

Organizing creativity: Lessons from the *Eureka! Ranch* experience

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ORGANIZING CREATIVITY: LESSONS FROM THE *EUREKA! RANCH* EXPERIENCE

Abstract:

Extant literature identifies many factors that support creativity in new product development teams, but little or no attention has been paid to how organizations might organize creativity to more consistently achieve superior creative outcomes. This chapter begins to address this gap by developing a research model of organizing creativity that is developed by: extending to the organizational level, an individual-level general model of superior performance based on expertise theory; refining the general model using extant creativity research to specify a deliberate-practice model of organizational creativity; and confronting this theoretical framework with a case study that chronicles the development and growth of the *Eureka! Ranch* (Cincinnati, OH), one of the leading organizational creativity consulting firms in the USA. The *Eureka! Ranch* experience suggests that organizing creativity to consistently achieve superior creative outcomes is possible. Central elements of this approach are captured in the propositions developed in this chapter. While these propositions suggest direction for improving the creative outcomes of organizations, they also suggest direction for the future research needed to establish their external validity.

Key Terms

Creativity

Organization

Expertise

Deliberate-practice

Case study

ORGANIZING CREATIVITY: LESSONS FROM THE *EUREKA! RANCH* EXPERIENCE

There is growing interest in organizational creativity as a continuing source of new products and services with superior economic, social, and environmental outcomes (Cohen, Smith and Mitchell, 2008). Among the many descriptions of creativity (Table 1), one representative definition of organizational creativity is: “. . . the creation of a valuable, useful new product, service, idea, procedure, or process by individuals working together in a complex social system” (Woodman, Sawyer, and Griffin, 1993, p. 293). Subsequent to the appearance of this definition, Drazin, Glynn, and Kazanjian (1999) suggested that creativity is a process, rather than an outcome; and they have cited Amabile (1983), and Mohr, (1982) in support. More recently, however, Amabile and her coauthors, (2005) – in closer agreement with the definition of organizational creativity cited above – have asserted that creativity “. . . refers to both the process of idea generation or problem solving, and the actual idea or solution (Amabile, 1983; Sternberg, 1988a, Weisberg, 1988)” (Amabile et al, 2005, p. 368). But how does organizational creativity as both complex social process and as idea-solution emerge? In this chapter we therefore explore two research questions: (1) what is the organizing process that leads a group (vs. the individual) to a creative outcome, and (2) to what extent are idea-solutions “created” – in the sense that creativity is viewed to be dependently volitional (i.e. it does not exist until it is developed), rather than being independently emergent (it exists and must simply be recognized).¹

Creativity has been conceptualized as a cognitive process, both at the individual level (e.g., Bower and Hildegard, 1981; Cohen and Levinthal, 1990) and in general (e.g., Shalley, et al, 2004; Woodman, et al, 1993). Consequently we adopt cognitive theory, and in particular, expertise theory, to begin to address our research questions. We extend this individual-level theory to the organizational-level using cognitive process composition arguments utilized in other cross-level entrepreneurial cognition research (e.g., Smith, et al, 2009), and then draw on extant creativity research to delineate a more refined expertise development-based model of organizational creativity that suggests organizational creativity to be a kind of expertise that can be invoked through deliberate practice. We then confront this theoretical framework with a case study that chronicles the experience of one of the co-authors of this chapter, Jeffrey A. Stamp, who was a participant observer (1996-2002) in the development and growth of the *Eureka! Ranch* (Cincinnati, OH), one of the leading organizational creativity consulting firms in the USA. In exploring the implication of this case study we interrogate our model through comparison of theory with expert practice, to ascertain what aspects of this model are more and less pertinent to the development of organizational creativity, at least from the perspective of this highly successful firm. Insights gained suggest how organizational creativity can be organized through deliberate practice (Charness, Krampe and Mayr, 1996).

Deliberate practice has previously been suggested to generate expert performance in the study of individuals in a variety of disciplines such as chess (Chase and Simon, 1973), computer programming (McKeithen, Reitman, Reuter, and Hirtle, 1981), physics (Chi, Glaser, and Rees, 1982), probation officer (Lurigio and Carroll, 1985), and also in entrepreneurship (Baron and Henry, 2010, Mitchell et al., 2000, Sarasvathy, et al, 1998). Expert theory (e.g., Chi, Glaser, and

¹ We note that our analysis of volition in creativity contributes to the more-general opportunity creation vs. discovery dialogue (see, e.g. Alvarez and Barney, 2007), although this is not the focus of our chapter.

Rees, 1982) suggests that deliberate practice should also build capabilities to develop organizational creativity.

We use this theory to develop a framework and interpretive model to understand how organizations develop creativity expertise to create idea-solutions. To begin to establish the validity of this framework and model, we draw on the *Eureka! Ranch* experience to provide an initial case-based calibration of the framework.

We therefore proceed to: (1) outline the general theory of deliberate practice from the expert information processing theory literature with special attention to its application beyond the individual level – i.e., to groups/ organizations; (2) present the *Eureka! Ranch* case; (3) apply observations from the *Eureka! Ranch* experience to elaborate the theory at the organizational level; to thereby, (4) offer an organizational-level model of organizing creativity with testable propositions. We conclude with implications of the theory for further research and for use within organizations desiring to better organize creativity within their economic sphere.

{Insert Table 1 about here }

DELIBERATE PRACTICE

An Individual-level Model

Charness, Krampe and Mayr (1996) have argued that the long legacy of “apprenticeship” in human history, which relies upon significant input from tutors or more-experienced guild members to produce expert performance, is one of the primary reasons that coaching in a variety of individual-focused skill domains is so effective in producing desired outcomes by individuals (1996, p. 51). But in their study of individual skill in chess, for example, rather than supporting the stand-alone role of coaching (found to be nonsignificant in the study), these researchers found instead that only coaching which invokes deliberate practice – that is: serious study that allows maximal control over the amount and duration of that study – provides the explanation for noticeable positive effects on skill acquisition (1996: 77-78). Their summary taxonomy (model) of the factors important to expertise/ skill acquisition by individuals provides a helpful theoretical point of departure for our analysis of organizational creativity (1996: 53).

{Insert Figure 1 about here }

Thus, following the left-to-right flow in the figure, a general theory of deliberate practice for individuals suggests that the three categories of antecedents of deliberate practice (selected for their applicability to individual skill acquisition) are: (1) external social factors, (2) internal motivation/personality factors, and (3) external information factors. These three sets of factors are thought to influence the “intensity,” “duration,” and “content” of deliberate practice activity. Deliberate practice activity, in turn, is then suggested to influence the cognitive system of an individual such that an improved knowledge base and improved problem solving processes result, which are then thought to lead to expert performance.

Deliberate Practice beyond the Individual Level

While it might also be interesting to apply the deliberate practice model to individual creativity, this is not the focus of our theorizing. Instead, we move next toward the extension of this individual-level model across levels to the group/organization level, because this is the focus of both our participant observations, and the task of organizing creativity.

However, before taking this leap, we must recognize that the development of constructs at levels beyond their original conceptualization has additional requirements.² Specifically, Chan (1998) suggests that a rationale for cross-level conceptualizing is essential. In particular, he suggests that where concepts “. . . from a lower level are used to establish [a] higher level construct” (p. 235); that the following types of models are serviceable: additive, direct consensus, referent-shift consensus, dispersion, and process models (p. 236). As we previously noted the organizational creativity literature has its definition rooted in process (Amabile et al, 2005). We therefore utilize a compositional process model for the task of extending the individual-level deliberate-practice constructs to the organizational level.

A compositional process model enables structure found at one level of analysis (e.g., the level of the individual) to be useful in understanding structure at another level of analysis (e.g., the level of the organization). This model is defined to be: *a model which specifies the process relationships among phenomena or constructs at different levels of analysis that reference essentially the same content, but which are qualitatively different at different levels* (Chan, 1998: 234; Rousseau, 1985). Thus, using this idea, the lower-level process we see in the individual-level deliberate practice model may be “composed to the higher level by identifying critical higher level parameters, which are higher-level analogues of the lower level parameters, and describing interrelationships among higher level parameters, which are homologous (having the same relative position, value, or structure) to the lower level parameter relationships” (Chan, 1998: 241).

Herein, we develop a process-composition model which explains how structural linkages among deliberate practice constructs at the individual level of analysis apply to specifically-constructed homologous variables at the organization level of analysis. The *Eureka! Ranch* experience is then used as substantive evidence to support the validity of this organization-level model. . In the paragraphs following, we therefore present the constructs and proposed relationships underlying an organization-level conceptual model of creativity deliberate practice. We envision this process as one which underlies the process of “organizing creativity.”

{Insert Figure 2 about here}

Thus in Figure 2, once again following a left-to-right flow, we suggest a specialized theory of deliberate practice expertise development for organizations, paralleling the constructs in the individual model in the manner suggested by Chan (1998). Hence, the “organized creativity” model of deliberate creativity organization shown in Figure 2 also indicates that its three categories of antecedents (selected in this case for their general applicability to organizational creative skill acquisition) are: (1) social factors, (2) motivation factors, and (3) informational factors. The composition of each of these factors in the specialized model arises from our review of the level-neutral antecedents of creativity (Table 2: noted as “N”), to identify the model elements that – recomposed to represent at the organizational level the elements in the individual-level figure – may be asserted to comprise the organizational level deliberate practice model of creativity expertise (Table 2). This was accomplished by conducting a broad review of the creativity literature, using electronic data bases such as Business Source Complete, EBSCO, and ProQuest, combinations of the key words creativity, and management, organization, and

² While it is also beyond the scope of this chapter to delve deeply into the mechanics of construct-development across levels; the analysis we provide nevertheless draws the applicable outlines (e.g., Chan, 1998; Rousseau, 1985), and provides construct definition sources that can enable deeper consideration.

entrepreneurship, and the restriction ‘academic (scholarly peer reviewed) journals.’ We started by limiting the search to articles with the term ‘creativity’ in the title, published in the past ten years, then expanded the search using reference snowballing to seek creativity antecedents not previously identified. We sought to identify within the published research on creativity, those constructs that have been asserted to serve as antecedents to creativity in general. A theoretical antecedent is considered to be something (e.g. a preceding construct in a theoretical model) that came before something else (e.g. the consequent construct in that theoretical model) that may have influenced or caused it (Bagozzi and Phillips, 1982; Merriam-Webster Dictionary; Suddaby, 2010).

{Insert Table 2 about here }

We reviewed more than 89 articles and identified 47 creativity antecedents. We organized these general creativity antecedents alphabetically by likely construct name/terminology. Additionally, we attempted to indicate (as specified in a given article, or as we have interpreted assertions in that article) the likely level of analysis to which these antecedents have been asserted to apply; and we designated this as I = individual level; and N = level neutral. This was done through the use of rater judgment of key passages from the cited article that establish the antecedent-creativity relationship. The results of this analysis appear in Table 2.

The three sets of factors shown in Figure 2 (social, motivational, and informational) are thus suggested to influence the “intensity,” “duration,” and “content” of the deliberate practice activity proposed at the organizational level: deliberate creativity organization. Deliberate creativity organization, in turn, is then suggested to influence the creative system of an organization such that improved problem solving processes and an improved knowledge base result, which then lead to expert creative results. In the following paragraphs we therefore utilize this theoretical framing as a means to interpret the *Eureka! Ranch* experience; and to then generate several theoretical propositions for organizing creativity.

INTERPRETING THE *EUREKA RANCH* EXPERIENCE:

A DELIBERATE-PRACTICE-BASED MODEL

In this section, we utilize the organization-level model as an organizing theoretical means to interpret the creativity process utilized so successfully at the *Eureka! Ranch*. Hence, the next step in the report of our analysis is to present the case in chronological order utilizing the words of Jeffrey A. Stamp, as participant observer. We then proceed to develop an organization-level research model of organizing creativity.

The Case: Participant-observations of the *Eureka! Ranch* Experience

During interviews with Jeffery A. Stamp held in Lubbock Texas on April 9, 2013, the following chronology of the *Eureka! Ranch* experience emerged. What follows is the words of Jeff Stamp, paraphrased in parts (indicated by square brackets) for flow; the number indicators are used in Table 3 to map the *Eureka! Ranch* experience to the organizational-level deliberate practice model (Figure 2):

“The story of the *Eureka! Ranch* was in many ways an expert exercise in marketplace opportunity recognition. Doug Hall, who is the founder of the *Eureka! Ranch*, has a degree in chemical engineering from the University of Maine. His father worked with the quality guru, Dr. W. Edwards Deming at the Nashua Corporation. So

Doug always had a key awareness of the concept of quality engineering and of course, quality engineering in itself has now become the major focus of the *Eureka! Ranch* that drives everything they do. So Doug has a natural attraction for this process [of engineering creativity].

Rarely, does anyone ever effectively teach the concept of how to create. There are creativity theory classes, and psychology theory classes on what it means to be creative, but how do you practice creativity? [That was Doug's genius, figuring out a way to organize creativity, make it a process that could be quality engineered.]

When Doug graduated from the University of Maine with his bachelor's degree in chemical engineering, he found that he really wasn't enthralled with the production side but wanted to go into the marketing side. So he went to Proctor & Gamble in Cincinnati, Ohio and he got a job in advertising. Doug became a wonder boy of creativity. When everyone else is going zig, Doug goes zag and everybody thinks it's great... So he began to be involved in a number of large brands from such as Spic and Span to wherever needed a creative spark. He developed a reputation as being the wild and wacky creative genius when he and his team set a P&G record for nine innovations in twelve months. But the life of a creative genius also creates organizational friction - they are often viewed as being high maintenance and the staff always turns over because you can't keep political favor and creative intensity. They're mutually exclusive. [1] So Doug decides to leave [Proctor & Gamble]. This is about 1986.

