due to who knows why. So I'll have to talk to this person to make sure I'm involved more.

In this example, the engineer feels that his lack of involvement during realization generated problems and he describes his intention to try to be involved more in order to be better able to control how idea are realized in the future. As an extreme example, an artist described her interactions with an originator:

He [the originator] ended up doing ten times more work right at the end because he wanted to do other people's jobs just to make sure it was done his way. He would take your assets from you and finish them himself just to get it done his way. I could see that's not good either for him, pressure wise, not to trust anyone. I could tell it's because he has a vision which is good, and we are similar in that. We like things to be done really well and if you see something you don't think is done really well, instead of trying to push that as a person you just go do it yourself.

The artist describes how the originator's lack of trust, and need for control ("make sure it was done his way"), hindered her ability to do her job, as the receiver, and realize the ideas in the form of assets. Also, the example implies that the originator likely needed to handoff ideas because he had too much on his plate, "pressure-wise," and was not recognizing his limits. A software engineer (CS60), also described how while he needed to focus his attention on the ideas he was directly responsible for, he continued to control the idea he handed off as well, "it's like

in some way it is helpful for me to be involved, like it's the only way I can deal with it." Thus, a lack of readiness enabled by strong ownership, lack of trust, an inability recognize limitations, coupled with the originator's continued control during realization enabled this originator-dominated scenario.

While the above examples suggest that the originator had a sense of exclusive ownership, it may be possible for an originator to maintain a sense of shared ownership as they control ideas during realization. In other words, the scope of ownership was not a deciding factor in originator-dominated handoffs since originators were able to maintain their initial ownership throughout the handoff. Interestingly, then, this scenario demonstrates how misalignments in perceptions between the originator and the receiver may occur. For example, the originator may view the work as collaborative and the handoff enabling the realization of their idea, while the receiver may view the process as merely the realization of the originator's idea involving little of their own input. Also, it is important to note that the originator maintains ownership throughout the handoff and this is the only scenario in which the idea does not change course during a handoff and is therefore truly originator-dominated.

**Collaborative handoff.** Within this scenario, the originator maintains shared ownership while the receiver develops shared ownership. Thus, this scenario, offers another means for originators to maintain ownership despite a handoff. This handoff scenario emerges when the originator has control during realization, yet the receiver is also able to control the idea. Thus, the idea changes course through the mutual control of both the originator and receiver following handoff. This continued back and forth during realization is more characteristic of our typical conceptualization of collective collaborative work, whereas the other scenarios represent more sequential collaborative work.

Within this scenario, originators seemed to focus on how their original ideas served as “seeds” which fostered the development of ideas more collectively. In other words, even though they may have sole ownership for a particular period of time, their ownership was more shared:

I mean that’s part of working with like a big development team is that like they all become everyone’s ideas right away. But I don’t feel like, even something like [X idea] which I said I came with the seed of, I don’t feel like that’s mine now. Like there was a time where I felt like it was mine because it was, like the whole thing was based on something I wrote. But once everyone had gotten their hands on it, it just became like a cool thing *we* were making, which I am totally fine with (CS06, QA tester).

At times, originators actively tried to encourage this more shared ownership to enable a mutual exchange of ideas, as a designer (CS68) described in a diary entry:

I DID IT. Finally found the correct amount of detail to place in our [scene] specifications. Everyone's bought off on concepts, we know how many of what things we are building for our first [scene]. Bonus points: An artist took the opportunity to insert their information into my document. That's a major collaboration milestone. I see that as a realization that this document is reflecting all of our work, not just mine.

Thus, a more shared sense of ownership on the part of the originator opened space for receivers to control ideas, while, at the same time, the originator could continue to control ideas during realization, maintaining a sense of shared ownership.

Given that both originators and receivers controlled ideas, receivers developed a sense of shared ownership. For instance, an artist (CS36) described a sense of “we” over an idea she implemented:

The original idea was thought of a while ago by someone else... He did some really very, very nice artwork which has helped me with the architecture because it suggests what the architecture’s going to look like but it wasn’t so helpful in determining what the game part of a level is going to be... I would say I have a fair amount of free reign. I’ve been sticking with the basic ideas that he put forth just because I think it’s easier and I think those settings fit pretty well... It’s changed definitely just because no one had worked the specifics enough beforehand so we had to figure out a lot of things coming into this.

Similarly, a software engineer (CS59) described a handoff in which rather than the idea becoming his, it became more inclusively owned by he and the idea originators—the direction of the idea being collectively guided:

[Chuck] had the original idea and he sort of gave me the [one page description]. But then I think actually it did sort of take a bit of a life for me and I sort of want to driving it for a while and then it turned to like okay here [Chuck] here's what I've got. What do we think where do we go next? And you know and it's hard to pin down exactly each of those steps occurred but it was certainly collaborative like it was not like you know I just didn't go off into a cave and do it. I don't want to give you that impression. The code, I went off into a cave and did it but the feature I did not.

As the above quotes suggest, this path occurred under conditions in which collaboration was fostered through both the inclusion of the idea originator during realization and the receiver's ability to control the direction of the idea. In the example that follows, another engineer (CS51) describes how he had a unique perspective which allowed him to see an idea differently than the originator. Given the opportunity to control the realization, he was able to use this unique perspective to develop the idea:

We had a designer who kind of had this like sort of abstract high level ideal of like this is what this is how this will probably work why don't you go do this. And so I started building sort of his idea, this was when I was pretty junior, and he seemed to know what he was talking about. So I was alright I'll just kind of do what you say. And then I started to realize that he hadn't thought about all the different platforms and he hadn't thought of all these different edge cases and...so I guess that was definitely in collaboration...being the person who's often in the trenches actually putting in their features in definitely gives you an opportunity to be like "wow we just put this thing here."

These examples suggest that in a collaborative handoff, both originators and receivers develop a shared sense of ownership over the idea. The originator does not need to lose ownership, or form disownership, in the handoff, because a sense of shared ownership allows them to continue to control ideas, even if the idea changes away from what they originally intended. Therefore, the sense of shared ownership was more salient than the presence or absence of trust and recognizing limitations. Similarly, buy-in to the specifications was less

salient for the receivers, because they are given freedom to control the specifications with the originator, consequently developing a sense of shared ownership. Given that it is nearly impossible for an originator to maintain exclusive ownership over their idea in such interdependent work, it may be most effective to harness this shared ownership.

Importantly, this is the only scenario in which both the originator and receiver feel positive forms of ownership following a handoff.

### **Implications of Handoffs in Creative Work**

Within this chapter I have outlined 4 different handoff scenarios that result in varying ownership outcomes for idea originators and receivers, as well as key conditions that relate to when each scenario will emerge. In doing so, I make several important contributions to the ownership and creativity literatures. First, I reveal that social interactions may impact psychological ownership, yet idea originators may maintain ownership in the face of these interactions. Thus, rather than focusing on how ownership impacts social interactions, I theorize when social interactions, in the form of handoffs, impact ownership. Second, I differentiate between losing ownership and disownership, as well as suggest two potential routes to disownership. Third, I highlight the iterative nature of creative work and call into question the separation of creativity and implementation that dominates current theory. I conclude this chapter with a brief discussion on how creative workers may determine the most appropriate handoff scenario depending on their goals.

***Re-focusing on how social interactions impact ownership.*** Extant work in psychological ownership predominantly considers how ownership (primarily with job or organization as the target) impacts social interactions rather than on how social interactions impact ownership. For example, scholars have theorized and begun to study how psychological ownership leads to

reactions to territorial infringements by others (Brown et al., 2005; Brown & Robinson, 2011), but we know relatively little about how social interactions change experienced ownership and under what conditions. Within this chapter, I propose a model (figure 5.2) of how handoffs, a particular type of social interaction involving a shift in formal responsibility, within creative work impact psychological ownership. In doing so, I unpack specific originator and receiver psychological conditions that impact the handoff scenario that emerges. I also illustrate how these psychological conditions potentially generate a desire for control that may or may not be realized following the handoff. Depending on how the control dynamics play out, originators may maintain ownership, lose ownership or form disownership, while receivers may form ownership or disownership. Broadly, then, I illustrate that how social interactions impact ownership depends on the synthesis of the particular psychological conditions that both the originator and receiver bring in to the handoff and how they continue to interact following handoff.

In a related vein, current work suggests that participative decision-making relates to psychological ownership. (Han, Chiang, & Chang, 2010; Pierce et al., 2004). Scholars postulate that participative decision making within the job context enables employees to develop ownership because it enables shared authority allowing for more employee control (Pierce & Jussila, 2011). The focus of this area of research, then, is on how the work environment structure impacts the emergence of ownership, not on the specific social interactions between coworkers during decision-making. Nonetheless, extant research implies that top-down decision making likely limits an employee's ability to form their own ownership over a target, but focuses more on the receiver, rather than the initial decision-makers. I extend this work by focusing on the social interactions that relate to decision-making, specifically around how an idea will be changed, and

how the social interaction impacts the originator's ownership. My research shows that being able to continue to control and make decisions following a handoff impacts the ability to maintain ownership in the course of social interactions. In other words, an originator's continued ability to control ideas during realization allows for ownership maintenance. Further, if the originator dominates the control dynamics, then the receiver may form disownership. Thus, this research deepens our understanding of the role of control during decision-making from the idea originator's perspective, but also indicates that with top-down decision making not only may the receiver not form ownership, but they might actually form disownership.

***Introducing and distinguishing between ownership loss and disownership.*** As I have suggested in prior chapters, scholars, to date, have only addressed the loss of possessions and its effect on ownership in a limited way. The work that does speak to loss suggests that these losses will be experienced negatively (Belk, 1988; James, 1890; Pierce et al., 2001). Here, I show that an originator may lose ownership in changing from having a sense of ownership to having no sense of ownership. Thus, this loss of ownership results from an acceptance in reduced control. This type of loss may be experienced somewhat positively, or at least not negatively, if the originator recognizes their limits and trusts those with whom s/he works. In contrast, disownership, where a negative connection to the target remains, may form with the loss of control. As the examples throughout this chapter suggest, this disownership can be associated with feelings of disappointment and frustration.

The introduction of the concept of disownership as a conceptual complement to ownership, parallels, but is distinct from, work on identification and disidentification. As Pierce et al. (2001) theorize in their early work on psychological ownership, whereas the conceptual core of identification is around using elements of the target to define oneself, the conceptual core

of psychological ownership is possessiveness. Further, identification occurs through emulation and affinity with the target (Pratt, 1998), whereas psychological ownership occurs through control, familiarity, and investing oneself (Pierce et al., 2001). Thus, the two constructs are conceptually distinct. Similarly, disidentification and disownership are distinct. Disidentification is defined as a self-perception based on “a cognitive separation between one’s identity and one’s perception of the identity” of the target and a “negative relational categorization of oneself” and the target (Elsbach & Bhattacharya, 2001:397). In contrast, the definition of disownership I propose in the chapter does not focus on a self-perception, but rather the negative experience of possession, characterized by the active feeling of “not mine” that arises from a misalignment between factors that enable ownership. For example, disownership for an originator may result from investment in an idea (which promotes ownership) along with perceived lack of control (that does not promote ownership). Despite these conceptual distinctions, the relationship between ownership/disownership and identification/disidentification is similar in that “dis” is not a less or neutral form implying little connection to the target, but rather “dis” implies a connection (sometimes a strong one), but in a negative form (Elsbach & Bhattacharya, 2001; Kreiner & Ashforth, 2004; Pratt, 2000).

Additionally, in introducing the concept of disownership, I reveal two routes to disownership. The first route to disownership, described above, focuses on loss as the creative worker changes from *a sense of ownership to disownership* through the loss of control. As illustrated by focusing on receivers, disownership may also result from changing from *no sense of ownership to disownership*. In other words, by gaining affinity for the idea but not control, creative workers develop a sense of disownership. Therefore, like disidentification (Elsbach & Bhattacharya, 2001), an individual need not to have first experienced ownership over the target

to form disownership. Thus, disownership emerges from losses and gains that result in state of misalignment in conditions that enable and strengthen ownership.

*Elucidating the importance of realization in creative work.* In addition to these contributions to the ownership literature, this research also informs our current theoretical understanding of creativity and implementation. While not the primary focus of these findings, my data revealed a blurring of the creative and implementation processes, which scholars have typically separated and studied independently. Therefore, I have purposely not labeled specification and realization, creativity and implementation. As I have noted in prior chapters, creativity is defined as the generation, development, and production of ideas that are novel and useful and is traditionally distinguished theoretically from implementation which involves testing and refining prototypes to convert ideas into products (e.g. Amabile, 1988; Amabile et al., 1996; Baer, 2012; George, 2007; Shalley et al., 2004). Scholars do acknowledge that, in practice, the creative process can be highly iterative with implementation informing creative development (Amabile, 1988; Hargadon, 2005; Sutton & Hargadon, 1996); nonetheless the role of implementation in informing creativity remains undertheorized.

This chapter suggests that in converting abstract ideas into concrete products through realization, ideas are also generated and developed. In fact, the nature of handoffs suggests that more often than not, creative ideas change away from original specifications over the course of realization and that realization has a large impact on how the idea manifests. In other words, ideas continue to evolve and develop as they become more and more concrete through realization. Several creative workers described how when ideas exist only in abstract form in peoples' heads, multiple people can have simultaneous views of the idea that conflict with one another. During realization, not only are ideas realized, but also the conflicting views around

ideas are realized. In working through these conflicting views (in my data, conflicts between originator and receiver perspectives) during realization, ideas are clarified, changed, and developed. In other words, this process of making the abstract concrete via realization is critical to collective idea development. This challenges the traditional separation between creativity and implementation that views implementation primarily as the execution of worked out ideas, rather than something creative. Scholars, in their efforts to clearly distinguish between creativity and implementation, have deemphasized the important role that this realization plays in developing ideas and translating them into products. This research suggests, then, that the theoretical distinction routinely conveyed in the literature between creativity and implementation may need to be revised in order to better explain these organizational realities.

There are several ways of aligning specification and realization with current scholarship. One approach is to explicitly include realization in the course of the creative process as an embellished form of the outcome assessment stage (Amabile, 1983, 1988). In other words, realizing the idea in a concrete form allows for an assessment of the idea, which would not be possible without prototype realization and refinement. Realization, then, may present a method for more accurate idea assessment. In realizing ideas in physical form, different abstract assumptions that individuals have are made apparent, allowing all involved parties to recognize how their assumptions differ and to make assessments based on a common set of assumptions that shape the idea. This approach dovetails with work on prototyping based on design thinking which emphasizes action over abstract analysis (Brown, 2008; Hargadon, 2005). Another approach is to consider two different forms of the creative process – one that focuses on the generation and specification of more abstract ideas and the other that focuses on modifying ideas and addressing problems that arise in the course of realizing ideas in progressively more concrete

forms. This approach aligns with different concepts of creativity that distinguish between creativity as proactive ideation and more reactive problem-solving (Runco, 2004) and open versus closed problems (Unsworth, 2001). In other words, with this approach, specification and realization are both creative, but they have different starting points and goals. Finally, we could simply acknowledge that implementation is not merely the execution of ideas and primarily socio-political (Baer, 2012), but that implementation shapes ideas in meaningful ways and that the idea-work performed during implementation is worthy of explicit attention. Regardless, the theoretical dichotomy between creativity and implementation has created a blind spot that underplays the role of realization in creative work.

