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Creative Collaboration and the Self-Concept: A Study of Toy Designers

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ABSTRACT   In this paper, we explored how collaborative behaviours were related to the self-concepts of creative workers. Our findings, derived from a qualitative study of corporate toy designers, showed that the *personal (vs. social) identities* of toy designers were most strongly related to collaborative behaviours. Further, collaborative behaviours defined as *idea giving* were most *congruent* with all toy designers' personal identities, while collaborative behaviours defined as *idea taking* were most *incongruent* with those identities. Finally, specific collaborative behaviours related to specific types of personal identities (e.g. the collaborative behaviour of 'incorporating the ideas of others' was especially incongruent with 'artistic' personal identities). Together, these results suggest that promoting collaboration among creative workers may require attention to not only idea-giving behaviours and social identities (as suggested by most extant theories), but also to idea-taking behaviours and personal identities. We discuss the implications of these findings for theories of creative collaboration and identity in organizations.

Keywords: collaboration, creativity, designers, identity, self-concept

INTRODUCTION

To help generate creative solutions, most large corporations encourage workers to collaborate on projects and to act as 'good colleagues' by sharing useful information (Cabrera et al., 2006; Jemielniak, 2008; Kram and Isabella, 1985; Latham and Skarlicki, 1995; Shore et al., 1995). This perceived link between collaboration and creativity stems from the belief that creative output can be enhanced through the sharing of diverse opinions, new approaches, and novel perspectives to problem-solving (see Monge et al., 1992; Paulus and Nijstad, 2003; Perry-Smith, 2006; Ravasi and Stigliani, 2012; Sternberg, 1999; Taggar, 2002). According to Amabile (1996, p. 233), creativity in organizations is stimulated, in part, by having a 'diversely-skilled work group in which people communicate well, are open to new ideas, constructively challenge one another's

work, trust and help one another, and feel committed to the work they are doing.' In support of these arguments, Hargadon and Bechky (2006) found that specific collaborative activities (e.g. reflective reframing) often trigger moments of collective creativity.

At the same time, there is substantial anecdotal evidence that creative workers – i.e. 'people who add economic value through their creativity' (Florida, 2002, p. 68) – experience difficulty when collaborating with others (Paulus and Nijstad, 2003). Indeed, creative workers are frequently derogated as selfish, unaccommodating, and antisocial – putting the preservation of their individuality ahead of being good collaborators and colleagues (Fletcher, 1999; Mumford, 2000). These unflattering descriptions suggest that something about the *self-concepts* of creative workers (i.e. the 'theories' that individuals hold about themselves, including their self-defining categorizations; Schlenker, 1980, p. 50) makes them ill-suited to being effective collaborators. As Richard Florida, author of the best-selling book, *Rise of the Creative Class*, puts it:

> [Creative workers] exhibit a strong preference for individuality and self-statement. They do not want to conform to organizational or institutional directives and resist traditional group-oriented norms . . . [They] endeavor to create individualistic identities that reflect their creativity. (Florida, 2002, p. 77)

In this paper, we seek to better understand the links between creative workers' self-concepts and their collaborative behaviours through a qualitative study of toy designers. We hope that such understanding may shed light on the reasons why some creative collaborations in organizations succeed, while others fail. Before describing the study, we provide a brief overview of extant research linking collaboration and the self-concept and outline the theoretical and practical motivations for our study.

Links Between Collaboration and the Self-Concept: Extant Research and Findings

Although the specific links between creative workers' self-concepts and their collaborative behaviours have not drawn much scholarly attention (John-Steiner, 2000), organizational researchers have made extensive investigations into the linkages among *non*-creative workers' self-concepts and collaborative interactions. Inspired by Sherif et al.'s (1955) seminal 'Robbers' Cave' experiment, these studies examine how collaboration is affected by the *social identities of workers* (i.e. core self-categorizations that are based on associations with social groups – such as 'democrat' or 'engineer'; Ellemers et al., 2004). These studies show that the more individuals' identities are defined by association with a given social group (i.e. the more strongly individuals *identify* with a group), the more inclined those individuals will be to collaborate with members of that group (Ellemers et al., 2004).

The role of social identity in facilitating collaborations is clear. Researchers have found that group identification can mediate the relationship between demographic diversity and collaborative behaviours in a workgroup (e.g. Chatman and Flynn, 2001), organizations can facilitate knowledge transfer by activating a shared group membership (e.g. Levine and Moreland, 2004), and individual acts of cooperation may stem more

from feelings of identification with the group or organization than from the perceived value of resources exchanged with fellow employees (e.g. Tyler and Blader, 2001). Group identification may facilitate such collaborative efforts because it leads group members to feel connected to the group and to perceive their self-worth as associated with group outcomes and performance (Ellemers et al., 2004). Further, researchers have found that, if group members' social identities are salient, those members are more likely to conform to group norms, such as working collaboratively (Postmes et al., 2001). By the same logic, lack of salient group identities is predicted to diminish group members' motivation to collaborate (Van Der Vegt and Bunderson, 2005).

Yet, this social identity perspective seems unable to explain, completely, creative workers' apparent aversion to collaboration. In particular, social identity accounts do not address collaborative problems that arise due to differences in creative styles and approaches to creative problems (e.g. whether creators prefer an organic vs. rational approach to creative problem-solving) (John-Steiner, 2000). Further, researchers have found that in some cases, individuals who are highly identified as group members are, nonetheless, reluctant to contribute to group work if that work requires them to compromise on their personal, creative ideals. For example, in a study of product design groups, Kilker (1999) found that designers with opposing 'design ideals' (e.g. a focus on technical vs. social goals of design) struggled to collaborate effectively on a group project. Thus, as illustrated in the earlier quote, some difficulties in creative collaboration appear to arise when the demands of collaborative work (e.g. compromising on creative ideals or styles) conflict with personal and distinctive dimensions of creators' self-concepts (e.g. defining oneself as a creator of a distinctive style).

In line with these findings, social psychologists studying self-verification motives (i.e. desires to affirm and verify current self-concepts) have argued that 'people will strongly desire verification for both *personal and social* self-views whenever possible' (Seyle and Swann, 2007, p. 213; emphasis added). Further, research on self-affirmation and self-verification suggests that affirming valued personal characteristics may conflict with some collaborative behaviours in ways that social identities do not (e.g. Polzer et al., 2002). For example, some highly-valued personal characteristics common among creative workers (e.g. being an independent thinker) may conflict with collaborative work methods (e.g. compromising to achieve group consensus). By contrast, social identities (e.g. being a graphic designer vs. an illustrator) are less likely to interfere with collaborations because these identities link creators to specific roles and communities that are affirmed through collaboration (e.g. being part of the graphic design team on an advertising campaign provides an affirmation of one's valued role on the campaign). Thus, collaborative behaviours may pose threats to personal aspects of the self-concept, even while they provide affirmations to social dimensions of the self (Adarves-Yorno et al., 2007). In turn, the apparent incongruence between collaborative behaviours and the personal self-concepts of creative workers may lead those workers to avoid collaboration, or to collaborate in a superficial manner as a means of protecting their self-concepts.

As for verifying their self-concepts, past research has shown that individuals will choose to engage in specific behaviours (e.g. feedback seeking, task selection) that are affirming to their self-concepts (Numazaki and Kudo, 1995; Swann and Read, 1981),

and will seek out alternate ways to affirm their self-concepts if they are deprived of a convenient opportunity to self-verify (Brooks et al., 2011). This research has also shown that individuals who are forced to behave in ways that run counter to their self-concepts will report high levels of negative affect (Brooks et al., 2011). Extending these findings, it seems plausible that these same individuals may choose to avoid behaviours that threaten their self-concepts, and may experience negative affect if forced to engage in collaborative behaviours that contradict their self-concepts.

While none of this research has examined collaborative behaviours or the avoidance of collaborative behaviours in particular, these findings suggest that, in situations where personal dimensions of the self are salient (e.g. when working on a creative project that is well-suited to showcase one's distinctive skills and styles), desires to affirm these personal dimensions of the self may discourage creative workers from engaging in collaboration. This might explain our encounters with creative employees who represent iconic personality types, such as 'individualists' and 'free-spirits,' and appear reluctant to cooperate with their fellow co-workers, especially when their distinctive style is on the line.