So what's he going to do? He's a chemical engineer who worked in advertising who basically created ideas and didn't really have a product to his name other than P&G projects. So he says well, I'm going to be entrepreneurial... I'm going to go back to what I know best [creativity]. So in his basement he starts the [creativity firm] Richard Saunders International (inspired by the pen named used by Ben Franklin). He went to The Wall Street Journal and pitched an idea for an article on a new way to develop creativity- which he got in 1989 and business takes off. Then he went after some large Proctor & Gamble-sized clients such as PepsiCo, Coca Cola, and American Express and sold them on his new way to do creativity. The entrepreneurial strategy worked. By 1992 he moves from his basement to a very cool renovated 1779 era Eureka! Mansion and then later right next door into the custom built *Eureka! Ranch* in 1997 where the firm still exists today as a creativity laboratory and think tank.

There are four generations of creative methodology, in particular, that I think are relevant for this treatise, three of which are innovations of the *Eureka! Ranch*. Now Doug would disavow that this is what they do today as the *Eureka! Ranch* is continually evolving. They don't do simple new product or service concept creative sessions anymore because in many ways, the creative process at the *Eureka! Ranch* has run its course, but I still use it today in every creative session I do for a corporate client and the methodologies still works wonderfully, if done right. Doug has done it for so long that he basically has now gone on to his next generation of creative processes called innovation engineering. He does an adaptation of Six Sigma process in a creative context now. Thus you could say, he's taken his Deming background and he's basically doing private lean, what they call agile development in innovation or concept development, which is the new big thing now.

In the early days of Richard Saunders International, the first generation, creativity started with everybody around the room. You brought in very bright people for a brainstorming session. You brought them into the room and you used the standard Osborn rules. No idea's a bad idea. Let everybody talk. You try to get more ideas than fewer ideas. Everything is valid. You put white flipcharts on the wall and everybody just starts throwing out ideas. That was the way in which creativity worked. Experts were the source of your knowledge content from which the group drew from in the brainstorming session. Well, that was because at that time, we didn't have the Internet. So you didn't have knowledge networks in a concentrated place like you find online today. You had experts in geographically dispersed areas and you had to bring them together. So the key thing was bring them to a room and explore what happened in a collaborative thinking environment. So you really found that an original brainstorming group was the first attempt in a knowledge network development - and it worked. So you brought great people into a room. You started with some provocative ideas and people just bounced off the ideas. There is a concept called bridging that is especially useful here. If you throw out an idea and I like it, I bridge onto it and add some of my knowledge to yours to make a synthesized improvement. For example, I have an idea for a new water bottle, you say, well, let's put some fruit juice in it. I go well, why simple fruit juice? Let's, in addition to fruit juice, we also put other flavors in it to create provocative blends that have unexpected taste combinations. Then a third person suggests the added flavors must be natural flavors. Then people bounce around other additions that are different. So we have multiple ideas and combinations form the single starting water concept. We have an idea for water with fruit juice and an idea for water with natural flavors in it and so

on. We keep all those ideas and then later on, someone looks at them and turns them into proper written product concepts, and then later they were evaluated through consumer testing. The innovation of brainstorming was just to bring the knowledge network together and harvest the low-hanging fruit. So with all due respect to Alex Osborn, brainstorming was really an effective process of low-hanging fruit harvesting in an efficient way by bringing people together in the same room rather than calling people up from all of the different places where they worked. [2]

So the standard creative process, if you read in the literature, there's the Osborn process and rules, which is funny, because they wrote the rules of creativity...which just seems ironic. You have methods like the SCAMPER method and then you've got these various ways in which basically the creative process starts with incubation. Then you wait for magic. Then there's contemplation. Then you create ideas. It's this sort of a linearized process. Doug decided that that this was not only inefficient, it was unreliable, and you didn't necessarily create new ideas. Brainstorming historically has always been like a statistical method, in order to get good ideas, you need more ideas. If you had generated 1,000 really good ideas, and then after you whittle them down, maybe one will work - and it was always this bad funnel of you've got to start with 1,000 ideas and then after you throw most of them out, you might find one that will make it. Doug didn't like leaving things to chance. He thought about what was needed to get better ideas, and he concluded we needed to create a better process. [3]

I think Doug's great contribution to creativity, if I had to limit it to one - was that creativity is a process, a process that can be managed, and a process that can be optimized, and a process that can be sold. I think he was the first to realize that the output of creativity is a "written consumer-centric concept". A "concept" is in effect a commercial asset to a company because we believed that before you can market in dollars, you market in words. And it was important to Doug to get insight from the consumer as early in the creative process as possible. So the concepts we produced at the Eureka! Ranch for clients was literally a 100-word plus or minus whatever is necessary description of your idea as if it's written through the eyes of the customers. [4] For example, 'Introducing new from Dasani, Fruit Waters' and then we describe what it is and this description addresses the key elements of an effective concept - the overt consumer benefit, the reason to believe you can produce those benefits, and how the product is dramatically different from other products. Well, Doug's team became very good at writing consumer-centric concepts for testing. Marketing companies thought 'we go to you, you charge us, and together we create some new product concepts that we fully own. You don't ask anything other than your 6 figure fee and in return, give us a folder full of innovative fully written concepts? Done, where do we sign up?' This was a great business model because brand managers couldn't often do this themselves, they couldn't write with great skill, in a way that was effective in consumer testing. It's not uncommon for people to struggle with articulating their ideas, and people especially struggle to communicate new to the world ideas. So Doug's genius business model was selling the promise of creating great concepts from the view of the creative through the eyes of the customer, and then figuring out how to deliver on that every single creative session. [5]

So in the second generation around 1989, and the first Richard Saunders International Eureka! Mansion innovation (it wasn't yet called the *Eureka! Ranch* at this point), is orchestrated immersion with a specialized creative known as a 'Trained Brain.' Doug would have a session and then he and his team would create 40 ideas in 40 days (40 days and 40 nights, in reference to the Bible). [6] Doug's point of difference was that he and his team are so fluid in their creative juices that they will create more ideas than anybody else and can accomplish this task in a very short time compared to the many months and years normal new product development takes in corporate life. You create concepts, you write concepts. So he had on his staff writers, journalists, comedians, English majors, a couple of marketing people, a couple of salespeople and Doug. That's life and it's grand. The Gen 2 innovation was separating creation from evaluation and then seeding the process with these Trained Brains. [7] Trained Brains are people trained in creativity and in managing the process of working with content experts in order to ensure innovative product concepts were developed. The development of the master creative practitioner, the Trained Brain (and I was one of them), to me was a true innovation because we have validated proof that they actually help the creative process and have the ability to help a brainstorming session produce more innovative ideas. The Trained Brains at the Eureka Mansion during this time were a highly trained group that had to demonstrate and maintain a high degree of creative production ability.

Traditionally, a creative session was bringing in a bunch of subject matter experts, people who understood the topic. So let's say we're going to create new digital recording devices and we're the Sony Corporation. So let's go within the Sony organization and get engineers, software writers, logistics people. We'll get people who really understand what this product category is. We're going to get them in a room and we're going to say 'hey,

what's the next generation of digital recorders?' Doug viewed this as biasing the creative output because you are already judging before you even start creating because you've got the experts and they're going to come from a position of cognition that says – 'I know what needs to be done.' [8]

Doug decides to mix it up in the creative process. Let's do something really clever. First let's shorten the creative cycle down from 40 days to 3 days. In order to dramatically speed up this process we have to change how we get ideas out of the collected team during the creative session. To do this, let's bring from the corporate side all the experts but let's equalize that [with Trained Brains, who really understand the process]. So in the creative session we're going to bring five people from Sony and we're going to bring five Trained Brains from Eureka! who know nothing about digital recorders as a profession. [9] Now these five Trained Brains are really creative people and they are also consumers so they fill an important space in the session. We're going to have a comedian. We're going to have a writer. We're going to have a branding and naming expert. We're going to have a journalist. We're going to have a mathematician. We're going to have bright, very bright thinking people who are trained and proven to be creative. They're also very expressive. They have high energy and, great, fun personalities. The kind of people you want to hang out with. Most corporate teams are composed of the technical, quiet, introverts. We have these technical experts which are typically thought of as left-brain thinkers balanced with the extrovert Trained Brains which tended to operate as right-brain thinkers. Doug's philosophy was let's use a whole brain in the session. Let's at least have one whole brain to balance out the perceptual bias or conformational bias, which we know exists in internal brainstorming groups of people from the same team or orientation. For example, if you have an argument with someone, you tend to bring up the things that validate your argument because that's the position from which you're viewing the construct of the question you are at odds with. [10]

It's hilarious because what you get are serious people and fun people and what happens is a very unique, creative dissonance. Creative dissonance is very important. For example, one of the things that we always did was to designate someone in the role we endearingly called 'the hockey puck'. The hockey puck is a Trained Brain whose job it is to say early on in the creative session the most outlandish idea they can think of. That way anything else anyone else in the session would say really actually now, seems more possible. [11] For example, he or she suggests, 'let's create the gravity levitating digital recorder that seems to follow you around wherever you are so you never have to wonder where your recorder is. It just seems to follow you. We'll use robotic technology to give it intelligence. This recorder will be great'. This completely out-of-the-box, and then some, idea fulfills its purpose and the people from Sony would look at that Trained Brain and think, 'like okay, that's ridiculous, let's get back to reality.' The trained brain would be okay with the suggestion, but we would make an effort to write the concept down anyway - it follows you, it floats on air, levitating anti-gravity magnets. People would laugh and they would go okay. It served the purpose of loosening the team up to hearing new ideas. And after that all ideas were seemingly more legitimate. The lesson here was no evaluation; it kills the creative process. [12]

We also found that the music and other creative session environmental comforts had a minor impact on the creative output. Usually conventional wisdom says to have music, have Nerf balls to throw around, have lots of candy and caffeine, make it a fun and lively environment; as if you need permission to create ideas. One of the reasons why creativity is generally done offsite is because just the site of a normal corporate office means the team shouldn't be having fun here. We need to be working. So they didn't understand the concept of fun and the value of play. But we did learn that if you're laughing, you are more likely to say yes to new ideas. [13]

When you're laughing, you go from amygdala thinking, that reactionary flight, fight, fright, part of your lower brain, to higher function frontal lobe neocortex thinking. This has now become the great advancement of neuroscience in the last five years. Researchers at Dartmouth University and John Hopkins have actually taken people, put them in functional MRI units, it's called fMRI units, and they give them creative exercises. They look at which part of the brain lights up. It turns out when you're being creative and you're synthesizing new ideas, the part of your brain in the neocortex that also responds to pleasure and other positive sensory signals lights up which means that when you're laughing and have a good time, you're more likely to say yes. Your ability to say no decreases and that kept the creative session moving forward. [14]

We discovered this intuitively without needing functional MRIs because for us the proof was in the output. We just got better ideas. We actually quantified using post-creative session surveys that not only did you get more ideas using Trained Brains but you got better quality ideas. The Trained Brains were a catalyst to get the experts to not think down their normal, convergent, mental memory tracks. So their job was to push, pull, prod, cajole,

kid, peel open in many cases, even be sarcastic and push and push. We had some of the most dynamic and historic creative sessions that you've ever seen. [15] These sessions produced many of the seed idea concepts that you still see in products in the market today.

It was high energy but it was in many ways taxing because what we learned was in order for the Trained Brains to work together, you needed something for everyone to chew on. Now the key to a great creative session is a clearly defined objective. [16] To simply state 'we need to create new digital recorders for Sony.' That's not a clear objective. That's a broad objective because what is a digital recorder? What does it mean to record? What does it mean to be digital? Who is Sony? What does that mean? You want to be able to say, we want to create a portable, less than four inch by five inch device that costs less than \$100. We typically assume that creativity is a blank piece of paper, blue sky, ultimate horizon and that's not true. You need to have some construct of direction, otherwise in a Trained Brain process where any idea is allowed without judgment, a digital recorder becomes a secretary with a steno pad doing shorthand. [17] That's a digital recorder because it can now go backwards. People would go okay, that is someone who is acting as a recorder but we're in the business of making electronics. You have to have some constraints. The question is what resource constraints should we view this creative challenge from so we know where we're going in the creative session? [18]

You see, the challenge with a clearly defined objective is it's conditional on the incoming proposition of what they think the business is about. Often when you have the creative session, what would tend to happen is the objective would start to slide because it's something the client would become aware of during the session. So we as the creative team would have to always check against what we call reality drift... If all of a sudden, a concept had a piece of manufacturing equipment capitalization that was required in order to use that line in their current production plant, they'd kill it. So we needed to know the conditional arguments, these other components or environmental factors unknown to us at the point of creativity. [19]

So in the creative sessions the Trained Brains would go away after day one because their job was done. They're the catalyzing agent to make this whole brain. Then in day two and three, we sit with the core team and evaluate the concepts for application and commercializability. A lot of the client side experts go away too, but usually the brand manager and a couple of their assistants remain with our smaller writing and art team with Doug to hone in against the major objective, with the outcome to polish the concepts into a portfolio balanced for both low and high risk around the objective. [20]

So Doug is starting to organize the process of creativity in order to get better results. The standard problem with many creativity sessions is that the person in charge states; 'thank you all for coming here, we're going to create some ideas today and I'll know it when I see it.' This is an impossible position to put a creative team. Again, it's about how to manage the process – in an organizational context, you've got to know how to manage creative people and the creative process. Doug has great skill of getting output from a creative session. [21] Our concept was first we have an immersion process where we work with the client before the session to understand what it was they wanted to do. We would do a site visit. We would look at their factories. We would look at their R&D. We'd interview people. We'd get a sense of their being. [22] Then we'd go back and before the creative session would start, we would have an internal procreative session. You see, the trained brains appear to be naïve; appear is the key word here. It appears to be chaos. It appears to be an unmanageable, nonlinear set of things. But it's a highly orchestrated dance. [23]

What Doug did at the beginning, which was also very smart, was to keep a copy of every concept they ever wrote. The *Eureka! Ranch* was a concept writing machine with a highly prolific team of concept writers and artists. So by the time I met Doug, he probably had 5,000 or 6,000 concepts under his belt. I used to write about 250 concepts a year for the six years I worked with Doug. I've probably written another 3,000 since. So my guess is that Doug's total database in the company is now greater than 20,000 concepts and growing. [24]

Then Doug has another brilliant idea. He goes, huh, I've got all these concepts. The next thing clients are going to want to know is how do consumers like them? So within the *Eureka! Mansion* phase, he starts to develop a consumer research arm, testing all these concepts with consumers. This effort is set up as a sister company called *AcuPoll Research* which becomes one of the top new concept developing, consumer testing companies. [25] Doug then does a successful spin-off of *Acu-Poll* in a sale to a group of employees.

