Towards a meta-theory of creativity forms:
How novelty and usefulness shape creativity

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ABSTRACT

Creativity has long been defined in terms of novelty and usefulness. Surprisingly, however, there is relatively little agreement about the precise meaning of either dimension, the relationship between them, or the process through which they are produced. In this paper, we explore how novelty and usefulness have been used explicitly and implicitly in the creativity literature to reveal three ways to understand the definitional constructs. We propose that these three understandings give rise to distinct but interrelated forms of creativity: creativity as *maximization*, creativity as *balance*, and creativity as *integration.* Each form provides a different way of answering the question: what is creativity? We further theorize that the forms are shaped by the distal relations between novelty and usefulness, context, and process. Fundamentally, our theory suggests that developing a creative outcome for a distant alternative reality is a different form of creativity than developing an idea grounded in the present, so that as creators move through space and time, they also move through different forms of creativity. Our meta-theory furthers our understanding of creativity by revealing the centrality of usefulness in defining creativity; opening up the dynamics of the creative process; and highlighting interdependencies between ideas and context.

A cornerstone of research on organizational creativity has been the consensus that creativity is defined as developing ideas, products, process, or other outcomes that are both *novel* and *useful* (Amabile, 1983; George, 2007; Hennessey, Amabile, & Mueller, 2010; Woodman et al., 1993). The foundations of modern creativity research (e.g., Amabile, 1983; Guilford, 1950; Stein, 1953) and recent reviews (Diedrich, Benedek, & Jauk, 2015; Kampylis & Valtanen, 2010; Sullivan & Ford, 2010) both focus on these two main components. This definition has provided the theoretical heart for decades of research on how to foster the generation of novel ideas and the selection of useful ideas to spur organizational success, growth, and survival.

Despite that consensus, literature on organizational creativity displays discrepancies in the treatment of novelty and usefulness. Recent research shows substantial diversity in how novelty and usefulness are defined or operationalized; the way they relate to one another; and the processes through which they are produced. For example, Kampylis & Valtanen (2010) identified seven meanings for each dimension; and scholars have recently both called for treating novelty and usefulness as independent (Diedrich et al., 2015) and suggested that the dimensions cannot be pulled apart (Harvey & Mueller, 2021). Since novelty and usefulness *are* creativity, confusion about them means confusion about what creativity actually is, so that Teresa Amabile's (1996) observation that "An intriguing and still unanswered question… is, what, exactly, do judges mean when they call something 'creative'?" (Amabile, 1996: 31) remains a valid and critical concern for the field. Simonton (2013) similarly proposed that many debates in the creativity literature are actually "misdirected disagreement over creativity's meaning" (Simonton, 2013, 69) that may result in studying different phenomena and developing hypotheses, measuring constructs, and analysing relationships in ways that are theoretically inconsistent or incompatible (Simonton, 2013).

In the present paper, we aim to develop meta-theory about creativity to address these issues. Meta-theory uncovers and clarifies the assumptions, boundaries, conditions, and limitations of a set of theoretical perspectives (Mayo, Kakarika, Mainemelis, & Dueschel, 2017) to reveal an underlying structure that provides deeper meaning of a phenomenon (Zhao, 1991). We propose that variety in the use of novelty and usefulness—the defining features of creativity—reflects the existence of a set of theoretical perspectives that can be discerned and compared to provide greater insight into creativity. Our meta-theoretical analysis proceeds in three stages, around which we organize the paper. First, we induce three meta-dimensions along which existing theoretical assumptions in the organizational creativity literature vary (Wallis, 2010). The meta-dimensions are the distal relationship between novelty and usefulness, distance to the context for evaluating novelty and usefulness, and distance in the process for producing novelty and usefulness. Next, we use the meta-dimensions to interrogate the literature. That reveals three theoretical perspectives on creativity, which we label *maximization*, *balance*, and *integration*. Finally, we build meta-theory to integrate the theoretical perspectives (Cornellisen, 2017; Wallis, 2010).

Our meta-theory comprises two key propositions. One is that each perspective aligns with a fundamentally different *form* of creativity; that is, a distinct manifestation of creativity that captures a particular aspect of the phenomenon in which novelty and usefulness have a particular meaning, relationship, and way of emerging. The forms are thus consistent, patterned ways of providing an answer to the question: what is creativity? The second proposition is that variation between the forms can be explained in terms of *distance* (e.g., drawing on the concept of psychological distance, Trope & Lieberman, 2010) of those seeking creativity (creators and judges) from the context for assessing creativity or the process of producing it. We argue that distance shapes the form of creativity, and so explains how creators move between forms. Thus, if creativity is the combination of novelty and

usefulness, distance can be likened to a mathematical function that changes the nature and relationship between constructs. Distance is therefore a previously unconceptualized factor that explains how the three forms relate to one another, providing deeper understanding of the phenomenon of creativity (cf Zhao, 1991).

Bringing these propositions together, our theorizing suggests that developing an idea or product for a distant alternative reality is a different form of creativity than developing an idea grounded in the here-and-now present moment, so that as creators move through space and time, they also move through different forms of creativity. That provides new insights into the generation and evaluation of ideas. Specifically, we suggest that idea elaboration and iteration can be understood as movements through different forms of creativity; and that inconsistencies in evaluations of creative products can be understood as mismatches between the form of creativity and the domain of its evaluation when creators and judges are at different distances from the creative act, as they are often likely to be. For example, extant literature would describe writing a book as the development of an idea through stages from generation to implementation (Amabile & Pratt, 2016; Perry-Smith & Mannucci, 2017), that could be assessed relative to a single domain (Amabile, 1996; Csikszenthmihalyi, 1999). Our meta-theory suggests that writing a book could also take three separate forms of creativity— creativity as maximization when freely imaging a new concept for the book; creativity as balance when figuring out how to pitch a proposal that will appeal to an agent; and creativity as integration when grappling with language, character, and story arc while writing. Each form entails distinct ways of producing and evaluating ideas.

Our meta-theory provides three insights that act as generative mechanisms for further research. First, whereas novelty has been prioritized as the defining feature of creativity, by putting the relationship between novelty and usefulness at the heart of our theorizing (Sutton & Staw, 1995; Weick, 1989), we show the critical importance of usefulness to understanding

creativity and call for attention to the role of usefulness in creative products and processes. Second, whereas the creative process is typically described as dynamic and iterative (cf Amabile & Pratt, 2016), our theory provides a new window into those dynamics. Finally, whereas research has advocated that ideas be generated independently from the environment for their selection (Campbell, 1960), we call attention to the dependencies between ideas and evaluative context. We propose that by planting seeds for further research into usefulness, processes, and interdependencies, our meta-theory brings creativity theory closer to the way that creators and collectives engage in the phenomenon, thus answering recent calls for "phenomenal theory" (Ployhart & Bartunek, 2019).

META-THEORETICAL REVIEW OF THE LITERATURE ON ORGANIZATIONAL CREATIVITY

Novelty and usefulness are the defining characteristics of creativity (Amabile, 1982; George, 2007; Guilford, 1950; Shalley, Zhou, & Oldham, 2004). Novelty sets creative ideas apart from tried and tested solutions or more routine problem solving (George, 2007). As such, novelty is viewed as the critical factor that distinguishes creative from non-creative ideas (Campbell, 1960; Litchfield, Gilson, & Gilson, 2015). Guilford (1950, 1957) proposed three measures of novelty used by most researchers today—fluency (number of ideas), flexibility (number of different categories a set of ideas fall into), and originality (uniqueness of ideas from others—often termed frequency). Usefulness distinguishes creative ideas from those that are crazy, fanciful, and bizarre (George, 2007) by requiring ideas to be relevant to a proposed problem or acceptable within the standards of a relevant domain (Guilford, 1950). The field has greatly benefited from strong consensus about these two defining criteria, enabling research on organizational creativity to cohere and flourish.

Meta-dimensions for Reviewing the Creativity Literature

Despite consensus on novelty and usefulness, variance persists in the way that novelty and usefulness are defined and measured. Novelty and usefulness are social judgements about

creative ideas and outcomes (Amabile, 1996; Csikszentmihalyi, 1996; Guilford, 1950) made by creators and evaluators (Berg, 2016; Mueller, Melwani, Loewenstein, & Deal, 2018). Because of their social nature, the comparison set for creative products can vary by task, context, and judge (Zhou, Wang, Xiaoye, Song, Jiwen, Junfeng. 2017). This means that, as a field, we have relatively little insight into what judges mean, or whether they all mean the same thing, when they describe an idea or outcome as creative (Amabile, 1996; Loewenstein & Mueller, 2016; Paletz & Peng, 2008; Ritter & Rietzschel, 2017).

By reviewing the creativity literature, we identified three ways researchers employ novelty and usefulness in studies—i) they assume or imply a relationship between novelty and usefulness; ii) they give meaning to novelty and usefulness through explicit definitions or operationalizations for evaluating each component relative to a given context iii) and they describe or theorize a process through which novelty and usefulness are produced. We use these as meta-dimensions (Wallis, 2010) for comparing studies to organize the literature. A key insight that emerged as we uncovered the meta-dimensions was that each describes a form of *distance*. The relationship between novelty and usefulness describes how closely related the two defining features are in creative products or acts; the definitions of novelty and usefulness describe the distance between creative products or acts and the context in which they are evaluated; and the process for producing novelty and usefulness describes the distance between stages of the creative process. Below, we introduce the meta-dimensions to elaborate the role of distance, before reviewing the literature on organizational creativity by structuring it around the three meta-dimensions (Mayo et al., 2017).