***Determining the right scenario.*** More practically, this research suggests that creative workers must consider the goal of the handoff, as well as the collection of outcomes that may arise, in determining which handoff scenario is most appropriate. If the desire is to maintain ownership, then from the originator perspective, either the collaborative or originator-dominated handoffs may be best. From the receiver perspective, clean, receiver-dominated, and collaborative handoffs enable positive forms of ownership. Therefore, if the ability for both parties to establish ownership is the goal, then the collaborative handoff is the best way to achieve that goal. However, this handoff requires the most time, as both parties continue to be involved with and control the idea during realization. Thus, if the originator does not have time or a desire to continue to control the idea, then a clean handoff may be the most appropriate. My findings suggest, however, that it may be difficult to simultaneously balance the needs of both the originator and the receiver. Indeed in only half of the potential scenarios (clean and collaborative) are the needs of both parties met; in the other two scenarios (receiver- and originator-dominated) one person ends up developing disownership.

Another way to assess handoffs is through the impact on the idea. In all of the handoffs, except for the originator-dominated scenario, the idea changes. These changes might be beneficial as the idea continues to develop and may improve. However, particularly in later stages of development, the goal may simply be to execute the specification and not continue to generate new developments in the idea. Consequently, the use of the originator-dominated scenario may be the most functional, despite the enabling of receiver disownership. As Ford and Sullivan (2004) suggest, at a certain point when deadlines are approaching, new developments may hinder creative work. Thus, the goals of the handoff must be taken into account when assessing the appropriateness of different handoff scenarios.

## CHAPTER 6 DISCUSSION

### **Integrating and Summarizing Key Findings**

The general purpose of this dissertation is to understand how creative workers respond to shifts in responsibility over their ideas. In order to explore this question, I conducted a qualitative, inductive study of creative workers within a video game design studio. Iterating between the data and theory on psychological ownership and creativity, my findings focus on the psychological ownership creative workers experience over their ideas and how creative workers respond to handoffs during creative work. Here I integrate and summarize the findings through a model, depicted in Figure 6.1. At a general level, I use the findings from Chapter 4 as bookends for the findings in Chapter 5 to demonstrate the antecedents and outcomes of handoff scenarios.

Within Chapter 4, I illustrated how task characteristics and individual-level factors impact both the scope and intensity of the ownership that a creative worker experiences. I demonstrated how the particular type of task which relates to the target of the task (abstract or concrete) and task coordination (autonomous or interdependent) influences a creative worker's ownership scope (shared or exclusive). Also, I found that work-style preferences, prior experience, expectations, idea affinity, and duration of investment impacted the ownership state (scope and strength). Thus, both the originator and receiver enter the handoff with individual differences that impact ownership. During specification, originators are primarily concerned with managerial and conceptual tasks (described in Chapter 4) and these task characteristics, as well as individual differences, impact the ownership they experience through the handoff. In the case of receivers, individual differences also impact the psychological conditions with which they enter the handoff. In addition to task characteristics and individual differences, the relationship between the originator and receiver prior to the handoff also likely impacts the handoff scenario

that emerges. Specifically, in Chapter 5, for example, I described how trust and control dynamics between the originator and receiver impact the handoff scenario that emerges. Both of these factors relate to the ongoing relationship between the originator and receiver. Taken together, task characteristics, individual differences, and the relationship between the two parties impact the handoff scenario that emerges.

In the course of handoffs, a shift in responsibility takes place and creative workers may call into question their ownership relationships with the idea. Originators always begin with some ownership, however, as I describe in Chapter 5, an originator may maintain or change their ownership (either losing ownership or forming disownership). Receivers may, in turn, form ownership or disownership depending on the handoff scenario. Integrating the findings from Chapter 4, my research also suggests that receivers' ownership is likely not only influenced by the conditions of the handoff but also individual factors (e.g. experience, duration of investment, expectations) and the task characteristics, which in the case of realization are largely production oriented. While Chapter 5 primarily focused on the ownership outcomes (maintain or change ownership) associated with particular handoff scenarios, in Chapter 4, I demonstrated how participating in creative work with a particular ownership scope relates to other individual outcomes. These outcomes relate to task motivation (Amabile, 1983, 1988), emotions (Amabile et al., 2005), territoriality (Brown et al., 2005), a sense of transcendence in contributing to a collective product, and resiliency in the face of change (Fredrickson et al., 2003; Shin, Taylor, & Seo, 2012). Drawing from and building on these findings, I suggest here that originators and receivers likely experience these other outcomes, such as positive or negative emotions and increased or decreased motivation, from handoffs as well. Further, some of these outcomes specifically relate to how a creative worker may approach future work (e.g. task motivation,

resiliency). Therefore, in experiencing either these positive or negative outcomes, creative workers may learn and change how they approach ownership in future work, via their preferences and/or expectations. This relationship is illustrated in the model with feedback loops from experience/learning to originator and receiver individual factors. Thus, this model demonstrates how creative workers may learn and adapt, even in the face of work characteristics that are beyond their control (e.g. task type). I have addressed unique contributions particular to each chapter in that chapter's respective conclusion, in what follows I focus on the broader theoretical implications of the dissertation as a whole.

### **Theoretical Contributions**

*Psychological ownership.* While psychological ownership describes a particular type of attachment, a connection between an individual and an inanimate target, my results reveal that this connection is fundamentally relational, in the sense that ownership shapes and is shaped by social interactions and relationships. Ownership at its root is a sense of possession (Pierce et al., 2001). In other words, in claiming something is “mine,” an individual may imply that it is “not yours” and, in so doing, claiming ownership may prescribe a relationship between “me,” and “you,” vis-à-vis my relationship with the target. As Belk argued (1988:147) (in considering possessiveness in children), “relationships with objects are never two way (person-thing), but always three-way (person-thing-person).” To date, research in psychological ownership has been primarily concerned with the relationship between “me” and the “target” and has focused only limited attention on understanding how relationships and social interactions impact ownership. In exploring, psychological ownership in a context rich in social interactions and interdependent work, I am able to bring this relational consideration into theoretical focus. My primary focus within the dissertation has been on a particular type of social interaction in creative work—idea

handoffs. Given the necessary shift in responsibility, handoffs are a strong case of a social interaction in which a creative worker's ownership over their idea may be called into question. However, as I discuss in the literature review, in the course of receiving feedback, help-seeking (Mueller & Kamdar, 2011), or reflective reframing (Hargadon & Bechky, 2006), creative workers sense of perceived control may also be challenged as others engage with an idea, prompting a shift in ownership. Thus, while handoffs may force a shift in formal responsibility, all social interactions around ideas may call into question a creative worker's control and, therefore, ownership relationship with that idea. To begin to build theory around a relational perspective of ownership, I draw from and build on my findings to focus next on how ownership scope<sup>4</sup> impacts social interactions which in turn impacts the ownership experienced.

One of the key findings of this dissertation is that creative workers can experience a sense of shared ownership and this shared sense of ownership impacts interactions with other creative workers around their ideas. This shared scope describes how the creative worker views her-/himself as a collective contributor and feels that the idea is "ours." Thus, with a shared sense of ownership, creative workers take an inclusive approach to ideas, appreciating the contributions of others, and this sense of shared possessiveness can become progressively more inclusive—moving from including other coworkers, to the sub-team, to the project team, to the organization at large. While it might be tempting to simply suggest that scope relates to individual differences (e.g. more collectively oriented individuals develop shared ownership), my findings demonstrate that in addition to individual differences, the actual task on which the individual is working shapes this sense of ownership; tasks focused on abstract targets that require interdependent

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<sup>4</sup> As a simplifying assumption I do not focus on the role of ownership strength.

coordination enable shared ownership. Thus, a creative worker may develop shared ownership over one task, but not another.

In addition to enabling a sense of inclusivity, a creative worker's shared ownership creates space for others to engage with, contribute to, and develop their own ownership over the idea. In other words, one creative worker's sense of ownership impacts how another's sense of ownership develops via social interactions. For example, in my description of collaborative handoffs, originator's entered the handoff with a shared sense of ownership and this sense of inclusivity facilitated shared control in which both the originator and receiver could influence the direction of the idea. Following the handoff, the receiver also developed shared ownership. Thus, shared ownership allows others to develop shared ownership. This same pattern might emerge in the context of feedback, as well. For example, a creative worker with a shared sense of ownership may not only seek out feedback to improve their idea, but they may be more willing to incorporate and change the idea based on that feedback. Thus, a shared sense of ownership may be another factor, in addition to cognitive style (De Stobbeleir, Ashford, & Buyens, 2011) and feedback orientation (London & Smither, 2002), that influences how individuals seek out and incorporate feedback. This work also suggests that with a shared sense of ownership, creative workers may be more likely to consider and adopt feedback, regardless of whether it is expands upon the original idea or diminishes it (Baer & Brown, 2012), since they view contributions more inclusively. From a feedback providers' perspective, if their suggestions influence the direction of the idea, they may experience a sense of control over the idea which enables the development of ownership (Pierce et al., 2001). More broadly, then, a shared sense of ownership enables a sense of openness around ideas that not only allows others to shape ideas

and develop ownership, but may actually encourage individuals to seek out these idea-changing social interactions.

Inclusive ownership not only facilitates feedback, it also creates a sense of ownership stability: when an individual enters a social interaction with shared ownership, social interactions are less likely to generate a change in ownership for that individual. For example, in handoffs, a shared sense of ownership allows the idea originator to maintain his/her sense of ownership regardless of the control dynamics that ensue or how the idea changes. Even if the originator does not control the idea following the handoff and the idea changes away from their original intent, the originator may still view their idea as the “seed” that led to the final idea, still claiming a sense of shared ownership over the idea. More often than not, though, creative workers with a shared sense of ownership were able to develop more fluent idea exchange that allowed them to continue to influence the idea even when others were also able to control the idea. Therefore, shared ownership allows an individual to maintain this shared sense of ownership throughout social interactions with others, because s/he enters the social interaction with an established sense of inclusiveness and the appreciation of others’ contributions. At the same time, this shared ownership enables others to develop ownership, as well.

In contrast, with an exclusive sense of ownership, creative workers enter a social interaction with the notion that the idea is “mine.” Current literature describes how psychological ownership can lead to territorial behaviors (Brown & Robinson, 2011; Pierce & Jussila, 2011). Thus, under certain conditions, ownership may cause creative workers to view social interactions as territorial infringements which must be rebuffed. However, my findings suggest that relationships with others may mitigate these feelings of infringement. For example, I found that trust and recognition of one’s own limitations enabled a clean handoff in which a creative

worker transferred ownership to another individual, leading to their own loss of ownership. This sense of trust arose from a sense that others' were competent in being able to carry the idea forward. Further, in recognizing their own limitations, creative workers implicitly acknowledged the skills and expertise in others.

These conditions of trust and recognition of personal limits (or the recognition of the expertise of others) likely relates to the prior and ongoing relationship between the two people engaging in a social interaction. In other words, through an ongoing relationship, people are able to observe the behaviors of others. Based on these observations of behaviors, people determine whether someone is trustworthy or not (Dirks & Ferrin, 2002; Levin, Whitener, & Cross, 2006). Therefore, an ongoing relationship likely informs trust and the recognition the skills of others. For example, in Chapter 5, I gave the example of an originator who claimed, "giving this person this kind of responsibility has proven to be unsuccessful." Because of this observation, the originator did not trust the receiver and attempted to maintain control. In other words, their prior relationship impacted how the social interaction unfolded. Building off of these findings, I propose that the relationship between two individuals engaging in a social interaction either facilitates or inhibits the idea to change and new ownership to develop.. Specifically, if trust and appreciation of others skills' exists, the originator is likely more open to allowing others to engage with their ideas, even if they enter the social interaction with an exclusive sense of ownership.

Exclusive ownership may also be more volatile than inclusive ownership. When creative workers enter a social interaction with an exclusive sense of ownership, unlike an inclusive sense, this interaction is more likely to lead to a change in ownership. My findings on handoffs indicate that with exclusive ownership a social interaction prompts a questioning of a creative

workers' control of the idea and consequently their sense of ownership. As I have already suggested, depending on the relationship between the two individuals, a social interaction may prompt a loss of ownership. Additionally, I found that following a formal shift of responsibility, an originator may wish to continue to control the idea and disagree with the direction the idea is heading. If the originator is unable to continue to influence the idea, they may develop disownership. These contestations of control that arise in social interactions may relate to hierarchical relationships within the organization, as people at the top of the organizational hierarchy likely have more control compared to those lower in the hierarchy (Grimes, 1978). Thus, in contestations over control, those higher in the hierarchy are more likely to win out. In other words, disownership may occur in scenarios in which a more junior employee receives an idea from a more senior employee yet they are unable to control it when they might want to. Similarly, extending the findings beyond handoffs, disownership may occur in feedback scenarios in which the feedback receiver feels they must incorporate the feedback even if they disagree with it. However, the evidence that idea originators, some of whom were managers, developed disownership, suggests that hierarchy is not the only factor at play. In some situations, a creative worker loses control when they wish to maintain it, simply because they need to move on to thinking about other ideas. In other words, the idea continues to change beyond their awareness and it is only when they become aware that they experience disownership. This indicates that disownership is more likely to arise in the context of social interactions, because ideas exist between people, rather than just in one person's head, and the interactions around ideas may provoke contestations of control that do not occur while working in isolation. In other words, social interactions may prompt new experiences of ownership.

Figure 7.2 summarizes this relational perspective of ownership. First, it shows how two individuals (Person A and Person B) enter a social interaction with an initial state of ownership. From my findings, this initial state might range from no ownership to strong inclusive or exclusive ownership. The scope of this ownership (which is determined by both task characteristics and individual differences) shapes how the person views their contributions in relation to others and their openness to others' contributions. Also, this openness is likely impacted by the existing and ongoing relationship between person A and person B. With the social interaction, each person may question their own control of their idea, prompting a change in ownership. Following the social interaction, then, the range of possible ownership states expands to include disownership.

In summary, this dissertation takes an important first step in highlighting the importance of understanding the social context in which ownership occurs, since psychological ownership shapes and is shaped by social interactions and relationships. As Pierce and Jussila (2011: 4) acknowledge psychological ownership “is a general part of the human condition” and “feelings and expression of ownership are everywhere.” It is not surprising, then, that psychologists have long been concerned with ownership and how we relate to the objects around us. What is surprising is the time it has taken for this topic to enter scholarship on organizations, given its impact on behavior. In focusing on a more relational perspective ownership, this dissertation provides the foundation to begin to fully explore how ownership impacts the fundamental nature of organizations—“how groups of people organize and carry out their goals” (Heath & Sitkin, 2001:54)—by not only focusing on how employees relate to objects, but on how ownership impacts and is impacted by social interactions and interpersonal relationships. Without a more complete understanding of the relational nature of ownership, we cannot fully understand how

and why cooperation and coordination occurs in service of generating collective goods and services, which is one of the key purposes of organizations. More importantly, we might also horribly misspecify or not be able to understand the positive effects of loss of ownership or why, under certain circumstances, people may willingly abdicate control over their ideas.

*Creativity and the management of creative workers.* While a social perspective of creativity has become more prevalent in the literature (e.g. Hargadon & Bechky, 2006; Hargadon, 2006; Perry-Smith, 2006; Perry-Smith & Shalley, 2003; Shalley et al., 2004; Sutton & Hargadon, 1996), current research tends to focus on how social interactions facilitate the generation of ideas, rather than on how social interactions impact the relationship between an individual and their ideas over the course of creative work. More broadly, the creativity literature has paid little attention to the relationship that creative workers develop with their ideas and how this relationship impacts the collective creative process. First, this study provides a deeper understanding and framework to think about why certain social interactions during the creative process produce positive emotions and motivation, while others do the opposite. For example, Amabile and colleagues (2005) suggest that creative workers often experienced negative emotions when their ideas were evaluated, but some creative workers experienced positive emotions. My research begins to unpack how ownership scope influences social interactions and that shared ownership may enable more positive emotions to occur more consistently. In other words, without attending to ownership dynamics we cannot fully understand why certain social interactions produce motivation and excitement, while others result in apathy and frustration. At a broad level, psychological ownership is critical to understanding the subjective experiences, such as emotions and motivations, that impact how people engage in creative work.