So after starting in his basement, Doug buys the Edwards 1779 era mansion, the mini-mansion in Newtown, Ohio and creates a new home for Richard Saunders International he names the *Eureka! Mansion*. Eventually he would actually build on the property right next door a ranch house, on a lake, right beside the mansion that he

converted into his home. So in the middle of Cincinnati sits a ranch house. It looks like a ranch house. It's got wooden rails in the front like the wild west. He went and bought an old saloon bar and installs in the front lobby of the *Eureka! Ranch*. It's gorgeous. He created a convincing ranch environment so when clients visited the *Eureka! Ranch* they actually got to go to a ranch. [26] Time goes by, big huge companies like American Express and Disney start to come to him and it's an amazing gig. It was during this time in 1994 between the Mansion and Ranch phases that I met Doug. I was new product development Section Manager at *Frito-Lay*, a division of *PepsiCo*. *Frito-Lay* hired Doug to do a creative session for our new low-fat snack development team. I meet Doug during his immersion walk through. He literally walked in my office one day to ask how snack products were made. Of that first meeting I was struck by his incredible energy and thorough preparation in his immersion questions. One of the most important aspects of creativity is incubation and immersion and we'll talk about the steps of what creativity is a little bit later but the key thing is at this point, Doug always went onsite with the big huge clients, like a *PepsiCo*, huge because an average session is \$140,000 for three days and so they're very pricy. [27] A couple of years later I leave *Frito-Lay*, start a venture, work with Doug as a Trained Brain, then eventually join him full time for six years.

So Doug had started developing generation two. Instead of 40 ideas in 40 days, he moved to a three day workshop, and a portfolio of 10 to 20 ideas, and you get full art, full concept writing. You come on Tuesday. By Friday, you leave, you get the folder. People were like how the heck do you pull this off? [28] So basically he had an around the clock operation. So workshop starts on Tuesday. We have creativity session from eight in the morning until four in the afternoon. Then we break for a bit before dinner, and then Doug has dinner with the client until about 7. [During the break before dinner] Doug briefs his writers and they write concepts overnight. Wednesday morning, [the client] walks in at nine o'clock, and magically, there's a portfolio of finished concepts. [29]

We learned how to write concepts better and better and gave some thought to what makes them better. At this time Doug has this database of 12,000 to 13,000 concepts and they have been tested with consumers. So we used this data to create an algorithm to predict concept success or deficiency. Doug called it Merwyn. [30] We applied a patent for the method, but it is described in Doug's book Jump Start Your Business Brain. Merwyn is the heart of generation four, and it was another key *Eureka! Ranch* innovation. We discovered that there are three key drivers of a great product concept: overt benefit, real reason to believe, and dramatic difference. [31]

Overt benefit is what is in it for the customer. What specific promise can you make to motivate them to buy? What makes it valuable? [32] The real reason to believe is why should customers believe your promise? Why should they trust that this is possible and that you can do it better than others? [33] Dramatic difference is about differentiation and relative value, how is this product better than alternatives and what makes it not just great, but a great deal? [34]

That was the magic of the Merwyn algorithm: the ability to predict success. So you have a core objective set out by the client and then you have levels from zero to 10 on a Likert scale of how much overt benefit [*value creation promises*] to the core objective does it has. What are the reasons to believe [*why customers should trust your promises*]? And what makes it differentiated, really special relative to alternatives. And we understood that the language used to construct the concept literally brings it to awareness and tenability. So we could score concepts, weed out the deficient ones and focus on quality. We had like an intentions index, how likely a customer and the client are going to accept this idea. What we really had to learn how to do was define the science of writing a consumer winning concept and then that's where we invented Merwyn and the algorithms. [35]

So bringing it back, in generation two we have Trained Brains to create a whole brain the room, a system to use these Trained Brains to generate more ideas, and better ideas, a system to take these ideas and develop them into fully developed concepts, and a system to evaluate which concepts would gain the most traction. So now we focused on increasing the quality of the concepts that we generated. This is where generation three was evolving at the same time. [36] This next innovation was a big breakthrough around stimulus and in seeding informed intent in our clients. [37]

We had Trained Brains that understood creativity and the helped orchestrate the process, but we needed the clients to get up to speed so our time together could be more effective. [36] Informed intent was about giving the client an understanding of our creative process, instilling in them a belief that we know what we are doing and that together, we will be successful. [38] We gave them a sense of opportunity, generating perceived feasibility and perceived desirability for what can we create. It was really pre-selling them on our own concept framework:

the overt benefit, reasons to believe, and dramatic difference of the *Eureka! Ranch*. [39] So one of the things we did on Monday night was we'd have a little training session with the client team on what does it mean to be creative, the point of creativity, what is the creative goal as opposed to their brand goals, and we established a clearly defined objective. We primed the pump because most people aren't loaded for opportunity. Most people are loaded for preservation. [40]

Informed intention gave them a sense of possibility around creating ideas, that they could do more. We used to measure a corporate index of how creative is the client organization was coming into the creative session. How successful are they at innovation? How many ideas did they have that went to market? Trying to get past those hurdles of the team's internal statement of 'oh, my God, we're not a very creative company. [41] We've not done a whole lot.' This observation opened up for Doug a training opportunity with his clients on the *Eureka! Ranch* framework, so we started doing some training. We actually created a training business, which became its own highly successful and profitable piece of business. Training the companies on how to be more creative made the creative sessions more productive. [42]

We also learned during this generation three phase how to develop client creativity to significantly increase mental fluidity – a lot more ideas, better ideas, leading to better concepts – we increased mental fluidity significantly higher because, again, we needed to jump their tracks of linear thinking. Now there are creative gurus like Edward De Bono and other folks who talk about lateral thinking and a lot of people think that the *Eureka! Ranch* is nothing more than fancy lateral thinking engine. For example, how do I take this white Styrofoam coffee cup and relate it to new possible organizational structure ideas in a business school? That's lateral thinking. What Doug did to extend and bend this method was a nifty technique he called stimulus response, and stimulus response was what I would define as a nonlinear method of lateral thinking. [43] In other words, I would call it lateral thinking squared and this technique would work very effectively when used in a group. [44] A very simple example of how this stimulus response works to extend the power of the stimulus dramatically compared to lateral thinking starts with the same stimulus I mentioned before: how is a cup like a university business school? So what you would do is go around the participants in the creative session and ask them to connect the elements of the cup to build ideas for new ideas for the business school. You might start with well, let's take the elements of the cup. Cup's half full, or half empty. It holds volume. It's Styrofoam so it's disposable. We have somebody on the manufacturing line that had to make sure that that cup was the right form and is always perfectly made to the same dimensions. Then someone else builds from that and recalls that same dimensions in a business schools are called 'AACSB' standardizations and so on. We can have a one ounce cup, a six ounce cup. We can have a whole sleeve. So we can relate directly these characteristics of a coffee cup and apply them to the business school objective. But these leaps are obvious and descriptive, anyone can do that. You don't end up with dramatically different ideas because the stimulus is still close in. Creativity is creating a concept that is both innovative and valuable. [45] To get there you needed serendipitous thinking or divergent thinking to produce more idea options, not reordered conventional thinking. [46]

So what we would do is instead of using the cup as a direct source of ideas to figure out a business school ideation challenge we use the cup as a starting **stimulus**. What we do is we'd say when you think of cup, what do you think of? So we would write an extended mind mapping of things that they think about the cup. For example maybe when I think about the cup, I think of an athletic supporter, which is a cup for baseball players. This is somewhat conventional thinking, drinking cup, cup, athletic cup, athletic supporter. Lots of people would make that connection, so it's not very innovative. We wanted original thinking, divergent, serendipitous thinking where we are thinking about ideas and connections that no one else is thinking about. And to do this we use indirect association. [47] View a stimulus, respond to it and think of something, take that thought and associate it with something else, take that something else and associate it with yet another something else. Three, four, five levels of indirect association where the path between the original stimulus and the thinking end point are not obvious and can be only explained by the connections of meaning provided by the individual; the end point uniquely influenced by individual experiences and cognitive processes. For example using the white Styrofoam coffee cup as a stimulus as before but now we extend it, you see a coffee cup, someone else thinks of pencil holder, another person thinks to put dirt in the cup and make it a seedling planter, the next person sees tipping the cup on its side and using it as a golf ball putting target, then someone thinks of tearing up the cup into little pieces, someone sees these pieces and thinks of communion wafers. You think of think of these small Styrofoam wafers could be used in religious ceremony as sacrament. Sacrament makes you think of affirmation or self-selection. And now we take these words which have been related here in a secondary nonlinear effect and apply them to the original problem context, for example, linking a coffee cup to sacrament, affirmation or self-

selection to the business school context. So you might think about self-selection, affirmation and MBA and come up with the concept idea of a real-world executive MBA program for expert entrepreneurs where the degree is conferred based solely on an assessment of prior learning experience coupled with a real market laboratory, as documented (self-selected) by the entrepreneur and affirmed (or blessed to use the sacrament language) by their stakeholder peer network rather than an academic board. The cup was just a stimulus, but you might have got to sacrament because of your unique life and perspective of the world. Somebody could say well, that's just really wrong and suggest something else and the process starts again. In this way from the same piece of stimulus many concept ideas begin to emerge. So we always say that it can be whatever it is but now it jumps the tracks and gives us a starting point from which we think from a different second order place and it amplifies the ideas generated. This was the huge, big a-ha. [48]

Then we learned how to use the stimulus more effectively. So now what we would do is we would select physical stimulus to foster greater jumping off points, more creative response from the participants, and we would customize the stimulus to the people in the room. We learned very quickly it was about personality matching and that's where we started to make relationships with a group called the HBDI, Herrmann Brain Dominance Instrument. Ned Herrmann was an engineer for GE and he began to realize that people had various kinds of thinking style personalities. It's not like Myers-Briggs. It's not like a number of others but basically it's a way in which people think about ideas, not their personality per se but their personality when thinking about new ideas. So we measured our clients' thinking styles and we would match with our trained brains an opposite set so that we had a complementary whole brain. So we created this concept of whole brain creativity. That became our secret R&D. That's never really been clearly codified in the academic literature I can better set up a creative session because I know how you're going to accept the stimulus and I can choose stimulus that fits your thinking style, which helps you be more fluid in the creative process. [49]

And we called this the nonlinearity of stimulus. It was a two-step stimulus process. So you take a base stimulus, unrelated to your industry context, and you cross it up by doing free association around that base stimulus. This approach results in nonlinear super-stimulus that creates an exponential increase in the number of ideas generated. Then you add the industry context – also represented by stimulus, but this time related stimulus, like a CPU to represent the computer industry, or a graduation hat to represent a University. It is just a clever extension of some standardized brainstorming methodology. Alex Osborn used stimulus. They did it all the time and so did De Bono and other people. But this was a clever reassembly of that basic idea – using unrelated and related stimulus, and free association to get innovative thinking. Once we figured that out, the quantity, breadth, and depth of the ideas generated was just off the hook. We always got lots of ideas but we got better ideas and inherently, you get more ideas but the key thing is you want better ideas. No one cares whether you create more ideas. [50]

So it's this process of managing the stimulus and then using people's own life experience to get them thinking divergently. [51] This means that the Trained Brains became more than just thinkers. They became facilitators, or mini facilitators, if you will. So you'd have a group of two or three people and out would come a piece of stimulus. The Trained Brain's job is to go wide, just to start throwing things in and letting the corporate people add on, until they figured it out or we trained them how to be starters. So literally the Trained Brain's interaction to fire became kindling, gasoline, and match. That's how we generated the heat. [52]

We literally could have creative sessions where we did enough preparation that Doug and I would create pre-concepts ahead of the customers even coming in and literally in the 20 concepts generated during the Tuesday creative session, 5 of them contained these seed ideas that were written before the clients ever got there because we had practiced with the stimulus beforehand. We'd introduce those on the Wednesday, after spending the Tuesday working with the client to generating innovative ideas. Wednesday morning we'd say hey, while we were putting these ideas together, we had some new thoughts. We always presold it that way because the stimulus response process can diverge along many directions. We'd always have some great concepts in the bank, that way we knew we could always deliver on our promise. [53]

Another big masterful thing was in understanding how to pitch or communicate the ideas that you create in a portfolio. The key observation was there are two kinds of biases that people always operate from. Overconfidence bias because the client comes in with the attitude of the experts, while discounting the expertise of the Trained Brains, thinking the experts will know the correct ideas.. Then they have their confirmational biases which literally confirm what they think they already know. We used to get a lot of language for example like 'so what you're saying is' – and you can tell they're leading you down this path of trying to confirm what

they already think. So we had to know how to intersperse the concepts and we used to call it the Three Bears Method. So you always stack concepts in groups of three, knowing that they're more likely going to pick the middle of the three. The first one's not enough, the last one's too much and the middle one's just right. It works. It's always the Mama Bear. So what you do, if you have 20 concepts, you say okay, well, we're going to show these concepts and we're going to show you three which are name ideas, three that are manufacturing ideas and three that are – so you parcel them into groups. You don't say we have 20, or people just go crazy. [54]