Theoretical and Practical Motivation for Our Study

Based on the above review, we propose that creative workers will be motivated to affirm their self-concepts, including both social and personal dimensions. However, affirming these self-concepts may conflict with some collaborative behaviours expected of creative workers. Thus, despite the absence of research specifically relating the self-concept to creative collaboration, we would argue that understanding the linkages among different dimensions of the self and collaborative behaviour would add to our understanding of creative collaboration, and help to explain why some creative collaborations succeed while others fail. The theoretical motivation for our study, then, is to enhance extant frameworks of creative collaboration by gaining a better understanding of the relationship between collaborative acts and the broader self-concepts of creative workers.

In addition, we would argue that such an understanding has practical relevance to the management of professional creative workers in large corporate contexts – including artists, designers, and software engineers. As noted earlier, these creative workers often define their self-concepts in terms of personal characteristics such as 'independent', 'idealistic', and 'rebellious' (see Bain, 2005; Feist, 1999; Jemielniak, 2008; Petkus, 1996). For these individuals, engaging in collaborative work (an increasingly normative part of creative work in large corporations) may represent a direct contradiction to valued personal characteristics. Effective management of creative workers would, then, require an understanding of these contradictions.

Further, managing creative workers may require understanding *which* collaborative behaviours are most (and least) consistent with their self-concepts. This idea follows from research showing that collaborative work in corporate contexts involves a number of different *types* of activities, including knowledge sharing, criticism, and supporting different points of view (Amabile, 1996; Marks et al., 2001; Taggar, 2002), with some of these activities (e.g. advocacy for underdeveloped ideas) identified as more important to creative output than others (Leonard and Swap, 1999; Skilton and Dooley, 2010). Thus,

understanding how these different kinds of activities are most and least congruent with the self-concepts of creative workers seems critical to supporting creative performance, as well as managing and retaining creative talent.

Our overall goal in this paper, then, is to answer the following research question:

Research Question: How do specific collaboration activities relate to the self-concepts of creative workers in corporate contexts?

In the sections that follow, we describe a qualitative field study of corporate toy designers that we used to help answer this question.

METHODS

We used qualitative methods, including interviews and non-participant observation, to develop theory about the relationship between collaborative behaviours and the self-concepts of professional creative workers in a corporate context (Creswell, 2007).[1] Given our current understanding of collaboration and social identity we approached this study as one of 'theory elaboration' (Lee et al., 1999), in which our goal was to extend theory around a conceptual area, rather than build completely new theory. As Lee (1999, p. 164) notes, '[t]heory elaboration occurs when preexisting conceptual ideas or a preliminary model drives the study's design.' Our data collection and analysis took place over a four-year period. This extended data collection and analysis period allowed us to view participants on multiple occasions, across different settings, and over the lifecycle of a project.

Research Setting

The first author performed all data collection at the design centre for a large US-headquartered toy manufacturer. At the time of the study, the company employed over 30,000 people in 43 countries and territories and sold products in more than 150 nations throughout the world. The design centre housed over 200 toy designers who worked on the development of new toy prototypes. No manufacturing was performed at this site (although construction of prototypes was performed), and while marketing professionals and other administrative employees visited the design centre to confer with toy designers, no administrators (other than clerical staff) were housed on-site. We chose this setting because it appeared to fit our needs for studying creative workers in a large, corporate context in which creative output was required and collaboration on creative projects was the norm. Data collection centred on toy designers in Boys Toys because the Girls Toys division was being reorganized during the time of the study.

We conducted an initial pilot interview with the Director of Boys Toys to further determine how well-suited this research site was for our purposes. Specifically, we asked the director how the Boys Toys division was structured and managed, what the culture of the division was, what kinds of people worked there, what their backgrounds were, how they were evaluated and promoted, and if they perceived themselves

as creative workers. We also asked about typical work that a given designer would perform, about team or group work, and what kinds of employees tended to perform well or not.

The director informed us that toy designers in his division were required to come up with approximately 1000 new toy designs a year. These original designs sometimes involved relatively minor modifications to existing designs (a new toy car design), but often involved the creation of completely new toy concepts. Thus, these designers viewed themselves, and were viewed by management, as creative workers. The director also told us that collaborative teamwork was the norm on all design projects, and that designers were expected to collaborate with everyone on a project team, regardless of their assigned role. All designers were assigned to a specific toy group (described in detail below) and within that group were assigned to different toy projects involving a team of multiple designers and technicians. The first author's experience during interviews and observations (discussed below) confirmed that collaboration was normative and expected in this research site, and that most projects involved substantial teamwork. This information led us to conclude that this research site was suitable for pursuing our research question.

Physical Research Site

The physical layout of the 22,000 sq. ft. design centre was an open plan design, with 'Girls Toys' occupying half of the open space, and 'Boys Toys' occupying the other half. The Boys Toys division had five different toy groups. We refer to these groups by the pseudonyms ACTION FIGURES, LICENSED TOYS, CARS, GAMES, and COOL IDEAS. Designers in ACTION FIGURES worked on the design of dolls resembling licensed comic-book heroes, and some proprietary action figures. Designers in LICENSED TOYS developed toys that were based on television shows and movies and were used in franchising those entertainment products. Designers in CARS developed toy cars of many forms, along with track sets and accessories. Designers in GAMES developed games and puzzles for both boys and girls (although they were housed on the Boys Toys side of the design centre). Finally, designers in COOL IDEAS developed toy concepts that might fit any of the other design groups.

Within the Boys Toys side of the design centre, specific toy areas (e.g. CARS, ACTION FIGURES, GAMES) were geographically co-located. Each group had its own common work area (including large tables for working on prototypes) separated from other groups by moveable partitions. Individual designers had private cubicles adjacent to their group's common workspace. The only enclosed areas housed special machinery (e.g. metal working machines), lab space, and digital video production rooms, plus a few offices for senior staff. Designers could hear their colleagues across the open floor plan, see what others were working on in the public areas, and physically examine prototypes in the design centre.

Participants

Participants were 40 designers (35 men, 5 women; average age = 39.5 years; average time working at the corporation = 12.7 years), including 6–8 designers from each of the

five toy design areas (from a total of 15–20 designers in each of these areas), who were selected by the head of Boys Toys as a representative cross-section (i.e. in terms of job experience and expertise) from each group. The first author interviewed these participants outside of the design centre (in an adjoining set of meeting rooms used for contractor meetings) during the first phase of data collection, and observed them during the second phase of data collection.

Participants were actively engaged in designing new toy prototypes and held the titles of staff designer (7), project designer (16), or designer (17). All three groups of designers had the primary job responsibility of designing new toy prototypes to meet the Boys Toys division's annual output of 1000 new toy products. The primary difference between the staff designers and the project designers or designers was that the former had some supervisory responsibilities over groups of designers and technicians. All of the designers reported that they were required to work extensively in collaborative teams and that they considered themselves to be creative workers due to their job requirements to produce original toy designs.

All designers were paid by salary, and there was no incentive pay system at the time of the study. Given the relatively flat hierarchical structure, there appeared to be little incentive for designers to move up to higher levels of responsibility. This notion was confirmed in interviews and informal discussions.

Data Sources

Timeline. The first author collected all data for the study over the course of four years: 2003–06. She first interviewed 30 of the 40 toy designers studied over the course of the year 2003. She then conducted approximately 100 hours of observation from 2004 to 2006. She observed the 30 designers that were initially interviewed, along with 10 additional designers. She also interviewed the 10 additional designers during the observation phase of the study.

Interviews. Interviews followed an open-ended format, with questions changing to pursue interesting leads and new themes that arose during the course of the interview. We used Kvale's (1996) framework of conversational, qualitative interviewing as a guide to ensure that our interviews produced data most relevant to our research question. Based on these guidelines, we developed an open-ended interview protocol that focused on the themes of collaboration and the self-concept. Interview questions addressed the following topics: what the toy designer did on a day to day basis; his or her current work group and projects as well as past work groups and projects at the same company; current instances of collaboration at work and past experiences with collaboration; the most fulfilling and affirming vs. threatening creative tasks at work; his or her self-concept at work and how it was affirmed or threatened; examples of affirmations or threats to this self-concept; specific collaborative projects that were affirming and/or threatening; and examples of responses to threats or affirmations used to maintain their self-concept at work.

