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## A Bird's Eye View of the Creativity–Innovation Nexus: The Moderating Role of Supervisor Support and Decision Autonomy

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### Introduction

Creativity is a necessary, but insufficient antecedent of innovation, which also includes the finalising step, that is, the implementation of creative ideas. Therefore, it is imperative for managers and HR experts alike to know how to stimulate both employee creativity and individual innovation, as the latter ultimately provides a tangible value for the firm (Baer, 2012). In order to obtain a deeper understanding of the mechanisms and foundations for individual innovation outcomes, recent research on creativity and innovation has examined a diverse set of their antecedents.

Despite the increased interest in this relatively new topic of research, questions remain concerning innovative work behaviour (IWB) requirements against a backdrop of innovation and change. While organisations are increasingly seeking to use individual creativity, the role of HRM (compared to other contingencies such as personal predictors, organisational or team climate and employee connectedness/organisation; Baer, 2012) is rather under-researched. Specific HRM practices, such as job design, i.e. how to design the workplace to foster creativity and innovation, have received little attention in the literature, especially among the HRM and OB scholars. Furthermore, existing studies have predominantly applied a single-level perspective, and were thus mostly unsuccessful in correctly estimating cross-level contextual influences and interactions with individual-level factors

in predicting the transformation of creative ideas into implemented innovations.

The aim of this chapter is to investigate the interplay between organisational and job factors in stimulating the innovation process. We discuss how perceived supervisor support and decision autonomy moderate the creativity–innovation nexus. In conceptualising our arguments about the proposed connections, we draw on the theoretical framework of the Self-Determination Theory (SDT; Deci & Ryan, 1985). The core premise of the SDT is that individuals can be proactive and engaged in beneficial activities as a function of social-contextual conditions (Ryan & Deci, 2000). These conditions influence the satisfaction of three innate psychological needs – autonomy (i.e. possessing opportunities to choose), competence (i.e. the need to feel like you are able to perform the task at hand successfully), and relatedness (i.e. the need to feel belongingness and connectedness with others). When these are satisfied, they yield most effective functioning (Gagné & Deci, 2005; Ryan & Deci, 2000).

After defining the multi-stage and multi-level nature of the innovation process, we focus on the link between idea generation and implementation at the individual level, and examine the importance of perceived supervisor support (organisational-/managerial-level) and decision autonomy (job–employee-level) for transforming creative ideas into implemented innovations. We suggest that this moderation occurs through fostering employees' perceptions of psychological states of competence, relatedness and autonomy, as predicted by the SDT. Taken together, this chapter is conceptual in nature, as it aims at uncovering the workplace features related to job design, leadership and personal characteristics conducive to working creatively and implementing creative ideas, and HRM and OB practices that represent a crucial stepping-stone towards fostering organisational innovation.

We contribute to the literature by relating to multi-level theory (Kozlowski & Klein, 2000) and taking a cross-level perspective in examining top-down contextual influences and cross-level interactions in predicting individual-level creativity and innovation. This approach is important because it helps to estimate accurately and unravel the key contingencies involved in the individual-level innovation process. By examining both creativity and innovation within the same model (focusing on the relationship between them), we connect diverse streams of literature on those constructs that were previously examined separately. Our discussion offers several research propositions that could potentially drive future research efforts. A practical contribution of this chapter focuses on the people-related challenges of achieving creativity

and innovation in organisations and discussing the implications of our findings for HRM in small and medium-sized enterprises (SMEs).

### **Individual innovation as a two-stage multi-level process**

Creativity at the individual level provides the foundation for individuals, groups and organisations to pursue innovative efforts. Previous research on creativity at work, rooted in the historic traditions of psychology, focused either on examining the antecedents of creativity or on investigating the drivers of implementation. The first part has mostly been covered within the behavioural research on individual creativity, whereas the second represents the domain of organisational research on innovation (Woodman, Sawyer & Griffin, 1993). Separate research streams of creativity and innovation do little favour to the field in terms of providing a comprehensive understanding of the 'black box' of the innovation process.

Recently, the relationship under examination has been increasingly addressed through individual innovation – a multi-dimensional construct that can be viewed in terms of different types (e.g., product, service and process), levels (e.g., radical and incremental) or stages. The latter, dynamic aspect of the innovation process is increasingly relevant and under-investigated. The stages or phases of the innovation process detail the major steps that a creative idea must go through in order to become fully realised. While IWB can be conceptualised as a two-, three-, four- or five-stage process, we simply envision the individual innovation process as consisting of idea generation and implementation, where creativity is 'the seed of innovation'.

By taking a binary perspective of IWB it is possible to identify similarities and differences present within the innovation process. Recent studies by Baer (2012) and Škerlavaj, Černe, Hernaus, and Dysvik (2014) have found that the relationship between individual creativity and innovation implementation is not as straightforward and linear as it seems. Therefore, examining the moderating roles of contextual (managerial and job) factors on the relationship between idea generation and implementation at the individual level offers promising avenues to advance research on the micro-foundations of innovation. We follow the study of Škerlavaj et al. (2014) who conceptualised and tested a curvilinear, inverse U-shaped relationship between creativity and innovation, and account for such a shape in theorising about our propositions and potential moderating factors.