So yes, creative magic does happen and we do have unique combinations that occur more often using these four generations of techniques but we set them up to happen. The client is going to think this is just random from their perspective but in reality it was highly orchestrated. There's no blind randomness allowed in creativity. That's a common misconception of brainstorming that the whole thing can be rigged so that at the center of a great creative session is a guide to get participants to make cognitive selections that they might never thought were possible until someone lead them to it. In this context of the creative session it doesn't happen by itself, which is the power of the group. The reality is that the facilitator or guide can't, on their own, determine the output, they can only organize and guide its' flow. Creativity has changed as the nexus of bringing important people to one location, to using brains in a serial processor. It's distributed thinking. It's literally cloud-based – remember, a creative group could be interpreted as the first cloud computing system ever. Cloud computing is not a new invention. It just happens to be done now by computers. Cloud-based in that here's a bunch of people, we'll hook up their brains and a great facilitator can get the maximum out of it. The *Eureka! Ranch* can arguably claim to have created more and better ideas than anybody else in the country. The magical creativity of *Eureka! Ranch* is the orchestrated emergence of a concept. Organizational creativity is a misnomer because it's what you do to organize creativity that makes it happen. [55]

I have never believed that at the *Eureka! Ranch* we ever created anything that did not already exist somewhere deep in someone's mind. We simply brought to awareness and perceptual conditioning that these things were possible. So we went and put them together. [56]

Interpretation

An analysis of this chronology with respect to the deliberate practice model appears in Table 3, which is organized to follow the left-to-right flow represented within Figure 2. Table 3 provides a homologous definitional basis for each antecedent construct utilized as elements in the figure. Additionally, Table 3 contains the participant-observations from the *Eureka! Ranch* experience which both enable the interpretation of this experience in terms of the theoretical model, and support generalizations upon this experience that comprise the research model (Figure 3) we suggest for organizing creativity. The matching between the literature-based constructs and the *Eureka! Ranch* experience was accomplished using multiple rater assessments. Independently, the lead authors reviewed the transcript of the *Eureka! Ranch* experience, coding this text for deliberate practice expertise constructs. The lead authors then compared their coding, discussed the few areas where there was difference of opinion, and used consensus to determine the final coding. Where there was more than one transcript element that illustrated a construct, the most demonstrative passage was included in Table 3.

{Insert Table 3 about here}

Based upon the analysis made possible by an examination of Table 3, a research model emerges which can enable researchers to examine the theoretical propositions for organizing creativity that flow from the analysis. Specifically, we are enabled through this analysis to: (1) identify the constructs in the organizational-level deliberate practice model (Figure 2) which are generalizable beyond the *Eureka! Ranch* experience, and (2) specify the definitions of key constructs in a model of organizing creativity, as illustrated in Figure 3.

{Insert Figure 3 about here}

A RESEARCH MODEL

As illustrated in Figure 3, the research model that we have abstracted from our analysis of the *Eureka! Ranch* experience is similar in form to both the individual and organizational level models of deliberate practice but they are not identical. In this section we utilize Figure 3 as our means to communicate both the constructs suggested to further the understanding of organizational creativity, and the logic for the relationships, presented in the form of propositions. Following, we review the constructs and research logic presented in Figure 3 from right to left, beginning with the outcome: superior creativity outcomes.

Superior Creativity Outcomes

As previously suggested, superior creativity outcomes are defined to be *new product introduction results with economic, social and/or environmental outcomes (Cohen, Smith, Mitchell, 2008) that either exceed past results for similar products of a given organization, or exceed results for comparable products of competitors.* (Economic outcomes include such performance results as sales, market share, or profits. Social outcomes include brand equity, reputation, customer satisfaction, etc. Environmental outcomes include pollution levels, energy footprint, quality of life, and many others.)

Superior Product Concepts

From our analysis of the *Eureka! Ranch* experience, we suggest that the notion of the “product concept,” as a monetizable outcome of organizational creativity, is a highly useful one to contribute to the creativity literature. The process of organizing creativity that is chronicled in the case introduces a subtle but important distinction, by suggesting that an explicit-form written product concept is a critical result of the creativity process. As suggested in the case, superior explicit-form product concepts are defined to be *the written depiction of new products* that reflect clear: “overt benefits”, “real reasons to believe”, and ‘dramatic differences.’ These elements reflect three key aspects of creativity. ‘Overt benefits’ reflect the value (appropriateness) aspects of creativity (Hennessey and Amabile, 2010, Ford, 1996). ‘Dramatic differences’ reflect the novelty or differentiation aspect of creativity (Amabile, 2005). ‘Real reasons to believe’ reflect the difference between invention and innovation, that, at least in the business context, necessitates creative outcomes being both feasible to commercialize and being accepted by customers (Jones, Knotts, and Udell 2011; Schoen et al., 2005).

There is anecdotal evidence from the case (where thousands of written product concepts were analyzed in the Merwyn database against consumer preferences) that there is a connection between superior explicit-form written product concepts and superior outcomes. While the literature does not address the notion of the explicit-form written “product concept,” superior products (valued and differentiated) have been found to be the most important differentiator between winners and losers in new product development (Cooper, 2011). Consequently we expect:

Proposition 1: Superior explicit-form written product concept development leads to superior creativity outcomes.

Product Concept Deliberate Practice

Product concept deliberate practice is defined to be *the orchestrated activities that involve intensity (Cohen and Levinthal, 1990), duration (Amabile et al, 2005), and content central to the development of a new product concept (Hall, 2001).* As previously noted, the

expertise-development theory that underlies the deliberate practice model of superior performance suggests that intensity, duration, and content are the key elements comprising deliberate practice; and also that deliberate practice drives exceptional performance. The *Eureka! Ranch* experience suggests that: a key facet of intensity is immersion: devoting dedicated time to the creative process (Table 3); a key facet of duration is accelerated incubation: which we note from the case can be interpreted as “working around the clock”; a key facet of content is written explicit-form product concepts which exhibit: strong overt benefits, real reasons to believe, and dramatic differences. Accordingly we suggest:

Proposition 2: Product concept deliberate practice leads to superior product concepts.

Concept Development Capacity

Concept development capacity is defined to be *the level of competence (e.g. ability for bisociation, divergent production, insight) available to refine the quality of new product concepts (see, e.g. Corbett, 2005; Ireland et al, 2003; Woodman et al, 1993)*. We suggest concept development capacity to be a construct that is homologous in nature to the problem-solving process capability that is part of a cognitive system. In the organization-level model we suggest that as part of the organizational creative system, changes in the creativity process are a key outcome of deliberate practice. However, in the case we have analyzed, we have not seen as directly, this linkage implicating deliberate practice and the superiority of the product concept. Rather, our experience indicates that it is the ability to refine product concepts that were developed through product concept deliberate practice that enables them to become superior. As previously noted, the literature suggests that the dimensions of deliberate practice that influence its effectiveness are: intensity, duration, and content (Figures 1 & 2). While intensity and duration are primarily thought to arise endogenously, content (the “what to practice” and “how to practice it”) must come from expert external sources *and* be utilized by those who are actually doing the practicing (Charness, Krampe and Mayr 1996). To the extent such input is not available, then the “content” portion of deliberate practice can be compromised (practice is flawed), and the effectiveness of deliberate practice is reduced. Consequently, we suggest that concept development capacity (such as input from the trained-brains in the case) has a moderating effect on the relationship between product concept deliberate practice and the quality of the product concepts produced.

This observation is borne out in the literature, which suggests that the refinement of creative output is enabled or disabled to the extent that insight, divergent production and bisociation (Table 2) are available for application to influence the quality of the practice. As we have previously noted, this “coaching” role is also suggested to combine well with deliberate practice to produce expert performance (Charness, Krampe and Mayr 1996). Hence we suggest:

Proposition 3: Concept development capacity moderates the association of product concept deliberate practice and superior product concepts.

Concept Assessment Knowledge

Concept assessment knowledge is defined to be *the extent of relevant techniques and tools available (cf, Woodman et al, 1993) for validating possibilities generated in the product concept generation process*. We interpret concept assessment knowledge as a construct that is homologous in function to the knowledge base that is part of a cognitive system. Similar to concept development capacity, the ability to draw upon previously developed expert evaluation

cognitions enables coaches to help organizations to select “winning” product concepts. This effect was evident in the *Eureka! Ranch*’s use of the Merwyn database to assess the veracity of product concepts against consumer preferences. Consequently, we conclude that the level of concept assessment knowledge has a moderating effect on the relationship between product concept deliberate practice and the quality of the product concepts produced, and accordingly we suggest:

Proposition 4: Concept assessment knowledge moderates the association of product concept deliberate practice and superior product concepts

Relevant Social Priming

Relevant social priming is defined to be *the cognitive readiness (e.g., the preparedness invoked by such factors as imposed goals (Ambrose and Kulik, 1999), task clarity (Hauser and Wood, 2010), response to role modeling (Shalley et al, 2004), etc.) that arises from the assertion of expectations within an important/ applicable social context*. The case illustrated three social-priming sub-constructs that appear to us to be particularly relevant. First, clearly defined creative objectives initiated product concept deliberate practice by “priming the pump.” Second, constraint awareness, which helps to provide direction in the use of related stimulus to assist in the development of concepts that are relevant and implementable. And third, “trained-brain catalysts,” provided role modeling for task-relevant activity.

Expertise theory suggests that social factors enable or constrain the extent of deliberate practice (Charness, Krampe and Mayr 1996). More recently, developments in cognitive psychology suggest that the social situation of cognition creates dynamism in the task environment through action orientation (Mitchell, Randolph-Seng, Mitchell, 2011). Where cognition is action-oriented, embodied, distributed, and situated within a given context, behavior (such as deliberate practice) is concurrently and jointly affected by: what action is underway, the way a person’s body is responding (had your coffee this morning?), the extent of input from a variety of other people, and within some given situation. This “social influence *plus* body/ experiential influence” conceptualization moves away from more static models for understanding cognition (e.g. input, process, output – so-called *boxologies* (Smith and Semin, 2004)) toward a more dynamic model. This logic suggests that relevant social factors prime or prepare the mind for action: in this case the actions of product concept deliberate practice. Thus, we suggest:

Proposition 5: Relevant social priming leads to product concept deliberate practice.

Innovation Motivation

Innovation motivation is defined to be *the desire (e.g. from positive/negative affect (Amabile et al., 2005)), and confidence (e.g. self-efficacy (Shalley et al, 2004)), and propensity for action (Sternberg, 1997) necessary to generate action toward engagement in creative tasks*. The *Eureka! Ranch* experience suggests three facets of innovation motivation that we believe are particularly relevant. First, organizational efficacy, wherein the *Eureka! Ranch* found it to be important to develop “informed intent” with their clients, instilling within them a belief in their exceptional skill and methods, thus enabling the creation of an expectation that together they would be successful in generating superior new product concepts. Second, affect orchestration. At the *Eureka! Ranch* a key role of the “trained brains” was to make it fun: to keep clients engaged and positively disposed toward the deliberate practice process of product concept

development. Third, creative dissonance development, another key role of the “trained brains,” was used at the *Eureka! Ranch* to invoke tension, focus, and motivation.

The expertise literature suggests that motivation in the deliberate practice process stems from such factors as attention span, repetition tolerance, and competitiveness (Figure 1) (Charness, Krampe and Mayr, 1996). When informed intent, positive disposition, and dissonance resolution were invoked in organizing creativity, a high level of motivation to innovate occurred (see *Eureka! Ranch* case). Thus, we suggest:

Proposition 6: Innovation motivation leads to product concept deliberate practice.

Information Completeness

Information completeness is defined to be *the quality of the fusion among: domain specific knowledge (Sternberg, 1997), prior organizational knowledge (Shepherd and DeTienne, 2005); and relevant creativity knowledge and outside (creativity-expert) sources (Cohen and Levinthal, 1990)*. We note from the case that at the *Eureka! Ranch*, it was important to match domain expertise and prior knowledge with process expertise and relevant creativity knowledge. The result of this matching was the formation of a “whole brain,” which then enabled the members of the organization to avoid perceptual and conformational biases as they were organized with intensity, duration, and (most importantly in this instance) specifically relevant content. Accordingly, we offer:

Proposition 7: Information completeness leads to product concept deliberate practice.

DISCUSSION

Evident in Table 3 is the fact that in organizing creativity, the *Eureka! Ranch* business model is highly consistent with the organizational-level expertise development model of Figure 2. Deliberate creativity organization is clearly the focal activity of the *Eureka! Ranch*. Social factors, motivational factors, and informational factors are tuned to supporting this focal activity, and a creative system (represented by the business model) was developed to drive superior results. This provides support for our framing the organization of creativity at the organizational-level, as an expert entrepreneurial cognitive task. With a few exceptions, the *Eureka! Ranch* experience reflects (and draws upon) most of the key concepts thought in the extant literature on creativity and deliberate-practice expertise to be relevant to the generation of superior creative results. The exceptions which we noted in our analysis (Table 3), the social factor of autonomy/freedom, the motivational factor, propensity to invest, and the informational factors of abstractness and uncertainty, do not necessarily imply that these factors are not relevant in any context, but suggest that they were not relevant to the *Eureka! Ranch* approach, as recounted in participant observations.

The *Eureka! Ranch* case extends our understanding of organizational creativity by providing new insights into organizing creativity, as well as in potential applications in related fields. In the following paragraphs we suggest several implications of our research, related to our model that is: (1) more complete; (2) more systematic; (3) more integrated with related fields such as corporate entrepreneurship and innovation; and (4) more extendable, than previous work.