Distal relationship between novelty and usefulness. The first dimension that emerged from our review is the distal relationship between novelty and usefulness. Creativity studies make a variety of implicit and explicit assumptions about how closely related the two dimensions are in creative products or outcomes. Some research views novelty and

usefulness as independent contributors to judgements of creativity (Diedrich et al., 2015; Paletz & Peng, 2008; Runco & Charles, 1993; Sullivan & Ford, 2010). That research suggests that creativity is made up of two continuous variables representing two orthogonal dimensions—novelty and usefulness—that contribute independently to creativity (Perry-Smith & Coff, 2011). These variables are additive, such that an increase or decrease in one corresponds to a proportional increase or decrease in creativity, or multiplicative, such that some non-zero level of both novelty and usefulness are required before the object can be considered creative. The dimensions are untethered, so that novelty and usefulness may be far apart in creative products.

Other research conceptualizes novelty and usefulness as inherently interdependent. One stream of work explicitly theorizes that novelty and usefulness are paradoxical (e.g., Berg, 2014; Miron-Spektor & Erez, 2017), so that they appear to be incompatible and thus negatively related (Poole & Van de Ven, 1989; Smith & Lewis, 2011). For creative products to be novel and useful, they must have moderate levels of both (otherwise, they can have one attribute but not the other). Novelty and usefulness are thus brought closer together in creative outcomes. Alternatively, novelty and usefulness are viewed as working together in parallel (e.g., George & Zhou, 2001; Tierny et al., 1999), so that they are mutually enhancing and inextricably connected within creative ideas (Farjoun, 2010; Schad et al., 2016). From that perspective, novelty and usefulness are very closely intertwined in creative products.

Distance to evaluative context for novelty and usefulness. The definitions of novelty and usefulness also vary across studies in terms of how distant creative products or acts are from the target domain in which they are evaluated. It has long been recognized that novelty exists relative to a context or judge (George, 2007). Target domain includes any framework against which ideas will be judged, such as a product category, a market, a country, an audience, or a field. Most foundational creativity theories incorporate a context

for assessing ideas. For example, prior theorizing emphasizes the domain or field of knowledge (Csikszentmihalyi, 1996; Shapiro, 1968), context related to some group at a given point in time (Amabile, 1996; Woodman, Sawyer, & Griffin, 1993). Domains have their own norms, rules, framings, and knowledge (Csikszentmihalyi, 1996) and imply a particular comparison set, or ideational pool, for assessing the novelty and usefulness of ideas (Runco & Charles, 1993; Simonton, 2003; Mumford, Lonegran, & Scott, 2002).

Definitions of novelty and usefulness contain an implication of the target domain for assessing the dimension, often by providing an explicit comparison set. Studies vary in how distant the implied set is from the idea, whether because the set is far away from a target idea, or because the set is broad and diffuse. If a comparison set is broad (e.g., the domain of art), it is difficult to be close to it, as one may be close to some elements that make up the set, but is likely to be farther from others (e.g., a marble sculpture in human form is close to some parts of the domain, like other marble sculptures or paintings of the human form, but far from other parts, like a musical composition). Some scholars imply that novelty of ideas is assessed relative to a broad and distant comparison set of imagined ideas by emphasizing that novel ideas should be entirely new to the world (Csikszentmihalyi, 1999) and ideas that "...other people would be unlikely to think of" (Harrington, 1975: 438). Alternatively, novelty may be defined as unexpected (Kampylis & Valtanen, 2010), which may occur because an idea is new to a given domain (Hargadon, 2002) so that novelty of an idea is "the extent to which it deviates from the traditional or status quo", (Stein, 1953, 311) and so is assessed close to the target domain. Similarly, variance exists in implied distance to the target domain for assessments of usefulness. Some definitions emphasize that useful ideas are those that are effective for solving a given problem or meeting specific needs or constraints (Ford & Gioia, 2000; Stein, 1953; Diehl & Stroebe, 1987), so that the comparison set is close to the proposed idea; whereas others emphasize the extent to which ideas provide broader value to an

organization or culture (Csikszentmihalyi, 1999; Litchfield et al., 2015; Shalley et al., 2004), so that the comparison set is a distant, long-term future utility.

Distance between stages of process for producing novelty and usefulness. Finally, the creativity literature varies in how distant the stages are in the process for producing novelty and usefulness. Research has theorized evolutionary and staged processes in which stages are separate or even isolated (Osborn, 1953; Diehl & Stroebe, 1987; Rietzschel et al., 2010; Amabile et al., 1996). Generation is followed by evaluation, selection, and ultimately implementation (Campbell, 1960; Staw, 1990; Amabile & Pratt, 2016; Wallas, 1926), with earlier stages focusing on novelty and later stages focusing on usefulness (Staw, 1990). However, other work shows that the creative process is inherently embedded in a social context (Cattani & Ferriani, 2008; Czikszentmihalyi, 1999), and that the processes of generation and selection may be more closely intertwined (e.g., Hargadon & Bechky, 2006; Harrison & Rouse, 2014; Harvey & Kou, 2013; Sawyer, 2000). For instance, groups engage in processes in which generation and selection work in parallel, such as producing and resolving constraints (Harrison & Rouse, 2014). In those cases, stages move much closer together, to the point of becoming simultaneous.

Three Theoretical Perspectives as Forms of Creativity

Building on the diversity of distal relations for novelty and usefulness we observed across the creativity literature, the next step of building our meta-theory was to systematically review the literature along the three meta-dimensions (Wallis, 2010), categorizing studies of creativity according to what they assume or imply about the relationship between novelty and usefulness, how they define the context for assessing novelty and usefulness, and how they describe the distance in the process of producing novelty and usefulness. This draws on a typological style of theory building in which we "draw together and integrate different

constructs" (Cornellisen, 2017, 6-7) by extracting key insights from extant literature and theorizing about how and why the constructs relate within a particular form.

From that process, three perspectives on creativity emerged—*maximization*, *balance*, and *integration*. We summarize the three perspectives in Table 1. The table shows that each perspective has distinct theoretical roots and is represented by coherent streams of research in the creativity literature today. It is also evident that streams within a perspective are distinct, and in many cases, diverse. However, as our goal is to integrate broadly, we focus on those ideas where diverse streams of research come together, and de-emphasize their differences. There is also some variance in the dominance of a given level of analysis within each perspective (for example, the maximization perspective contains a greater balance of studies with an individual level focus relative to the integration perspective, which contains a greater balance of studies with a collective or system level focus). However, the perspectives can and do cross levels, both theoretically and empirically, so we view each as applicable to individual and collective levels.

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It is possible to see the three perspectives as artefacts of their distinct theoretical and empirical traditions. However, we propose that the different theoretical perspectives are better understood as representing three distinct *forms* of creativity. By form, we mean a manifestation of creativity that captures a particular aspect of the phenomenon in which novelty and usefulness have a particular relationship, context for evaluation, and process of emerging (see also Crossan & Apaydin, 2010). Each form is a way of answering the question: what is creativity? There are at least three reasons to view each theoretical perspective as aligned with a form of creativity. First, novelty and usefulness are the defining features of creativity. As such, different answers to the questions of what novelty and usefulness are and how they are related imply different ways of understanding what creativity is. Second, the

divergent interpretations of these terms and their relations cannot logically all be true at the same time—novelty and usefulness cannot be both positively and negatively related; the process of creativity cannot simultaneously involve separating and integrating activities. Third, as we show in Table 1, although the balance of methods used in different perspectives differs (e.g., more experimental work in maximization and more qualitative work in integration), there is also methodological variety within theoretical perspectives. For instance, integration theories include qualitative process-based studies (e.g., Sonenshein, 2016) but also quantitative field-based and archival research (e.g., Uzzi & Spiro, 2010). We therefore propose that methodological differences relate to researchers' attempts to capture a wide range of processes and outcomes that embody different forms of creativity, from the development of artistic products like music, dance, and video games, to organizational developments like new designs, policies, and routines, to knowledge outcomes like research and development insights, conceptual combinations, and new perspectives (cf Fisher et al., 2018; Goh et al., 2013; Grimes, 2018; Lingo & O'Mahony, 2010).

At the same time, the forms should not be understood as types into which creative acts or outcomes can be firmly categorized, but rather run along a continuum. The forms are ideals that may be blurred or combined. For example, ideally, in brainstorming people may not consider usefulness of their ideas at all. However, it is likely that in practice, people consider usefulness in differing degrees, with some people ruling out any impractical idea. Precisely at what point creativity switches from one form to another is therefore unclear; and capturing it empirically is challenging. Some studies already engage complex images of creativity that do not fit neatly into a single form. For instance, Beenen & Miron-Spektor (2015) draw on both balance and integration theories, showing how creators experience tension between novelty and usefulness, yet move towards integrating those dimensions.

Thus, both practitioners and scholars may experience and capture multiple forms in the course of creative work.

Maximization Perspective. The maximization perspective is that creativity is maximized when both novelty and usefulness are at their highest levels, because each can be independently optimized. This view draws on evolutionary theory, in which novelty is produced through unconstrained idea generation and ideas are subsequently filtered for usefulness (Campbell, 1960; Staw, 1990), and on stage models that conceptualize creativity as a progression from generating ideas in response to a particular problem to assessing and selecting ideas that best fit the problem (e.g., Amabile, 1996; Csikszentmihalyi, 1996; Hogarth, 1980; Wallas, 1926). The primary generative motor in evolutionary theory is blind variation; the primary generative motor in stage models is divergent thinking. The theories share the view that generation produces novelty, then only the most useful ideas should be retained. This perspective is relatively dominant in organizational creativity research. It is evident in streams of research on brainstorming (e.g., Diehl & Stroebe, 1987), divergent thinking and cognitive effects of conflict (e.g., Beersma & De Dreu, 2005; Nemeth & Kwan, 1987), and problem-solving approaches to creativity (e.g., Delbecq & Van de Ven, 1971). It emphasizes the cognitive process of idea generation (e.g., Amabile, 1988; Rietzschel, Nijstad & Stroebe, 2006), the factors that influence those processes such as affect (De Dreu, Baas, & Nijstad, 2008), and organizational context (Shalley, 1995).