This insight has several practical implications as well – especially for managing creative workers. As Amabile and Kramer (2011) suggest, understanding inner work lives is key to being able to improve the productivity of workers. This research focuses on the inner work lives of a particular, yet large, segment of the working population—creative workers—to consider issues that are fundamental to creative work itself. In addition to the organizational benefits, creativity is often promoted as a positive experience for individuals. For example, engaging in creativity can lead to positive emotions and flexible thinking, as well as help individuals cope with and adapt to change (Amabile et al., 2005; Flach, 1990; Runco, 2004; Sternberg, 2001). However, as noted, creative work may result in unintended negative consequences for creative workers. In my data, creative workers frequently described anger, disappointment, frustration, and apathy when their ideas were modified or cut during prototyping and iteration. At its extreme, these negative feelings caused creative workers to develop a sense of learned helplessness in which they felt powerless in their ability to influence the final product and, at times, creative workers expressed the desire to switch off their current project or take time off of work. While creative work may, on the whole, offer employees positive experiences, it is important to acknowledge the unintended negative consequences or costs that are manifested through the creative work process. Without understanding the complexity of creative worker’s experiences, managers are unable to truly harness the creative potential of their employees.

This dissertation begins to provide insight into how creative workers can manage ownership over their ideas in order to help curtail some of these costs. Specifically, in reflecting about how their contributions relate to the collective product and consequently their own limits in being able to develop the whole, creative workers likely will experience work more positively and enable better social interactions with colleagues. Specifically, my findings suggest that

developing a shared sense of ownership helped creative workers develop a sense of resiliency and reap benefits from collective successes. In other words, rather than focusing on whether individual contributions make it into the final product, creative workers benefited from viewing their ideas as part of a collective process in which their contributions served the greater whole. This suggests that creative workers should focus more on how their contributions benefit the whole product, rather than on whether the specific outcomes of their tasks are visible in the product. In other words, it is necessary to fully invest in tasks in order to develop the collective product, not to be able to claim that a piece of the product is individually theirs. Further, in reflecting on their limitations, as well as their strengths, creative workers may better appreciate the contributions of those with whom they work, in order to enable the cooperation necessary to generate collective products. For example, they may be more willing to abdicate control and engage in clean handoffs.

Also, this study provides insights to help manage creative workers. First, managers may benefit from enabling an environment of ownership transparency. This involves recognizing and acknowledging that creative workers develop a sense of ownership that impacts how they work. It is important to recognize, for example, that new creative workers, particularly those entering with art-based training, may enter the commercial creative process with priorities that conflict with organizational goals. Specifically, new hires may tend to focus on their individual contributions and an exclusive sense of ownership that frames how they participate in the collective creative process. Therefore, managing creative workers with little commercial art experience may require not only explicitly acknowledging this shift in priorities and goals, but designing incentives to encourage this more collective focus. For example, in meetings and more informal communication, managers may consider emphasizing how all ideas are valuable.

In other words, all ideas, whether they make it in to the final product or not, contribute to the shape of the product by spurring other ideas and generating knowledge that acts as foundation of the final collective work. Managers may also generate opportunities to share in collective successes more often along the product development process to generate shared small wins (Amabile & Kramer, 2011a, b; Reay, Golden-Biddle, & Germann, 2006).

Second, creative workers range in the ownership they experience and this ownership varies from idea to idea. In considering handoff processes, managers should consider the ownership that the originator has over the idea and the repercussions of a handoff, for both the idea and the creative worker. In particular, if an originator has a strong, exclusive sense of ownership and wants to influence the idea following handoff, but are unable to, they will likely develop a sense of disownership accompanied by feelings of frustration and agitation. As some of my examples suggest, this may cause the originator to fight against the idea later in its development. If, on the other hand, an originator with strong exclusive ownership is able to maintain control, the originator may be more satisfied, but the idea is unlikely to be influenced by other perspectives. Therefore, it is important to consider both how the handoffs will impact creative worker experience (which may impact idea development in the future) and how the presence or absence of multiple creative workers, and consequently multiple sources of influence, will impact idea development.

Third, creative workers would likely benefit from more explicit management of expectations around iteration. While many creative workers, understood, at some level, that their work would often be thrown out in the process of iteration, creative workers, especially those more junior, often seemed to forget this as they became engrossed in particular tasks. Creative

workers may, therefore, benefit from more frequent reminders and discussion about the iterative process as whole and where their tasks specifically fit into that process.

### **Limitations and Directions for Future Research**

While a strength of this dissertation is its qualitative inductive approach, this approach, like any research method, has its limitations. First and foremost, an inductive approach is best suited for unearthing new constructs, mechanisms and processes, but is not suited to testing relationships between constructs. Throughout this dissertation I have outlined salient factors and conditions that relate to ownership scope, ownership strength, readiness for handoff, and disownership. Future research could test the relationships among these conditions, as well as causal mechanisms, using quantitative approaches. Even though the intent of qualitative methods is primarily to generalize to theory, rather than other populations (Yin, 2009), one key concern about qualitative research is around the generalizability of the findings. As described in the methods, I selected the context of game development because of its characteristics that are representative of other organizations focused on generating creative products. Specifically, work is project-based and requires different specialized skills in service of generating a product that is both novel and marketable. Therefore, I believe that these findings are transferable via analytic generalizability (Lincoln & Guba, 1985) to other settings that share these similar characteristics like advertising, design, and research and development and likely provide valuable insights into understanding other organizational contexts.

While I attempted to reduce methodological limitations during my study design, any study design has limitations that must be acknowledged. First, one limitation of relying on interviews is that individual accounts may be colored by retrospective bias. In order to offset this limitation, I purposely included both diaries and observations to reduce the time between the

events and recall of that event and allow for triangulation. Interestingly, when I conducted follow-up interviews, many people did not remember the events they had described in their diaries. So, while interviews contain retrospective bias, diaries may contain a momentary bias, in which events that are particularly salient in the moment are quickly forgotten. Also, while multiple methods offered opportunities for triangulation, they may have influenced one another. For example, questions I asked during interviews may have influenced responses to diary entries and vice versa. Second, within inductive study designs there is a tension between maintaining openness, but needing structure in protocols and instruments to be able to compare across informants. While I used a semi-structured interview protocol in initial interviews, in follow-up interviews, I also used early analysis on categories of ownership as prompts in order to refine my understanding of emergent categories. This narrowing may have shaped the informants thinking, however I was careful to ask whether the categories presented represented their thinking and if not how their experience differed. Several people preferred to describe their experience without referencing the cards.

Third, the window of time I spent in the field may have created limitations. For the game team, in particular, I was able to capture one full prototype development cycle within the middle of the product development, however I was not able to capture the entire product development (lasting approximately 3 years). Therefore, I was only able to capture ownership during early product development retrospectively and was unable to consider ownership in final stages of product development. Future research might explicitly consider at what project stages ownership is most important. Considering the final stages of product development, for example, suggests competing hypotheses. On the one hand, my findings on the importance of project phase expectations suggests that creative workers may develop more ownership at later stages of the

project, because they believe the work they do is ensured to be part of the final product. On the other hand, the type of work at the end of the project requires less investment and creative input, thus ownership may be less likely to emerge.

Finally, given that I conducted the study in one organization, I am unable to speak to the role of organizational-level concerns that might impact my findings. For instance, in the course of my interviews, several informants drew contrasts to other game design studios with different organizational cultures. The management of Central Studio was very interested in establishing collaborative work processes to develop a collective vision of the product. In other words, they viewed the vision of the game as collaboratively generated, rather than the product of one individual's grand view. Other organizations, with more top-down creative processes, embracing a single "auteur" approach (Schreier, 2011), may have different structures that enable different ownership experiences. An important direction for future research, then, would be to conduct a study of the role of organizational context in shaping ownership outcomes.

In addition to future research to balance out the limitations of this current study, many new questions and research directions arose throughout the course of the research that were beyond the scope of the dissertation. First, within my dissertation, concerns of identity are in the background, but future research might bring these ideas to the foreground. The initial conception of psychological ownership argues that when people claim ownership they view the possession as part of their extended self (Belk, 1988; James, 1890; Pierce et al., 2001). In other words, the possession becomes part of how the individual defines who they are. Therefore, psychological ownership and identity are intimately linked. The relational model proposed in this chapter (figure 6.2) begins to suggest that ownership scope may trigger different levels of individual identity and therefore change the nature of interactions. For example, one's creativity may be

viewed as an idiosyncratic trait. However, as social identity theory suggests, we may also think of our social identities – moving from simply ‘I’ to ‘We.’” This shift in perspective has been known to change behavior – such as increasing prosocial behavior (Penner, Dovidio, Piliavin, & Schroeder, 2005). This suggests that identity dynamics may help explain why inclusive ownership leads to behaviors that favor the greater good of the product. In addition, my findings begin to touch on the role of self-expression in commercial creative work. Specifically, there appears to be a tension between self-expression and more collective expression. Initial evidence in this dissertation suggests that this tension around expression and extended self might be important to explore in the context of newcomers in creative work, as they move from personal independent creative work to more collective commercial creative work. One of the key motives for establishing ownership is identity expression or the desire to communicate one’s identity to others (Pierce et al., 2001). Typically creativity is an avenue for this type of self-expression. However, in the context of collective commercial work, this need to express the self may be problematic as the self and not the product is prioritized. In viewing a collective product as “ours,” though, raises the question of whether it is possible to incorporate objects into a form of collective extended self, rather than a personal one. In other words, can the same need for self-expression be met in commercial work if the “self” is more collective? Brewer and Gardner (1996) propose that other relationships may be incorporated into the extended self, but they do not explore whether it is possible to develop a collective extended self; and Belk (1988) suggests that elements of the extended self can be shared (e.g. a house can be part of both a husband’s and wife’s extended self) but does not articulate the notion of a collective extended self. Rather than a collective social identity, a collective extended self would center on whether certain targets are claimed by the group or not, as well as the impact of those claims on behaviors. In other words,

rather than focusing on “who we are,” determined by social categories, the focus would be on “what is ours.” Nonetheless, “what is ours” likely helps define “who we are,” so that collective identities are linked to collective extended selves.

Also, identity scholarship has also established the relational nature of identities in that identities must both be “claimed,” asked for, and “granted,” validated by others (Albert & Whetten, 1985; Bartel & Dutton, 2001; DeRue & Ashford, 2010; Glynn, 2000; Pratt, 2012). Within this dissertation I implicitly focus on claiming of ownership, but do not explicitly address granting of ownership. However, within my context, creative workers were granted (or not granted) ownership by other creative workers during meetings, annual reviews, and via feedback. Future research might explore the interactive nature of claiming and granting around ownership to further develop a relational perspective of ownership.

In addition to exploring the intersection of psychological ownership and identity more explicitly, future research might also focus on the trajectory of ideas in creative work. My primary focus was on how creative workers experience changes around their ideas and I was less focused on how the idea itself changed over time. For example, in focusing the level of analysis on the idea, future research might track who interacts with ideas and when and how those interactions impact how the idea changes over the course of creative work. While I do not focus on cycles of handoffs, in addressing this more idea-focused question, understanding cycles of handoffs is critical to understanding how ideas are shaped and iterated upon by multiple creative workers. In other words, by tracking the networks of people that interact and shape an idea over time, we could better understand how social interactions and relationships among people impact idea development. This research also suggests that ideas might serve as boundary objects (Bechky, 2003) that facilitate networks of individuals to engage in group creativity. By focusing

on trajectories of ideas, this research offers a new way of building on research that integrates creativity and social network perspectives (Perry-Smith, 2006; Perry-Smith & Shalley, 2003; Zhou, Shin, Brass, Choi, & Zhang, 2009), with ideas serving as important nodes connecting people within the network.

In conclusion, this dissertation makes important contributions to both our understanding of psychological ownership and creativity in organizations by beginning to develop a relational perspective of ownership in which I argue that not only is an individual's psychological ownership shaped by social interactions, but it shapes social interactions, as well as shapes how others develop psychological ownership via these interactions. Nonetheless, the study of psychological ownership, particularly in connection with creativity, is in its infancy. This dissertation provides a springboard from which to continue to explore the impact of psychological ownership on creative worker experience, and employee experience more broadly.

## TABLES

Table 3.1. Description of sample

	Team*		Total
	Oz	Tools	
Role ( Total N)	38	18	56
Art	11	0	11
Audio	6	1	7
Design	7	0	7
Engineering	4	11	15
Management	3	2	5
Production	4	1	5
Quality Assurance	3	3	6
Gender (% Women)	16%	11%	14%
Age (Years)	34.5	34	34.3
Organizational Tenure (Years)	5.8	4.8	5.5

\*Initial team through which participants became involved with the study

Table 3.2. Chronological list of meetings attended

Duration (hrs)	Meeting Type	Team
1	Provide project background to date for research	Oz
1	Provide project background to date for research	Tools
0.5	Research kick off meeting – team-wide	Oz
1	Design meeting	Oz
1	Visual development meeting	Oz
1.5	Art review	Oz
1	Art review	Oz
0.5	Task assignment – engineering	Oz
1	Design meeting	Oz
1.5	Art review	Oz
0.5	Research kick off meeting – team-wide	Tools
1	Design meeting	Oz
1.5	Art review	Oz
1	Playtest of game	Oz
1	Leads meeting	Tools
1.5	Task assignment - gameplay team	Oz
1.5	Game review - team-wide	Oz
1	Design meeting	Tools
1	Inter-team meeting	Both
1	Design meeting	Tools
1.5	Task planning - team-wide	Tools
2	Task assignment - team-wide	Tools
1	Design meeting	Oz
1	Art review	Oz
2	Former game build review	Oz
9.5	Informal observation of desk-side meetings scattered throughout field work	Both

Table 4.1 Illustrative data for model of ownership scope

Themes	Representative Quotations
<i>Shared Path</i>	
Shared ownership	<p>CS43 (producer): The ownership I still feel is a ‘we’. He can’t do it by himself. He can set forth goals, he can say like, I think that this game is about this but in order to come up with the idea like you know I feel like you need to have the right people on board with you on that idea.</p> <p>CS44 (artist), diary: This week we ([Katie] and I) began working on real concepts once more-- we're in charge of concepting what the [level] will look like. Our lead told us he was excited to see what we would do with it. He seemed to be glad that we'd get the opportunity to ""make this our baby"" and start from scratch</p> <p>CS55 (software engineer): We the [Tools] team, we own [the tool set]. We own [it] in a way that it is locked down, other people legitimately cannot check anything into it without running it through us and so there's some handcuffs on it. Things have to go through us.</p>
Abstract target	<p>CS09 (manager): I'm not making components -- I haven't made components since the early '90s.</p> <p>CS60 (software engineer): The best we can do is like write comments about like what the overarching design of a system is and what are you trying to model, like how do different pieces like interlock and interrelate.</p> <p>CS01 (manager): My point is that a lot of my job is in navigating this very intricate thread of creative possibility to extract things that I think are cohesive.</p>
Interdependent tasks	<p>CS22 (manager): We'd have design meetings or we'd have sprint reviews or whatever and I'd look at stuff along with [other managers] and we made comments and helped move things along to the point where they finally got a demo that was shot really well.</p> <p>CS39 (designer), diary: We may even want to change our terminology to avoid the misleading connotations that seem to be involved here. This is a realization we came to when breaking down the problem in front of a fresh audience at a design review this week. The outside perspective definitely led to fresh and promising insights into the nature of the problem.</p> <p>CS36 (artist): It's changed definitely just because no one had worked out the specifics enough beforehand so we had to figure out a lot of things</p>

coming into this.

Outcomes

CS30 (artist): If someone has got a good idea, I prefer that we all get behind it rather than everybody fight for their individual one at some point, you have to get behind something and say this is the one we are all going to go with.