A More Complete Model

First, the *Eureka! Ranch* approach focuses on the development of explicit-form written product concepts as the focal content of the deliberate practice of creativity organization. The extant literature suggests that fluency, cognitive skills, field independence, creativity relevant skills, and fluidity are the content to practice. *The Eureka! Ranch* draws on those skills, but applies them specifically to the development of product concepts that have three key elements: a strong overt benefit, strong “reasons to believe,” and strong dramatic difference, suggesting that superior creative results are driven by superior product concepts.

A More Systematic Model

Second, the *Eureka! Ranch* approach provides insight into the creative system required to achieve superior creative results. Previous work to be found within the creativity literature has not addressed the ‘black box’ of how to set up a system to deliver superior creative results, implying that the creative process is inherently unsystematic. The *Eureka! Ranch* business model suggests that what was thought to be unsystematic is, in reality, substantially systematic; and it is clear that over a substantial period of time, the *Eureka! Ranch* has been able to document an effective system for consistently achieving superior creative outcomes.

Linkage with Related Fields: Corporate Entrepreneurship, and Innovation Literatures

Third, our analysis of the *Eureka Ranch!* model for organizing creativity has implications for research in related fields (i.e., those beyond organizational creativity), in particular: corporate entrepreneurship and innovation. These fields often employ an organization level of analysis for the explanation of innovation and creativity processes and events (e.g., Zahra, 1991, 1993, 1995; Damanpour 1991), which facilitates integration with our treatment of organizational creativity.

Zahra’s (1995) defines corporate entrepreneurship as the processes that involve “innovation, renewal, and venturing efforts.” Sharma and Chrisman (1999) even more explicitly define corporate entrepreneurship as “the process whereby an individual or a group of individuals, in association with an existing organization, create a new organization or instigate renewal or innovation within that organization.” Our model addresses generating new products in a process that involves the creation of explicit-form written product concepts. Given that other aspects of corporate entrepreneurship (as noted)—creating new organizations and instigating (strategic) renewal—also require creativity; it may be valuable to consider potential construct analogs to the explicit-form written product concept for these processes as well. In this way, the process of developing entire new organizations or new strategies might likewise be explained by a deliberate-practice, expert-cognition approach, and related model.

Additionally, Barringer and Bluedorn (1999) have observed that the influence of context on a firm’s level of entrepreneurial intensity has become a major theme in the corporate entrepreneurship literature. Many of the social factors we have described as being important to the process of organizational creativity could be added to some of the contextual factors suggested by the corporate entrepreneurship literature (e.g., turbulent vs. stable environments, Naman and Slevin, 1993; top-management team support and political factors, Hitt, Nixon, Hoskisson, and Kochlar 1999).

Damanpour (1991) cites previous research defining innovation as the “adoption of an internally generated or purchased device, system, policy, program, process, product, or service that is new to the adopting organization ” (1991: 556). Past work on innovation has suggested

that international diversification contributes to higher innovation (Hitt, Hoskisson, and Kim, 1997). It has been suggested that successful innovation in the context of high international diversification depends on “culturally diverse corporate and divisional management teams” (Hitt, Hoskisson, Kim, 1997: 790). This assertion appears to us to be analogous to the notion of a “whole brain” found throughout the *Eureka! Ranch* case; and it appears to parallel the construct of information completeness we propose. Like assembling a “whole brain” to organize creativity; assembling diverse management teams likely increases the quality of fusion-born innovation from combining domain specific knowledge, prior organizational knowledge, and relevant creativity knowledge and sources to produce inter-functional integration (Hitt, Hoskisson, and Nixon, 1993). Relatedly, previous research on cross-functional teams suggests the foregoing organizational arrangements to be necessary but not sufficient for the development of new products within the context of corporate entrepreneurship (Hitt, Nixon, Hoskisson, Kochhar, 1999). In these and similar studies, we speculate that perhaps structural considerations are reported as “necessary but not sufficient” because they are speaking to only part of the requirements of organizing creativity. For example, these structures, despite facilitating information completeness, may be neglecting certain elements of deliberate practice.

There are constructs reported to be significant in studies of innovation or corporate entrepreneurship that do not appear in our model. For example, organizational slack, “the pool of resources in an organization that is in excess of the minimum necessary to produce a given level of organizational output” (Nohria and Gulati, 1996:1246), has been associated positively with innovation (Cyert and March, 1963), yet, our model says little about organizational resources. This and other open points may be reconciled, however. Consider the assertion of Nohria and Gulati (1996): that the relationship between slack and innovation takes an inverted U-shape. They argue that too little slack discourages experimentation and attempts at innovation, and that too much slack increases complacency and a decreases discipline in evaluation. We wonder whether our model of organizing creativity may simply account for these realities in another way. For example, the social factors of autonomy and freedom encourage experimentation and innovation attempts, and the social factor of imposed goals decreases complacency and sets proper boundaries. There are likely many such similarities in the literature, that can stem from our analysis of organizing creativity, and which provide an opportunity for further integration and empirical testing. Hence, just as we have identified organizational-level homologues to individual-level counterparts in our additive composition model of organizational creativity, we likewise suggest that application to other literatures may proceed based on drawing analogs to phenomena, models, and definitions in related fields. It is likely that phenomena salient to all fields will be better understood.

Extension of Value Creation Research

Fourth, the expert knowledge base (thinking) that supports the *Eureka! Ranch* process for organizing creativity reflects the three key active knowledge structures required to create any economic exchange: planning cognitions, relationship (promise) cognitions, and competition cognitions (Mitchell, Morse, and Sharma, 2003). Understanding these expert cognitions may allow others to effectively develop a *Eureka! Ranch* style creative system needed to achieve superior creative results.

Future Research

The key limitation of single case research is external validity. While the Eureka Ranch experience maps well to our organizational-level expertise development model of Figure 2, further development and investigation of a more generalized research model of creativity organization is needed. We developed Figure 3 based upon the *Eureka! Ranch* experience and offer it as starting point for future research on ways to “organize creativity”. Such a model might be tested using an experimental method, training new product development managers or other innovators in the *Eureka Ranch!* approach and comparing the inputs, processes, and outcomes of this treatment group to control groups that received more traditional creativity training and those that did not receive any training at all.

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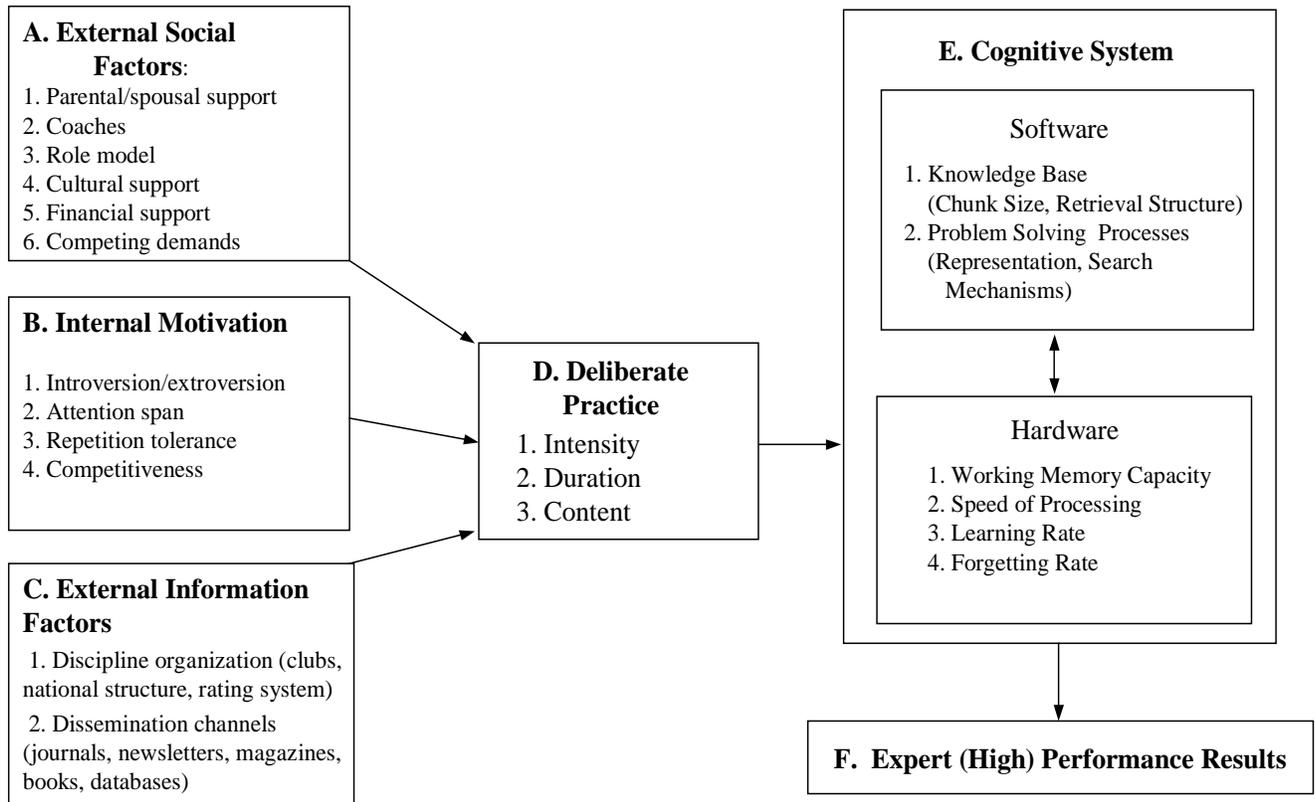
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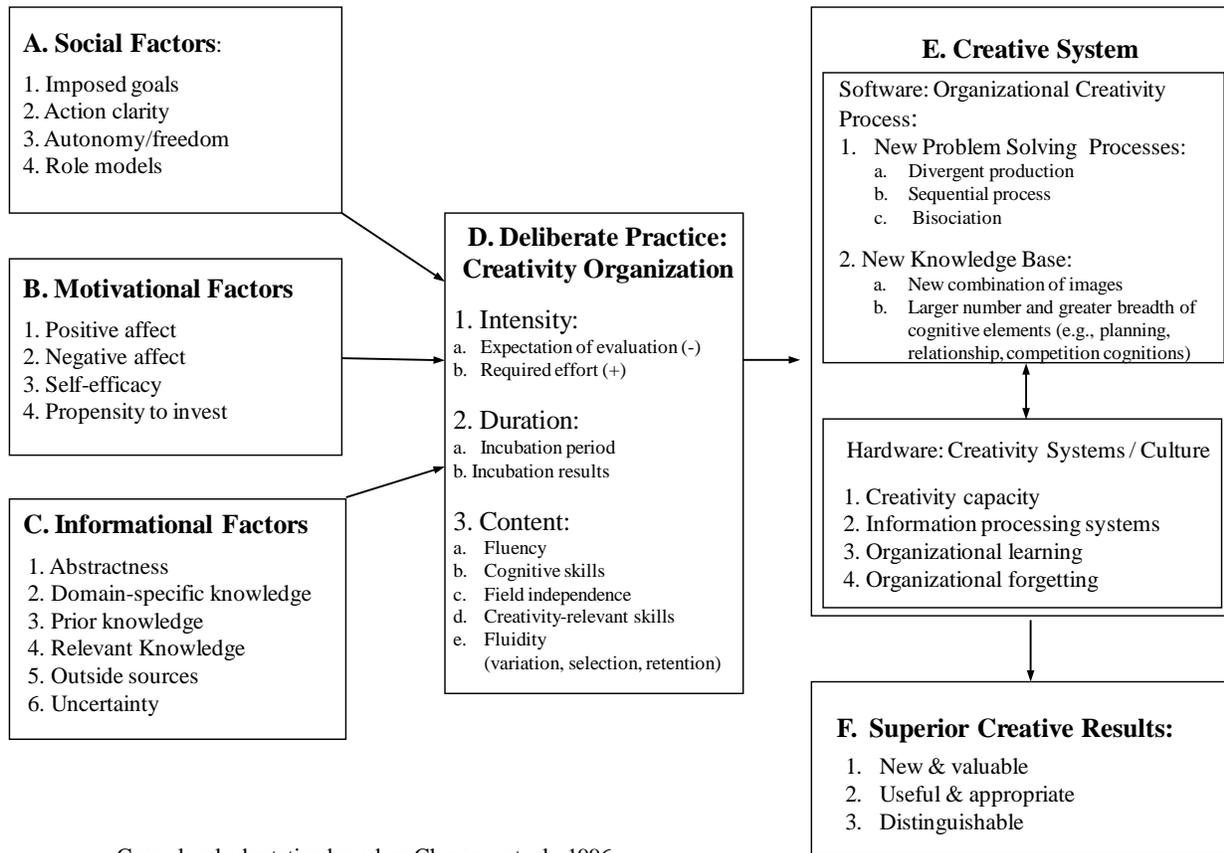
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Figure 1
Factors Important to Expertise/Skill Acquisition



Adapted from Charness et. al., 1996

Figure 2
Organizing Creativity:
Possible Constructs (see Table 2 for references) in
An Organization-level Model of Deliberate-practice-based Creativity