Form of creativity as maximization. Grounding this perspective in the phenomenon, the form of creativity as maximization entails engaging in virtually random or blind divergence of ideas that takes them into fanciful directions, to maximize novelty, with no concern for the utility of ideas, only later filtering ideas for that criterion. Pure imagination would fit this form of creativity, as Perry-Smith and Mannucci (2017) describe:

> Screenwriters' ideas for new movies can be inspired by different elements, such as a book, a real-life event, or an anecdote. For example, Wes Anderson, the famous

screen writer and director, got the initial inspiration for the story of *The Royal Tenenbaums* by the chance purchase of a CD of Maurice Ravel's music. While he was listening to Ravel's "String Quartet in F Major," he started thinking about "an F. Scott Fitzgerald-type New York story. I pictured it being set in the 1960s, though. It was probably a bit like Good Night and Good Luck, something like that!"(Seitz, 2013: 28). This anecdote underlines the randomness and unpredictability of the idea generation process…" (Perry-Smith & Mannucci, 2017, 55).

Brainstorming and computational approaches to creativity would also take this form. This does not imply that creativity as maximization necessarily ends with an idea—an idea can be turned into an innovation through its implementation, which takes place at a later stage and where feasibility and practicality take priority. Thus, a funnelled form of innovation also fits this type. As another example, consider a chef who wants to identify a new flavour combination. If she starts with a set of ingredients, tries every combination and eliminates those that are not novel, then selects the most delicious one, she has engaged in creativity as maximization. She can then turn the combination into an innovation by implementing it in a dish served in her restaurant.

Distal relationship between novelty and usefulness. In maximization, novelty and usefulness are relatively distant from one another. A tenet of evolutionary theory is that creativity is maximized when variations are independent of the selection environment (Campbell, 1960). Correspondingly, maximization theories view novelty and usefulness as independent contributors to judgements about an idea's creativity (Diedrich et al., 2015; Paletz & Peng, 2008; Runco & Charles, 1993; Sullivan & Ford, 2010), so that in creative products, novelty and usefulness may be distant from one another, with some ideas being highly novel but low in usefulness and vice versa. Perry-Smith and Coff (2011) noted that "antecedents across the two components may differ… some factors may lead to novel ideas that are not terribly useful, while others may promote solutions that are useful but rather mundane. Treating these as a single dimension may obscure those more subtle effects." In an examination of the creativity of managerial decision making, Ford and Gioia (2000) also

found that independent factors led managers to label decisions made in the course of their work as novel versus valuable. Factor analysis has also demonstrated that novelty and usefulness are independent facets of creativity (Besemer & O'Quin, 1986; O'Quin & Besemer, 1989; O'Quin, 1988).

Distance to evaluative context for novelty and usefulness. The contexts for assessing novelty and usefulness are relatively distant in studies drawing on this perspective. Novelty is typically defined as a global measure of uniqueness or originality (e.g., George & Zhou, 2001; Paletz & Peng, 2008) relative to a broad and therefore more distant comparison set. Emphasizing that novelty is compared relative to a large and varied set of ideas, Souriau (1881; cited in Campbell, 1960) explained that, because a large number of "possibilities are produced, most of them worthless… only rare ones" will fit the task. Campbell's (1960) development of evolutionary theory to explain "breakouts" from available wisdom suggests that novel ideas represent significant changes relative to all existing knowledge in a domain. Other scholars suggest that novel ideas are those that only a small number of people in the population are likely to come up with (Dietrich et al., 2015; Harrington, 1975; Runco & Charles, 1993), implying that ideas are compared with all possible ideas that could be generated. Empirically, this is often measured in terms of general statistical rarity or uniqueness (e.g., Osborn, 1953; Runco & Charles, 1993; Wilson, Guilford, & Christensen, 1953); although originality may be assessed relative to responses given within a particular study, instructions to judges tend to ask for global assessments of originality without qualifying the comparison set.

Maximization theories define usefulness, in contrast, as compared to a close comparison set. Usefulness often means functionality for a particular problem or task (e.g., George & Zhou, 2001; Perry-Smith & Coff, 2011). Usefulness is therefore determined by the selection environment (Campbell, 1960). Empirically, researchers adapt usefulness criteria to

the task studied. For example, Paletz & Peng (2008) include specific criteria for judging the quality of a text book, like that it should be easy to read; and Runco & Charles (1993) assess usefulness of ideas for 'things that are square' on whether or not they are actually square. Ideas are therefore judged in terms of usefulness according to a relatively close comparison set of things that are very similar to themselves within a target domain. In turn, that means that the context for assessing novelty and usefulness are distant from one another.

Distance in process of producing novelty and usefulness. Maximization theories describe producing novelty through idea generation and elaboration at the beginning of the creative process, and later assessing usefulness as a filter for selecting ideas (Amabile, 1988; Campbell, 1960). Implementation occurs at the end of the process. The stages are viewed as separate and distinct, representing different goals. For instance, Rietzschel, Nijstad, & Stroebe (2010) found that participants focused on novelty in selecting ideas to a creativity prompt but feasibility when prompted to identify the best ideas. This is also evident in the now ubiquitous advice to separate novel idea generation from idea selection, which should focus on evaluating the quality of ideas (e.g., Osborn, 1953). Ideas can be revisited to during the process, but iterating means returning to the beginning of the process and proceeding through it again in a relatively linear fashion (Amabile & Pratt, 2016).

Balance Perspective. The balance perspective implies that creativity is highest when ideas hold moderate levels of novelty and usefulness, balancing an inherent tension between them. This involves maintaining and negotiating opposing forces, drawing on theories of conflict, power, and paradox (Drazin, Glynn, & Kazanjian, 1999; March, 1991; Kuhn, 1963), and using tension as the generative fuel for creativity (Bledow, Frese, Anderson, Erez, Farr, 2009; Miron-Spector & Erez, 2017). These theories emphasize the contradictory nature of creativity, which has been deeply embedded in our understanding of the phenomenon since Guilford (1950) described the two opposite thought process of divergent thinking that

broadens out into many ideas and convergent thinking that narrows towards one solution. From this perspective, novelty and usefulness can be viewed as paradoxical (Berg, 2019; Drazin et al., 1999; Miron-Spektor & Erez, 2017; Miron-Spektor, Gino & Argote, 2011), so that creativity involves moderating between the two. Thus, ideas are low in creativity if they are high only one dimension, because they are necessarily low in the other.

Balance theories include cognitive models of creativity that describe iterating between generating seeds of ideas and refining them according to task constraints (e.g., Finke et al., 1992); studies of how creators and collectives in organizations balance multiple conflicting goals (e.g., Gilson, Mathieu, Shalley, & Ruddy, 2005; Rietzschel, Nijstad, & Stroebe, 2010); and research on exploration versus exploitation that traditionally treats those options as incompatible and requiring a choice about which to allocate resources to (March, 1991; Gupta, Smith & Shalley, 2006). Correspondingly, balance theories focus on the experience of and cognitions associated with tension (e.g., Miron-Spektor & Erez, 2017) and the social dynamics of conflict (Drazin et al., 1999; Lovelace, Weingart & Shapiro, 2001).

Form of creativity as balance. The form of creativity as balance entails moderating between novelty and usefulness, often by shifting back and forth between the two. Goh et al.'s (2013) study provides an example of how video game developers shift between making the game novel and modifying their designs to make the features useable:

> There's this constant balancing act of adjusting something over here and making sure nothing else got messed up along the way. . . . There's a lot of cycles going back and forth between myself and [the] design [team members] until it was what they were envisioning

Similarly, the chef described above may engage in creativity as balance when she a recipe to make it spicier or to cook more quickly, shifting the output towards either novelty or usefulness. New product development teams similarly moderate between developing an idea for a future reality while considering how to produce and implement the idea today (e.g.,

Miron-Spektor, Erez, & Naveh, 2017). In this case, implementation occurs in small steps, as an idea is trialled then adjusted, moving the idea gradually closer to the finished product.

Distal relationship between novelty and usefulness. At the heart balance theories is an assumed negative relationship between novelty and usefulness. Although paradox scholars recognize that elements are interrelated (Schad et al., 2016; Smith & Lewis, 2011), paradox research typically emphasizes their oppositional and contradictory nature (Poole & Van de Ven, 1989; Schad et al., 2016). Correspondingly, we define paradox between novelty and usefulness as a negative relationship such that, as novelty increases, usefulness decreases and vice versa. This means that conceptually, the two definitional components are distant, but in creative products, they must be balanced, or brought closer together.