CS60 (software engineer), diary: Collaborating with artists is especially rewarding for something experimental like this, where we don't quite know where we'll end up, but where we can both draw on our various strengths to hopefully end up with something new neither of us could have achieved on our own.

CS15(artist): And I mean being an artist in a studio like this you've sort of sacrificed a little bit of that artistic vision, to be able to work with other creative people to integrate it into one sort of group mentality of ideas, I think for me it's a worthwhile sacrifice.

CS44 (artist): I think the "we" worked really well for when we had split the two [sub-teams up]...I think that's really good because it kind of promotes a sense of team, like we're all in this together, which I think is really positive for any kind of project with more than one person. So I think that's a good thing.

CS16 (audio designer): Because there's like collaborative ownership and then there's this dialogue which is just a fun way to work.

CS36 (artist), diary: This week they basically removed all of the original story that I pitched from the [level] we're working on because of time. It's difficult to deal with your ideas getting stepped on but if you know the end product will still be good it's easier to keep on with it.

CS10 (audio designer):I think the shift from "I" to "we" is also tied into the shift between like feeling less ownership, less responsible, like less personally responsible.

CS27 (audio designer), diary: Lately i keep going through periods of feeling insignificant on the team, for instance the game would go forward without me which makes me feel unmotivated to be creative. For instance if someone told me that I own a certain section of the game, I feel like I would be highly motivated to make it unique and awesome, but since I am on a large team things always feel somewhat like an uphill battle while walking in molasses. Sometimes things would go much quicker if management listened to a few people on the team, instead of prototyping every possibility.

### ***Exclusive Path***

- Exclusive ownership CS10 (audio designer): Obviously there is going to be a lot of input other than mine in how the music should be shaped but in the end I'm the person who owns that because I'm the person who decides.
- CS58 (software engineer): I own the [system] and [the other] system that I'm making is very much all me. So I have this thing that I'm making and I'm giving people access to it in terms of they can ask it for things, they can ask it do things, whatever.
- CS08 (artist), diary: I was told to revive an old piece of art for a newer implementation. I originally thought that this was another step backwards as we seem to be bailing out on newer ideas and retreat to some old ones. Then I realized that I was the artist who had done the art for this old version, so I felt better.
- Concrete target CS22 (manager): I took that initial broad half baked idea, not half baked as in bad but just not completely thought through. Then I arrived at the implementation where every detail has to be thought through. There is nothing abstract in it; it has to be there it is. We've had to solve all these problems that... So I felt a lot of ownership over that.
- CS53 (software engineer): Even though [Ken] helped out doing the high level [conceptual] stuff and I did the low level stuff, so I feel ownership over the low level stuff.
- CS32 (audio designer), diary: I feel like the music I composed for [the scene] is evocative and unique.
- Autonomous tasks CS50 (software engineer): I think the reason that I overall feel like I feel ownership, the reason that I can look back on my career and say that is because I'm the one writing the tutorials. I'm the one teaching people how to use it, I'm the one producing these designs.
- CS02 (manager): I felt ownership because I touched every line of code and rewrote every line of code and put it into different classes or files I think just to make a more organized sense of it and less redundancy. Most people can't go through that. This is about 2000 lines of code and that took me about three days. I got to a point where I knew every line of it and that's what you need as a coder, to really feel ownership of something, and that's a relatively small system.
- CS44 (artist): I feel like I created a lot of ownership in [the Oz chamber] too, which is kind of weird because I guess they decided that I could draw [chairs], so I drew a lot of the [chairs] for [the Oz chamber].

## Outcomes

CS17 (designer): A lot of work gets thrown away if the design like shifts while people are producing like while we are in production all of the work that the artists had done, the audio guys had done, just pretty much gets deleted and at that point people get completely like demoralized and they are like, “Why should I put in more effort into this?”

CS36 (artist), diary: This week we were deciding which of several pitches I'd put forward for [Oz chamber level] would be chosen and make it into the game. Though all the ideas were mine the ones I liked the least got chosen, so it still feels like a bit of a loss. I think a lot of the things I like will get re-purposed in the scene, it's still not quite the vision I had initially.

CS22 (manager): If you own something then you are ultimately responsible for how that comes out. You feel this personal responsibility meaning, if that succeeds then you feel like you have personally succeeded. If it fails then you actually feel disappointed and sad and personally a little wounded I think...If you feel that way about it then; you will basically do what it takes to try make it succeed as much as possible because, it's tied up in your own sense of self worth....I'm saying I think people should feel ownership of that, which means that if it gets cut they will feel bad.

CS04 (producer): I think that people can get caught up in the ideas of like hey that was my idea, and this is my turf and stuff like that and lose sight of the problems we're trying to solve.

CS52 (engineer), diary: I realize that the product should be driven by users, but I can't get over feeling that they are just wrong and that I am right. It is really frustrating to not be able to convince them why my design is better.

CS30 (artist), diary: This week I've been in productive mode. Less of an idea generation phase, and more of an execution phase...I am happy to see my little personal touches being incorporated into the assets I'm creating.

CS09 (manager): [I said], “Why don't you go off an idea on that and see if you can refine that?” and what he came back with was something that it's not [the same idea], it's a completely new mechanic...in many ways it's really elegant just as an integrated experience is probably better than anything we have.

CS18 (artist): You would concept it out. You would build it and you would have critiques on it, but you were really responsible for a piece of real estate. And it definitely filled you with more sense of purpose in your

job.

**Individual  
Differences**

Experience

CS53 (software engineer): I think I've become more of like a 'we' person from like the beginning when I first got into the industry like being young and out of school and like chip on my shoulder I guess. I was like "This Is my idea" blah, blah, blah. I wanted recognition too. Now, I'm growing old and saying that I'm part of a team.

CS62 (QA): People are possessive of their ideas; I mean this is not unusual. That's not the same consideration that goes to having done this for a living for a long time and seeing exactly what it takes to make this happen. There is not that perspective, I guess that's the key thing. There is not that perspective into where that idea would fit into the big picture. It's just like I can see what this idea is in theory.

CS15 (artist): I think when I first was making games, I would be very attached to stuff that I made like very precious about the stuff that I created... There's nothing like going through and just ripping up art after the fact. Like tearing stuff apart to get it to run, to sort of relax you on like anything is sacred... There's plenty of good ideas here. We are making a product and it's important that all the stuff looks good and plays good but don't think that your idea is the second coming.

CS28 (software engineer): In the past I thought I had this awesome idea here in myself. I'm just going to work on it and then I'm going to come into work and be like, "hey here it is look at how awesome it is." And I did that a lot for a while and it's not that successful. It's so much better to work with people because your idea becomes better anyways and I don't think there's that much glory to be had in saying that was mine.

CS44 (artist): I think I learned a lot more about game process and also giving up ownership and moving stuff around and seeing what people can do. I think coming out of school I had some distrust of giving my work to people because we don't really have group projects, you just do your work and nobody else touches it, nobody paints on it or anything like that. That's an important lesson to learn because life is not always simple.

CS55 (software engineer): I tend not to fight for the stuff I want to do. If I really, really, really want to do it and I can make a good enough case for it like I'll just find the time to do it... to me that seems like a better way than to argue about something's priority and whether or not it should be.

Work style  
preference

CS14 (software engineer), diary: The nice thing is, I can try most of those out all by myself and get real, quantified data of how much each change helps. There isn't a bunch of people to run ideas by or need to fight for my

ideas. That's nice!

CS15 (artist): I like being in a creative group and being able to do stuff, some people do not like to make any concessions basically with their art. And they want to do their own sort of stuff but to be in a social atmosphere where you are working as a team and not be open to that I think it's kind of a waste sort of.

CS35 (designer): I'm happiest when there's crazy, wacko design discussions going on. Like people are throwing out ideas and there's all kinds of stupid ideas that are getting shot down. People are saying, "No we should do this, and no we should do that", and it's just like a free for all. Then you end up with some, kind of something comes out of it that's like a jam and you go with it, that's the best thing.

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Table 4.2 Illustrative data of factors that impact ownership strength

Themes	Representative Quotations
<b><i>Ownership Strength</i></b>	
Idea affinity	<p>CS44 (artist): I think I'm much more attached to those [ideas] because, first off, they have more me in them because they're something only I might come up with.</p> <p>CS48 (artist), diary: There are many ways my job has been an extension and expansion of the creative ideas I had explored in my past as [an artist], but this was the closest alignment of my past and present yet.</p> <p>CS59 (software engineer): As soon as those things get thrown into a priority list and typically what then happens is the people who have the most like affinity already based on their experience for a thing try for that.</p>
Project phase expectations	<p>CS51 (software engineer): I think one of the things that are the hardest on the game teams is the amount of throw away work you do. Just because it's hard to come in, bust your ass on something knowing that there is an 80% chance it's going to be thrown away.</p> <p>Interviewer: Do you feel like there are any downsides to feeling that sort of ownership in that early phase?</p> <p>CS06 (QA): I guess if you're particularly attached to your ideas, it's inevitable that most of them are not going to make it into the game.</p> <p>CS13 (engineer): I think probably from now through the end of the project, people will be owning very specific areas of code.</p>
Duration of investment	<p>CS44 (artist): I feel ownership over a few specific pieces from the [Oz chamber] because not only did I draw the pre-production stuff, but I got to paint over them for the final concept.</p> <p>CS52 (software engineer): I don't know if that is good or bad I just I haven't had the time so I am curious about it but on the other hand the nice part about not knowing about it is not like not having my OCD kicking in if I find out about it and I would have rather done things differently</p> <p>CS08 (artist): I mean everything's too embryonic right now, I almost feel like this isn't my game yet.</p>

Table 5.2 Illustrative data of key conditions that impact handoffs

Themes	Representative Quotations
<p><i>Originator</i> <i>Psychological</i> <i>Conditions</i></p>	<p>Initial Ownership</p> <p>CS10 (designer): I did sort of observe from afar what was happening with [the characters] and with the story just because of sort of personal investment.</p> <p>CS60 (software engineer): I would like to work on it if it like happens I would like to be the one to do it because there was a code that I know most and like I mean I think I probably like take like code ownership and my like relation to code more personally.</p> <p>CS59 (software engineer): Losing ownership over the [feature] because I was going to be out for a few days right at the time when all of a sudden like performance concerns arose around it and I was like “hey you know we’re going to bring [Ed] in and he’s going to figure out what’s going on here”. And I sort of felt it like slipping a little there and I was like pretty attached to it so I kind of slipped it in and I was like “hey listen can we just like chill out for a few days and I’ll get to it?”</p>
<p>Trust</p>	<p>CS09 (manager): I mean I have a lot of faith in the people who are doing it, so I don't feel as if I need to be doing it. I think that the team is well-staffed and capable of success.</p> <p>CS31 (designer): I don't feel ownership over [the gameplay] but that is okay like I understand where that is going and I trust the people who are building that.</p> <p>CS53 (software engineer): I think I completely own the implementation at that point. I don't really think anybody else cares about the implementation at that point; as long as it does what we agreed that it's going to do and the rest is about trust.</p>
<p>Recognizing Limitations</p>	<p>CS36 (artist): As an [artist] it's not my place to be giving direction on the scene and stuff like that.</p> <p>CS32 (audio designer): I also just know that that just because I would have more time I would make it the way I would want it and that's not necessarily what everybody else wants or what the game needs. That's why they have designers in games. It's so they can tell us what really is going on, you know.</p>

CS58 (software engineer): I would absolutely, absolutely not have had time to even think about it. So it's great that there's now another person who can be tasked with this thing.

**Receiver**  
**Psychological**  
**Conditions**

Idea Affinity

CS61 (software engineer): If it is something that I feel like I have not learned anything from doing then it is not that interesting. Of course I will still do it but I will not enjoy it as much. For me if it is something that is a bit challenging or that I at least feel like I am learning something.

CS53 (software engineer): I think to me personally if I get to work on something new that I haven't worked on before, it's more fun, so like, because it's like the learning experience. So I'm like cool, great. I think that if I've already solved a problem and I'm asked to just implement something that I already know I'm like, "Okay that's my job". So it's not exciting, there is no exploration, like discovery.

CS04 (producer): I think I was feeling a little bit like, "Okay, I'm going to go inherit somebody else's problems again on a team not of my choosing again."

Buy-in to  
Specifications

CS58 (software engineer): It's negative in terms of the system because it wasn't coming from me in the first place. This is something that somebody else requested that's not really -- how to phrase that? The need for the system is not coming from me or the people that I work with most commonly.

CS01 (manager): [The flying monkeys are] this really interesting polarizing element for that specific reason. I feel disownership of the idea but there were people who felt incredibly strongly that it should be there. So I just like "Fine if you think it's such a great idea, make it. We'll put in the schedule and we'll see how important it is." It was an expensive experiment and I think we all learnt something from it.

CS50 (software engineer): So to me it's already failed its core mission, that doesn't mean it can't be a great [feature] or it can't be a different type of [feature]. But that original mission that we set out on was not what we tried to solve. So I probably would never feel ownership over the whole [feature] because of that.

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## FIGURES

Figure 2.1. Simple schematic of research questions

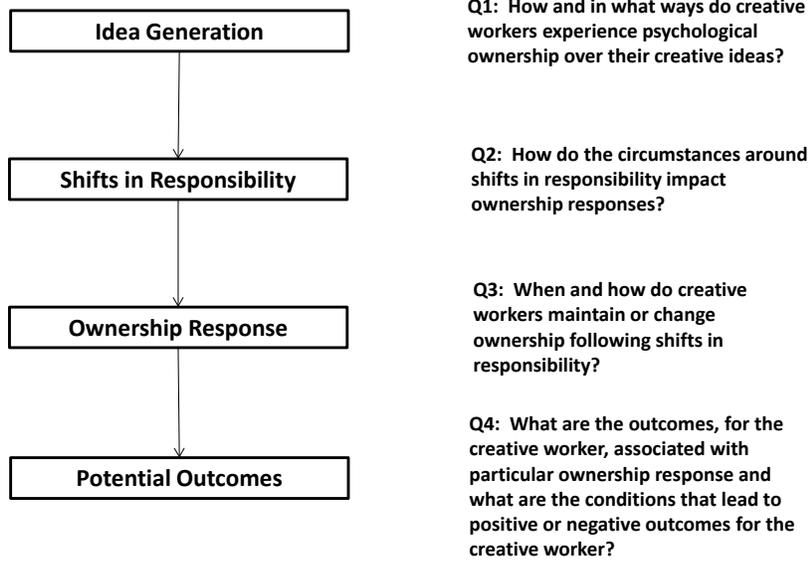


Figure 2.2. Definitions for this dissertation; schematic based on Amabile (1988)

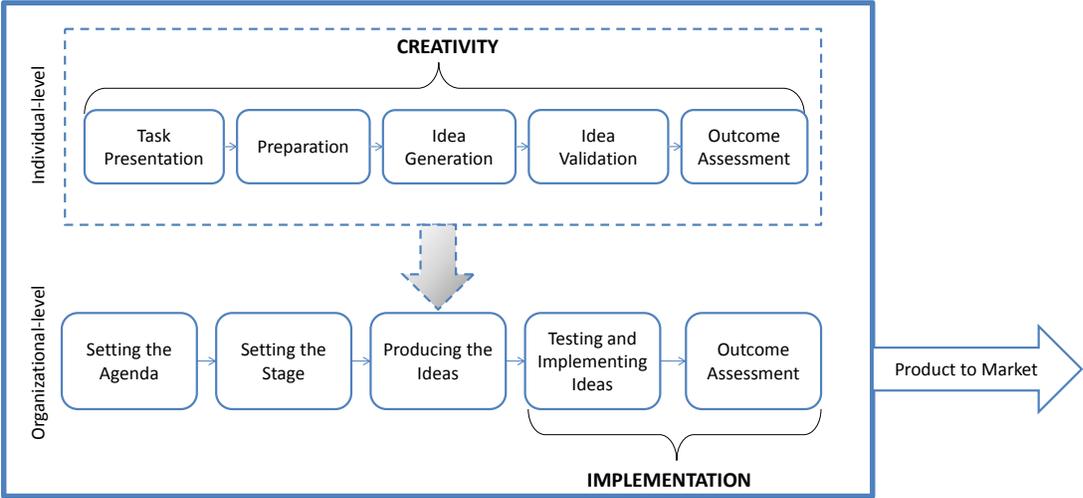


Figure 2.3. Idea exchange and idea handoff during and following the creative process