For each instance of a project, experience, or threat/affirmation reported, we asked participants to describe the whole experience, from beginning to end, including details about the nature and source of their feelings and experiences. If participants brought up

a topic or line of discussion that was not in our interview protocol, we allowed the interviewer to explore the issue. All interviews lasted 60–90 minutes and were tape-recorded and transcribed.

Observation. Non-participant observation took place for approximately 4 hours per day, for 5 days for each of the five toy groups. The first author observed all 40 of the interviewees during this time, along with several other designers and technicians who were not interviewed. Observation consisted of both silently shadowing toy designers, as well as conversing with them about what they were doing and what others were doing. The first author had open access to everything that happened in the design centre and was invited to observe meetings, brainstorming sessions, focus groups, and prototype testing. Much of the time, the first author would position herself in one of the large common work areas in the design centre, so she could easily observe many designers working at the same time and witness interactions and collaborations taking place in these areas. She also studied individual designers by walking around the design centre and checking into their work periodically, monitoring them from a distance for prolonged periods of time. The first author kept field notes during observations and recorded detailed notes after each day of observation (over 100 pages of field notes were compiled).

Data Analysis

Data analysis followed an iterative approach, moving back and forth between theory-development, data review, and literature review (Strauss and Corbin, 1998). We analysed our data in four stages described below.

Stage 1: Identifying the self-concepts of toy designers most relevant to creative work. In our initial analysis of transcribed interviews, the first author and a research assistant searched for evidence regarding the self-concepts of participants most relevant to creative work. We focused on *self-categorizations as a means of identifying the self-concept* because past research has linked self-categorizations to the self-concept (Brewer, 1991; Schlenker, 1980; Turner and Onorato, 1999). We searched for comments from interviews and evidence from observation notes related to self-categorizations by toy designers when defining their self-concepts at work. Although individual informants did not use the words 'self-categorizations', we looked for evidence that suggested self-categorizations (i.e. we looked for comments designers gave about the 'type' or 'kind' of person or designer they were). These kinds of statements have been used as evidence of categorizations in past research (Elsbach and Kramer, 1996) and were prevalent in our data.

The first author and research assistant first coded half of the interview transcripts and discussed the findings. Based on this coding, we developed an initial framework of six self-categorization labels (i.e. idealist, pragmatist, creator, refiner, controller, and enabler) that defined the self-concepts of the 40 toy designers. We should note that most toy designers did not use the exact labels we chose for their self-categorizations (e.g. idealist, creator, controller, etc.), but described themselves in ways that made these labels appropriate (e.g. those who self-categorized as 'idealists' talked about

'staying true to oneself' or 'having a singular vision' in toy design, while those who self-categorized as 'refiners' talked about 'solving problems in others' designs' and 'providing a part of the design'). We then coded the remaining interview data in terms of these six self-categorizations and compared our coding assessments. Our inter-coder agreement, using Cohen's Kappa was k = 0.82 (Cohen, 1960). All discrepancies were discussed and resolved. Finally, we individually coded the observation data for evidence of the six types of self-categorizations (e.g. toy designers talking about themselves in ways that indicated self-categorizations). We found that all designers clearly fit into one primary self-categorization, although most also overlapped with a second self-categorization. Again, all discrepancies in self-categorizations were discussed and resolved.

Despite not asking for a specific kind of self-description from informants, we found that all six of these self-categorizations seemed to fit the definition of *personal identity categorizations* (i.e. self-categorizations related to personal attributes and traits, such as being extroverted or shy; Blader, 2007). By contrast, these self-categorizations and the way they were used by designers did not appear to fit well with the definition of *social identity categorizations* (i.e. self-categorizations that associate oneself with a social group, such as 'car designer' or 'game designer').

Based on this coding, we developed an initial identity grid that defined the personal identities of toy designers based on these six categorizations. The categorizations were plotted on a grid defined by the two dimensions of 'creative output' (e.g. original concepts vs. incremental solutions), and 'creative approach' (e.g. idealistic vs. pragmatic) because these dimensions appeared to differentiate the six self-categorizations. We then returned to 30 of the 40 toy designers (10 of the original 40 designers were unavailable for confirmation of the identity categorizations), and asked them to plot their identities on the grid, and then to comment on the appropriateness of our two self-categorization dimensions, which we now labelled as 'personal identity categorizations'. We asked them if our placement made sense, if other placements would be more accurate, and if they felt that none of the six personal identity categorizations were accurate descriptions of their personal identities. All 30 of the designers confirmed our choice of self-categorization dimensions and personal identity categorizations. Further, many of them confirmed our placements of their colleagues. Based on this feedback, we felt very confident in our descriptions of these 30 designers' personal identity categorizations and that our coding scheme would produce accurate results for the additional 10 designers with whom we did not confirm identity categorizations.

Stage 2: Identifying collaborative behaviours related to the personal identity categorizations of toy designers. In the second stage of analysis, a research assistant and the first author searched transcribed interviews and observation field notes for any evidence of collaborative activities that appeared to relate to the personal identity categorizations of toy designers. In the interview and observation data, we searched for descriptions of all collaborative activities and stories of collaborations. We created a document that contained transcribed stories of collaborative activities. In sum, we identified 196 descriptions/stories of collaborative activities that were discussed or considered by toy designers (134 from interview data and 62 from observational data).

We then used past research on collaboration (described in the introduction) as a guide to label 60 of the 134 instances (randomly selected) from the interview data. We discussed our labeling scheme several times and came to agree upon a framework of six common collaborative behaviours described by toy designers. Two of these behaviours were related to giving ideas (i.e. offering ideas and promoting ideas), and three of these behaviours were related to taking ideas (i.e. soliciting ideas, considering ideas, and incorporating ideas). The sixth behaviour involved both taking and giving of ideas concurrently (i.e. co-creating ideas).

Next, we analysed the observation data to determine if any new collaborative behaviours emerged and to validate that all six collaborative behaviours were evident in the observational data. Our analysis of 30 of these 62 instances (randomly selected) revealed no new types of collaborative behaviours, and confirmed the use of all six behaviours in actual observed collaborations.

Finally, the first author and research assistant went back through the remaining 72 instances of collaborative behaviours from the interview data, and 32 instances of collaborative behaviours from the observation data, and coded them separately using the six-category framework. Our inter-coder agreement, measured using Cohen's Kappa, was k = 0.85 (Cohen, 1960). We discussed and resolved all discrepancies.

Stage 3: Relating collaborative behaviours to personal identity categorizations. In a final stage of data analysis, we returned to the 196 total instances of collaborative behaviours identified in Stage 2 and determined if engaging in these behaviours clearly had a positive or negative relationship with the personal identity categorizations of the toy designers, and if designers chose to engage or not engage in these behaviours because of consistencies or inconsistencies with their identities. In particular, we searched for interview text or observational notes that a collaborative activity was 'easy' or 'hard' for a person to perform, based on 'the kind of designer' they were, or if they felt differently (i.e. better or worse) about themselves as a result of engaging or not engaging in these activities. We also looked for interview or observational evidence indicating that people engaged in or avoided collaborative behaviours because this activity fit with or didn't fit with their personal identity. The first author and a research assistant coded half of the interview instances (67 instances) and half of the observational instances (31 instances) of collaborative behaviours for evidence of positive or negative relationships with personal identity. Our inter-coder reliability, based on Cohen's Kappa, was k = 0.78 (Cohen, 1960). We discussed and resolved all discrepancies. We then coded the remaining instances of collaboration and discussed and resolved all discrepancies. Of the 134 instances of collaborative behaviour we identified from the interview data, we coded 41 as indicating a positive relationship with personal identity, and 65 as indicating a negative relationship with personal identity (28 instances did not appear to be clearly related to personal identity affirmation or threat). Of the 62 instances of collaborative behaviour we identified from the observational data, we coded 28 as congruent with personal identity, and 29 as incongruent with personal identity (5 instances did not appear to be clearly congruent or incongruent with personal identity). In total, we identified 163 instances of collaborative behaviours that related to personal identity categorizations in our study.

Stage 4: Identifying patterns in the relationships between collaborative behaviours and personal identity categorizations. After identifying the relationships between the six collaborative behaviours and six personal identity categorizations, we developed six figures that illustrated these relationships. We then examined these six figures and returned to the literature to determine if we could identify any over-arching patterns in the relationships between collaborative behaviours and personal identity categorizations.