Some studies directly posit a negative relationship between novelty and usefulness (e.g., Berg, 2016). A large body of research is consistent with this view, showing how novelty and usefulness are facilitated by conflicting factors and associated with opposing contexts. For example, people tend to select ideas that are high in feasibility, popularity, and value for the greatest number of people at the expense of choosing ideas that are high in originality (Blair & Mumford, 2007; Rietzschel, Nijstad, & Stroebe, 2010). The negative relationship between novelty and usefulness is also evidenced by research that shows that different factors facilitate novelty versus usefulness, and indeed the facilitators of usefulness may limit idea novelty, and vice versa. For example, generating novelty is enabled by self-focused intrinsic motivation whereas generating usefulness is facilitated by other-focused perspective taking (Grant & Berry, 2011); high conscientiousness may be associated with generating useful solutions but is less likely to be associated with generating novel solutions (Gruys et al., 2011); and displaying negative affect in pitches enhances investors' evaluations of the quality of ideas, whereas positive affect is important for generating novel ideas (Milovac & Sanchez-Burkes, 2014). Studies in this vein also suggest that as ideas increase in

novelty, they become more difficult to implement, less feasible, and more difficult to assess (Klein & Knight, 2005; Mueller, Wakslak, & Krishnan, 2014; Shapira, 1995).

Distance to evaluative context for novelty and usefulness. Balance theories tend to define both novelty and usefulness in terms of more narrow and closer target domains than do maximization theories, by emphasizing novelty for solving a particular problem or task and usefulness in terms of feasibility or use to a given audience. Like research from a maximization perspective, studies in this vein may assess statistical uniqueness of ideas relative to the set generated in the research, but they often caveat instructions to judges to assess ideas relative to a similar set, such as other circus acts (Berg, 2016) or other products (Miron-Spektor & Beenen, 2015). There is also consistency amongst studies drawing on balance theories in defining usefulness as assessed relative to a close target domain, such as a value to a particular audience (Berg, 2016) or feasibility in a specific context (Rietzschel, Nijstad, & Stroebe, 2010). For example, Mueller et al. (2012) asked subjects to evaluate the potential success of a product, which involves estimating how well it will be received in a market; Fleming (2001) evaluated success in terms of actual use of patents by other inventors; and Milovich & Sanchez-Burks (2014) asked participants how much they would be willing to invest in entrepreneurial ventures. Each measure entails evaluating how an audience may compare an idea or product to others that exist in the same category. Thus, the comparison set for novelty and usefulness is relatively close to the creative task and output.

Distance in process of producing novelty and usefulness. Balance theories posit a creative process of iterating closely between opposing dimensions, adjusting ideas to make them more novel or more acceptable to key stakeholders. Drazin, Glynn, & Kazanjian (1999) describe this process as a continual negotiation, for instance, between the opposing frames held by different organizational groups, who shift in power over time. The creative process, then, cycles between ideas that are novel and useful for one audience, and those that are novel

and useful for the other. At the collective level, Harrison & Rouse (2014) describe how groups balance between individual creative autonomy to produce novelty and constrained action to coordinate collectively. For individual creators, this involves balancing conflicting dimensions at all stages of the creative process, both in idea generation and idea selection. As Miron-Spektor et al. (2011) note, "focusing on only one demand can be maladaptive. Too much focus on originality…with little or no emphasis on constraints…may result in novel but overpriced produces that do not meet consumers' needs" (Miron-Spektor et al., 2011, p 229). This form thus suggests cycles of convergence and divergence (Goh et. al., 2013). At the cognitive level, the geneplore model (Finke et al., 1992) describes this cycling as generating seed ideas and refining emergent ideas according to task constraints. Thus, unlike maximization theories that advocate separating stages of the process, in balance theories, stages of the process are relatively closer together.

Integration Perspective. The integration perspective suggests that creativity is highest when novelty and usefulness come together, recognizing the connection between them. This view emphasizes the "selection, rejection, and synthesis of disparate ideas and contributions into a coherent whole" (Lingo & O'Mahony, 2010), drawing on theories of synthesis, combination, and brokerage (Koestler, 1965; Burt, 1994; Hargadon, 2002). As Koestler (1964) wrote, "the creative act…does not create something out of nothing: it uncovers, selects, re-shuffles, combines and synthesizes already existing facts, ideas, faculties and skills." It thus involves searching for connections between elements (Harvey, 2014) and reorganizing them into new patterns (Hargadon & Bechky, 2006; Soda et al., 2021), emphasizing the interconnections between apparently conflicting or disparate ideas (Farjoun, 2010). The generative motor in integration theories is combination (Poincare, 1913; Burt, 2004) and the defining feature is the emergence of a coherent whole (Rothenberg, 1996; Koestler, 1964). Holistic integration provides a transformation that has been referred to as the

"magical synthesis" (Arieti, 1976; Csikszentmihalyi, 1988), so that creativity exists when an idea embodies both novelty and usefulness connected together.

Like the other perspectives, integration is deeply embedded in creativity research. Along with integrating ideas as a foundation for creativity (e.g., Koestler, 1964; Poincare, 1913; Hargadon, 2002), a common measure of creativity in organizational field research is a single scale with multi-barreled items that capture both novelty and usefulness (e.g., George & Zhou, 2001; Oldham & Cummings, 1996; Scott & Bruce, 1994; Tierney, Farmer, & Graen, 1999). This suggests an implicit assumption that the dimensions in some way move in parallel to produce creative outcomes (Berg, 2014; Gruys et al., 2011). Research from this perspective tends to emphasize collective dynamics that prioritize interactions over cognitive processes (Hargadon & Bechky, 2006; Soda et al., 2021). This form also draws on a "logic of attraction" (Ford & Ford, 1994), emphasizing supportive contexts (e.g. George & Zhou, 2007; Shin & Zhou, 2003) in which ideas are brought together, built on and transformed (Vera & Crossan, 2005; Lingo & O'Mahony, 2014; Harvey & Mueller, 2021).

Form of creativity as integration. Creativity as integration entails transforming ideas into new patterns and new meaning through synthesis. Tsoukas (2009) provides an example in describing the creativity of conversations in the course of producing new knowledge:

> "an actor cannot know the meaning of his utterance until another actor has responded. As Sawyer (2003, p. 43) remarks, "the complete meaning of a turn is dependent on the flow of the subsequent dialogue." An utterance has the potential to mean, but contains no meaning in itself; its potential is realized through another's response (Gergen et al. 2004, p. 12)." (Tsoukas, 2009, 4)

From that perspective, when an utterance is made, it is both novel and useful, because it changes the conversation and in doing so initiates new meaning, which has value. At the same time, the example illustrates the close link between novelty and usefulness, as well as the tight integration of the process through which they are produced. The initial comment cannot be understood without a response; correspondingly, an idea is understood both

through its generation and evaluation. Returning to the example of the chef described in the preceding sections, the chef engages in creativity as integration if she makes a dish that looks like one thing, but tastes like something different, so that both the novelty of the dish and its usefulness come from the same source—the surprise of the unexpected flavour. Creativity as integration also occurs in improvisation, where novelty produces value to the performance (e.g. Sawyer, 1992). In this form of creativity, the idea and corresponding product co-develop; the idea itself is itself a result of its implementation (Fisher & Barrett, 2019).

Distal relationship between novelty and usefulness. Integration theories portray novelty and usefulness as closely intertwined, consistent with a duality view in which the dimensions are interdependent and move in concert (Farjoun, 2010; Shad et al., 2016). Poincare (1913) conceived of the most useful mathematical combinations as also being the most beautiful and harmonious. This means that stimulating one dimension also enhances the other. For example, Ford & Sullivan (2004) show that novelty early on during the creative process can enhance outcomes because novel contributions increase the consideration set, prompt more rigorous discussion of alternatives, and facilitate learning. This view of the distal relationship is most evident in studies that measure novelty and usefulness within a single construct with scale items that assess both simultaneously (Amabile et al., 1996); for instance, Zhou & George (2001) included an item in their measure of creativity that assessed whether employees suggested *new* ways to improve *quality* (see also Tierney et al., 1999). Other studies imply that novelty and usefulness are compatible and co-existent. For instance, Miron-Spektor and Beenen (2015) found that inducing both learning and performance goals simultaneously in experimental participants led to higher levels of both novelty and usefulness; Miron-Spetor, Erez, and Naveh (2011) found that teams produced more radical innovation when they included both creative and conformist members; and Gilson, Mathieu, Shalley, & Ruddy (2005) found that teams performed better when they both worked in a

creative environment and used standardized work practices. These findings suggest that novelty and usefulness can work together to enhance creativity. However, the potential duality between novelty and usefulness is rarely explicit in research.

Distance to evaluative context for novelty and usefulness. Integration theories emphasize that novelty is contained in a new pattern or arrangement of pre-existing components or ideas (Hargadon, 2002; Weick, 1989). The comparison set for assessing novelty, and therefore the target domain, is narrow and close to the idea being evaluated— ideas are judged relative to the present state; that is, whether an idea changes the status quo within a specific context, like an organization, a routine, or a team. The comparison for the idea is thus a set of one. For example, Obstfeld (2005) defines a creative project as action that introduces change into a social system. The definition of usefulness expands under this form to include an idea's broader value to a social system (Csikszentmihalyi, 1999). Usefulness is thus considered in terms of whether a change brings some benefit. For instance, Ford (1996) explicitly uses novelty and value to define creativity and Shalley et al (2004) use an overall measures of team effectiveness, judged by an organization. Harvey & Mueller (2021) describe how policy teams came to believe their solutions to improve healthcare could only be useful if they were also novel enough to change the current system, because only then would the solutions create value.

Distance in process of producing novelty and usefulness. Integration theories closely connect phases of the creative process (Sawyer, 2000). Harvey & Kou (2013) argue that in groups, idea evaluation is also a generative act, noting that "When one group member shifts a discussion toward an idea suggested by another... that is a moment of idea generation for the originator and evaluation for the other." (Harvey & Kou, 2013, 27). Similarly, in networks research, creative brokers both identify relevant knowledge, and synthesize it to produce new insights (Burt, 2004; Fleming, Mingo, & Chen, 2007). Thus, novelty and usefulness co-

develop throughout an ongoing process where generation and selection are intertwined. Because an idea involves an emergent pattern that shifts how different components work together, creators must constantly iterate between generating ideas, making changes, and filtering based on how the changes influence the entire idea, in an integrated process. This perspective prioritizes creative actions over creative thoughts (Ford, 1996; Obstfeld, 2005; Tsoukas, 2009). When a creative response is enacted, it is both generated and selected. Alternatively, an individual broker may act as an integrator (Lingo & O'Mahony, 2010).