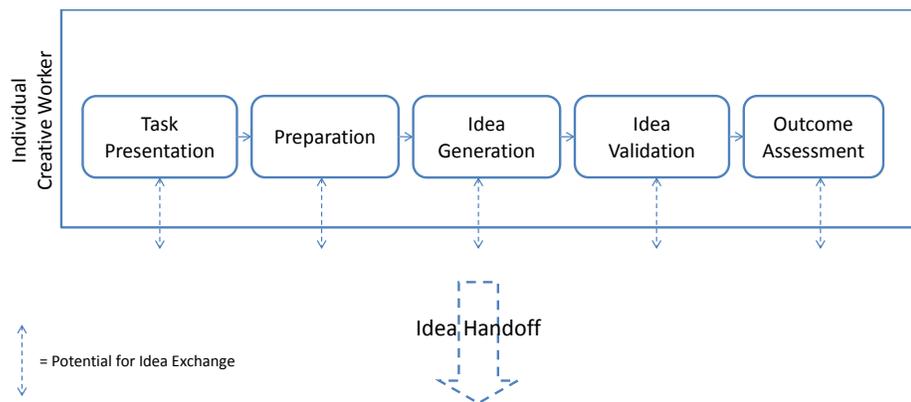


Figure 4.1. A model of the development of ownership scope in creative work

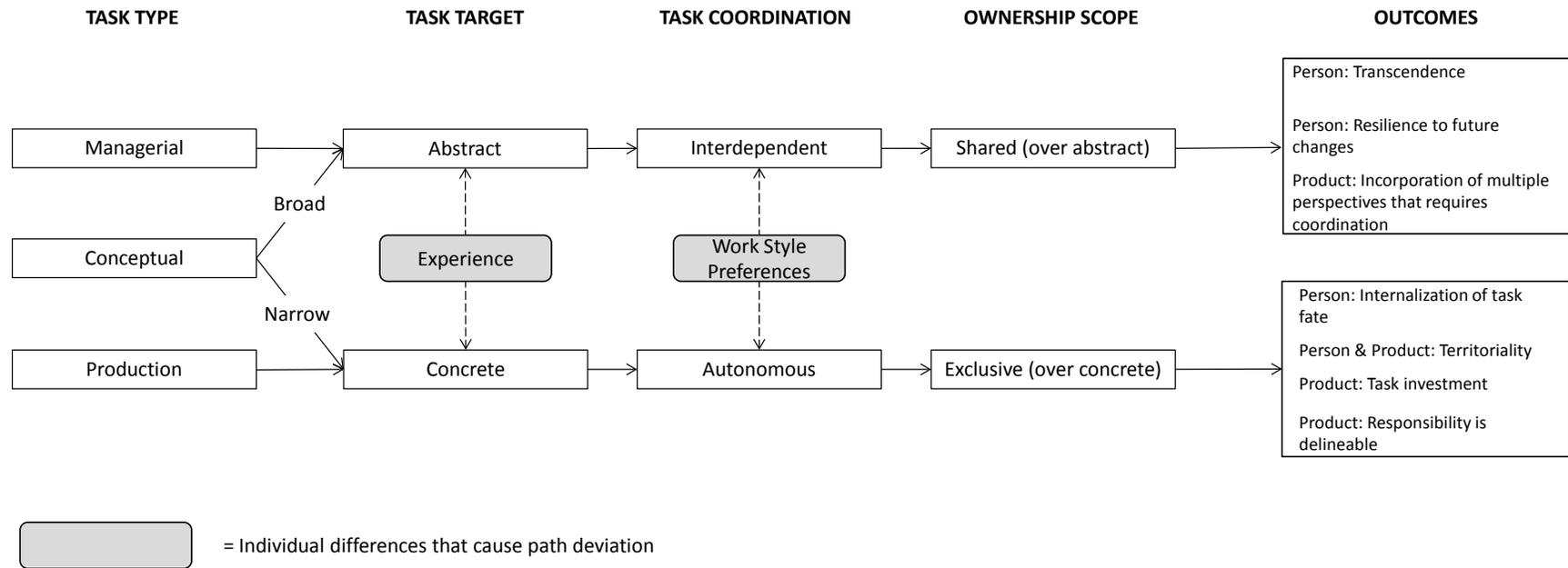


Figure 5.1. Key conditions and dynamics within a handoff scenario

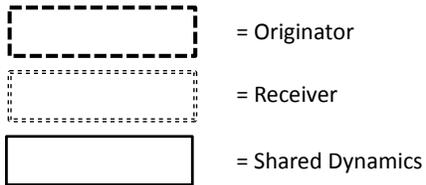
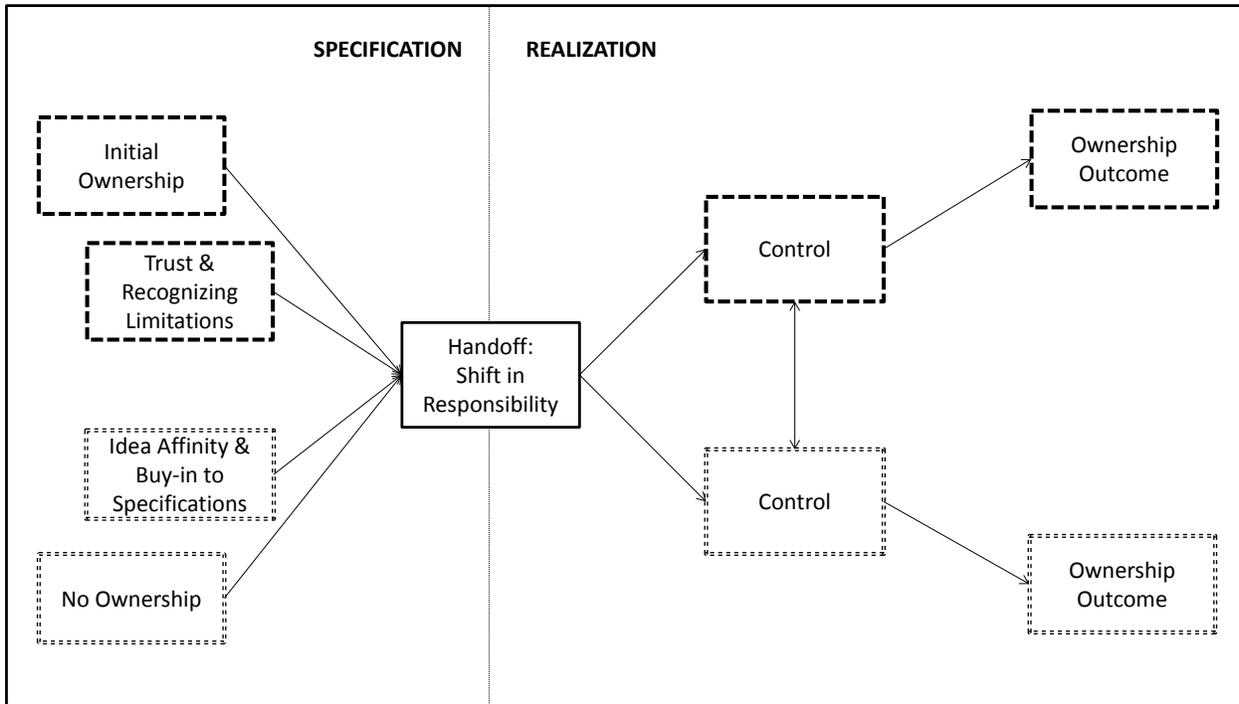
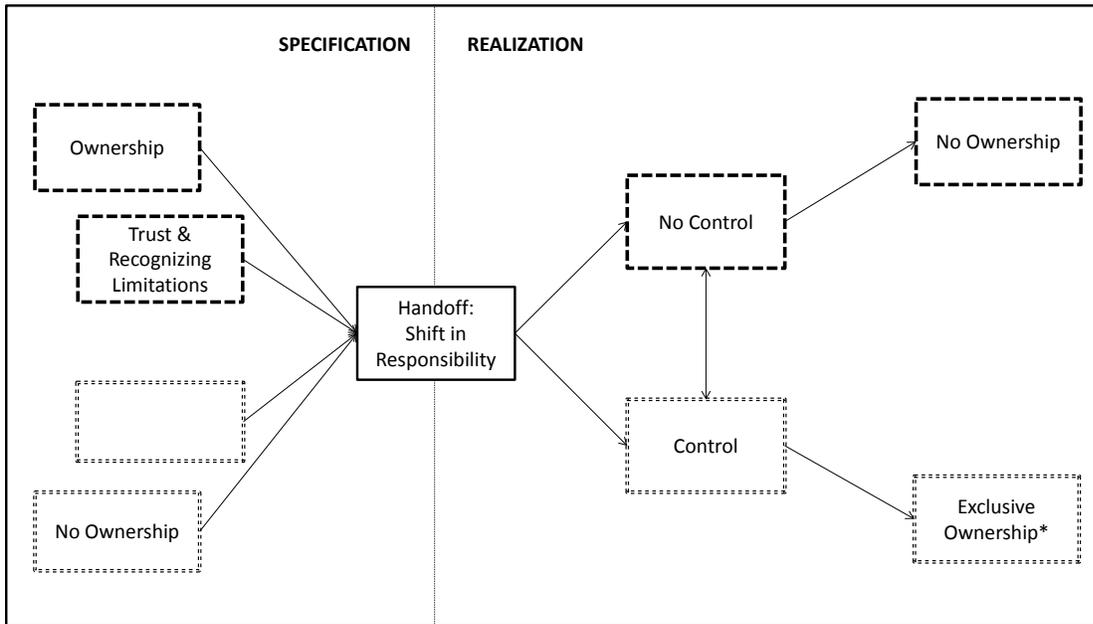
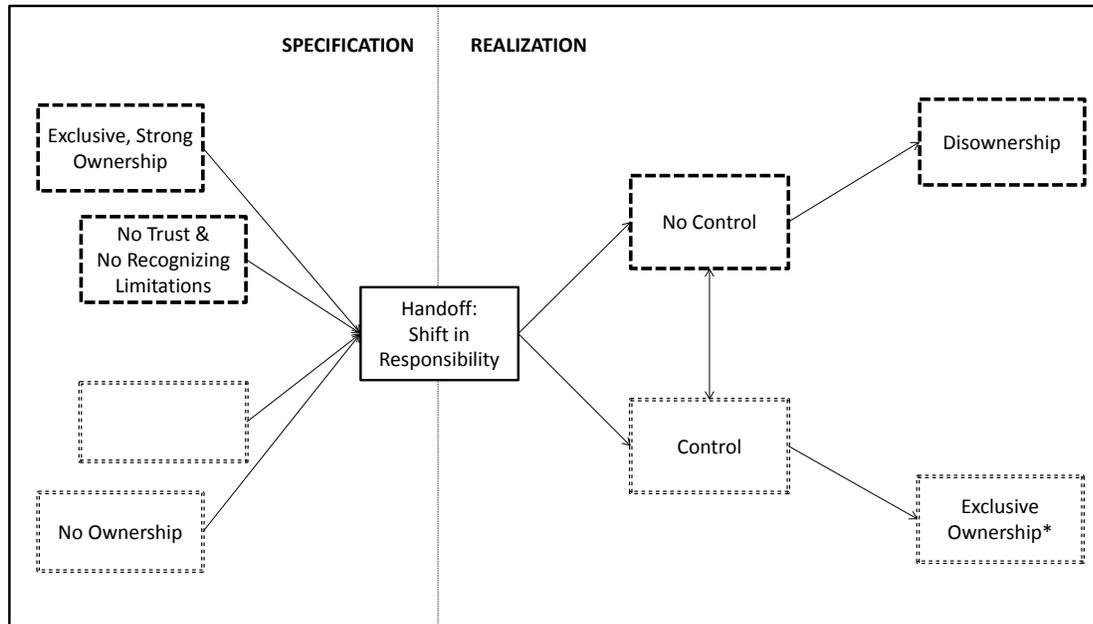


Figure 5.2. Salient conditions and dynamics for each handoff scenario

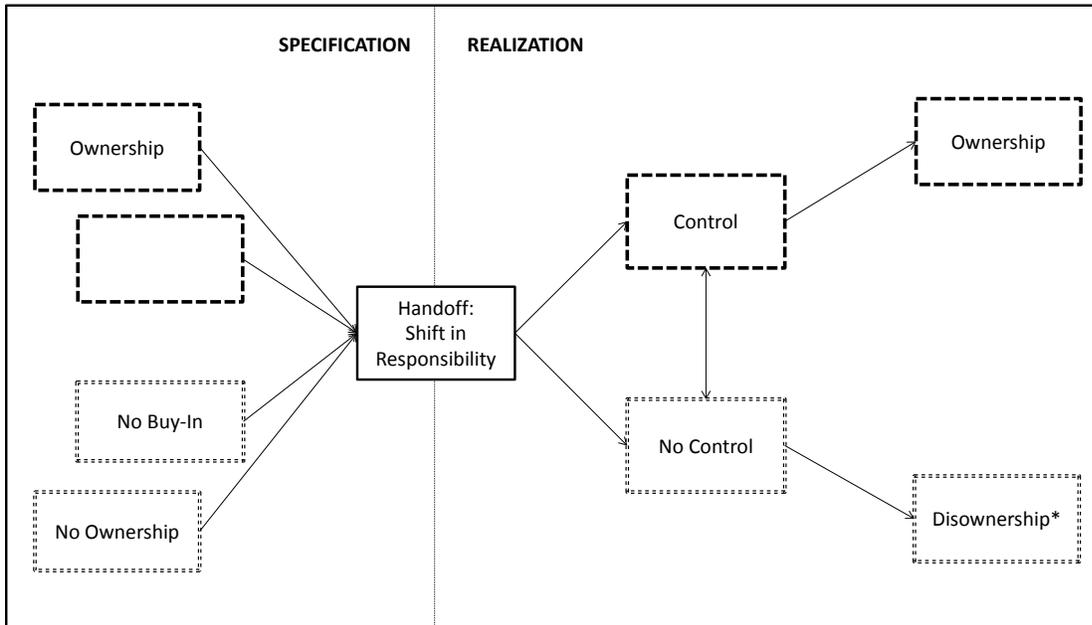
**CLEAN HANDOFF**



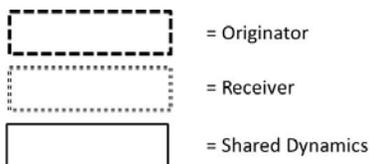
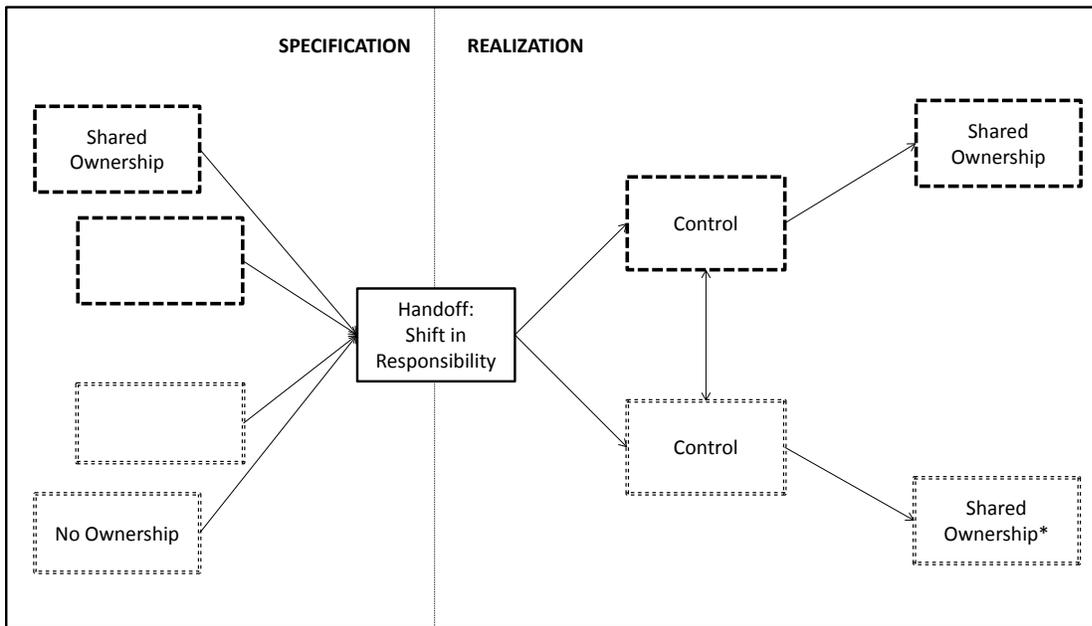
**RECEIVER-DOMINATED HANDOFF**