Cross-level adaptation based on Charness et. al., 1996

Figure 3
A Research Model of Organizing Creativity

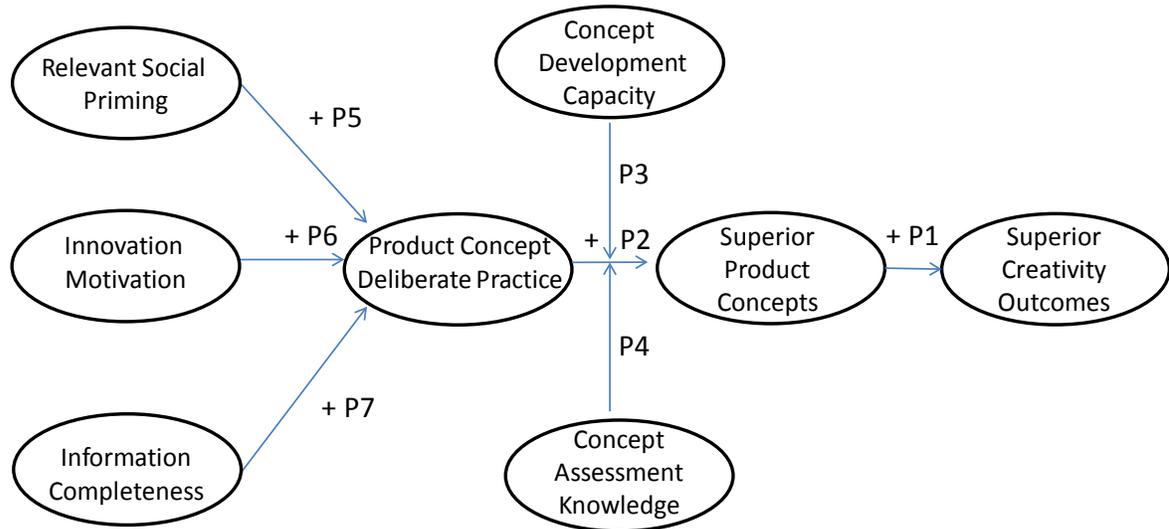


Table 1: Analysis of Representative Creativity Descriptions by Level of Focus

<i>Section A1: Individual Level – Outcome Focused</i>
<ul style="list-style-type: none"> • “We consider employee creativity to be the production of ideas, products, or procedures that are (1) novel or original and (2) potentially useful to the employing organization (Amabile, 1996)” (Madjar, Oldham & Pratt, 2002, p. 767).
<i>Section A2: Individual Level – Process Focused</i>
<ul style="list-style-type: none"> • “To Torrance (1988), individual creativity is a process of sensing problems, making guesses, formulating hypotheses, communicating ideas to others, and contradicting conformity or “what is expected”” (Drazin, Glynn, & Kazanjain, 1999, p. 290). • “At the individual level, we define creativity as the engagement of an individual in a creative act (Ford, 1996; Torrance, 1988). Creative engagement is a process in which an individual behaviorally, cognitively, and emotionally attempts to produce creative outcomes (Kahn, 1990)” (Drazin, Glynn, & Kazanjain, 1999, p. 290).
<i>Section B2: Organizational Level – Process Focused</i>
<ul style="list-style-type: none"> • “Organizational creativity is the creation of a valuable, useful new product, service, idea, procedure, or process by individuals working together in a complex social system” (Woodman, Sawyer, & Griffin, 1993, p. 293).
<i>Section C1: Level Neutral – Outcome Focused</i>
<ul style="list-style-type: none"> • “Researchers and laypersons seem to agree that creativity refers to something that is both novel and in some sense valuable” (Ford, 1996, p. 1114). • “Definitions that focus on the attributes of creative products have become widely acknowledged as the most useful approach for empirical study and theory development (Amabile, 1983b; Busse & Mansfield, 1980; Mumford & Gustafson, 1988). If researchers focus on creative products, they designate attributes of people, processes, and places as contributors to these acts and recognize that, ultimately, assessments of creativity are subjective (Amabile, 1982)” (Ford, 1996, p. 1114). • “I define creativity as a domain-specific, subjective judgment of the novelty and value of an outcome of a particular action” (Ford, 1996, p. 1115). • “The study of creativity has generated a wide-ranging variety of definitions of the concept, some of which define it as a characteristic of a person and others as a process (Amabile, 1988). However, most contemporary researchers and theorists have adopted a definition that focuses on the product or outcome of a product development process (Amabile, 1983, 1988; Shalley, 1991; Woodman et al., 1993; Zaltman, Duncan, & Holbek, 1973). Following this earlier work, in the current study we defined creative performance as products, ideas, or procedures that satisfy two conditions: (1) they are novel or original and (2) they are potentially relevant for, or useful to, an organization” (Oldham & Cummings, 1996, p. 608). • “...”creativity refers to publicly visible attributes of a product presented by an actor to a field” (Ford & Gioia, 2000, p. 707). • “...”creativity is not an inherent quality of an object, but rather is a subjective judgment made by members of a field of the novelty and value of an outcome of an act (cf. Amabile, 1982)” (Ford & Gioia, 2000, p. 707). • “Throughout most of these perspectives, creativity usually has been defined as the production of novel ideas that are useful and appropriate to the situation (e.g., Amabile, 1983; Mumford & Gustafson, 1988)” (Unsworth, 2001, p. 289). • “...Li and Gardner offered a Chinese definition of creativity as “the solution of problems and products in a way that is initially original but is ultimately accepted in one or more cultural settings” (1993: 94)” (Farmer, Tierney, and Kung-McIntyre, 2003, p. 619). • “Creativity is generally defined as the production of novel, useful ideas or problem solutions. It refers to both the process of idea generation or problem solving and the actual idea or solution (Amabile, 1983; Sternberg, 1988a, Weisberg, 1988)” (Amabile et al, 2005, p. 368). • “Drawing on the assumption that novelty is that distinguishing feature of creative work over and above work that is solely useful or well done (Amabile, 1996)” (Amabile et al, 2005, p. 368).

(continued) Table 1: Analysis of Representative Creativity Descriptions by Level of Focus

<i>Section C2: Level Neutral – Process Focused</i>	
•	“We define creativity as a process, rather than an outcome. This distinction is not unique to us (Mohr, 1982); Amabile has modeled creativity as an individual-level cognitive process consisting of multiple stages” (Drazin, Glynn, & Kazanjain, 1999, p. 290).
•	“...in effect creativity is a process necessary, but not sufficient, condition for creative outcomes” (Drazin, Glynn, & Kazanjain, 1999, p. 290).
•	“...an approach to work that leads to the generation of novel and appropriate ideas, processes, or solutions” (Perry-Smith & Shalley, 2003: 90).
•	“Considerable theoretical work (e.g. Amabile, 1996; Stein, 1967) has suggested that the creative process involves several stages, including (1) identifying a problem/opportunity, (2) gathering information or resources, (3) generating ideas and (4) evaluating, modifying , and communicating ideas” (Shalley et al., 2004, p. 947).
•	“Creativity can be viewed as a means of identifying problems, using guesswork, developing hypotheses, communicating ideas to others , and contradicting what would normally be expected (Torrance, 1988)” (Gilson, Mathieu, Shalley, & Ruddy, 2005, p. 522).

Table 2: Antecedents of Creativity (listed alphabetically)

Antecedent	Level	Relationship
Abstractness	N	"...accessing information at more abstract, principled levels leads to greater originality in forming new ideas (e.g. Ward et al., 2002)" (Baron & Ward, 2004, p. 567).
Access to outside sources of knowledge	N	"Outside sources of knowledge are often critical to the innovation processes.... At the organizational level, March and Simon (1958:188) suggested most innovations result from borrowing rather than invention" (Cohen & Levinthal, 1990, p. 128).
Acquisition Effort	N	"To develop effective absorptive capacity... it is insufficient merely to expose an individual briefly to the relevant prior knowledge. Intensity of effort is critical" (Cohen & Levinthal, 1990, p. 131).
Basic Elements of Creativity	N	"...based upon Csikszentmihalyi's (1996) basic elements of creativity – preparation, incubation, insight, evaluation, and elaboration" (Corbett, 2005, p. 477).
Basic Elements of Creativity	I	"Creative behavior often is modeled as the result of ...cognitive skills, such as linguistic ability, expressive fluency, convergent and divergent thinking and intelligence (Barron & Harrington, 1981; Basadur & Finkbeiner, 1985; Basadur, Graen & Green, 1982; Gardner, 1993; Glynn, 1996; Helson, Roberts, & Agronick; 1995; Sternberg, 1988)" (Drazin, Glynn, & Kazanjain, 1999, p. 287).
Basic Elements of Creativity	I	"Scholars have found individual creativity to be highest when individuals are motivated by intrinsic engagement; challenge; task satisfaction; and goal-oriented, self-regulatory mechanisms (Amabile, 1988; Amabile, Hill, Hennessey, & Tighe, 1994; Glynn & Webster, 1993; Kanfer, 1990; Kanfer & Ackerman, 1989)" (Drazin, Glynn, & Kazanjain, 1999, p. 287).
Cognitive Factors	N	"Researchers have identified a number of cognitive abilities that relate to creativity. Carrol (1985) found eight first-order factors that all loaded highly on a second order factor of idea production: associative fluency, fluency of expression, figural fluency, ideational fluency, speech fluency, word fluency, practical ideational fluency, and originality" (Woodman et al., 1993, p. 298).
Cognitive Skills/Processes	N	"A number of studies have specifically focused on examining various cognitive processes or skills involved in creative problem solving (see Reiter-Palmon & Illies, 2004, for a review). Some of the skills examined in these studies include problem finding, problem construction, combination, generation of alternatives, and idea evaluation, that are part of the creative process (e.g. Mumford, Baughman, Maher, Costanza & Supinski, 1997; Reiter, Palmon, Mumford, Boes, & Runco, 1997; Vincent, Decker & Mumford, 2002)" (Shalley et al., 2004, p. 947).
Cognitive Structures	I	"Research on memory development suggest that accumulated prior knowledge increases both the ability to put new knowledge into memory... and the ability to recall and use it....Bower and Hilgard (1981; 424) suggested that memory development is self-reinforcing in that the more objects, patterns and concepts that are stored in memory, the more readily is new information about these constructs acquired and the more facile is the individual in using them in new settings" (Cohen & Levinthal, 1990, p. 129).
Cognitive Style	I	"A number of investigations have examined the relation between individuals' cognitive style and creative outcomes (see Kirton, 1994; Masten & Caldwell-Colbert, 1987). Results suggest that individuals with an innovative style tend to be more creative than those with an adaptive style (e.g., Keller, 1986; Lowe & Taylor, 1986)" (Shalley et al., 2004, p. 937).
Computational Theory	I	"Amabile's (1983, 1996) computational theory of individual creativity predicts that task motivation, domain relevant skills, and creativity-relevant processes are important components for individual creativity and that there are individual differences in levels of the three components. Mounting empirical evidence demonstrates that individuals are more creative when they possess higher levels of these components (Conti, Coon, & Amabile, 1996; Ruscio, Whitney, & Amabile, 1998)" (Taggar, 2002, p. 315).

Antecedent	Level	Relationship
Creative Education	I	“We found that students who were identified as creative and who were taught and assessed in their course performance in a way that permitted the students to be creative and rewarded them for their creativity performed better, than did creative students who were not so recognized” (Sternberg, 1997, pp. 490-491).
Creative Role Identity	I	“...with the highest creativity occurring when employees had a strong creative role identity and perceived that their organization valued creative work” (Shalley et al., 2004, p. 946).
Creative Role Models	N	“...Shalley and Perry-Smith (2001) hypothesized and found that observing creative models allows individuals to acquire relevant strategies and approaches that enables them to exhibit higher creativity in their own work” (Shalley et al., 2004, p. 947).
Creative Self Efficacy	I	“...results showed that creative self-efficacy was positively related to creativity, above and beyond contributions of general job self-efficacy” (Shalley et al., 2004, p. 946).
Creativity Goals	N	“The results of three studies suggest that creativity goals enhance creativity” (Ambrose & Kulik, 1999, p. 266).
Divergent Production	N	“Divergent production has long been considered the cognitive key to creativity and has continued to be a major consideration in creativity research. Basadur, Graen, & Green (1982) postulated a sequential application of ideation (divergent thinking) and convergent thinking through the stages of problem finding, solution generation, and solution implementation. Thus, for a creative person to produce socially useful products, his or her divergent thinking must come hand in hand with convergent thinking” (Woodman et al., 1993, pp. 298-299).
Domain Specific Knowledge	N	“...creativity appears to be relatively domain-specific” (Sternberg, 1997, p. 490).
Evolutionary Processes	N	“Evolutionary metaphors that emphasize variation, selection, and retention processes also have been effectively employed by other creativity researchers, most notably Campbell (1960), Simonton (1988), and Staw (1999)” (Ford, 1996, p. 1114).
Expectation of Evaluation	N	“Previous studies provide results that are generally consistent with the argument that creativity is lower when individuals expect their work to be critically judged” (Shalley et al., 2004, p. 940).
Field Dependence	N	“In addition, field dependence also has been related to creativity. People with high field independence are able to analyze the relevant aspects of the situation without being distracted by the irrelevant aspects, whereas field-dependent people have difficulty separating less important aspects (Witkin, Dyk, Paterson, Goodenough, & Karp, 1962)” (Woodman et al., 1993, p. 298).
Freedom or Autonomy	N	“Studies of creativity have revealed that individuals produce more creative work when they perceive themselves to have choice in how to go about accomplishing the tasks that they are given (e.g. Amabile & Gitomer, 1984)” (Amabile et al. 1996, p. 1161).
Good Investments	N	“According to our investment theory of creativity (Sternberg & Lubart, 1991, 1992, 1995, 1996), creative people are individuals who are willing and able to “buy low and sell high” in the realm of ideas. Buying low means pursuing ideas that are unknown or out of favor, but that have growth potential. Often, when these ideas are first presented, they encounter resistance. The creative individual persists in the face of this resistance and eventually sells high, moving on the next new or unpopular idea. Sometimes creativity is thwarted because a person puts forth an idea prematurely or holds an idea so long that it becomes common or obsolete” (Sternberg, 1997, p. 488).
Good Investments	I	“According to the investment theory, creativity requires a confluence of six distinct but interrelated resources: intellectual ability, knowledge, styles of thinking, personality, motivation, and environment” (Sternberg, 1997, p. 488).
Heuristics	I	“...Busenitz and Barney (1997) found that entrepreneurs relied more heavily on heuristics to speed up the decision making process than did managers. Without such mechanisms, windows of opportunity would often close before an opportunity could be identified” (Shepherd & DeTienne, 2005, p. 93).