Combining the Three Forms of Creativity

Whereas it is possible to engage in only one form of creativity (for instance, maximizing through brainstorming, balancing through generating an implementation plan, or integrating through improvising), it is unlikely that the forms are entirely mutually exclusive. A given creative act may involve multiple forms, as an idea develops through space and time. In the following section, we develop an integrating framework for how creators may move between the forms. As we will discuss, applying the framework demonstrates that moving between the forms can help us to understand the elaboration, iteration, and evaluation described as core to creativity as processes that combine and integrate *across* the three forms.

DISTANCE AS AN INTEGRATING FRAMEWORK FOR CREATIVITY FORMS

A goal of meta-theory is to uncover underlying structure that provides deeper understanding of a theory (Zhao, 1991). Having identified alternative forms of creativity, therefore, we now aim to develop a framework for understanding how the different theoretical perspectives we observed relate to one another (for examples of similar approaches, see Chao & Moon, 2005; King, Felin, & Whetten, 2010; Mayo et al., 2017).

A key insight of our review is that each form of creativity is characterized by distinct distal connections between novelty and usefulness. Maximization theories describe novelty and usefulness as separate, untethered, and potentially distant; paradox theories describe a

moderately close relationship with novelty and usefulness in tension, but pulled closer together in creative products and processes; and integration theories describe tightly intertwined relationships in which novelty and usefulness move towards one and the same.

Our overarching theoretical proposition, therefore, is that distal relations between novelty and usefulness shape the form of creativity. At the heart of our theorizing is the notion that creating something for a far away, distant context takes on a different form (maximization) than creating something at a modest distance or time (balance), and both take on different forms than creating something here and now for the present moment (integration). We propose that creators and judges will interact differently with ideas at different distances—they will draw on different sources of inspiration and prioritize goals and concerns differently. Ideas will therefore derive novelty and usefulness from different places. Distance is thus a previously unarticulated explanation for how creators engage in creativity.

The concept of distance has recently found prominence through research on psychological distance (for reviews, Trope & Liberman, 2010; Trope, Liberman, & Wakslak, 2007), which explains how people "experience… alternatives to reality" (Trope & Liberman, 2010, 440) as a function of distance between the self and a target reality. We propose that this theory can be productively applied to understanding forms of creativity, because creative ideas, by their nature, present "alternatives to reality". We stretch the concept by theorizing relations between forms of creativity; whereas construal level theory connects psychological distance to levels of abstraction, we connect it to how novelty and usefulness are conceived of and combine. We first introduce two dimensions along which we conceptualize distance, before theorizing about how distance shapes the form of creativity.

Dimensions of distance. Psychological distance describes distance between an anchor, who according to the theory is the self (Bar-Anan, Liberman, & Trope, 2006), and a target. This means that, in a given situation, at least two points are relevant for assessing,

measuring, or altering, distance. Prior research elaborates four facets of psychological distance—temporal, physical, social, and hypothetical distance (Trope & Liberman, 2010). We borrow from and adapt those facets to the context of creativity to theorize two distinct distal relations based on our meta-dimensions—contextual distance, which is the distance between a judge or creator (the anchor) and a target domain (the target), and processual distance, which is the distance between a creative idea or act (the anchor) and its realization (the target) that emerges from how closely the stages of the creative process are connected.

Following construal theory, we suggest that different dimensions resolve down to a single experienced distance, and it is the overall pattern of distance that shapes the form of creativity (Trope & Lieberman, 2010). We expect the dimensions to be correlated (Trope & Liberman, 2010). For example, if an expert in a field develops a specialized new product, contextual distance is low; that expert is also more likely to have access to materials or equipment that allow them to experiment with and rule out some ideas during generation, thus collapsing the stages so that processual distance is also low. At the same time, distance need not be the same for both facets. The dimension most salient in a given context will have the greatest impact on the overall pattern (Trope & Liberman, 2010).

Contextual distance. We define contextual distance as the distance between the judge of novelty and usefulness and the target domain for an idea. We consider both external evaluators and creators themselves to be judges, because the social nature of creativity means that both creators and evaluators have internal definitions of creativity (Litchfield, 2008; Runco & Charles, 1993). Describing distance as the space between a judge and the target domain implies that distance can change when either the judge or the target domain change relative to the other. By extension, contextual distance is influenced both by factors that affect the location of the judge relative to the domain, such as her expertise or social relationship with others in the context; and by factors that affect the location of the domain

relative to the judge or creator, such as whether the idea is developed for present or far future use or for a distant location versus the judge or creator's home. For instance, a physics professor may be intimately aware of and steeped in the field of particle physics, and therefore close to the target domain, whereas a novice begins far from the domain. Alternatively, a creator developing an idea for a new car would be closer to the target domain if developing a car to drive now (with a comparison set of cars currently on the road) than if developing a car for 10 years from now (with a comparison set of future cars), or if developing a car that could work on Mars (with a comparison set of imagined Martian cars).

Processual distance. We define processual distance as the distance between the generation of a creative idea and its realization in physical form. While process models have evolved over the years to include less strict delineation of stages and iterative or recursive looping between stages (Amabile, 1996; Amabile & Pratt, 2016), those models retain the notion that as ideas move through the process they get closer to implementation, which is equated to physical or material realization. This means that distance changes either when an idea moves forward through the creative process towards implementation, or when stages of the creative process move closer together, so that ideas are enacted in physical form during earlier stages of activity. Viewing ideas as closer when they move towards implementation mirrors research on temporal psychological distance, which shows that events, plans, thoughts and actions are represented in an abstract form when they are far in the future[1], and more concrete form when they are temporally close (Trope & Lieberman, 2010). Yet, ideas can also be generated and developed through a physical form (Hua et al., 2022)—that is, by physically or materially enacting the idea by engaging with material (Stigliani & Ravassi, 2018; Sawyer & DeZutter, 2009) or an embodiment of the idea (Heracleous & Jacobs, 2008;

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[1] Ideas may also be temporally distant if they are in the past, but since creators do not develop ideas for the past, we focus here on future distance. We consider past distance when turning to the distance between an idea and an evaluator or judge of the idea in the following section.

Endrissat & Noppeney, 2013) during generation. In those cases, idea development shapes experiences and perceptions before cognition. For example, a dance move (Harrison & Rouse, 2014) or a musical improvisation (Sawyer, 1992) are ideas in close physical form, even though they may not be implemented or even close to the end of the creative process. Processual distance therefore captures both the extent to which stages occur close together and how close an idea is to a physical form.

   How distance shapes creativity forms. Research shows that one's perception of how close or far away something is to present reality (the self, in the here-and-now) affects the level of abstraction with which they think about a focal object, with distant objects being represented in more abstract form (Bar-Anan, Liberman, & Trope, 2006; Liberman, Macrae, Sherman, & Trope, 2007). Correspondingly, we propose that the greater the distance, the more likely creators and evaluators are to represent ideas in a more abstract form (Förster, Friedman, & Liberman, 2004), and the more an instance of creativity will fit the form of maximization. This accords with the dominant view of construal level that abstract thinking facilitates creativity (e.g., Berg, 2019; Mueller, Wakslak, Krishnan, 2014). However, whereas that research would suggest that concrete thinking is harmful for creativity, other work suggests that making ideas more concrete, in the form of metaphors (Leung, Kim, Ong, Qui, Goncalo, & Sanchez-Burks, 2012), prototypes (Hargadon, 2002) or other boundary objects (Carlile, 2002; Stigliani & Ravasi, 2012) enhances creativity. We contend that, rather than revealing differences in the magnitude of creativity that results from abstract or concrete interactions with ideas, those streams of research highlight different forms of creativity. Specifically, we argue that when psychological distance is close, so that ideas are represented in more concrete form (Förster et al., 2004), the more an instance of creativity will fit the form of integration. Thus, abstract thinking may be helpful for creative tasks that take on the form of maximization, but harmful for tasks that take the form of integration. We suggest that

moderate levels of psychological distance, where ideas involve both abstract and concrete manifestations, will be associated with the balance form of creativity.

To elaborate our theorizing about how distance shapes the form of creativity a creator engages in, we present a detailed example of writing a book according to three different forms: i) generating the concept for a book then executing that concept, ii) developing the concept and pitching it to publishers, then writing it with continual feedback from editors; and iii) letting the concept for the book emerge through its writing. Although one can view the movement from identifying a concept to developing a proposal to writing a book as a natural linear progression through the creative process, we suggest that would best fit the maximization form and that other forms of writing a book are possible, with creative ideas developing in different ways. We describe these through the example.

When an author initially develops a concept for a book, she is relatively distant from the domain for realizing the idea, because the idea is an abstract mental representation that will only be realized in the future, and its ultimate fate is initially entirely unknown, as the author cannot know whether publishers will accept the idea. We propose that developing the concept takes on the form of maximization. Its novelty is most usefully judged globally, in terms of whether anyone else would think of the same idea, because comparing it to existing novels does not capture whether someone else may develop the same concept before the idea is realized. The usefulness of the concept is determined by whether it offers a blueprint for developing a novel; that is, the fit with the task. Novelty and usefulness are independent— one concept could be to write a historical book about the present day, and another could be to write a book with no words; both may be statistically rare, but the first is a solution to the problem of what to write a book about, and the second is not, suggesting a set of novel ideas with high usefulness exists, and a separate set of novel ideas with low usefulness also exists. Concepts for the book can be brainstormed, and idea generation can be isolated until all of

the concept ideas are produced, before one is selected to best fit the task. Creativity comes from the author's ability to free her imagination from the constraints of knowledge of the present moment and generate an idea that others would not consider. Once the concept is generated, it can then be elaborated, and implemented as the author writes the book.