Initially, we were struck by the differences in collaborative behaviours that were incongruent with personal identities. One group of personal identity categorizations ('idealists', 'creators', and 'controllers') were incongruent with all types 'idea-taking' behaviours. By contrast, another group ('pragmatists', 'refiners', and 'enablers') were incongruent with very few, specific types of idea-taking behaviours. These two groups also appeared to differ in their approach to creative tasks based on the data indicating personal identity categorizations. The first group (idealists, creators, and controllers) appeared to approach creative tasks from a more idealistic and independent perspective that is often used to describe professional fine artists (Bain, 2005). The second group (pragmatists, refiners, and enablers) appeared to approach creative tasks from a more practical and solution-oriented perspective that is often used to describe scientists (Jemielniak, 2008).

At this time, we returned to the creativity literature and looked for themes or trends in how creators approach or define creative work. Here, we also found evidence that creative workers and students tended to approach creativity work in two primary ways: what was often called a 'problem-solving' or 'intellectual' approach (i.e. integrating ideas, finding solutions, organizing ideas, using diverse approaches), and an 'artistic' or 'imaginative' approach (i.e. creating new ideas, unconventional thinking, originality, revolutionary ideas) (see Gluck et al., 2002; Ivcevic and Mayer, 2006). These two approaches to creativity (what might be called 'problem-solving' and 'artistic' approaches) appeared to fit well with the two groups of personal identities identified in our data.

Based on this information, we developed a general framework that included two primary types of personal identities of toy designers: (1) 'artistic' personal identities, that included the self-categorizations of 'creator', 'controller', and 'idealist'; and (2) 'problem solving' personal identities, that included the self-categorizations of 'pragmatist', 'refiner', and 'enabler'. We then related these two personal identities to the six collaborative behaviours identified above. We describe the findings from this analysis next.

FINDINGS

Our analysis revealed several insights related to our primary research question. First, we found that the personal (vs. social) identity categorizations of toy designers were the self-concept dimensions most directly related to creative workers' collaborative behaviours. Second, our analysis indicated that two general types of collaborative behaviours (idea giving and idea taking) were most relevant to toy designers' personal identities (no other collaborative behaviours seemed to be nearly as relevant). Finally, our analysis revealed two patterns in the relationships between specific collaborative behaviours and specific, personal identity categorizations. One pattern indicated that idea-giving behaviours affirmed the personal identities of most toy designers, and personal identi-

ties of most toy designers were consistent with engaging in idea-giving behaviours. Further, the specific collaborative behaviours of 'offering ideas' and 'co-creating ideas' were especially congruent with personal identity categorizations that emphasized a 'problem-solving approach' to creativity. The second pattern indicated that idea-taking behaviours threatened personal identities of most toy designers, and personal identities of most toy designers were inconsistent with engaging in idea-taking behaviours. Further, the specific collaborative behaviour of 'incorporating ideas' was especially incongruent with personal identity categorizations that emphasized an 'artistic approach' to creativity.[2]

Overall, we find these insights to be surprising and interesting given that most extant research linking the self-concept to collaboration has focused on how *social identities* support collaboration by motivating individuals to *give ideas* or input to a group project. By contrast, our analysis suggests that *personal identities* may undermine creative collaboration by requiring individuals to *incorporate the ideas of others* in a group project. We discuss these findings in more detail below.

The Personal Identities of Toy Designers

An important finding from our analysis is that the *personal identities* of toy designers (vs. their social identities) appeared to be most relevant to their willingness to engage in creative collaboration. Personal identities correspond to personal and distinctive bases of self-evaluation, frames of reference, basic motivations (Brewer and Gardner, 1996), and 'unique or idiosyncratic self-understandings' (Thoits and Virshup, 1997, p. 107). According to both identity theorists (Stryker, 1987) and self-affirmation theorists (Steele, 1988), personal identities reflect individual attributes, expectations, and motives (e.g. I'm a non-conformist and am motivated to push against pragmatic boundaries) that may not be in line with social standards. When people identify at the personal level they derive feelings of self-worth from the evaluation of their personal traits or characteristics (e.g. 'I feel better about myself if I believe that I am good at math or an outstanding violinist'). They make direct comparisons between themselves and their peers ('Am I relatively smarter than my colleagues?'), and they are primarily motivated to act on behalf of their own interests rather than on behalf of others' (Ellemers et al., 2004). Such personal identities contrast with social identities, which define a person based on his or her affiliations with social groups or organizations (e.g. 'I'm a Southerner' or 'I'm a Stanford University student').[3]

Based on these definitions, and as shown in Table I, our analysis indicates that the self-categorizations most often used by toy designers to define themselves at work were personal identity categorizations. More specifically, our analysis suggests that toy designers defined their personal identities by six self-categorizations that reflected two general approaches to creativity. We label these creative approaches: 'artistic' and 'problem solving'.

Artistic approaches to creativity. Toy designers whom we labelled as taking an 'artistic' approach to creativity defined themselves by the personal identity categorizations of *idealist*, *creator*, or *controller*. The toy designers who described themselves as 'idealists'

Table I. Evidence of personal identity categorizations among toy designers

Identity type Identity name Number of designers	Artistic Idealist 7	Artistic Creator 13	Artistic Controller 4	Problem-solving Refiner 6	Problem-solving Enabler 5	Problem-solving Pragmatist 5
Description	Works to maintain a singular creative vision in toy design projects. Does not like compromise or modification to ideas.	Values ability to create and contribute original ideas or concepts, even if they are modified in end product.	Seeks to control entire toy design projects from original idea to final product. Desires complete ownership of toy.	Sees contribution as refining the original ideas of others and bringing concepts to life, and making them work.	Seeks to bring other designers into a toy project to improve end product. Seeks shared ownership of toy design.	From the beginning, considers practical constraints and goals in toy design projects.
Examples	'I have been called incredibly headstrong on more than one occasion. Its because I am really trying to champion something of my own and keep the idea pure and uncompromised.' 'I definitely reach for the sky for stuff. I really push the envelope of what it is that I am trying to work on.'	'I think I see myself as the original idea creative person. And I think I do a little bit more of that than the actual technical problem solving part.' 'Sometimes you have to shake things up if it seems like you're hearing all the same old ideas. You know, sometimes you have to scare people. Or give an idea that is a little wacky, and outside your comfort level. Those are the kinds of ideas that push people to think about the problem in a new way. So sometimes I have to be that more visionary type of designer.'	'I think I am a little bit of a control freak. So, I like being involved in the whole thing. I think designers by nature, we have some control freakism around us. It's like this little child that you are nurturing. It's very hard to let it go.' 'I find it very hard to let someone else take control of a project that I have started working on. Once I have an idea going, I think "this project is mine".'	'I'm really more of a problem-solver than someone who likes to work on the original concept. For example, I'm good at finding a way to work with a product license and make it work with someone else's concept for a design.' 'Often people don't really believe it until they see it, type of thing, and I am able to put together a really quick mock-up of the way concepts would function. Personally, to me, that's the type of creativity that I think is valuable because it's making an idea real and figuring out how to take a concept and realize it.'	'I'm good at helping other groups to get their work done. Like, I like to help them get the right people into the team to solve the technical problems they have.' 'I guess I'm more like a translator. I help the designer get his ideas translated to the engineers.'	'I like to tug people a little bit more toward the practical side of design so that we put out something that is actually going to sell.' 'I could apply the input to things that I've seen or practical means to get something out. There are some ideas that come out during a brainstorm, but I think the ideas that do come out with my input are more fruitful or more practical.'

appeared to be concerned more with meeting their own standards for creativity than with meeting more pragmatic organizational needs and goals, such as goals for safety, cost, and size in toy design. For example, one self-categorized idealist noted:

> I look at other artists and get inspired by their style or their quality of work and I am like I want to try to move that bar, I want to meet that standard but yet still make it my own style . . . and really that is my ultimate happiness – just doing art for myself. I can draw a cool car now and I can render it and it looks photo real and it is all nice, and that's what makes me happy.

Toy designers who self-categorized as 'creators', by contrast, appeared to be concerned with developing original concepts and ideas, even if those ideas were eventually modified or embellished before the final product came out. As one creator noted:

> I tend to like to be like the originator of a concept. Partially because it's like, 'Wow, it's his idea!' or something like that. But also because I get to make something totally new, and it's really cool to be someone who can do that . . . I know there are other people who like to follow up on it, too. And it's OK with me if they perfect my idea a little, as long as the original idea is still there.