In practical terms, this implies that moderate levels of creativity are most beneficial for individual innovation implementation. Conceptualisation

of such a relationship is based on the fact that excessively creative ideas are usually based on the novelty aspect of creativity during the idea generation stage. Very novel ideas might be difficult to implement due to their out-of-the-box nature and the resistance of others that may arise because of their risky nature. The implementation of creative ideas into innovative processes or products challenges established power structures, which is why it is likely that this will conflict with certain interests within the organisation (Janssen, Van de Vliert & West, 2004). Some creativity is required for ideas to be noticed as being different from the previous status quo, but too much novelty may cause too much resistance in the organisation for ideas ever to be implemented.

Maximising the conditions fostering creativity is unlikely to translate directly into innovation implementation. Whilst the implementation part seems to be critical in introducing organisational changes, most empirical studies have so far focused on creativity rather than implementation. Studies directly examining working conditions in an idea implementation phase hardly exist (e.g. Hernaus, 2016), and the positive linear relationship between employee creativity and innovation implementation has been largely presumed in the literature.

Whereas Shalley et al. (2004) drew our attention and recommended that the creativity and innovation relationship should be studied more thoroughly, Sarooghi et al. (2015) took matters a step further and have recently provided the first meta-analytical review of the issue. They reported a positive relationship between creativity and implementation, particularly at the individual level. However, their meta-analysis did not provide cross-level data about important moderators of the innovation process, and did not offer an appropriate theoretical framework for understanding its complex nature. In this chapter, we build upon the work of Baer (2012) and move beyond the person-centric and single-level perspective in examining the process of translating creativity into innovation. We have accounted for the person-context interaction that is consistent with the SDT by simultaneously examining individual traits or behaviour (creativity as a predictor variable) and contextual factors (supportive supervision and job autonomy).

## **Multi-level factors of employee creativity and individual innovation**

### **An overview of cross-level effects on employee creativity and innovation implementation**

Although it is undeniable that creativity stems from individual ability, whether or not individual creativity is activated, exercised and channelled

into the final products or services is a function of the work environment or the contextual characteristics. Such an *interactionist* model of creativity has been originally proposed by Woodman et al. (1993), arguing that multiple components must converge for creativity to occur. A systematic review of the literature has identified potentially salient factors of creativity and innovation at four different levels: organisational, team, job-related and personal/individual. We will firstly examine the well-established antecedents of creativity, followed by less investigated factors shaping implementation stage of the innovation process.

At the individual level, personal factors such as extraversion, openness or conscientiousness (Feist, 1998) were frequently posited as predictors of creativity. The same applies for attitudes such as positive mood or a risk-taking/experimental attitude (Harvey & Novicevic, 2002). Motivational research into creativity has singled out intrinsic motivation or creative self-efficacy (Tierney & Farmer, 2002) as crucial predictors of creative performance. Moving beyond individual factors, the social research of creativity argues that creativity is an interactive construct involving social interactions, collaboration, creative requirements and creative tensions leading to novel ideas (Perry-Smith, 2006).

Naturally, whether or not employees at work will be creative also depends on the job-related context. Factors related to the SDT as drivers of positive psychological states, such as job autonomy or task interdependence (Amabile, 1998), job complexity (Campbell, 1988) or task variety (Taggar, 2002) are frequently identified as key components of a stimulating, creative work environment. Oldham and Cummings (1996) indicated the relevance of various job characteristics for predicting creativity at work, while Hammond et al. (2011) concluded that jobs could eventually be designed to promote creativity. In particular, if we give employees freedom and provide them with higher levels of control of their work, they will be more able to provide creative inputs.

Team-level context at work has also been examined as a circumstantial factor of creativity. Phenomena, such as climate (empowerment, safety, innovation etc.; Hunter, Bedell & Mumford, 2007) have been linked to creative performance. Recent meta-analytical evidence stresses the impact of evaluative information on creative processes at work (e.g. Hammond et al., 2011). Apparently, the situational cues concerning the criteria for success or failure in the work environment can contribute significantly to the increase or decrease in creative performance, thereby highlighting the importance of the team-level motivational climate for creative work.

Creative performance of employees quite often depends upon the leadership, which is demonstrated by several conceptualisations and

empirical studies (e.g. Oldham & Cummings, 1996), be it at the individual (leadership perceptions), team or organisational level. Evidence suggests that inducements at levels above an individual, such as establishment of a positive motivational climate or supervisor and social support (Amabile et al., 1996), indirectly influence individual creativity, mostly because they help to develop employees' positive emotional states, such as psychological safety, or through building the appropriate climate for stimulating creativity (Ekvall, 1996). Employees feel safer and more confident, which in turn boosts their creativity.

The study of idea implementation, i.e. innovation at the individual level, is a bit more short-handed, especially in terms of empirical research. With recent studies of Axtell et al. (2000), Baer (2012), and Škerlavaj et al. (2014), the study of individual innovation, in particular transforming creative ideas into innovative solutions, gained momentum. Hammond et al. (2011) argued that contextual factors, such as leadership, become more important for successful implementation rather than for the mere generation of creative ideas. On the other hand, Škerlavaj et al. (2014) and Baer (2012) focused more on the importance of employee relationships at work (i.e. networking skills, resource allocation or job design).