Antecedent	Level	Relationship
Incubation	N	"Recent neuroscience studies have demonstrated that learning can be improved, and creative insight fostered, by incubation periods ranging from one night to considerably longer – in the absence of any additional training (Stickgold, James, and Hobson, 2000; Walker et al, 2003; Stickgold and Walker, 2004; Wagner et al., 2004)"(Amabile et al, 2005, pp. 392-393).
Inexperience	I	"...exposure to examples of previous ideas or work can greatly restrict creative thought" (Baron & Ward, 2004, p. 564).
Intelligence	I	"In its essence, innovation involves intelligence; to put it simply, "An innovation is a new idea" (Van de Ven, 1986: 591)" (Glynn, 1996, p. 1081).
Intensity	N	"According to May, creativity cannot be understood only as a function of talent nor as an instrumental phenomenon where a final product or goal completely guides one's actions. Rather creativity depends on the intensity of the direct encounter of people with their work: their experience of unity with and complete absorption in their work, which makes them "become oblivious to the things around them as well as to the passage of time" (1994: 44)" (Mainemelis, 2001, 552).
Intrinsic Motivation	I	"An intrinsic motivational orientation has been postulated by many researchers as a key element in creativity (Amabile, 1990; Barron & Harrington, 1981). Simon (1967) postulated that the primary function of motivation was the control of attention" (Woodman et al., 1993, p. 300).
Knowledge and Skills	N	"Amabile (1988) identified both "domain-relevant skills" and "creativity-relevant skills" as being important for creativity" (Woodman et al., 1993, p. 301).
Negative Affect	N	"Some laboratory experiments have found a facilitative effect of negative affect on creativity" (Amabile et al, 2005, p. 371).
Number and breadth of Cognitive Elements	N	"The importance of the number and breadth of cognitive elements is highlighted by other creativity theorists as well (Langley and Jones, 1988; Sternberg, 1988b)" (Amabile et al, 2005, pp. 368-369).
Positive Affect	N	"...positive affect leads to the sort of cognitive variation that stimulates creativity (Clore, Schwarz, and Conway, 1994) (Amabile et al, 2005, p. 369).
Positive Affect	N	"experiences of certain positive emotions prompt individuals to discard time-trusted or automatic (everyday) behavioral scripts and to pursue novel, creative, and often unscripted paths of thought and action (Fredrickson, 1998: 304)" (Amabile et al, 2005, p. 369).
Positive Affect	N	"...these empirical results [by Isen's and other's experiments] provide substantial evidence that positive affect can induce changes in cognitive processing that facilitate creative activity" (Amabile et al, 2005, p. 370).
Positive Affect	N	"For example, Isen (1999a, 1999b) proposes that positive affect has three primary effects on cognitive activity. First, positive affect makes additional cognitive material available for processing.... Second, it leads to defocused attention and a more complex cognitive context Third, it increases cognitive flexibility..." (Amabile et al, 2005, p. 371).
Positive Affect	N	"The results indicate that positive affect relates positively to creativity in organizations and that the relationship is a simple linear one" (Amabile et al, 2005, p. 367).
Positive Affect	N	"Qualitative analyses identify positive affect as a consequence of creative thought events as well as a concomitant of the creative process" (Amabile et al, 2005, p. 367).
Prior knowledge	N	"Some psychologists suggest that prior knowledge enhances learning because memory – or the storage of knowledge – is developed by associative learning in which events are recorded into memory by establishing linkages with pre-existing concepts" (Cohen & Levinthal, 1990, p. 129).
Prior knowledge	N	"Invention is little more than a new combination of those images which have been previously gathered and deposited in the memory. Nothing can be made of nothing. He who has laid up no material can produce no combination" (Sir Joshua Reynolds, 1732-1792; quoted in Offer, 1990)" (Woodman et al., 1993, p. 301).
Prior knowledge	N	"Scholars of Austrian economics argue that people have different prior knowledge and this allows some individuals to identify certain opportunities (Hayek, 1945; Venkatraman, 1997)" (Shepherd & DeTienne, 2005, p. 93).

Antecedent	Level	Relationship
Reasoning	I	“Hogarth (1987) suggested that much of creativity involves generating explanations or determining causes. Hogarth (1987) discussed four components of causal reasoning that are relevant to creativity: (a) a causal field which provides the context in which judgments are made, (b) cues-to-causality, which are imperfect indicators of the presence or absence of causal relations, (c) judgmental strategies for combining the field and cues in the assessment of cause, and (d) the role of alternative explanations” (Woodman et al., 1993, p. 299).
Relevant Knowledge	N	“The prior possession of relevant knowledge and skill is what gives rise to creativity, permitting the sorts of associations and linkages that may have never been considered before” (Cohen & Levinthal, 1990, p. 130).
Self-Efficacy	I	“For example, Redmond, Mumford and Teach (1993) demonstrated that individual’s self-efficacy (i.e., the extent that individuals believe they have the ability to accomplish task specific goals and objectives) (Bandura, 1977) was positively related to their creativity. Recently Tierney and Farmer (2002, 2004) extended this work and developed the construct of “creative self-efficacy”” (Shalley et al., 2004, p. 946).
Self-Efficacy	N	“In fact, Ford (1996) placed self-efficacy beliefs as a key motivational component in his model of individual creative action” (Tierney & Farmer, 2002, p. 1137).
Working Memory Capacity	I	“Research findings indicate that the higher individuals’ working memory capacity, the better their performance on complex cognitive tasks...(Engle, 2002). In other words, the ability to focus one’s attention on what’s important is related to an important aspect of human intelligence – the abilities to think and reason (known as fluid intelligence)” (Baron & Ward, 2004, p. 564).

**Table 3: Possible Constructs for Research in Organizing Creativity:
Support for an Organization-level Theoretical Model (Figure 2)**

**Table 3: Possible Constructs for Research in Organizing Creativity:
Support for an Organization-level Theoretical Model (Figure 2)**

A. Social Factors

Constructs	Supporting Quote	Participant Observations
1. Imposed goals	“The results of three studies suggest that creativity goals enhance creativity” (Ambrose & Kulik, 1999, p. 266).	So one of the things we did on Monday night was we’d have a little session on what does it mean to be creative, the point of creativity, what is the creative goal as opposed to their brand goals, and we established a clearly defined objective. We primed the pump because most people aren’t loaded for opportunity. Most people are loaded for preservation [40]
2. Action clarity (teleological stance)	“ . . . interpreting another’s actions relies on an inferential process that considers the target goal and the environmental constraints that limit or facilitate goal achievement” (Hauser & Wood, 2010, p. 305).	It was high energy but it was in many ways taxing because what we learned was in order for the trained brains to work together, you needed something for everyone to chew on. Now the key to a great creative session is a clearly defined objective. [16] ... The question is what resource constraints should we view this from so we know where we’re going? [18]
3. Autonomy/freedom (in the creation environment)	“Studies of creativity have revealed that [people] produce more creative work when they perceive themselves to have choice in how to go about accomplishing the tasks that they are given (e.g. Amabile & Gitomer, 1984)” (Amabile et al. 1996, p. 1161).	“not evident in the case”
4. Role models (in the creation environment)	“...Shalley and Perry-Smith (2001) hypothesized and found that observing creative models allows [people] to acquire relevant strategies and approaches that enables them to exhibit higher creativity in their own work” (Shalley et al., 2004, p. 947).	So the trained brains would go away after day one because their job was done. They’re the catalyzing agent to make this whole brain and then day two and three, we sit with the core team. A lot of the experts go away but it’s usually the brand manager and a couple of their assistants and we hone in against the major objective, do these concepts build a portfolio of risk around the objective. [20] The trained brain, to me, was a true innovation because we have validated proof that they actually help the creative process. [8]

Table 3 Continued: B. Motivational Factors

Constructs	Supporting Quote	Participant Observations
1. Positive Affect	<p>“...positive affect leads to the sort of cognitive variation that stimulates creativity (Clore, Schwarz, and Conway, 1994) (Amabile et al, 2005, p. 369)...[through additional cognitive material being available for processing, defocused attention and a more complex cognitive context, and increased cognitive flexibility (Isen 1999a, 1999b in Amabile et al, 2005, p. 371), that lead to the pursuit of novel, creative, and often unscripted paths of thought and action (Fredrickson, 1998: 304)” in Amabile et al, 2005, p. 369)].</p>	<p>We found that it wasn't the music. Usually they say we'll have music, have Nerf balls, have lots of candy and caffeine and make it a fun and lively environment, as if you need permission to create ideas. One of the reasons why creativity is always done offsite is because just the site of our normal corporate office means we shouldn't be having fun here. We need to be working. So they didn't understand the concept of fun but we did learn that if you're laughing, if you are actually in a positive neocortex frontal lobe sort of place, instead of in your amygdala, flight, fright, fight area, you're more likely to say yes. [13]</p> <p>When you're laughing, you go from amygdala thinking to neocortex thinking. This has now become the great manifestation of neuroscience in the last five years. They've actually taken people, put them in functional MRI units, it's called fMRI units and they give them creative exercises. They look at which part of the brain lights up. It turns out when you're being creative and you're synthesizing new ideas, the part of your brain for pleasure lights up which means that you're laughing and have a good time, you're more likely to say yes. Your ability to say no decreases and that was what that was all about. [14]</p>
2. Negative Affect	<p>“Some laboratory experiments have found a facilitative effect of negative affect on creativity” (Amabile et al, 2005, p. 371).</p>	<p>[Bringing in trained brains] is hilarious because what you get are serious people and fun people and what happens is a very unique, creative dissonance. Creative dissonance is very important. For example, one of the things that we always had was we always designated someone as what we called the hockey puck and the hockey puck is a trained brain whose job it is to say the most outlandish thing they can think of. That way anything else you say really actually is more possible. [54]</p>
3. Self-efficacy	<p>“...results showed that creative self-efficacy was positively related to creativity, above and beyond contributions of general job self-efficacy” (Shalley et al., 2004, p. 946).</p> <p>“In fact, Ford (1996) placed self-efficacy beliefs as a key motivational component in his model of individual creative action” (Tierney & Farmer, 2002, p. 1137).</p>	<p>We had Trained Brains that understood creativity and the helped orchestrate the process, but we needed the clients to get up to speed so our time together could be more effective. Informed intent was about giving [the client] an understanding of our creative process, instilling in them a belief that we know what we are doing and that together, we will be successful. [38]</p> <p>Informed intention gave them a sense of possibility around creating ideas, that they could do more. We used to do an index of how creative is your organization. How much do they do innovation? How many ideas have you had that have gone to market? Trying to get past those hurdles of people's oh, my God, we're not a very creative company. [41]</p>
4. Propensity to invest	<p>“According to our investment theory of creativity (Sternberg & Lubart, 1991, 1992, 1995, 1996), creative people are individuals who are willing and able to “buy low and sell high” in the realm of ideas...Sometimes creativity is thwarted because a person puts forth an idea prematurely or holds an idea so long that it becomes common or obsolete” (Sternberg, 1997, p. 488).</p>	<p>“not evident in the case”</p>

Table 3 Continued: C. Informational Factors

Constructs	Supporting Quote	Participant Observations
1. Abstractness	“...accessing information at more abstract, principled levels leads to greater originality in forming new ideas (e.g. Ward et al., 2002)” (Baron & Ward, 2004, p. 567).	“not evident in the case”
2. Domain-specific knowledge	“...creativity appears to be relatively domain-specific” (Sternberg, 1997, p. 490).	Traditionally, a creative session was bringing a bunch of experts, people who understand the topic. So let’s say we’re going to create new digital recording devices and we’re the Philips Company. So let’s go within the Philips organization and get engineers, software writers, logistics people. We’ll get people who really understand what this product is. We’re going to get them in a room and we’re going to say hey, what’s the next generation of digital recorders? Doug [thinks] that’s biasing the creative output because you already are judging before you even start creating because you’ve got the experts and they’re going to come from a position of cognition that says I know what needs to be done. [8]
3. Prior knowledge	<p>“Some psychologists suggest that prior knowledge enhances learning because memory – or the storage of knowledge – is developed by associative learning in which events are recorded into memory by establishing linkages with pre-existing concepts” (Cohen & Levinthal, 1990, p. 129).</p> <p>“Scholars of Austrian economics argue that people have different prior knowledge and this allows some individuals to identify certain opportunities (Hayek, 1945; Venkatraman, 1997)” (Shepherd & DeTienne, 2005, p. 93).</p>	<p>We typically assume that creativity is a blank piece of paper, blue sky, ultimate horizon and that’s not true. You need to have some construct of direction, otherwise in a trained brain process, a digital recorder becomes a hot-looking secretary with a steno pad doing shorthand. [17]</p> <p>So it’s this process of managing the stimulus and then using people’s own life experience to get them thinking divergently.[51]</p>
4. Relevant Knowledge	“The prior possession of relevant knowledge and skill is what gives rise to creativity, permitting the sorts of associations and linkages that may have never been considered before” (Cohen & Levinthal, 1990, p. 130).	You see, the challenge with a clearly defined objective is it’s conditional on the incoming proposition of what they think the business is about. Often when you have the creative session, what would tend to happen is the objective would start to slide because it’s something they would become aware of during the session. So we have to always check against what we call reality drift... If all of a sudden, a concept had a piece of capitalization that was not required to use that line, they’d kill it. So we needed to know the conditional arguments, these other components or environmental factors unknown to us at the point of creativity. [19]
5. Outside sources	“Outside sources of knowledge are often critical to the innovation processes.... At the organizational level, March and Simon (1958:188) suggested most innovations result from borrowing rather than invention” (Cohen & Levinthal, 1990, p. 128).	Doug goes, well, let’s mix it up. Let’s do something really clever. Let’s bring from the corporate side all the experts but let’s equalize that. So we’re going to bring five people from Phillips and we’re going to bring five people from the <i>Eureka! Ranch</i> ; who know nothing about digital recorders as a profession. [9]
6. Uncertainty	“... uncertainty is a perceptual phenomenon derived from an inability to assign probabilities to future events, largely because of a lack of information about cause/effect relationships (Hoskisson & Busenitz, 2002)” (Ireland et al., 2003, p. 968).	“not evident in the case”