Finally, toy designers who self-categorized as 'controllers' were concerned mostly with having control over the entire project, from initial concept to final production. These toy designers displayed a strong need for independence in the design process. As one controller declared:

> I don't want to ask for help. It is just my nature to take ownership. At the end of the day, someone has to have the passion to make sure it is going to be done and be accountable that it is going to be done right, and if you don't take ownership that is not going to happen.

Problem-solving approaches to creativity. The toy designers that we defined as taking a problem-solving approach to creativity appeared to have personal identities defined by the self-categorizations of *pragmatist*, *refiner*, or *enabler*. Pragmatists took a practical approach to toy design that included considering the needs and concerns of marketing, budgets, and manufacturing from the starting point of the design process. As one pragmatist noted following a brainstorm, in which he nixed many 'unrealistic' ideas right away:

> I know what's going to work and what's not, and I don't want to waste time on ideas that I know are just not going to make it. I like to say no right away when someone brings up an impractical idea, just to get it out there and nip it in the bud. I'm usually the guy people now look to say no to those kinds of ideas. They just know that I won't let it go if it's too 'out there'.

In contrast, toy designers who self-categorized as 'refiners' valued being creative, and even coming up with impractical suggestions, but they focused their creative talents on refining the ideas or initial creations of others. As one refiner, who worked on the software embedded in toys, noted:

> The creativity that I bring is a little bit more refinement work after a meeting that we have. Like we'll have a brainstorm and people with come up with a lot of good ideas, and then maybe later they'll focus in on one, and then most people think the creativity is done. But for me, that's where my creativity starts . . . So my creativity is more of taking those initial ideas and making them come to life and refining them a bit through engineering and electronics.

Finally, toy designers who self-categorized as enablers appeared to be most interested in getting others involved in a toy design project, and making sure that designers got to work on the aspects of design that best fit their skills and creative identities. One enabler put it this way:

> I really do see myself as good at getting everyone assigned to a project to own a piece of it. Even if it's a very small part, I want them to feel like they have had an impact on the final product. I think that I have a knack for helping everyone to feel like a part of the team.

Collaborative Behaviours Related to the Personal Identities of Toy Designers

A second insight from our findings is that two general types of collaborative behaviours appeared to be most relevant to the personal identities described above. These collaborative behaviours may be defined broadly as *idea giving* and *idea taking*. As shown in Figure 1, idea-giving behaviours included *offering ideas* (e.g. making suggestions for an original concept or improvements on an existing concept) and *promoting ideas* (e.g. campaigning for the selection of a specific idea or attempting to sell others on a specific idea). Idea-taking behaviours included *soliciting ideas* (asking for ideas from others and asking for help in solving a problem), *considering ideas* (seriously thinking about an offered idea or discussing the idea with others), and *incorporating ideas* (actually using an offered idea in a
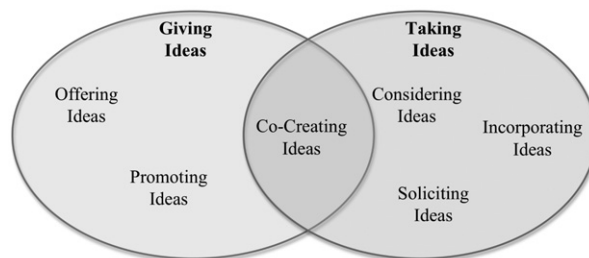

Figure 1. Collaborative behaviours related to the personal identities of toy designers

toy design). The sixth behaviour, *co-creating ideas* (i.e. developing ideas through joint discussions or brainstorms where it appears that ideas generated are the product of multiple individuals' efforts), involved both idea giving and idea taking.

It is important to note that, in the current study, idea-giving and idea-taking behaviours were related to help in the form of unique or distinctive ideas, which differs from help in the form of effort (e.g. help setting up a toy prototype, or testing a mechanism). It is also important to note that these collaborative behaviours are described from the perspective of a single designer, and most (with the exception of co-creation) do not directly acknowledge the role of other collaborators. While collaboration, by definition, involves a social interaction, the collaborative behaviours that we describe below are those that toy designers focused on when talking about their personal identities.

We describe these collaborative behaviours in more detail in the following section of the paper, where we examine how they related to specific personal identity categorizations of toy designers.

Relating Specific Collaborative Behaviours to Specific Personal Identities of Toy Designers

A third insight from our findings, as noted earlier, is that specific collaborative behaviours related to specific personal identities according to two general patterns. We illustrate these relationships in Figure 2 and Tables II and III, and discuss them in more detail below.

Idea-giving behaviours and personal identities of toy designers. As shown in Figure 2 and Tables II and III, it was typical for the giving of ideas (i.e. offering ideas, promoting ideas, and
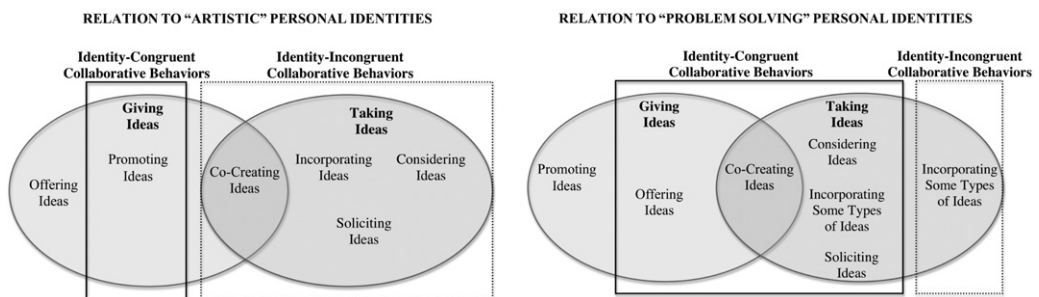

Figure 2. Framework relating creative collaborative behaviours to personal identities of toy designers

Identity-congruent collaborative behaviours (included inside solid rectangles) were behaviours that were both affirming to the given personal identities and likely to be enacted by those possessing the given personal identities. *Identity-incongruent collaborative behaviours* (included inside dashed rectangles) were behaviours that were both threatening to the given personal identities and likely to be avoided by those possessing the given personal identities. Behaviours not included inside solid or dashed squares were neither congruent nor incongruent with the given personal identities. These behaviours are considered *identity-neutral* in relation to the given personal identities.

Artistic personal identities include identities defined by the primary self-categorizations of 'idealistic', 'creator', and 'controller'. *Problem-solving personal identities* include identities defined by the primary self-categorizations of 'pragmatist', 'refiner', and 'enabler'.

Table II. Instances of collaborative behaviours coded as *Congruent* with personal identities of toy designers[a]

| | *Types of collaborative behaviours*[b] | | | | | | | | | | | |
| | *Promoting ideas* | | *Offering ideas* | | *Co-creating ideas* | | *Soliciting ideas* | | *Considering ideas* | | *Incorporating ideas* | |
Types of personal identities	Interview	Observ.	Interview	Observ.	Interview	Observ.	Interview	Observ.	Interview	Observ.	Interview	Observ.
Artistic	8	7	1	5		1				1	1	
Prob. solv	1		8		12	7	2	4	1	1	5	3

Notes:

[a] Number out of 69 instances of collaborative behaviours – identified in interviews or observations – that were congruent with either artistic or problem solving personal identity categorizations of toy designers.

[b] 'Promoting ideas' and 'offering ideas' are considered idea-giving behaviours. 'Soliciting ideas', 'considering ideas', and 'incorporating ideas' are considered idea-taking behaviours. 'Co-creating ideas' is considered both an idea-giving and idea-taking behaviour.

Table III. Instances of collaborative behaviours coded as *Incongruent* with personal identities of toy designers[a]

| | *Types of collaborative behaviours*[b] | | | | | | | | | | | |
| | *Promoting ideas* | | *Offering ideas* | | *Co-creating ideas* | | *Soliciting ideas* | | *Considering ideas* | | *Incorporating ideas* | |
Types of personal identities	Interview	Observ.	Interview	Observ.	Interview	Observ.	Interview	Observ.	Interview	Observ.	Interview	Observ.
Artistic	1		2	2	19	4	4		6		24	16
Prob. solv	2				2						6	6

Notes:

[a] Number out of 94 instances of collaborative behaviours – identified in interviews or observations – that were incongruent with either artistic or problem solving personal identity categorizations of toy designers.