**ORIGINATOR-DOMINATED HANDOFF**



**COLLABORATIVE HANDOFF**



\* Receiver idea affinity serves as an amplifier increasing the strength of ownership or disownership

Figure 6.1 A model of the role of handoffs in psychological ownership

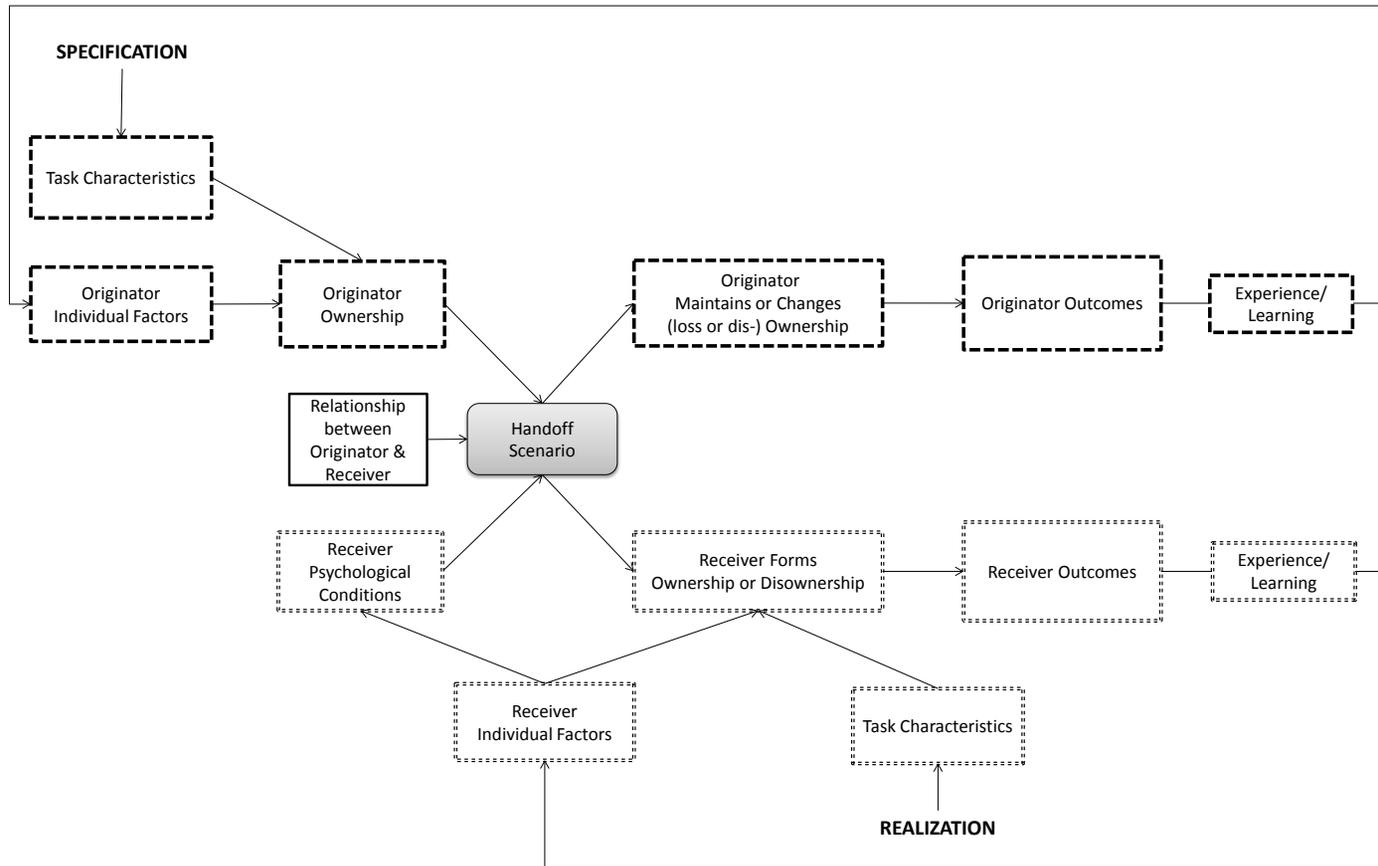
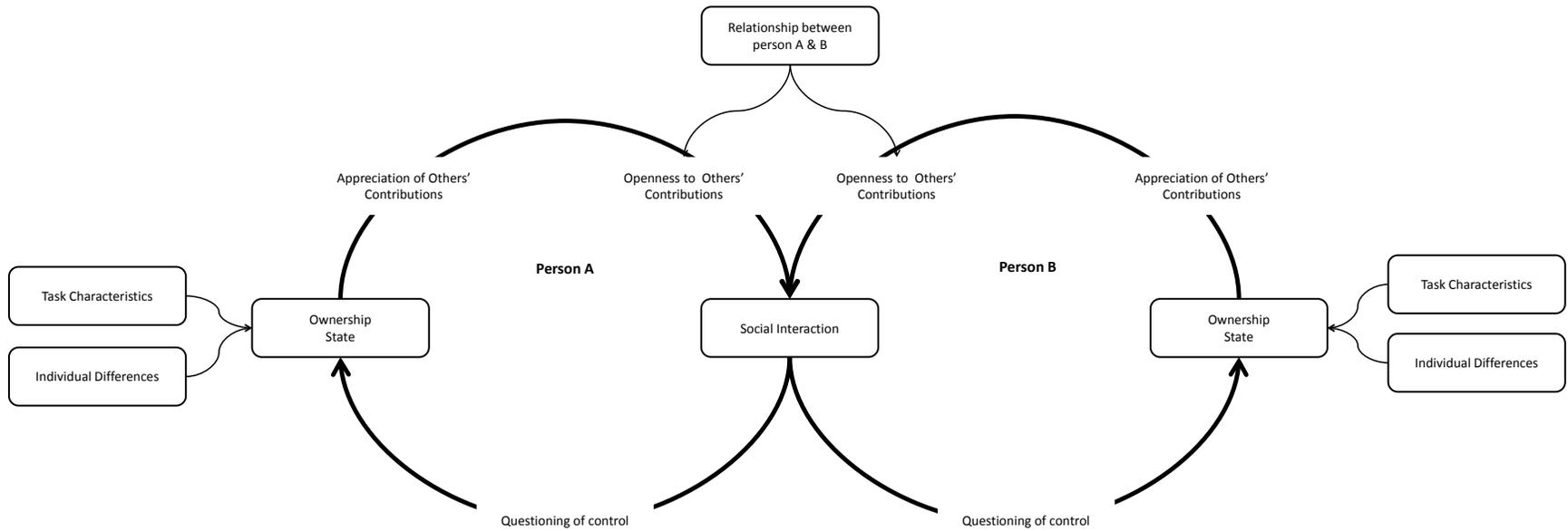


Figure 6.2 A relational model of psychological ownership



## APPENDICIES

### APPENDIX 1

#### Glossary of Context-Specific Terms

- Artist:** individual responsible for generating graphical elements of the game
- Asset:** a file that contains text, art, or audio used to make the game
- Audio designer:** individual responsible for generation of the audio within the game
- Concept:** conveys the look and feel of an asset or level before it is generated or what something might be in the future
- Bug:** a problem usually fixed by changing software code
- Console:** hardware device through which games are played
- Crunch:** working overtime
- Designer:** individual responsible for gameplay or how the user will navigate a particular system
- Feature:** a particular function of software
- Demo:** a partial version of the game
- Frame rate:** speed of animation
- Game build:** interim functional version of the game
- Gameplay:** refers to the experience of playing the game
- Greenlight meeting:** a meeting with the publisher to approve a plan for the game
- Lead:** individual in charge of a particular discipline (i.e. lead designer, lead artist)
- Level:** one continuous section of a game
- User-interface (UI):** area where users input and receive information
- Physics:** the introduction of the laws of physics into the game in order to make the game appear more real to the user
- Producer:** individual responsible for ensuring the game is delivered on time and on budget, manager of the team's tasks, timelines, and budgets.
- Publisher:** a company that pays for the manufacturing and marketing of the game
- Quality assurance (QA) tester:** individual responsible for checking functionality and locating system bugs, or defects
- Software engineer:** individual responsible for creating software code that creates functionality. Also known as coders or programmers.
- Scrum:** a project management method that breaks larger teams into smaller empowered teams
- Spec:** short for specification of the requirements of a particular feature or piece of the game
- Sprint:** a set time period to complete a collection of tasks
- Texture:** digital representation of a surface to make it appear three dimensional
- Tools:** software that enables the development of the game

## APPENDIX 2

### INITIAL INTERVIEW PROTOCOL THE RELATIONSHIP BETWEEN CREATIVE WORKERS AND THEIR IDEAS

Responder Code: \_\_\_\_\_

Location: \_\_\_\_\_

Date / Time: \_\_\_\_\_

#### Job Overview

*(Instruction to the interviewee) First, I just want to get a broad understanding of your job and what projects you work on.*

- 1) What is your current position in the organization? How long have you been in that job? At the organization?
- 2) Why did you take this job?
- 3) What projects are you currently working on?
  - What is your role on them?
  - Who else is working on them?
  - How do you like working on these projects?
  - Which are you the most excited about? The least?
- 4) Tell me about a typical day at work. What do you do?
- 5) Who determines what you work on and how you work on it?

#### Idea Overview

*(Instruction to the interviewee) Now, I would like to concentrate on your creative ideas.*

- 1) Can you take me through your idea development process?
- 2) Tell me about your favorite idea that you've had while at this job.
  - How did you come up with it?
  - What happened to it?
- 3) What was your least successful idea? Why?
  - How do you know it wasn't successful?
- 4) What was your most successful idea? Why?
  - How do you know it was successful?
- 5) In what ways, if any, do your ideas change over time?
  - (If they do) Why do they change (probe for own ideas vs. others)?
    - o How much are they changing because of your own ideas? Can you tell me about a specific example? How much does this change involve other people? (If others) How do they change your ideas? Can you tell me about a specific example?
- 6) How do you feel about sharing your ideas?
  - Under what conditions, if any, are sharing your ideas something you feel good about?
  - Under what conditions, if any, are sharing your ideas something you feel bad about?
  - What are the expectations you have regarding when and if you will relinquish control over an idea? Where do these expectations come from?
- 7) What happens when an idea leaves your hands? How do you think about your ideas once they leave your hands?
- 8) When, if at all, do you feel like you have fully let go of your ideas?
- 9) Tell me about a time when it was particularly difficult to share an idea with others or to let go of a creative idea?

#### Relationship between Creative Worker and Ideas

*(Instruction to the interviewee) Now, I would like to talk about how you relate to your ideas.*

- 1) To what extent do you feel like you have control over your ideas and how they are incorporated into the final product?
  - Probe: Do you feel like you have a choice about whether or not to change or turnover your ideas throughout the process? At some points more than others?
- 2) When, if ever, do you feel like you lose control of your ideas?
- 3) To what extent do you feel like the final product is yours?
- 4) Who owns the ideas you work on?
- 5) In what way, if any, do you think your ideas relate to who you are as a person?
- 6) In what way, if any, do you feel like your ideas or the final products represent you? If so, how?
- 7) In what ways, if any, do you feel like you are reflected in the final products in the past?
- 8) What are your expectations about how you will be reflected in the current project?
- 9) Does getting your name in the credits matter to you?

#### Identity

- 1) How do you describe yourself to other people?
- 2) How do people describe you?
- 3) How much does your work relate to who you are as a person?
- 4) How much does the game relate to who you are as a person?
- 5) When are you the happiest at your job?
- 6) When are you the most unhappy at your job?

#### Wrap-Up

*(Instruction to the interviewee) In closing, I'd like to ask you some questions about yourself. Your response to these questions is voluntary and you do not have to answer any questions that you do not wish to answer.*

Age:

Education (highest level):

Gender (*Note*):

- 1) Those are all the questions that I have – given that I am interested in how people connect and let go of their ideas, is there anything else you think that I should have asked you?
- 2) Do you have any questions for me?

*Thanks a lot for your time. I really appreciate it.*

## APPENDIX 3

### FOLLOW-UP INTERVIEW PROTOCOL THE RELATIONSHIP BETWEEN CREATIVE WORKERS AND THEIR IDEAS

Responder Code: \_\_\_\_\_

Location: \_\_\_\_\_

Date / Time: \_\_\_\_\_

#### Diaries

*(Instruction to the interviewee) First, I want to follow-up on some things that came up in your diary entries...*

- 1) You mentioned X idea, but didn't talk about it again. What happened to that idea? How do you feel about it now?
- 2) You mentioned Y as an idea that had been cut/changed. How do you feel about that idea now?

#### Ownership

- 1) Can you tell me how, if at all, you think about the differences between ideas and implementations?

*Introduce Cards: In the first interviews people described feel ownership in different ways. Some people claimed they felt ownership over a piece of the game/engine, not feeling ownership (so more neutral), and some described more of a dis-ownership (or more strongly negative ownership...this is not mine). Other people talked about rather than feeling personal ownership, the ownership was more collective or shared. I recognize that you may feel different things simultaneously. [Cards shifted from piece/whole to ideas/implementations]*

- 2) Which of these cards describe how you currently feel? Can you describe (especially for more rare ones)
- 3) Has that changed over time? What changed your feelings?
- 4) During your work on the project, have you ever felt any of the feelings on the cards you did not select? Why did you feel that way then but not now?
- 5) In past projects or former work, have you ever felt any of the feelings on the cards you did not select? Why did you feel that way then but not now?
- 6) What are the positives and negatives of having this sense of ownership?
- 7) Is having strong ownership ever problematic?
- 8) If you were a manager (or ideally), what kind of ownership would you like employees to have? Why?
- 9) On this project, have you ever lost ownership over a piece? When? Why?
- 10) On this project, have you ever lost ownership over the whole? When? Why?

#### Exploring emerging themes: Handoffs, cuts, feedback

- 1) In thinking about times when ideas are handed to you, are there times when you are more or less receptive to taking over that idea? Why?
- 2) When an idea or implementation is cut, what happens to your sense of ownership over that idea? Why?

- 3) How does whether an idea is in more abstract or more concrete form impact your reaction to a cut?
- 4) What do you think comes off the backburner more ideas or implementations? Why?
- 5) When, if ever, do you think about specific implementation as resources for the future?
- 6) How do conversations and feedback change your sense of ownership, if at all? Can you give me an example?
- 7) Can you give me an example when an idea changed and your sense of ownership didn't?
- 8) What about an example when an idea changed and your sense of ownership did?
- 9) Last time you talked about x, can you walk me through how your sense of ownership changed during over the course of that idea?