Table 3 Continued: D. Deliberate Creativity Organization

Constructs	Supporting Quote	Participant Observations
1. Intensity: a. Expectation of evaluation (-) b. Required effort (+)	a. “Previous studies provide results that are generally consistent with the argument that creativity is lower when individuals expect their work to be critically judged” (Shalley et al., 2004, p. 940). b. “. . . it is insufficient merely to expose an individual briefly to the relevant prior knowledge. Intensity of effort is critical” (Cohen & Levinthal, 1990, p. 131).	a. the people from Philips would look at you like okay, that’s ridiculous. The trained brain would go okay, but we would make an effort to write it down anyway, follow you, it floats on air, levitating anti-gravity magnets. People would laugh and they would go okay. And after that all ideas were legitimate. No evaluation; it kills the creative process. [12] b. So basically he had an around the clock operation. So the day starts on Tuesday. We have creativity session from eight in the morning until four in the afternoon. Then we break for a bit before dinner, and then I’ll tell more about the process a little bit later but in the nighttime, Doug has his writers write concepts overnight. So that by Wednesday morning, you walk in at nine o’clock, and this client’s been with Doug until about seven o’clock at night, and they come back the next morning and magically, there’s a portfolio of finished concepts. [27], also [1], [15], [22]
2. Duration: a. Incubation period b. Incubation results	a. “Recent neuroscience studies have demonstrated that learning can be improved, and creative insight fostered, by incubation periods ranging from one night to considerably longer – in the absence of any additional training (Stickgold, James, and Hobson, 2000; Walker et al, 2003; Stickgold and Walker, 2004; Wagner et al., 2004)”(Amabile et al, 2005, pp. 392-393). b. “Incubation is a process of unconscious recombination of thought elements that were stimulated through conscious work at one point in time, resulting in novel and useful ideas at some later point in time” (Amabile et al, 2005, p. 371)	a. One of the most important aspects of creativity is incubation and immersion and we’ll talk about the steps of what creativity is a little bit later but the key thing is at this point, Doug always went onsite with the big huge clients, like a PepsiCo, [27] ... [Doug] would have a session and then he and his team would create 40 ideas in 40 days, 40 days and 40 nights; taken from the Bible... [6] b. Instead of 40 ideas in 40 days, he moved to a three day workshop, and a portfolio of 10 to 20 ideas, and you get full art, full concept writing. You come on Tuesday. By Friday, you leave, you get the folder. People were like how the heck do you pull this off? [28]
3. Content: a. Fluency b. Cognitive skills c. Field independence d. Domain and creativity-relevant skills (concepts) e. Fluidity (idea variation, selection, retention)	a. “Carrol (1985) found eight first-order factors that all loaded highly on a second order factor of idea production:” [8 types of fluency] (Woodman et al., 1993, p. 298). b. “A number of studies have specifically focused on examining various cognitive processes or skills involved in creative problem solving . . . (Shalley et al., 2004, p. 947). c. “. . .field dependence also has been related to creativity. People with high field independence are able to analyze the relevant aspects of the situation without being distracted by the irrelevant aspects... (Woodman et al., 1993, p. 298). d. “Amabile (1988) identified both “domain-relevant skills” and “creativity-relevant skills” as being important for creativity” (Woodman et al., 1993, p. 301). e. “Evolutionary metaphors that emphasize variation, selection, and retention processes also have been effectively employed by other creativity researchers, most notably Campbell (1960), Simonton (1988), and Staw (1999)” (Ford, 1996,p. 1114).	c. We learned how to write concepts better and gave some thought to what makes them better. We have this database of 12,000 to 13,000 concepts and they are tested with consumers. So we used this data to create an algorithm to predict concept success or deficiency. [30] d. We actually quantified that not only did you get more ideas using trained brains but you got better quality ideas... The trained brains were a catalyst to get the experts to not think down their normal, cognitive, mental memory tracks. So their job was to push, pull, prod, cajole, kid, humiliate in many cases, be sarcastic and push and push... [15] also [35] e. We also learned how to develop client creativity to significantly increase mental fluidity – a lot more ideas, better ideas, leading to better concepts – we got fluidity way higher because, again, we needed to jump their tracks of linear thinking...What we did is this process we called stimulus response and stimulus response was a nonlinear method of lateral thinking. [40] also [7]

Table 3 Continued: E. Cognitive System

Constructs	Supporting Quote	Participant Observations
<p>1. New problem solving processes:</p> <p>a. Divergent production</p> <p>b. Sequential process</p> <p>c. Bisociation</p>	<p>a. “Divergent production has long been considered the cognitive key to creativity and has continued to be a major consideration in creativity research. Basadur, Graen, & Green (1982) postulated a sequential application of ideation (divergent thinking) and convergent thinking through the stages of problem finding, solution generation, and solution implementation. Thus, for a creative person to produce socially useful products, his or her divergent thinking must come hand in hand with convergent thinking” (Woodman et al., 1993, pp. 298-299).</p> <p>b. “...based upon Csikszentmihalyi’s (1996) basic elements of creativity – preparation, incubation, insight, evaluation, and elaboration” (Corbett, 2005, p. 477).</p> <p>c. “Bisociation occurs when a person combines two or more previously unrelated matrices of skills or information ... (Ireland et al., 2003, p. 981).</p>	<p>So yes, magic does happen and we do have unique combinations that occur but we set them up to happen. [The client is] going to think this is just random. There’s no random allowed in creativity. That’s the fallacy of the whole thing ...The magical creativity of <i>Eureka! Ranch</i> is the orchestrated emergence of a concept. Organizational creativity is a misnomer because it’s what you do to organize creativity that makes it happen. [55]</p> <p>a. Creativity is creating a concept that is both innovative and valuable. To get there you needed serendipitous thinking or divergent thinking, not conventional thinking. [46]</p> <p>b. In the old days, generation 1, creativity started with everybody around the room. You That was the way in which creativity worked. [2].... Doug decided that that was not only inefficient, it was unreliable and you didn’t necessarily create new ideas. Brainstorming historically has always been like a statistical method, in order to get good ideas, you need more ideas. If you had 1,000 really good ideas, maybe one will work and it was always this bad funnel of you’ve got to start with 1,000 and then you whittle them down. Doug didn’t like leaving things to chance. He said was we need to get better ideas, we need a better process. [3]</p> <p>c. But this [two step stimulus process] was a clever reassembly of that basic idea – using unrelated and related stimulus, and free association to get innovative thinking. Once we figured that out, the depth of the ideas was just off the hook... We always got lots of ideas but we got better ideas and inherently, you get more ideas but the key thing is you want better ideas. No one cares whether you create more ideas. [52] also [56]</p>
<p>2. New knowledge base:</p> <p>a. New combination of images</p> <p>b. Larger number and greater breadth of cognitive elements (e.g., Planning, Relationship, Competition Cognitions)</p>	<p>a. “Invention is little more than a new combination of those images which have been previously gathered and deposited in the memory. Nothing can be made of nothing. He who has laid up no material can produce no combination” (Sir Joshua Reynolds, 1732-1792; quoted in Offer, 1990)” (Woodman et al., 1993, p. 301).</p> <p>b. “The importance of the number and breadth of cognitive elements is highlighted by other creativity theorists as well (Langley and Jones, 1988; Sternberg, 1988b)” (Amabile et al, 2005, pp. 368-369).</p>	<p>a. What we did is this process we called stimulus response and stimulus response was a nonlinear method of lateral thinking. [43] So I would call it lateral thinking squared and the way that would work would be to use it in a group. [44]</p> <p>b. Planning Cognitions: The standard problem with creativity is the person in charge goes thank you for coming here, we’re going to create some ideas and I’ll know it when I see it. Again, it’s about how to manage the process – in an organizational context, you’ve got to know how to manage creative people and the creative process...So we did that. [22] also [13], [24], [37].</p> <p>b. Relationship Cognitions: We literally could have creative sessions where we did enough preparation that Doug and I would create pre-concepts ahead of the customers even coming and literally in the 20 concepts, 10 of them were written before the clients ever got there because we practiced it. We’d introduce those on the Wednesday, after spending the Tuesday working with the client to generating innovative ideas. Wednesday morning we’d say hey, while we were putting these ideas together, we had some new thoughts. We always presold it that way. We’d always have some great concepts in the bank, that way we knew we could always deliver on our promise. [53] also [26], [39], [46].</p> <p>b. Competition Cognitions: Then Doug has another brilliant idea. He goes, huh, I’ve got all these concepts... So within the <i>Eureka! Ranch</i>, he starts to develop a consumer research arm, testing all these concepts with consumers. So he develops AcuPull Research which then becomes one of the top new concept developing, consumer testing companies. [25] also [10], [16], [29]</p>

Table 3 Continued: E. Cognitive System

Constructs	Supporting Quote	Participant Observations
<p>3. Hardware: <i>Eureka! Ranch</i> Creativity Systems / Culture</p> <p>Creative Capacity</p> <ul style="list-style-type: none"> a. Orchestrated engagement b. Marginalizing ‘deal killer’ thinking c. ‘Trained brains’ traction d. Support staff idea processing e. Stimulus based divergent thinking f. Personality matching stimulus g. Validated concept assessment h. Framed concept pitching 	<p>Inherently unsystematic</p>	<ul style="list-style-type: none"> a) Our concept was first we have an immersion process ...[22] ...Then we’d go back and before the creative session would start, we would have an internal procreative session. You see, the trained brains appear to be naïve, appear. It appears to be chaos. It appears to be an unmanageable, nonlinear set of things. But it’s a highly orchestrated dance. [23] b) the people from Philips would look at you like okay, that’s ridiculous. The trained brain would go okay, but we would make an effort to write it down anyway, follow you, it floats on air, levitating anti-gravity magnets. People would laugh and they would go okay. And after that all ideas were legitimate. No evaluation; it kills the creative process. [12] c) So now we have Trained Brains to create a whole brain the room, a system to use these Trained Brains to generate more ideas, and better ideas, a system to take these ideas and develop them into fully developed concepts, and a system to evaluate which concepts would gain the most traction. So now we focused on increasing the quality of the concepts that we generated... [36] also [7], [8] d) So basically he had an around the clock operation.. in the nighttime, Doug has his writers write concepts overnight. So that by Wednesday morning, you walk in at nine o’clock, and this client’s been with Doug until about seven o’clock at night, and they come back the next morning and magically, there’s a portfolio of finished concepts. [27] e) The next innovation was a big breakthrough around stimulus and in seeding informed intent in our clients. [37]... We wanted original thinking, divergent, serendipitous thinking where we are thinking about ideas and connections that no one else is thinking about. And to do this we use indirect association. [47] ...The cup was just a stimulus... a starting point from which we think from a different second order place. [48]...It was a two-step stimulus process. So you take a base stimulus, unrelated to your industry context, and you cross it up by doing free association around that base stimulus... Then you add the industry context – also represented by stimulus, but this time related stimulus... Once we figured that out, the depth of the ideas was just off the hook... [50] f) Then we learned how to use the stimulus more effectively... we would customize the stimulus to the people in the room... [49] g) What Doug did at the beginning, which was also very smart, was to keep a copy of every concept they ever wrote... [24] We learned how to write concepts better and gave some thought to what makes them better... So we used this data to create an algorithm to predict concept success or deficiency. [28] We called it Merwyn...Merwyn is the heart of generation 3, maybe 3.1, but it was another key <i>Eureka! Ranch</i> innovation. [29] h) Another big masterful thing was in understanding how to pitch or communicate the ideas that you create in a portfolio...So you always stack concepts in groups of three, knowing that they’re always going to pick the middle of the three... [11]

Table 3 Continued: F. Expert Results

<i>A. Expert Results:</i>		Product Concepts
1. Novelty & valuable	<p>“Researchers and laypersons seem to agree that creativity refers to something that is both novel and in some sense valuable” (Ford, 1996, p. 1114).</p> <p>“I define creativity as a domain-specific, subjective judgment of the novelty and value of an outcome of a particular action” (Ford, 1996, p. 1115).</p>	<p>I think Doug’s great contribution to creativity, if I had to limit it to one – was that creativity is a process, a process that can be managed, and a process that can optimized and a process that can be sold. I think he was the first to realize that the output of creativity is a concept. A “concept” is an asset because we believe that before you can market in dollars, you market in words. So the concept literally is a 100-word plus or minus whatever is necessary description of your idea as if it’s written in through the eyes of the customers. [4]</p> <p>We discovered that there are three key drivers of a great product concept: overt benefit, real reason to believe, and dramatic difference. [31]</p> <p>Creativity is creating a concept that is both innovative and valuable. [45]</p> <p>Overt benefit is what is in it for the customer. What specific promise can you make to motivate them to buy? What makes it valuable? [32]</p>
2. Useful & appropriate	<p>“Throughout most of these perspectives, creativity usually has been defined as the production of novel ideas that are useful and appropriate to the situation (e.g., Amabile, 1983; Mumford & Gustafson, 1988)” (Unsworth, 2001, p. 289).</p>	<p>The real reason to believe is why should customers believe your promise? Why should they trust that this is possible and that you can do it better than others? [33]</p>
3. Distinguishing feature	<p>“Drawing on the assumption that novelty is that distinguishing feature of creative work over and above work that is solely useful or well done (Amabile, 1996)” (Amabile et al, 2005, p. 368).</p>	<p>Dramatic difference is about differentiation and relative value, how is this product better than alternatives and what makes it not just great, but a great deal? [34]</p>