[b] 'Promoting ideas' and 'offering ideas' are considered idea-giving behaviours. 'Soliciting ideas', 'considering ideas', and 'incorporating ideas' are considered idea-taking behaviours. 'Co-creating ideas' is considered both an idea-giving and idea-taking behaviour.

co-creating ideas) to be congruent with the personal identities of toy designers, especially personal identities that emphasized a problem-solving approach to creativity. The fact that giving away ideas was congruent with these toy designers' personal identities may seem surprising, given that creative workers often are judged (if not rewarded) for the ideas with which they are personally credited. Even in commercial environments where individual contribution is not explicitly documented (e.g. the design of commodity products such as tableware or home furnishings), individual designers often are recognized by their peers, and may gain an industry following if their creative ideas are considered noteworthy (Elsbach, 2009). Thus, giving away one's creative ideas seems like a behaviour that is likely to be negatively, rather than positively, related to the personal identities of creative workers. Yet, we found the opposite to be true.

Idea-giving by designers with 'problem-solving' personal identities. We found, consistently, that the behaviours of 'offering ideas' and 'co-creating ideas' were congruent with the personal identities of toy designers with problem-solving identities. For example, one such designer felt that offering possible solutions to other designers' problems was what he was known for and what he felt best about doing in collaborations. As he put it:

> I'm really the guy they come to for a lot of mechanical solutions. And a lot of times they'll come to me and say, 'Can we fit this [electronics] into this little guy?' And I'm the one who will figure a way to do it. And I'm able to do that better than a lot of the designers or even other people who work with mechanics. And the designs are better because I have this different way of looking at things and can solve these mechanical problems for them.

In another case, during an observation, the first author saw a 'problem-solving' designer stop what he was doing to help another team member better understand a toy concept. He was able to explain the concept clearly and persuaded a group of other team members to come by to help fill out his explanation. Later, another designer from this group was talking about the helpful designer in front of him, and said:

> [X] is so good at giving ideas and he is so approachable that almost everyone comes to him for help when they're stuck in a design project. He is so warm and inviting and just so helpful. He will offer solutions while he's on the way to the restroom, just off the cuff, and they'll be brilliant. And he's really good at getting other people to help out as well. He's always saying how he stole this idea from some other project. He's not afraid to use other people's ideas, and he gives full credit. He's just really great at giving help.

The helpful designer smiled, and agreed with his colleague, saying: 'It's just really hard for me not to want to get involved in these other projects when I see some way of improving the design.'

Finally, a 'problem-solving' designer noted that he appreciated co-creating ideas because he knew he could not do everything well, and in the end, by working with others he got to be part of a finished product (one that was successful because of his input). As he noted:

I was on this project, and I helped them by coming up with a little mechanism to make a wheel spin randomly. And I did it for next to no money using the existing design. Which I knew had to be the case because we were already at our cost limit. But then in the end, even though you can't see my little contribution, it ended up in the final product. And it was important to how it worked. So I really felt good about working on that project with that team, because it helped get my work out there, and also I got to show them how to do something simply and inexpensively, which is really my skill.

We did not find the behaviour of 'promoting ideas' to be consistent with 'problem solving' personal identities. This may have been due to the more pragmatic approach of these designers, and their reticence to push ideas that did not seem obviously viable. As one problem-solver noted:

There's a certain amount of pushiness that I see in some brainstorms by designers who want to get their ideas heard. And I'm just not likely to take that approach. If people like my ideas, fine. But, I'm not going to push them on anyone who doesn't want them.

Idea-giving by designers with 'artistic' personal identities. By contrast, 'promoting ideas' was the only idea-giving behaviour that we found to be consistent with personal identities that emphasized an 'artistic' approach to creativity. For example, an 'artistic' designer described how he promoted an idea about adding a cleaning tool to a messy toy. He explained that this idea would also keep the rest of his idea for the toy intact (despite its messiness). In this way, his actions help to preserve his personal identity categorization as an idealist (i.e. not having to compromise on his ideas). As he reported:

The [X] line, oh my God that's messy. So, I had to sell the idea of putting a cleaning stick in with the car. I said in the instruction manual that the car would go faster the cleaner it was. So that encouraged the kid to clean it. And it was appealing to Mom by giving the kid a way to clean it and the motivation to clean it. It was an extra piece of material, but it added to the appeal of the toy. So I really had to push that idea, but I knew it was a good one, and wanted to get it through so that I could keep the toy the way I wanted it.

By contrast, we did not find evidence that the idea-giving behaviours of offering ideas and co-creating ideas were consistent with the personal identities of most 'artistic' designers. As one designer noted about some 'artistic' designers in his group:

They can be helpful, but you get the sense that they don't want to really get involved in someone else's ideas because they just aren't that into someone else's vision.

Idea-taking behaviours and personal identities of toy designers. In contrast to idea-giving behaviours, we found that idea-taking behaviours were often incongruent with toy designers' personal identities, and that the specific idea-taking behaviour of 'incorporating ideas' was especially incongruent with personal identities that emphasized an artistic approach to creativity. The behaviour of 'incorporating ideas' was distinct from soliciting ideas and

considering ideas (two other idea-taking behaviours we identified) because it meant ceding control over the design (at least in the area to which the idea applied). These findings are also summarized in Figure 2 and Tables II and III.

Idea-taking by designers with 'artistic' personal identities. Our analysis indicates that designers with 'artistic' approaches to creativity found all of the collaborative behaviours associated with idea taking to be incongruent with their personal identities. First, the loss of control associated with 'incorporating ideas' made this behaviour especially incongruent with many 'artistic' designers who maintained strong opinions and ownership over their design projects. For example, one such designer claimed that the ideas incorporated into one of his designs ended up ruining the design. He found this outcome disheartening and felt strongly that the ideas he was pressured to incorporate were inconsistent with his personal identity. As he noted:

> The[y] have done things to the [X] line that I absolutely would not do, and they have made it a horrible toy. I think that toy line is going to die because they haven't followed the ideas I started with. Now some new group is going to pick it up and do their own things to it, and make it something that it's not meant to be. I believe I know why that toy was successful, but it's not my call anymore and somebody else is going to take it in a different direction and the key ideas are going to get diluted and lost. And it was a success in the first place because of that singular vision that I had.

Similarly, an 'artistic' designer claimed that ownership of the entire project was important to him and that incorporating ideas deprived him of feeling ownership. As he put it:

> I would say that I am more comfortable giving ideas than I am taking ideas. I think it comes down to my wanting to control the process and kind of hold on to it more. I find that I want to have complete ownership and I do have trouble reaching out for help when I get stuck on something.

Second, many 'artistic' toy designers found the co-creation of ideas to be incongruent with their personal identities. For example, the first author observed one 'artistic' designer opting out of several opportunities to co-create with designers from another toy line. In one instance, a designer from a different toy line came to the communal area near his cubicle, where the creator and several other designers were working. This outside designer asked if anyone knew about designing fake 'ice' for a play set. Several other designers talked to the outside designer about it, but the creator promptly left and went back to his cubicle. Later he told me that he was not interested in working with the outside designer because he was not working on that line, and would not have the opportunity to come up with the original concepts. He did not want to work on a project where he would just be adding to someone else's concept.

Finally, in some cases, we found that merely considering or soliciting ideas from others was viewed as incongruent with the personal identities of 'artistic' toy designers. For example, one such designer noted that he was unlikely to solicit ideas because he felt he should be able to own the entire project. As he explained:

When I'm assigned to a project I feel sort of like the world is on my shoulders and I've been the one who has been charged with coming up with every solution and every facet of this product and it is my responsibility and I am not supposed to ask for help. I've got to figure it out myself.

Idea-taking by designers with 'problem solving' personal identities. Toy designers whose personal identities suggested a problem-solving approach to creativity also found 'incorporating ideas of others' to be incongruent with their personal identities, albeit to a lesser extent than 'artistic' designers. In particular, these designers indicated a negative relationship between their personal identities and incorporating ideas of others if they believed that this activity undermined control over *their area of expertise.* For example, one 'problem solving' designer who worked mostly on styling and feature design admitted that he had a hard time incorporating ideas that encroached on his area of expertise. As he put it:

I think it depends on what kind of help or ideas it is. Like when it comes to styling or feature help, you know, I sometimes can be abrasive to taking help, you know, because that's my thing . . . because I feel I should own that whole arena of styling on my designs.