### Wrap-Up

*(Instruction to the interviewee)*

*Thanks a lot for your time. I really appreciate it.*

Is there anything else you think I should know to understand the relationship between you and your creative ideas?

## REFERENCES

- Agnello, A. J. 2013. New tech is great but how much will it cost to make a PlayStation 4 game?, *Digital Trends*. Online.
- Albert, S., & Whetten, D. 1985. Organization Identity. In L. L. Cummings, & H. W. Staw (Eds.), *Research on Organizational Behavior*, Vol. 7: 263-295. Greenwich, CT: JAI press.
- Amabile, T. M. 1979. Effects of external evaluation on artistic creativity. *Journal of Personality and Social Psychology*, 37: 221-233.
- Amabile, T. M. 1983. The social psychology of creativity: A componential conceptualization. *Journal of Personality and Social Psychology*, 45: 357-376.
- Amabile, T. M. 1988. A model of creativity and innovation in organizations. In B. M. Staw, & L. L. Cummings (Eds.), *Research in organizational behavior*, Vol. 10: 123-167. Greenwich, CT: JAI Press.
- Amabile, T. M., Barsade, S. G., Mueller, J. S., & Staw, B. M. 2005. Affect and creativity at work. *Administrative Science Quarterly*, 50: 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: 1154-1184.
- Amabile, T. M., Goldfarb, P., & Brackfield, S. C. 1990. Social influences on creativity: Evaluation, coaction, and surveillance. *Creativity Research Journal*, 3: 6-21.
- Amabile, T. M., & Kramer, S. J. 2007. Inner work life: Understanding the subtext of business performance. *Harvard Business Review*, 85: 72-83.
- Amabile, T. M., & Kramer, S. J. 2011a. The power of small wins. *Harvard Business Review*, 89: 70-80.
- Amabile, T. M., & Kramer, S. J. 2011b. *The progress principle: Using small wins to ignite joy, engagement, and creativity at work*. Cambridge, MA: Harvard University Press.
- Amabile, T. M., Schatzel, E. A., Moneta, G. B., & Kramer, S. J. 2004. Leader behaviors and the work environment for creativity: Perceived leader support. *The Leadership Quarterly*, 15: 5-32.
- Andriopoulos, C., & Lewis, M. W. 2009. Exploitation-exploration tensions and organizational ambidexterity: Managing paradoxes of innovation. *Organization Science*, 20: 696-717.
- Angle, H. L. 2000. Psychology and organizational innovation. In A. H. Van de Ven, H. L. Angle, & M. S. Poole (Eds.), *Research on the management of innovation: The Minnesota studies*: 135-170. New York, NY: Oxford University Press.
- Ashby, F. G., & Isen, A. M. 1999. A neuropsychological theory of positive affect and its influence on cognition. *Psychological Review*, 106: 529-550.

- Ashforth, B. E. 2001. *Role transitions in organizational life: An identity-based perspective*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Avey, J. B., Avolio, B. J., Crossley, C. D., & Luthans, F. 2009. Psychological ownership: Theoretical extensions, measurement and relation to work outcomes. *Journal of Organizational Behavior*, 30: 173-191.
- Axtell, C. M., Holman, D. J., Unsworth, K. L., Wall, T. D., Waterson, P. E., & Harrington, E. 2000. Shopfloor innovation: Facilitating the suggestion and implementation of ideas. *Journal of Occupational and Organizational Psychology*, 73: 265-285.
- Baas, M., De Dreu, C. K. W., & Nijstad, B. A. 2008. A meta-analysis of 25 years of mood-creativity research: Hedonic tone, activation, or regulatory focus? *Psychological Bulletin*, 134: 779-806.
- Baccigaluppi, J., & Crane, L. 2011. Brian Eno: Hampered by intellectual considerations, *TapeOp Online*.
- Baer, M. 2012. Putting creativity to work: The implementation of creative ideas in organizations. *Academy of Management Journal*, 55: 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: 60-71.
- Bakie, R. 2005. A brief history of video games. In S. Rabin (Ed.), *Introduction to game development*: 3-36. Boston, MA: Charles River Media.
- Bakker, A. B., & Xanthopoulou, D. 2009. The crossover of daily work engagement: Test of an actor-partner interdependence model. *Journal of Applied Psychology*, 94: 1562-1571.
- Bartel, C., & Dutton, J. 2001. Ambiguous organizational memberships: Constructing organizational identities. In M. Hogg, & D. Terr (Eds.), *Social identity processes in organizational contexts*: 115-130. Philadelphia, PA: Psychology Press.
- Bechky, B. A. 2003. Sharing meaning across occupational communities: The transformation of understanding on a production floor. *Organization Science*, 14: 312-330.
- Becker, L. C. 1976. The Labor Theory of Property Acquisition. *Journal of Philosophy*, 73: 653-664.
- Belk, R. W. 1988. Possessions and the extended self. *Journal of Consumer Research*, 15: 139-168.
- Bethke, E. 2003. *Game development and production*. Plano, TX: Wordware Publishing.
- Binnewies, C., Sonnentag, S., & Mojza, E. J. 2010. Recovery during the weekend and fluctuations in weekly job performance: A week-level study examining intra-individual relationships. *Journal of Occupational and Organizational Psychology*, 83: 419-441.

- Bishop, T. 2013. Microsoft: Global video-game market hits \$65 billion, and consoles still lead the way, *GeekWire*.
- Bledow, R., Rosing, K., & Frese, M. In press. A dynamic perspective on affect and creativity. *Academy of Management Journal*.
- Bolger, N., Davis, A., & Rafaeli, E. 2003. Diary methods: Capturing life as it is lived. *Annual Review of Psychology*, 54: 579-616.
- Brenner, L., Rottenstreich, Y., Sood, S., & Bilgin, B. 2007. On the psychology of loss aversion: Possession, valence, and reversals of the endowment effect. *Journal of Consumer Research*, 34: 369-376.
- Brewer, M. B., & Gardner, W. 1996. Who is this "we"? Levels of collective identity and self representations. *Journal of Personality and Social Psychology*, 71: 83-93.
- Brown, G., Lawrence, T. B., & Robinson, S. L. 2005. Territoriality in organizations. *Academy of Management Review*, 30: 577-594.
- Brown, G., & Robinson, S. L. 2011. Reactions to territorial infringement. *Organization Science*, 22: 210-224.
- Brown, T. 2008. Design thinking. *Harvard Business Review*, 86: 84-92.
- Brown, T. L. 1989. What will it take to win. *Industry Week*, 238: 15.
- Cain, S. 2012. The rise of the new groupthink, *New York Times*. New York.
- Cardon, M. S., Zietsma, C., Saparito, P., Matherne, B. P., & Davis, C. 2005. A tale of passion: New insights into entrepreneurship from a parenthood metaphor. *Journal of Business Venturing*, 20: 23-45.
- Caves, R. E. 2000. *Creative industries: Contracts between art and commerce*. Cambridge, MA: Harvard University Press.
- Chandler, H. M., & Chandler, R. 2011. *Fundamentals of game development*. Sudbury, MA: Jones & Bartlett Learning.
- Charmaz, K. 2006. *Constructing grounded theory: A practical guide to qualitative analysis*. Thousand Oaks, CA: Sage.
- Claessens, B. J. C., Van Eerde, W., Rutte, C. G., & Roe, R. A. Things to Do Today...: A Daily Diary Study on Task Completion at Work. *Applied Psychology*, 59: 273-295.
- Colquitt, J. A., Scott, B. A., & LePine, J. A. 2007. Trust, trustworthiness, and trust propensity: A meta-analytic test of their unique relationships with risk taking and job performance. *Journal of Applied Psychology*, 92: 909-927.
- Corbin, J., & Strauss, A. L. 2008. *Basics of qualitative research*. Thousand Oaks, CA: Sage

- Creswell, J. 1998. *Qualitative inquiry and research design: Choosing among five traditions*. Thousand Oaks, CA: Sage.
- Csíkszentmihályi, M., & Rochberg-Halton, E. 1981. *The meaning of things: Domestic symbols and the self*. New York, NY: Cambridge University Press.
- Daft, R. L., & Marcic, D. 2009. *Understanding management* (6th ed.). Mason, OH: South-Western Cengage Learning.
- Davis, M. A. 2009. Understanding the relationship between mood and creativity: A meta-analysis. *Organizational Behavior and Human Decision Processes*, 108: 25-38.
- De Stobbeleir, K. E., Ashford, S. J., & Buyens, D. 2011. Self-regulation of creativity at work: the role of feedback-seeking behavior in creative performance. *Academy of Management Journal*, 54: 811-831.
- Defore, J. 2011. Miranda July: 'The Future' is finally here, *The Washington Post*. Washington D.C.
- Denzin, N. K., & Lincoln, Y. S. 2008. *Collecting and interpreting qualitative materials*. Thousand Oaks, CA: Sage
- DeRue, D. S., & Ashford, S. J. 2010. Who will lead and who will follow? A social process of leadership identity construction in organizations. *Academy of Management Review* 35: 627-647.
- DeRue, D. S., & Rosso, B. D. 2009. Toward a theory of rapid creativity in teams. In E. A. Mannix, M. A. Neale, & J. A. Goncalo (Eds.), *Creativity in groups*, Vol. 12: 195-228. Bingley, UK: Emerald.
- DeTienne, D. R. 2010. Entrepreneurial exit as a critical component of the entrepreneurial process: Theoretical development. *Journal of Business Venturing*, 25: 203-215.
- Dewe, P., & Cooper, C. L. 2012. *Well-being and work: Towards a balanced agenda*. New York, NY: Palgrave Macmillan.
- Dillman, D. A., Smyth, J. D., & Melani Christian, L. 2009. *Internet, mail and mixed-mode surveys: The tailored design method*. Hoboken, NJ: John Wiley & Sons Inc.
- Dirks, K. T., & Ferrin, D. L. 2002. Trust in leadership: Meta-analytic findings and implications for research and practice. *Journal of Applied Psychology*, 87: 611-628.
- Dittmar, H. 1992. *The social psychology of material possessions: To have is to be*. New York, NY: Martin's Press.
- Dougherty, D., & Hardy, C. 1996. Sustained product innovation in large, mature organizations: Overcoming innovation-to-organization problems. *Academy of Management Journal*, 39: 1120-1153.
- Drazin, R., Glynn, M. A., & Kazanjian, R. K. 1999. Multilevel theorizing about creativity in organizations: A sensemaking perspective. *Academy of Management Review*: 286-307.

- Durall, J. 2011. Dealing with change, *altdevblogaday.com*.
- Ebaugh, H. R. F. 1988. *Becoming an ex: The process of role exit*. Chicago: University of Chicago Press.
- Economist, T. 2011. All the world's a game, Vol. 401: Special Report, 3-5.
- Eisenhardt, K. M. 1989. Building theory from case study research. *Academy of Management Review*, 14: 532-550.
- Elsbach, K. D. 2009. Identity affirmation through signature style: A study of toy car designers. *Human Relations*, 62: 1041-1072.
- Elsbach, K. D., & Bhattacharya, C. B. 2001. Defining who you are by what you're not: Organizational disidentification and the National Rifle Association. *Organization Science*, 12: 393-413.
- Elsbach, K. D., & Flynn, F. J. 2008. Issues of Identity in Collaborations Among Creative Professionals: A Study of Toy Designers, *UC Davis GSM No. 09-08*. Davis, CA: University of California, Davis.
- Elsbach, K. D., & Hargadon, A. B. 2006. Enhancing creativity through "mindless" work: A framework of workday design. *Organization Science*, 17: 470-483.
- Fine, G. A. 1996. Justifying work: Occupational rhetorics as resources in restaurant kitchens. *Administrative Science Quarterly*, 41: 90-115.
- Finkel, E. J., Burnette, J. L., & Scissors, L. E. 2007. Vengefully ever after: Destiny beliefs, state attachment anxiety, and forgiveness. *Journal of Personality and Social Psychology*, 92: 871-886.
- Flach, F. 1990. Disorders of the pathways involved in the creative process. *Creativity Research Journal*, 3: 158-165.
- Fleeson, W., Malanos, A. B., & Achille, N. M. 2002. An intraindividual process approach to the relationship between extraversion and positive affect: Is acting extraverted as "good" as being extraverted? *Journal of Personality and Social Psychology*, 83: 1409-1422.
- Florida, R. 2002. *The rise of the creative class*. New York: Basic Books.
- Florida, R. 2011. The income disparity of women in the creative class, *Atlantic Monthly*.
- Ford, C., & Sullivan, D. M. 2004. A time for everything: How the timing of novel contributions influences project team outcomes. *Journal of Organizational Behavior*, 25: 279-292.
- Ford, C. M., & Gioia, D. A. 1995. Foreword. In C. M. Ford, & D. A. Gioia (Eds.), *Creative action in organizations: Ivory tower visions & real world voices*. Thousand Oaks, CA: Sage.
- Fredrickson, B. L., Tugade, M. M., Waugh, C. E., & Larkin, G. R. 2003. What good are positive emotions in crisis? A prospective study of resilience and emotions following the terrorist

- attacks on the United States on September 11th, 2001. *Journal of Personality and Social Psychology*, 84: 365-376.
- Fried, Y., & Ferris, G. R. 1987. The validity of the job characteristics model: A review and meta-analysis. *Personnel Psychology*, 40: 287-322.
- Furby, L. 1978a. Possession in humans: An exploratory study of its meaning and motivation. *Social Behavior and Personality*, 6: 49-65.
- Furby, L. 1978b. Possessions: Toward a theory of their meaning and function throughout the life cycle. In P. Baltes (Ed.), *Life span development and behavior*: 297-336. New York, NY: Academic Press.
- Furby, L. 1991. Understanding the psychology of possession and ownership: A personal memoir and an appraisal of our progress. *Journal of Social Behavior & Personality*, 6: 457-463.
- Gardner, H. 1993. Seven creators of the modern era. In J. Brockman (Ed.), *Creativity*: 28-47. New York, NY: Simon & Schuster.
- Gardner, H. 1999. *Intelligence reframed: Multiple intelligences for the 21st century*. New York, NY: Basic Books.
- George, J. M. 2007. Creativity in organizations. *Academy of Management Annals*, 1: 439-477.
- George, J. M., & Zhou, J. 2002. Understanding when bad moods foster creativity and good ones don't: The role of context and clarity of feelings. *Journal of Applied Psychology*, 87: 687.
- 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: 605-622.
- Glaser, B. G., & Strauss, A. L. 1967. *The discovery of grounded theory: Strategies for qualitative research*. Chicago: Aldine.
- Glynn, M. A. 2000. When cymbals become symbols: Conflict over organizational identity within a symphony orchestra. *Organization Science*, 11: 285-298.
- Gough, H. G. 1979. A creative personality scale for the adjective check list. *Journal of Personality and Social Psychology*, 37: 1398.
- Grimes, A. J. 1978. Authority, power, influence and social control: A theoretical synthesis. *Academy of Management Review*, 3: 724-735.
- Hackman, J. R., & Oldham, G. R. 1975. Development of the job diagnostic survey. *Journal of Applied Psychology*, 60: 159-170.
- Han, T.-S., Chiang, H.-H., & Chang, A. 2010. Employee participation in decision making, psychological ownership and knowledge sharing: Mediating role of organizational commitment in taiwanese high-tech organizations. *International Journal of Human Resource Management*, 21: 2218-2233.