When an author develops an outline for the book and some character ideas and works with publishers to pitch and then edit the book, she gets closer to the domain, because the idea can be realized sooner, it becomes closer to a physical form as she prepares material to present during the pitch and to provide to editors, and the likelihood of the book being realized increases as she gets positive feedback from those she shares the idea with. We suggest that in this case, creativity takes on the form of balance. Novelty exists with reference to other ideas that people have already developed into pitches or books because they will comprise the comparison set for the audience; similarly, usefulness depends on how an audience of publishers and readers will receive the idea and whether the author can enact her ideas. These dimensions are paradoxical; the more novel the idea relative to other books, the more the author may find the book difficult to write and the more the publisher may struggle to market the idea. The process can be described as balancing one's imagination with what can be communicated, during which the author may have to scale back novelty to ensure ideas are feasible and respond to feedback. In this case, creativity comes from resolving the tension generated by the task's conflicting demands. The idea gets both generated and implemented through iteration with publishers and editors.

Finally, while the author is writing the book, she is close to the domain because the idea is being enacted as she writes, it will be realized in the relatively near future and its realization is increasingly likely. We suggest that in this case, the creative task takes on the form of integration. Novelty is no longer derived purely from the uniqueness of the concept, but from the holistic pattern that emerges in the product as a combination of the concept, the

storytelling style, the dialogue, and the characters, among other things. For example, a character may be used as a narrative device to reveal the story in a unique way. The usefulness is the value created by that constellation—does the book entertain, communicate, provoke, or move readers in some way? Those dimensions are also intertwined; the more the different aspects of the book work together to create a mood or style, the more novel the book becomes, but also the more valuable. As a result, the idea for the book emerges through the writing. The tasks of generating, evaluating, and even selecting ideas cannot be disentangled; it makes little sense to generate many characters and many possible dialogue exchanges between them and then select the best one, because the number of combinations would be virtually infinite. As ideas go down on the page, they are generated, developed, and selected into the story; choices about one plot point influence further generative activity. Once a selection is made, it may also be revisited, edited, and combined as further ideas unfold. Creativity comes from deep engagement in the present context to allow for the continual shifting of ideas as new ideas emerge. The idea only exists when it there is a physical form. That physical form could represent its implementation.

Below, we propose two specific mechanisms through which distance shapes the form of creativity, based on the two dimensions of distance we articulated.

How contextual distance shapes form of creativity through evaluating novelty and usefulness. We argue that target domain affects the form of creativity by shaping how creators and judges evaluate the novelty and usefulness of their ideas, which affects how novelty and usefulness are enacted while creating. The target domain for an idea influences how a creator thinks of the comparison set and the audience, so that what is considered to be novel or useful, and to whom, vary (Csikszentmihalyi, 1999). Boudreau et al (2016) call this "intellectual distance" and show how it shapes evaluations. Past research supports the notion that contextual distance shapes how creators and judges understand ideas (Amabile & Pratt,

2016), such that when creators are distant from the target domain creativity takes the form of maximization, and when creators are close to the target domain, creativity takes the form of integration. For example, research is consistent with the notion that experts, who are contextually close to target ideas, engage in integration, whereas novices, who are contextually distant, engage in maximization. That research shows, for instance, that experienced entrepreneurs are more likely to assess whether new venture opportunities solve a concrete problem than are novice entrepreneurs (Baron & Ensley, 2006). Research also suggests that experts have more differentiated, diverse, and nuanced evaluation criteria for assessing ideas than novices (Haller, Courvoisier, & Cropley, 2011). Further support is offered by the finding that taking on the perspective of those that one is developing ideas for, and thus moving closer to target domain of users of the idea, improves creativity (Grant & Berry, 2011; Hoever, Van Knippenberg, Van Ginkel, & Barkema, 2012), and that experiencing ownership for ideas, bringing one closer to those ideas, aids development and implementation (Baer & Brown, 2012).

We propose that if a creator's evaluation of novelty and usefulness shifts, it changes their assessment of what to retain and move forward during the creative process. For instance, in contextually distant maximization, outlandish ideas may be retained and later refined to make them useful; whereas in contextually close maximization, ideas that embody usefulness and value will be retained and elaborated to improve and customize them.

How processual distance shapes form of creativity through engagement with ideas.
We theorize that processual distance shapes the form of creativity by altering the way creators engage with emerging ideas. This can occur because the stages are intertwined or because of the physical nature of the idea and its development. When generation is distant from other stages of the creative process, creativity is best represented as maximization because generation occurs at a higher level of construal where it is freed from present reality,

which leads to more novel and creative thinking than lower level construals (e.g., Förster et al., 2004). Brainstorming and idea generation research (cf Diehl & Stroebe, 1987; Paulus & Nijstad, 2003) have established that creators do better when ideas are mental representations that are physically distant from creators. In contrast, when generation and evaluation occur in close cycles of iteration (e.g., Goh et al., 2013), creativity comes from identifying unique ways to connect novelty and usefulness that resolves tension between them (e.g., Harvey, 2014; Miron-Spektor & Beenen, 2015). Finally, when generation of ideas coincides with their implementation and creative ideas unfold in real time (Fisher & Barrett, 2019), creativity takes on the form of integration. That is supported by research that shows that creative performances involve accepting and building on immediately presented ideas rather than challenging them (Vera & Corssan, 2005), finding rather than solving problems (Sawyer, 2000), and emerging ideas through interaction such that they are irreducible into component parts (Tsoukas, 2009). Similarly, research on boundary objects shows how engaging with physical products can be essential, particularly for collective creativity (e.g., Carlile, 2002; Stigliani & Ravasi, 2012). We argue that when creators engage with ideas in different ways, it changes the source of new ideas. For example, in maximization, ideas come from cognitive stimulation, whereas in integration, they come from deep engagement in the present moment.

APPLYING THE DISTAL FRAMEWORK TO CREATIVITY RESEARCH

To illustrate the value of our framework for redirecting creativity research, we apply it to two foundational concepts in creativity research—generating and evaluating creative ideas.

Generating Creative Ideas

Most models of creativity emphasize that generating ideas is a dynamic, iterative process (Lubart, 2001) that involves elaborating and iterating ideas over time (Mainemelis, 2010). Yet, precisely *how* ideas are elaborated or iterated remains relatively opaque. We draw on our meta-theory to show how those processes depend on the form of creativity. We then

suggest that no single form captures the fullness of the phenomenon and propose an alternative conceptualization of elaboration and iteration as moving *across* different forms.

Elaboration. Elaboration is defined as refining, clarifying, and checking a core idea to develop it further (Perry-Smith & Mannucci, 2017). This implies that through elaboration, ideas progress in a relatively linear way, from vague notions to more detailed and complete versions (e.g., Berg, 2019; Hua et al., 2022). Consider the example of writing a book described in the previous section. Research would typically conceptualize movement from generating a concept, to elaborating the concept in the form of a pitch, to writing the novel, as the elaboration of an idea to make it more complete over time.

According to our meta-theoretical framework, because each of those creative tasks involves interacting with ideas at a different distance, each will involve different forms of elaboration. That may do more than simply refine the idea; it may produce fundamentally new insights from which novelty emerges. For example, the concept for the book may be pure novelty generation through cognitive stimulation (maximization) because it is processually distant. It begins as an abstract concept and elaboration adds concrete detail over time. In contrast, in balance, the pitch for the book already contains some concrete ideas and elaborating could involve cycles of assessing the idea in light of editorial feedback on audience or market preferences and tweaking or adjusting it to meet those criteria (e.g., Goh et al., 2013). Elaboration in balance thus may not entail increasing concreteness; indeed, it may broaden the idea, for example by broadening it to connect to new markets. Finally, in integration, elaboration may involve working with precise wording, language, or dialogue in a way that reveals a higher order theme for the story. Thus, elaborating may connect novelty and usefulness criteria to a higher order framework that brings them together (e.g., Harvey & Mueller, 2021), making ideas more abstract over time.

In sum, elaboration can include adding detail, broadening, or abstracting depending on the form. Calling only one of those 'elaboration' fails to appreciate the fullness of that process. Instead, we propose that elaboration involves moving between forms of creativity, where creativity is derived from different ways of interacting with novelty and usefulness.

Iteration. Iterating is typically understood to mean returning to earlier phases of the creative process (Amabile & Pratt, 2016). Our theory suggests that iteration is more than the cycling implied by that definition. In creativity as maximization, iterating involves returning to the beginning of the process (Campbell, 1960), revisiting the task in light of how well an idea met task criteria (Amabile & Pratt, 2016). That implies that ideas have been generated, selected, and assessed within a cycle, and that cycle repeats. In balance, iterating may be better understood as shifting back and forth between alternative perspectives, grappling with different ideas or criteria, during the processes of generating and selecting an idea (Drazin et al., 1999; Beenen & Miron-Spektor, 2015). In that case, iterating may entail micro-cycles of generation and selection or cycling between ideas, rather than repeating full cycles of returning to the beginning of the process. In integration, iterating may occur on an even more micro scale, shifting between goals, ideas, and evaluation criteria moment-to-moment so that each continually informs the other (Collins, 2012; Harvey & Kou, 2013). Importantly, iteration in the balance and integration forms do not mean that creators never revisit the initial problem or evaluate their ideas according to task criteria. Rather, in those forms, the problem may be continually re-constructed as ideas develop, because that activity is integrated with idea generation (Hua & Fisher, 2021).