These findings suggest that the positive impact of the collaborative behaviour of incorporating ideas may depend, in part, on the types of ideas being incorporated.

By contrast, the idea-taking behaviours of considering ideas, soliciting ideas, and co-creating ideas were not inconsistent, and in fact, were congruent with most 'problem solving' personal identities. Further, if incorporating others' contributions involved ideas that were outside of the expertise of a given designer, even these behaviours were found to be congruent with 'problem solving' identities. In all of these cases, idea taking was seen as useful in terms of solving problems and dealing, pragmatically, with design issues. As such, these behaviours fit with the personal identity categorizations of most 'problem solvers'. As one 'problem solving' designer noted:

I will recruit anybody who will stop for 5 minutes to stand and play. I'm always asking others about my designs, like I'll say, 'Well, what if it did this? Do you think it would be fun if we could do this?' And I get the best and most amazing ideas that way. It feels really good to work out the problems that way, and know that I'm not going to see those issues later on.

SUMMARY OF FINDINGS

In summary, our findings suggest that toy designers' effective engagement in creative collaboration may be, in part, a function of their personal identities. In particular, our findings showed that designers who had personal identities defined as 'artistic' (i.e. they liked to create ideas, were idealistic in their approach, and wanted to be in complete control of the process) viewed most collaborative behaviours to be inconsistent with their personal identities, and were especially opposed to incorporating the ideas of others into their designs. If forced to engage in these behaviours, 'artistic' designers experienced

threats to their personal identities. In contrast, we found that designers who had personal identities defined as 'problem solving' (i.e. they liked to refine others' ideas, were pragmatic in their approach, and worked to enable the input of others into the design process) found most collaborative behaviours to be consistent with their personal identities, and were especially likely to engage in the co-creation or offering of ideas. Participating in these collaborative behaviours was affirming to the personal identities of these 'problem solvers'.

At the same time, we found that all of the toy designers in this sample found their personal identities to be more incongruent with idea-taking behaviours than with idea-giving behaviours. That is, in addition to being a function of their personal identities, designers' engagement in the creative process was also a function of the type of collaboration that was required of them. Specifically, the incorporation of others' ideas into their creative projects led most designers in our study to feel that their personal identities were threatened, and in turn, led them to resist pressures to engage in creative collaboration. This was true even of those toy designers who defined themselves as 'problem solvers' – and thus, were presumably more open to input that would help them complete a challenging task. These designers reported threats to their personal identities when they were asked to incorporate the ideas of others involving areas in which the former perceived themselves to be experts. Thus, an interesting and novel idea to arise from our findings is that *promoting the behaviour of idea taking – not idea giving – may be what is critical to improving creative collaborations.*

In our final discussion, we describe how these findings may inform theorizing about collaboration and creativity, and improve the management of creative collaborations.

DISCUSSION

Creative workers often are described as having challenging personalities – socially dysfunctional, unflinchingly stubborn, and hopelessly prideful (Fletcher, 1999). According to some scholars, these 'creative curmudgeons' demonstrate clinically diagnosable sociopathic tendencies (e.g. Rothenberg, 1990) and, in interpersonal relationships, may be prone to stress and depression (a phenomenon labelled the 'Sylvia Plath effect' by Kaufman and Baer, 2002). Such an unflattering view of creative workers' sociability may not be surprising given that many archetypal creative icons are notoriously introverted and staunchly independent (e.g. Virginia Woolf, Vincent Van Gogh, Oliver Stone). In the context of organizations, these stereotypes imply that creative workers can be resistant to collaborating with others and may struggle in interdependent task environments (Elsbach and Kramer, 2003).

Despite this seeming tension between creativity and collaboration, organizations frequently encourage their creative workers to cooperate when developing innovative products (Sawyer, 2007). Further, there is evidence that successful creative collaborations do, in fact, occur in organizations (Hargadon and Bechky, 2006).

The findings of the current study suggest that how specific collaborative behaviours relate to the personal identities of creative workers can explain, at least in part, why collaboration is alternately welcomed and shunned by creative workers. These findings have both theoretical and practical implications.

Theoretical Implications

Our findings provide two primary theoretical contributions. First, they move theory on identity and collaboration beyond a focus on social identity (Ellemers et al., 2004; Hardy et al., 2005), and towards a focus on personal identity. Second, they deepen our understanding of creative collaboration by showing how, in addition to idea-giving behaviours, idea-taking behaviours play a critical role in such collaborations.

Relating collaboration to personal identity. Since Sherif et al.'s (1955) seminal work, organizational scholars have actively investigated the link between social identity and collaboration in the workplace, with their interest growing in recent years (e.g. Tyler and Blader, 2001). As noted in our introduction, this research indicates that group members' social identities can be powerful predictors of their willingness to collaborate.

Yet, lost in this focus on collaboration and social identities is an examination of how personal identities might play an important role in employee collaboration (Blader, 2007). Our findings help fill this gap in understanding by showing how some forms of collaborative work (e.g. incorporating the ideas of others into one's work) may obscure individual contributions and expertise, and thus threaten the personal identities of potential collaborators.

These ideas are consistent with recent research showing that group members may desire to stand out and show distinctive self-concepts when their personal identities are at stake (Adarves-Yorno et al., 2006, 2007). For example, in one study, Adarves-Yorno et al. (2007) found that, when the personal (vs. social) identities of members of student groups were made salient (e.g. by identifying group members by photos and name tags), those members were more likely to create individual posters (in an assigned task) that ran counter to an established group norm (i.e. to use more words than images). Further, compared to group members who conformed to established norms, these members viewed such non-normative posters as more creative. Thus, both perceptions of creativity and creative behaviours by group members became more counter-normative when their personal identities were made salient. Our findings suggest that these perceptions and behaviours may have reflected an especially strong need to affirm a distinctive personal identity when that identity was related to creativity.

Further, these findings provide insight on *why* personal identities are so strongly affected by some collaborative behaviours. In particular, because incorporating the ideas of others into one's projects was most threatening to toy designers' personal identities, we suggest that personal identities may be strongly tied to ideas that (1) one presumes to 'own', and (2) are 'authentic' expressions of one's self.

First, the relationship between 'owned' ideas and personal identities has recently been described by psychologists as a part of the 'possessive self' (De Dreu and van Knippenberg, 2005), and has been shown to lead individuals to value ideas or beliefs more when they are associated with the self, and to engage in competitive and defensive behaviours when these ideas are opposed (or even anticipated to be opposed). Our findings confirm and extend these recent findings by showing how some types of collaborative behaviour (i.e. idea taking) may trigger responses by the possessive self (i.e. a defence of one's ideas and resistance to changing them). Protecting one's ideas from the intrusion of others' suggestions may, thus, protect one's individuality and sense of self.

Second, recent research and theorizing on the relationship between personal identity and values suggests that we may be most motivated to affirm personal identities that are expressions of our 'authentic' self concepts (Erickson, 1995). That is, if we feel that a particular personal identity categorization is an important reflection of our 'authentic' or 'true' selves, we may be strongly motivated to affirm that personal identity. In turn, it seems we may also be motivated to protect that personal identity from threats (e.g. behaviours that run counter to our authentic selves). Our current findings add support to these notions by showing how the specific behaviour of incorporating others' ideas into toy designers' projects was most threatening to toy designers whose personal identities were most strongly defined by independent creativity.

Together, these findings suggest that affirmations of personal identities, unlike affirmations of social identities, may not be motivated, primarily, by needs for self-esteem enhancement (Abrams and Hogg, 1990). Instead, our findings resonate with work suggesting that personal identity affirmations may be motivated by needs to protect and promote individuality and authenticity (Hitlin, 2003). In this way, our findings add support to recent frameworks that seek to expand our understanding of the motives driving identity work in organizations (Ibarra and Barbalescu, 2010; Vignoles et al., 2006), and suggest that creative collaborations may be most successful when these other motives (e.g. needs for authenticity and ownership) are met through group interactions.