- Hargadon, A. 2005. Leading with vision: The design of new ventures. *Design Management Review*, 16: 33-39.
- Hargadon, A., & Bechky, B. 2006. When collections of creatives become creative collectives: A field study of problem solving at work. *Organization Science*, 17: 484-500.
- Hargadon, A., & Sutton, R. I. 2000. Building an innovation factory. *Harvard Business Review*, 78: 157-166.
- Hargadon, A. B. 2006. Bridging old worlds and building new ones: Toward a microsociology of creativity. In L. L. Thompson, & H. S. Choi (Eds.), *Creativity and innovation in organizational teams*: 199-217. Mahwah, NJ: Lawrence Erlbaum.
- Hayes, A. M., Feldman, G. C., Beevers, C. G., Laurenceau, J. P., Cardaciotto, L. A., & Lewis-Smith, J. 2007. Discontinuities and cognitive changes in an exposure-based cognitive therapy for depression. *Journal of Consulting and Clinical Psychology*, 75: 409-421.
- Heath, C., & Sitkin, S. B. 2001. Big-B versus Big-O: What is organizational about organizational behavior? *Journal of Organizational Behavior*, 22: 43-58.
- Hernandez, M. 2012. Toward an understanding of the psychology of stewardship. *Academy of Management Review*, 37: 172-193.
- Hight, J., & Novak, J. 2008. *Game development essentials: Project management*. Clifton Park, NY: Thomas Delman Learning.
- Ibarra, H. 1993. Network centrality, power, and innovation involvement: Determinants of technical and administrative roles. *Academy of Management Journal*, 36: 471-501.
- James, W. 1890. *The Principles of Psychology*. New York, NY: Henry Holt.
- Jick, T. D. 1979. Mixing qualitative and quantitative methods: Triangulation in action. *Administrative Science Quarterly*, 24: 602-611.
- Kanter, R. M. 1988. Three tiers for innovation research. *Communication Research*, 15: 509-523.
- Kidder, T. 1982. *The soul of a new machine*. New York, NY: Avon Books.
- Klein, K. J., & Sorra, J. S. 1996. The challenge of innovation implementation. *Academy of Management Review*, 21: 1055-1080.
- Kreiner, G. E., & Ashforth, B. E. 2004. Evidence toward an expanded model of organizational identification. *Journal of Organizational Behavior*, 25: 1-27.
- Lee, T. W., Mitchell, T. R., & Sablinski, C. J. 1999. Qualitative research in organizational and vocational psychology, 1979-1999. *Journal of Vocational Behavior*, 55: 161-187.
- Levin, D. Z., Whitener, E. M., & Cross, R. 2006. Perceived trustworthiness of knowledge sources: the moderating impact of relationship length. *Journal of applied psychology*, 91: 1163.

- Levitt, T. 2002. Creativity is not enough. *Harvard Business Review*, 80: 137-144.
- Lincoln, Y. S., & Guba, E. G. 1985. *Naturalistic inquiry*. Thousand Oaks, CA: Sage Publications, Inc.
- Litwinski, L. 1942. Is there an instinct of possession? *British Journal of Psychology*, 33: 28-39.
- Litwinski, L. 1947. The psychology of "mine". *Philosophy*, 22: 240-251.
- Locke, J. 1690. *Two treatises of government*. London: Awnsham Churchill.
- Locke, K. 2001. *Grounded Theory in Management Research*. Thousand Oaks: Sage.
- London, M., & Smither, J. W. 2002. Feedback orientation, feedback culture, and the longitudinal performance management process. *Human Resource Management Review*, 12: 81-100.
- Lubart, T. I. 2001. Models of the creative process: Past, present and future. *Creativity Research Journal*, 13: 295-308.
- Luchies, L. B., Finkel, E. J., McNulty, J. K., & Kumashiro, M. 2010. The doormat effect: When forgiving erodes self-respect and self-concept clarity. *Journal of Personality and Social Psychology*, 98: 734-749.
- Luthans, F. 2002. The need for and meaning of positive organizational behavior. *Journal of Organizational Behavior*, 23: 695-706.
- Madjar, N., Oldham, G. R., & Pratt, M. G. 2002. There's no place like home? The contributions of work and nonwork creativity support to employees' creative performance. *Academy of Management Journal*, 45: 757-768.
- Marshall, C., & Rossman, G. 1989. *Designing qualitative research*. Newbury Park, CA: Sage.
- Martin, L. L., & Stoner, P. 1996. Mood as input: What we think about about how we feel determines how we think. In L. L. Martin, & A. Tesser (Eds.), *Striving and feeling: Interactions among goals, affect, and self-regulation*: 279-301. Mahwah, NJ: Erlbaum.
- Mayer, R. C., Davis, J. H., & Schoorman, F. D. 1995. An integrative model of organizational trust. *Academy of Management Review*, 20: 709-734.
- Mayhew, M. G., Ashkanasy, N. M., Bramble, T., & Gardner, J. 2007. A study of the antecedents and consequences of psychological ownership in organizational settings. *Journal of Social Psychology*, 147: 477-500.
- McCarthy, E. D. 1984. Toward a sociology of the physical world: George Herbert Mead on physical objects. *Studies in Symbolic Interaction*, 5: 105-121.
- McIntyre, N., Srivastava, A., & Fuller, J. A. 2009. The Relationship of Locus of Control and Motives with Psychological Ownership in Organizations. *Journal of Managerial Issues*, 21: 383-401.

- Miles, M. B., & Huberman, A. M. 1994. *Qualitative data analysis: An expanded sourcebook*. Thousand Oaks, CA: Sage.
- Mueller, J. S., & Kamdar, D. 2011. Why seeking help from teammates is a blessing and a curse: A theory of help seeking and individual creativity in team contexts. *Journal of Applied Psychology*, 96: 263-276.
- Mumford, M. D. 2000. Managing creative people: Strategies and tactics for innovation. *Human Resource Management Review*, 10: 313-351.
- Nicholls, J. G. 1972. Creativity in the person who will never produce anything original and useful: The concept of creativity as a normally distributed trait. *American Psychologist*, 27: 717.
- O'driscoll, M. P., Pierce, J. L., & Coghlan, A. M. 2006. The psychology of ownership. *Group & Organization Management*, 31: 388-416.
- Oldham, G. R., & Cummings, A. 1996. Employee creativity: Personal and contextual factors at work. *Academy of Management Journal*, 39: 607-634.
- Parker, S. K., Wall, T. D., & Jackson, P. R. 1997. "That's not my job": Developing flexible employee work orientations. *Academy of Management Journal*, 40: 899-929.
- Patton, M. Q. 1990. *Qualitative evaluation and research methods* (2nd ed.). Newbury Park, CA: Sage.
- Pendleton, A., Wilson, N., & Wright, M. 1998. The perception and effects of share ownership: Empirical evidence from employee buy outs. *British Journal of Industrial Relations*, 36: 99-123.
- Penner, L. A., Dovidio, J. F., Piliavin, J. A., & Schroeder, D. A. 2005. Prosocial behavior: Multilevel perspectives. *Annual Review of Psychology*, 56: 365-392.
- Perry-Smith, J. E. 2006. Social yet creative: The role of social relationships in facilitating individual creativity. *Academy of Management Journal*, 49: 85-101.
- Perry-Smith, J. E., & Shalley, C. E. 2003. The social side of creativity: A static and dynamic social network perspective. *Academy of Management Review*, 28: 89-106.
- Pierce, J. L., & Jussila, I. 2011. *Psychological ownership and the organizational context: Theory, research evidence, and application*. Northampton, MA: Edward Elgar Publishing.
- Pierce, J. L., Jussila, I., & Cummings, A. 2009. Psychological ownership within the job design context: revision of the job characteristics model. *Journal of Organizational Behavior*, 30: 477-496.
- 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.
- Pierce, J. L., O'Driscoll, M. P., & Coghlan, A. M. 2004. Work environment structure and psychological ownership: The mediating effects of control. *Journal of Social Psychology*, 144: 507-534.
- Pierce, J. L., & Rodgers, L. 2004. The psychology of ownership and worker-owner productivity. *Group & Organization Management*, 29: 588-613.
- Pierce, J. L., Rubinfeld, S. A., & Morgan, S. 1991. Employee ownership: A conceptual model of process and effects. *Academy of Management Review*, 16: 121-144.
- Pratt, M. G. 1998. To be or not to be? Central questions in organizational identification. In D. Whetten, & P. Godfrey (Eds.), *Identity in organizations: Building theory through conversations*: 171–207. Thousand Oaks: Sage Publications.
- Pratt, M. G. 2000. The good, the bad, and the ambivalent: Managing identification among Amway distributors. *Administrative Science Quarterly*, 45: 456-493.
- Pratt, M. G. 2012. Rethinking identity construction processes in organizations: Three questions to consider. In M. Schultz, S. Maguire, A. Langley, & H. Tsoukas (Eds.), *Constructing identity in and around organizations*: 21-49. Oxford, UK: Oxford University Press.
- Pratt, M. G., & Ashforth, B. E. 2003. Fostering meaningfulness in working and at work. In K. Cameron, J. Dutton, & R. Quinn (Eds.), *Positive organizational scholarship*: 309-327. San Francisco: Berrett-Koehler Publishers.
- Pratt, M. G., & Dutton, J. E. 2000. Owning up or opting out: The role of identities and emotions in issue ownership. In N. M. Ashkanasy, C. Hartel, & W. Zerbe (Eds.), *Emotions in the workplace: Research, theory, and practice*: 103-129. London: Quorum Books.
- Pratt, M. G., & Rafaeli, A. 2001. Symbols as a Language of Organizational Relationships. In B. Staw, & R. Sutton (Eds.), *Research in Organizational Behavior*, Vol. 23: 93-132. Stanford, CA: JAI Press, Inc.
- Pratt, M. G., Rockmann, K. W., & Kaufmann, J. B. 2006. Constructing Professional Identity: The Role of Work and Identity Learning Cycles in the Customization of Identity Among Medical Residents *Academy of Management Journal*, 49: 235-262.
- Prelinger, E. 1959. Extension and structure of the self. *Journal of Psychology*, 47: 13-23.
- Rank, J., Pace, V. L., & Frese, M. 2004. Three avenues for future research on creativity, innovation, and initiative. *Applied Psychology-An International Review*, 53: 518-528.
- Reay, T., Golden-Biddle, K., & Germann, K. 2006. Legitimizing a new role: Small wins and microprocesses of change. *Academy of Management Journal*, 49: 977-998.
- Richardson, G. E. 2002. The metatheory of resilience and resiliency. *Journal of Clinical Psychology*, 58: 307-321.

- Rogers, E. M. 2003. *Diffusion of innovations* (5th ed.). New York, NY: Free Press.
- Rudmin, W., & Berry, J. 1987. Semantics of ownership: A free-recall study of property. *Psychological Record*, 37: 257-268.
- Runco, M. 2004. Creativity. *Annual Review of Psychology*, 55: 657-687.
- Saren, M. A. 1984. A classification and review of models of the intra firm innovation process. *R&D Management*, 14: 11-24.
- Schell, J. 2008. *The art of game design: A book of lenses*. Boston, MA: Elsevier.
- Schreier, J. 2011. Videogames need auteurs, but good luck finding them, *Wired*. Online.
- Schwarz, N., & Clore, G. L. 1983. Mood, misattribution, and judgments of well-being: Informative and directive functions of affective states. *Journal of Personality and Social Psychology*, 45: 513.
- Schwarz, N., & Clore, G. L. 2003. Mood as information: 20 years later. *Psychological Inquiry*, 14: 296-303.
- Shalley, C. E., & Perry-Smith, J. E. 2001. Effects of social-psychological factors on creative performance: The role of informational and controlling expected evaluation and modeling experience. *Organizational Behavior and Human Decision Processes*, 84: 1-22.
- 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: 933-958.
- Shin, J., Taylor, M. S., & Seo, M.-G. 2012. Resources for change: The relationships of organizational inducements and psychological resilience to employees' attitudes and behaviors toward organizational change. *Academy of Management Journal*, 55: 727-748.
- Shin, S. J., & Zhou, J. 2003. Transformational leadership, conservation, and creativity: Evidence from Korea. *Academy of Management Journal*, 46: 703-714.
- Shneidman, E. S. 1999. The psychological pain assessment scale. *Suicide and Life-threatening Behavior*, 29: 287-294.
- Shu, S. B., & Peck, J. 2011. Psychological ownership and affective reaction: Emotional attachment process variables and the endowment effect. *Journal of Consumer Psychology*, 21: 439-452.
- Siemer, M. 2005. Moods as multiple-object directed and as objectless affective states: An examination of the dispositional theory of moods. *Cognition & Emotion*, 19: 815-845.
- Sloper, T. 2005. Game production and project management. In S. Rabin (Ed.), *Introduction to game development*. Boston, MA: Charles River Media.

- Sonnentag, S., Mojza, E. J., Binnewies, C., & Scholl, A. 2008. Being engaged at work and detached at home: A week-level study on work engagement, psychological detachment, and affect. *Work & Stress*, 22: 257-276.
- Spradley, J. 1979. *Participant observation*. New York: Holt Rinehart & Winston.
- Staw, B. M. 1990. An evolutionary approach to creativity and innovation. In M. A. West, & J. L. Farr (Eds.), *Innovation and creativity at work: Psychological and organizational strategies*. Chichester, NH: Wiley.
- Staw, B. M., Sandelands, L. E., & Dutton, J. E. 1981. Threat rigidity effects in organizational behavior: A multilevel analysis. *Administrative Science Quarterly*, 26: 501-524.
- Sternberg, R. J. 2001. What is the common thread of creativity? Its dialectical relation to intelligence and wisdom. *American Psychologist*, 56: 360-362.
- Strauss, A. L., & Corbin, J. M. 1990. *Basics of qualitative research*. Thousand Oaks, CA: Sage.
- Sutton, R. I., & Hargadon, A. 1996. Brainstorming groups in context: Effectiveness in a product design firm. *Administrative Science Quarterly*, 41: 685-718.
- Takeuchi, H., & Nonaka, I. 1986. The new new product development game. *Harvard Business Review*, 64: 137-146.
- Tschang, F. T. 2007. Balancing the tensions between rationalization and creativity in the video games industry. *Organization Science*, 18: 989-1005.
- Unsworth, K. 2001. Unpacking creativity. *Academy of Management Review*, 26: 289-297.
- Utterback, J. M. 1971. The process of technological innovation within the firm. *Academy of Management Journal*, 14: 75-88.
- Utterback, J. M. 1974. Innovation in industry and the diffusion of technology. *Science*, 183: 620-626.
- Van Dyne, L., & Pierce, J. L. 2004. Psychological ownership and feelings of possession: Three field studies predicting employee attitudes and organizational citizenship behavior. *Journal of Organizational Behavior*, 25: 439-459.
- Vandewalle, D., Van Dyne, L., & Kostova, T. 1995. Psychological ownership: An empirical examination of its consequences. *Group & Organization Management*, 20: 210.
- Vaughan, D. 1986. *Uncoupling: Turning points in intimate relationships*. New York: Oxford University Press.
- West, M. A. 2002. Sparkling fountains or stagnant ponds: An integrative model of creativity and innovation implementation in work groups. *Applied Psychology-An International Review*, 51: 355-386.
- West, M. A., & Farr, J. L. 1989. Innovation at work: Psychological perspectives. *Social Behavior*, 4: 15-30.

- Wheeler, L., & Reis, H. T. 1991. Self-recording of everyday life events: Origins, types, and uses. *Journal of Personality*, 59: 339-354.
- Wuchty, S., Jones, B. F., & Uzzi, B. 2007. The increasing dominance of teams in production of knowledge. *Science*, 316: 1036.
- Yin, R. K. 2009. *Case study research: Design and methods* (4th ed.). Thousand Oaks, CA: Sage Publications, Inc.
- Zhou, J., & Shalley, C. E. 2003. Research on employee creativity: A critical review and directions for future research. *Research in Personnel and Human Resources Management*, 22: 165-218.
- 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: 1544-1552.