As for elaboration, our theory suggests that the fullness of iteration can also be captured as movement between forms. For instance, if a writer begins by writing a chapter with no real concept for where the book will go, she may develop a concept through the writing process and then iterate what she has written; alternatively, she may begin with a

highly marketable concept, but then iterate by making the writing unusual and refining the more abstract concept based on that. Thus, iteration also need not involve simply returning to an earlier phase, but rather, allowing later creative activities to mould earlier ideas.

Shifting between forms. We have proposed that elaboration and iteration involve shifts between different forms, but how do such shifts occur? We do not view them as only unfolding in a linear fashion, as would be suggested, for instance, if an author moved from developing a book concept, to pitching and editing the book, to writing it. Instead, the shifts may occur in any combination, overlapping with phases of creative activity. To re-write the creative process in an alternative way with the same example, an author could engage in integration during early stage idea generation if she began writing without a guiding vision just to see where the story took her; or, like Wright's (1939) book Gadsby, the author may begin with balance by imposing a constraint such as not using the letter "e", which produces continual tension between novelty of the story and feasibility. In either case, she may develop the idea through writing and constraint, but then take the idea and brainstorm, elaborate, and implement following maximization. Alternatively, she may switch from integration to balance or vice versa. Once creators get to a stage of implementation, they are likely to engage in some degree of integration as processual distance is low; but they may or may not engage in integration or balance at the earliest stages of the process, and even at later stages, they may return to maximization.

We further suggest that changes in form may be triggered by factors that shift distance. One such factor could be how creators interact with others as they move to increasingly collective levels, because doing so will affect their distance to the domain. For instance, creators may be more likely to engage in maximization when they are working alone, isolated from how useful their ideas may be to others; more likely to engage in balance when they begin to share their ideas with others and become exposed to how audiences and

other stakeholders will view the utility of their ideas; and more likely to engage in integrating novelty and usefulness when generating ideas with others in the context of a broader network or system where they may receive more immediate feedback on utility. That process could also work in other combinations, with creators working in a group or larger collective to generate ideas, and later incubating ideas alone.

Evaluating Creative Ideas and Evaluative Context

We theorized that distance shapes the form of creativity by affecting the context that creators consider when developing ideas. By extension, distance between a judge and a target domain will influence the judge's evaluation. Whereas the influence of context (Csikszentmihalyi, 1999), comparison set (Guilford, 1950; Mumford, Lonegran, & Scott, 2002), and judges' context (Amabile, 1982) on judgements has long been known, our theory reveals the potential for mismatches to occur between forms when judges and creators are at different distances from the domain. Specifically, we propose that judgements may become blurred or diverge when they are taken out of context because those who are distant from the domain assess a different form of creativity than those who are close.

Research has begun to explain how creativity judgements become biased. For instance, studies suggest that decision-makers may evaluate ideas differently than creators (Berg, 2016; Mueller et al., 2018) and experts may evaluate ideas differently from novices (Haller et al., 2011). Our theory builds on those findings to suggest that judges' assessments will diverge from one another, and from those of creators, when they view ideas at different distances. This may explain why judges often miss breakthrough and revolutionary ideas, such as the editors who turned down Harry Potter and George Orwell's 1984 (e.g., cited in Sternberg, Kaufman, & Pretz, 2003); if creators are contextually close to the target domain, because, for example, they have started writing characters and dialogue and have found unique ways to enact and elaborate the concept and enhance its novelty, but evaluators are

contextually distant because they are assessing the concept for the book, not its full enactment, they are using different manifestations of creativity—maximization versus integration—and by extension, different dimensions of novelty and usefulness relative to different comparison sets. A very ordinary concept may be enacted in an extremely novel way; if judges prioritize the concept, they may miss that form of creativity. In parallel, an extremely novel concept may be enacted in a very ordinary way, or may be impossible to enact and therefore made less novel through the implementation process, and if judges prioritize the concept, they may overestimate the creativity. This is consistent with Boudreau et al (2016), who found that evaluators gave lower scores to those ideas they were intellectually closer to—and so could better predict their implementation.

Research shows that creators can also display overconfidence in their own ideas relative to external stakeholders and audiences (Berg, 2016; Pesout & Nietfeld, 2021). Based on our theory, this seems particularly likely when creators are more distant from a target domain than judges. Returning to the book example, editors may be close to the market, whereas creators may be distant with little knowledge of reader preferences. When judges and creators are at different distances, the source of creativity, and therefore its meaning and comparison set, differs. If creators engage in maximization by focusing on the concept in a relatively distant domain, they may overestimate the creativity of their idea relative to editors with market knowledge of the domain.

The example also illustrates that mismatches can occur if judges view creativity at different points in the creative process and so have different levels of processual distance. For instance, taking a snapshot of creativity during the earliest stages of the process will capture the maximization form, but it may undervalue the contributions of ideas that could be enacted in highly novel ways from the perspective of creativity as integration.

BOUNDARIES OF THE THEORY

Our theory applies to creativity as the production of novelty and usefulness. We have not considered extensions of that phenomenon to, for instance, innovation, of which creativity may be a part, or to ongoing processes in which creators develop multiple creative products over time. It may be that in those more complex situations, the relationship between novelty and usefulness and the three forms of creativity come into play in different ways, at different levels and different points in time. Our theory does not directly address those issues.

We also have not explicitly differentiated levels of analysis in our theorizing. We posit that all three forms of creativity are possible from individual to collective levels. However, some levels may fit better with particular approaches. For instance, it may be more consistent to view creativity as a balance between paradoxical elements at the group level, where one sub-group may prioritize novelty and another may prioritize usefulness, and group dynamics lead the group to shift back and forth between those criteria, than at the individual level. Exploring how the relationships vary across levels is a direction for future research.

Although we have emphasized areas where theories and studies converge, substantial variance remains within each of the three theoretical perspectives. For example, whereas both creative synthesis and brokerage may be considered integration, synthesis emphasizes the collective nature of the creative process (Harvey, Kou, & Xie, 2018), whereas brokerage theories emphasize the role of leaders or brokers in synthesizing different perspectives (Lingo, 2018). Further work may fruitfully explore differences within each form of creativity.

Finally, our theory does not address the level of creativity that will result from different forms. We do not assume a relationship between form and level of creativity; we expect that any of the forms can produce revolutionary breakthrough ideas, and any can produce ideas that would be judged to have low or no creativity. Thus, our theory does not address ultimate variation in creativity of products.

DISCUSSION

Theorizing requires both defining core constructs and explaining the relationship between them (Sutton & Staw, 1995; Weick, 1989). The field of organizational creativity has made great advancements over the past decades by establishing novelty and usefulness as the core constructs that constitute creativity (Amabile, 1996). We build on that consensus by elaborating and integrating ways that the literature has described relating, evaluating, and producing the constructs to develop a meta-theory of creativity forms. We suggest that the forms more fully capture the complexity of the phenomenon, allowing for more insightful theories (Ployhart & Bartunek, 2019). Correspondingly, our work calls on researchers to deeply consider the distal context of creativity to align phenomena with a theoretical form.

Integrating the three forms demands rethinking the very nature of creativity. Our meta-theory provides three insights for re-directing creativity research: i) it highlights the importance of usefulness for defining creativity; ii) it offers new ways of understanding what occurs during the creative process; and iii) it calls for greater attention to interdependencies of creativity. We conclude with methodological considerations for pursuing these questions.

Prioritizing usefulness as a defining feature of creativity. Whereas prior research views novelty as the defining feature of creativity (George, 2007), because our meta-theory puts the relationship between novelty and usefulness at the root of a creative form, it calls for usefulness to be incorporated into theories and measures of creativity. Indeed, in the balance and integration forms, novelty and usefulness are inextricably linked. Yet, the concept of usefulness remains underdeveloped in creativity research. It is often defined as feasibility, meeting the needs of a given task or problem, or appropriateness; but it is more rarely defined in terms of value. In the course of solving complex, multi-faceted problems, however, value may be what creators and decision-makers want—an idea that is used by and improves the state of those for whom it is intended. Both scholarly and popular writing about creativity justify their focus by claiming that creativity is valuable to society, culture, and commerce

(e.g., Amabile, 1996; Leavitt, 1963). However, value may only be recognized over time, and when ideas are adopted, suggesting that the meaning of usefulness may change over time. Conceptualizing usefulness as value may thus provide a link between the creativity and innovation literatures. It may also help identify ways to integrate novelty and usefulness. Some ideas are the most valuable when they are also novel; for instance, advertising is more likely to be remembered by consumers if it is novel, and therefore surprising or interesting (Olney, Hollbrook, & Batra, 1991), so that the novelty enhances value. Future research should explore the meaning of value, and other dimensions of usefulness, in creative contexts and products, and how they may shape novelty.

Opening up dynamic creative processes. Whereas research theorizes a dynamic and iterative creative process (Amabile & Pratt, 2016; Lubart, 2001), those dynamics often remain a black box, into which our meta-theory offers two insights. First, rather than viewing elaboration as sitting between generation and evaluation (Perry-Smith & Mannucci, 2017) and iteration as returning to earlier stages of the process (Amabile & Pratt, 2016), we suggest that both involve movement between forms of creativity. Because forms combine activities of the creative process in different ways, this further implies that elaboration and iteration may be better conceptualized as processes that run alongside the traditional stages, rather than existing within or between those stages.