The importance of idea-taking to creative collaboration. Early research on creative collaboration concentrated on getting group members to freely offer their ideas (e.g. in brainstorming sessions) as a means of improving the effectiveness of such collaborations (Osborn, 1957). Motivated by research on 'groupthink' (Janis, 1989), these scholars sought to understand how to encourage dissent and divergent idea generation in group collaborations as a means of avoiding poor decision making and uncreative output. This early work has led scholars, for decades, to focus on idea giving (and the trust that is necessary for people to openly share their ideas) as the most critical behaviour in creative collaboration (Amabile, 1996). In fact, even recent reviews of group creativity focus on idea giving as the collaborative behaviour most important to group creativity and innovation (Litchfield, 2008; Paulus, 2000).

Yet, as noted in the introduction, despite extensive research on creative collaboration in this vein, practitioners still complain about the difficulties of promoting collaboration among creative workers. Our findings suggest that one reason for this difficulty may be that *it is the under-studied behaviour of idea taking – not the well-studied behaviour of idea-giving – that is critical to understanding and promoting creative collaboration*. In short, our findings suggest that scholars have paid too little attention to idea taking – and in particular to the incorporation of others' ideas – in their research on creative collaboration.[4]

In response, our results provide several new insights about idea taking in creative collaborations. For example, idea taking was especially threatening to the toy designers in our sample when incorporating the input of others was perceived to alter their ideas, which in turn, would remove the 'signature' of the idea's originator (Fletcher, 1999). In support of this notion, Elsbach (2009) found that creative workers, whose finished products did not bear their names, went out of their way to develop 'signature styles' in their products' appearance, so that at least some consumers might link these products to

a single creator. Thus, our findings about idea taking suggest that creative collaborations may be more successful if individual creators can maintain a clear link to the core design, despite the input of others.

At the same time, our findings suggest that idea taking may arise in multiple forms, including the noncommittal 'soliciting' of ideas, the more interested 'consideration' or 'co-creating' of ideas, and the fully accepting, 'incorporating' of ideas. While soliciting ideas, consideration, and co-creation of ideas were often congruent with the personal identities of toy designers, incorporating ideas was almost always incongruent with the personal identities of toy designers. This finding suggests that making a change to creative ideas that one has already established, individually, is more relevant to creative workers' personal identities than is requesting or considering ideas (that may or may not be implemented) or co-creating ideas (that are established jointly). These findings support previous work showing that adopting others' suggestions is more likely if those suggestions expand upon (vs. subtract from) an individual's already-established idea (Baer and Brown, 2012).

Practical Implications

Our findings about creative collaboration and personal identity also have implications for the management of collaboration in professional work settings. In particular, our analysis helps shed light on the debate concerning personal factors and organizational factors as managerial levers to improve knowledge sharing and innovation. Past research has found that personality factors, such as self-efficacy and openness to experience, were much stronger predictors of individual engagement in knowledge sharing than were organizational features, such as the availability of knowledge management systems or rewards associated with knowledge sharing (Cabrera et al., 2006). Similarly, our findings highlight a connection between an individual's personal identity and idea sharing among toy designers, and imply that attention to the personal identity categorizations of creative workers, in particular, may be equally or more important to fostering their collaboration at work than providing appropriate rewards and collaboration tools. These findings make clear that a one-size-fits-all approach to designing and promoting creative collaborations is unlikely to work.

Our findings also have implications for the design of reward, training, and management systems in organizations that rely on collaboration among creative workers. Most organizations that hope to foster innovation attempt to motivate creative work by offering rewards to those employees who are directly responsible for the most creative ideas. However, our findings suggest that, rather than rewarding employees for offering 'the most creative idea', organizations might offer rewards to employees who are able to effectively incorporate others' ideas into their own work. Further, training programmes may need to be updated to include education on how to effectively take ideas from others, in addition to how to give ideas. Effectively taking ideas from others may require a specific set of skills (e.g. engaging in discussion about how the idea fits or doesn't fit with the pre-existing project) that are not intuitive or commonly learned by creative workers. As for managers, effectively leading creative collaborations may mean preventing any single group member from 'owning' an idea in the early stages (and thus, being resistant

to taking ideas from others). These changes in reward, training, and management systems may get at the heart of the personal identity/collaboration conflict more directly, by addressing refusals to take others' ideas rather than reluctance to give one's own.

Limitations and Directions for Future Research

Despite the theoretical and practical contributions outlined above, we recognize that our study is limited in some respects. The creative workers in our sample are employed by one firm, whose product line is targeted to a specific demographic market. Although we did not consider between-firm variance in how creative workers collaborate, we suspect that such variance exists and that it is likely meaningful. For example, we would expect the distribution of creative workers who identify themselves as creators, idealists, controllers, refiners, enablers, and pragmatists to vary according to the task environment, industry norms, and organizational culture. In short, we would expect contextual variables to play an important role in determining how collaboration is related to identity. This perspective fits with more sociological views of identity (Hsu and Hannan, 2005), and suggests several avenues for future research.

In a small design firm such as IDEO (Sutton and Hargadon, 1996), for example, we might expect differences in terms of how designers are recruited, socialized, and rewarded according to their identity types. And, whereas some firms may strongly emphasize the need for collaboration (and informally reward it) others may espouse independent, competitive values. Further research is needed to identify the extent to which our findings can generalize across different organizations and different organizational cultures. Finally, because of the strong local norms that may arise regarding collaboration and creativity, future research may also need to look at the collaborations across organizational groups, or between corporations and external designers who contract with those organizations (Ravasi and Stigliani, 2012).

A second limitation of the present research is the scale of the organization we studied. The firm employed hundreds of designers, working on thousands of potential product designs. The boundaries of collaborative 'groups' in this firm were highly permeable, if not entirely amorphous. Given these conditions, designers were allowed to focus their activities in ways that shaped their personal identity categorizations. However, in a smaller setting, such as a single group of creative workers, individual team members may not be afforded the same luxury to develop specialized talents. It would be interesting to see whether unique personal identity categorizations are just as likely to emerge in these smaller settings, or if the minimal scale and tighter restrictions force the creative worker to become a jack-of-all-trades, rather than a master of one.

CONCLUSION

Creative workers often are depicted as unhelpful, selfish, and disobliging. But this critical view may be off the mark, at least as it pertains to creative workers in corporate settings. Many of the creative workers in our sample did not fit the stereotype of uncooperative and difficult operators. Indeed, most were willing to share ideas freely with their colleagues. Further, we found that many of the creative workers who struggled with

collaboration were not unwilling or unable to give help and advice, but rather were unwilling and unable to receive it (at least without threatening their personal identities). The upshot of these findings is that managers interested in fostering collaborations among creative workers should reconsider their view of these valuable employees. Creative professionals may be more willing to engage in collaborations than we think, but their willingness may depend on whether and how the collaborative process relates to their self-concepts.

NOTES

[1] A second study, using a portion of the data from the current study, has been previously published (Elsbach, 2009). That study focused on the process of identity management through the actual design products of a group of 10 designers (out of 40 total designers included in the current study). Some of the data regarding the identities of 10 designers used in the prior study is also used in the current study. The data on collaboration, and the relation of collaboration to the self-concept – that is the focus of the current study – was not used at all in the prior study.

[2] Note that our analysis indicates a two-way relationship between personal identities and collaborative behaviours (i.e. personal identities may influence which collaborative behaviours designers engage in, and collaborative behaviours may influence which personal identities are threatened vs. affirmed). These relationship effects appear to be tightly intertwined. Thus, we do not propose that either effect is dominant or more important than the other. Instead, we focus on the importance of the relationships in general.

[3] Our perspective on personal identities is grounded in cognitive social psychology (see Hewitt, 1989). This perspective focuses on individual self-perception as the primary process involved in identity construction. This contrasts with more sociological perspectives that view identity as a more socially constructed phenomenon (see Hsu and Hannan, 2005; Lok, 2010). Our use of a more psychological perspective is based on the specific attention this perspective gives to *personal identities*. By contrast, sociological perspectives tend to focus on group and organizational identities, and have paid less attention to personal identities (see Hitlin, 2003, for a discussion).

[4] In an anecdotal illustration of this phenomena, a recent Google Scholar search turned up no articles related to creativity that included the phrase 'incorporating the ideas of others', but over 400 articles related to creativity that included the phrase 'sharing ideas with others'.

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