Second, following from these insights about elaboration and iteration, our theory implies that creative activity can unfold in different directions as creators move through forms. Rather than elaboration increasing ideas in detail, it may expand, broaden, or revise ideas in a variety of ways as creators move across distal contexts. Similarly, rather than iteration implying repeating the creative process, it can occur in increasingly narrow or broad cycles between generative and evaluative processes. Thus, in each stage of creative activity, creators may be engaging in different forms. In this sense, forms provide a basis for arranging

the creative process in different ways. For example, creators may move from abstract idea generation, to selection and implementation when they engage in creativity as maximization. Or, they may move from generating ideas through concrete engagement akin to implementation, towards an abstract understanding, when they engage in creativity as integration. In each case, creators move through all of the stages of creative activity typically described in process models, but in different sequences depending on the form. Implementation occurs in both examples as well, but its role differs—in maximization, it is execution, and in integration it is generative. Yet, the processes are not bounded by those forms. After engaging in integration, creators may find that the idea they developed (and implemented as they did so) does not fully capture the concept that emerged, and may iterate through a process of maximization to refine the idea, then implement the revised concept.

A question raised by our theory is how the forms combine, and how their combination affects creative products. Our theorizing emphasizes ideal forms, but it is likely that forms are often blurred or combined. For instance, Ford & Sullivan (2004) suggest that prior to a team's midpoint transition, novelty and usefulness will exist in a duality, suggesting creativity as integration, whereas after the transition, they will be negatively related, suggesting creativity as balance. As that work suggests, the relationship between balance and integration is almost certainly more complex, because apparently paradoxical elements often have an underlying relationship whose interdependencies can be uncovered (Schad et al., 2016). It may be, for instance, that transforming the paradoxical relationship between novelty and usefulness also shifts creativity from balance to integration. Future research should explore how the forms may productively or phenomenologically be combined. An additional question for future research is what other factors may trigger shifts between the forms

Interrelationship between ideas and context. By theorizing that distance shapes both the process of generating ideas and its evaluative context, our work challenges the long-

held assumption that idea generation can be independent of the context for idea selection (cf Campbell, 1960). Because distance links generation and evaluative context within a form of creativity, they are inherently interdependent such that a creator's perception of the distance to the evaluative context for her ideas will affect the way she engages in generation. Phenomenologically, it may be clear that interrelationships pervade creativity. Ideas are unlikely to be selected based purely on objective quality (Mueller et al., 2012; Mueller et al., 2018). Instead, they may be selected because of the power, influence, or reputation of creators; because of judges' relationships with creators; because of how they relate to previous creative successes; or because of how creators themselves become attached to or lose faith in them. Yet, those dependencies have rarely been examined in research.

Our distal framework suggests that the more a creator is embedded in the system for which her idea is generated—for example, generating an idea to benefit a group of colleagues one works closely with or one's own family and friendship circle—the more likely that judgements of the idea will be shaped by a judge's relationship with the creator. In parallel, distance in the process can obscure independence between generation and selection environment, such as when ideas are judged by group members as they are produced (Amabile, Goldfield, & Bracknell, 1990). More research is needed to understand the way that generative processes are shaped by creators' relationships with judges, their own past creative efforts, the system in which they are embedded, and the way the process unfolds. These interdependencies may also take place over time; for instance, both a creator's assessment of her own past work and judges' evaluations of that work may shape the way she engages in subsequent creative efforts. A further question is: under what conditions do creators separate, balance, or integrate competing conditions, and how does each strategy shape creative outcomes across contexts? Research has tended to advocate a separation to deal with

tensions, without exploring conditions under which it is most likely or valuable. Our theory advocates greater consideration of approach and exploring choices or switches between them.

Methodological considerations for advancing creativity research. In exploring new questions, we echo luminaries in the field in advising that researchers be thoughtful about capturing creativity in a way that matches what they intend to study (Amabile & Mueller, 2008; George, 2007; Guilford, 1950; Shalley, Zhou, & Oldham, 2004; Torrance, 2003). Specifically, our theory calls for examining novelty, usefulness, and overall creativity, and exploring the relationship between them. Yet, in integration, qualitative differences between creative and non-creative products mean that the same relationship may not hold for ideas across the scale. Simply calculating correlations between variables will be insufficient to define the relationship; independence may mask a negative relationship at the lower end of the scales and a positive relationship at the higher end of the scales. Measuring all three constructs may allow researchers to explore the relationship between novelty, usefulness, and creativity, provided they search for inflection points where that relationship may change.

Researchers should further consider how tasks are presented to participants in their studies. Participants often want to please researchers, creating demand effects in study designs (e.g. Orne, 1962). Researchers could use that to elicit the form of creativity they desire. Cuing creativity as a holistic concept would allow participants to define the creative form; using task cues to direct independence, balance or integration would allow researchers to more clearly link their results to a particular form.

Finally, researchers should consider how close creators, and therefore researchers themselves, are to context. Our review showed that each form of creativity has been studied with different methodologies. Yet, research on integration tends to rely more on qualitative research, where both creators and researchers are close to the context, whereas research on maximization relies relatively more on experimental research, where creators and researchers

are more distant. By controlling distance, researchers can focus their studies on a particular form. For example, it may be challenging to create a sufficiently immersive task in the laboratory to replicate integration, which requires deep engagement in a context; but choosing tasks that more closely integrate stages of the creative process by asking participants to produce their ideas (e.g., origami designs; Gino et al., 2010) may move them closer to integration. Inducing maximization in the field may be equally challenging because it requires creators to disengage from the context in which they are embedded; indeed, this has long been a major challenge for creativity scholars and practitioners. Isolating stages of the process or using tasks that are disconnected from context may move the form closer to maximization. In sum, by moving a creator or judge closer to or further from the completion of the creative cycle or enactment of the creative product, a researcher may encourage the use of a particular form of creativity.

Exploring the relationship, context, and processes of novelty and usefulness calls for a closer intertwining of qualitative and quantitative research approaches. Qualitative research is needed to induce an understanding of the phenomenon so that researchers know where to look for shifts in the relationship between novelty and usefulness, how creators are embedded in tasks, and the meaning of creativity in context. Quantitative research is then needed to capture and examine the insights that occur from that process. Our hope is that elucidating and integrating the three forms provides a foundation for bringing our theoretical understanding of creativity closer to the fullness of the phenomenon.

TABLE 1: Three theoretical perspectives on organizational creativity

	Maximization Perspective	Balance Perspective	Integration Perspective
Summary	Generative motor is random variation to maximize novelty followed by selective retention to maximize usefulness	Generative motor is tension between conflicting factions or view, which gets reconciled by balancing novelty and usefulness	Generative motor is combination and connections of ideas into new patterns
Theoretical roots	Evolutionary theory (Campbell, 1960; Staw, 1990) Stage models (Wallas, 1926; Amabile, 1996) Divergent thinking (Guilford, 1950; Nemeth & Kwan, 1987)	Conflict (Drazin et al., 1999) Exploration / exploitation (March, 1991) Paradox (Lewis, 2000; Miron-Spektor, Gino, & Argote, 2011)	Synthesis (Koestler, 1964; Arieti, 1976) Combination (Poincare, 1913) Brokerage theories (Burt, 2004)
Examples of current research streams & methods	Brainstorming (e.g., Diehl & Stroebe, 1987; Nijstad & Stroebe, 2006) - Experimental Diversity (e.g., Kurtzberg, 2005) - Experimental & field research Conflict & competition (e.g., Beersma & De Dreu, 2005) - Experimental & quant field research	Geneplore model (e.g. Finke et al., 1992) - Experimental Paradox (e.g., Miron-Spektor & Erez, 2017) - Experimental, quant field research, qualitative, theoretical Constraints (e.g., Harrison & Rouse, 2014; Goncalo et al., 2015; Hirst et al., 2011) - Experimental, quant field research, qualitative	Transformational leadership & integrative complexity (e.g., Shin & Zhou, 2003; Tadmor, 2012) - Quantitative field research Brokerage & networks (e.g., Lingo & O'Mahony, 2010; Uzzi & Spiro, 2010) - Qualitative, quant field research Practice-based/process research (e.g., Sawyer, 1992; Harvey, 2014) - Qualitative, theoretical
Form of creativity	Creativity as maximization: Separately maximize novelty and usefulness	Creativity as balance: Balance novelty and usefulness	Creativity as integration: Integrate novelty and usefulness

Table 1 continued

	Maximization theories	Balance Theories	Integration Theories
Distal relationship between novelty and usefulness	Independence - In creative products, novelty and usefulness may be distant from one another so that creative products may have high novelty and low usefulness or vice versa Measurement Usefulness Low High ——————— Novelty Low High ————————	Paradoxical: as novelty increases, usefulness decreases and vice versa - In creative products, novelty and usefulness must be at moderate levels so that they can co-exist. They become closer in creative products Measurement Usefulness Novelty ————————	Interdependent and positively related: as novelty increases, usefulness increases and vice versa. - In creative products, novelty and usefulness are closely related; they may overlap or be two sides of the same coin Measurement Usefulness, Novelty, Creativity Zero ————————
Distance to evaluative context	Novelty compared to a distant set of all imagined possibilities; Usefulness compared to narrow set of current problem	Novelty compared to a closer set of the current context or problem; Usefulness compared to a closer set of current task or audience	Novelty compared to close set of what is in immediate context (change from status quo); Usefulness compared to broader set of value
Distance in creative process	Linear model with separate stages	Linear model with close iteration and elaboration between stages	Integrative model with overlapping and simultaneous stages

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