Out of the variables mentioned that might be relevant for enhancing either creativity or the implementation at the individual level, we have selected two that might be particularly relevant. This selection is influenced by the over-arching theory of this chapter – the SDT that intertwines to form the basis for our interplay-predicting research propositions. As cross-level moderating effects of supervisor support and decision autonomy could potentially represent key features of the innovation process, the focus has been placed on these two contextual factors of influence on creativity and innovation implementation.

### **Supervisor support as an organisational-level factor of creativity and innovation**

Leadership issues in creativity research have been thoroughly examined. Findings suggest that certain types of leadership behaviours induce employees' perceptions of leader or supervisor support that is conducive to their subsequent creativity. These leadership behaviours involve emotional support, and more instrumental support forms (Amabile, Schatzel, Moneta & Kramer, 2004). Supervisory encouragement presents the latter one, and facilitates employees with tasks, ensures they develop the expertise necessary to perform well and elicits the intrinsic motivation for creative work (Amabile et al., 1996).

In line with the organisational support theory and SDT, supervisor support includes providing help and resources to the subordinates (Shanock & Eisenberger, 2006). Thus, the majority of leaders' effectiveness in stimulating creativity can be explained through social influence (Mumford, Scott, Gaddis & Strange, 2002), making supportive supervision a beneficial factor of employee creativity. Highly creative tasks are often poorly defined and do not need control, but require at least some level of structuring, routinisation and direction. Close relations with supervisors, manifested in perceived supervisor support that can provide structure, may help improve employee perceptions of self-competence and influence the internalisation (Ryan & Deci, 2000) of creative work, enhancing their perceptions of competence and relatedness. In other words, leaders need to know how to provide a context for employees' creativity in order to stay competitive in today's turbulent and fast-changing working environments.

The SDT concurs that job characteristics are one way of stimulating motivation, but the interpersonal style of supervisors seems to be even more important (Gagné & Deci, 2005). This is also consistent with findings from creativity and innovation literature. Contextual factors, in particular team leadership and management support, were shown to be more important for implementation than for idea suggestion (Axtell et al., 2000; Oldham & Cummings, 1996). Therefore, supervisor support is the key to enhance employees' perceptions of competence and relatedness. When these are satisfied, they yield most effective functioning (Gagné & Deci, 2005; Ryan & Deci, 2000). The determination and engagement in implementing innovative ideas stem from satisfied psychological needs (Cadwallader, Jarvis, Bitner & Ostrom, 2010).

### **Decision autonomy as a job-level factor of creativity and innovation**

Along with organisational characteristics such as organisational climate and supervisory practices, researchers have maintained that individual creativity can be enhanced by appropriate job design (e.g. Hammond et al., 2011). Job autonomy provides employees with the resources to experiment and, thus, to be creative. Its pivotal role in fostering the innovation process has been well-documented, particularly for facilitating decision-making within the creativity stage (Amabile, 1983). For example, employees occupying expert positions are expected to be autonomous while solving business-related problems. Because such problems are often complex in nature and unexpected or novel, knowledge

workers such as engineers, consultants or physicians need to find creative solutions as a part of their job requirements.

According to the SDT, a direct focus on autonomy is crucial for identifying contextual and individual factors that promote one's creativity (Deci & Ryan, 2008). Providing employees with the freedom and independence to determine which procedures should be used to carry out a task may increase the likelihood that they would be willing to implement them within their job. In addition, job autonomy is important for creative work involvement as it provides employees with a sense of responsibility for their jobs.

Although studies have shown that autonomy is the most important aspect of the work environment that fuels individual creativity, it has also been found that discretion at work relates positively to innovative behaviours (Amabile, 1983; Axtell et al., 2000). Unsworth (2001) goes even further and suggests that job autonomy is more strongly related to the implementation of ideas as opposed to the initial generation of ideas.

### **Cross-level effects of supervisor support and decision autonomy on the creativity–innovation link**

Leaders can use both formal and informal means for stimulating employee creativity and innovation implementation. By designing autonomous jobs and providing employees with an opportunity to choose their working methods, define work scheduling and practise discretion at the workplace, they formally send the 'be creative' message to their subordinates. However, less formal engagement of supervisors within the innovation process is also important. Supervisors need to provide additional, informal support in order to boost innovative performance. Creative employee ideas very often cannot be realised without having a strong wind in the back and if a supervisor's attitude "I am with you" is missing. Supervisors need to be there for their subordinates in order to encourage them, as well as to provide a necessary advice, direction or resources when needed. The moderating influence of formal job requirements and informal supervisor support can significantly shape the innovation process outcomes (see Figure 11.1). Therefore, their role should be more thoroughly described as it follows.

Rosing et al. (2011) indicated that a single leadership style can not constantly promote innovation effectively. Instead, particular leadership traits or mechanisms for influencing employee behaviour are more important. Supportive supervision might be the key and it has also been



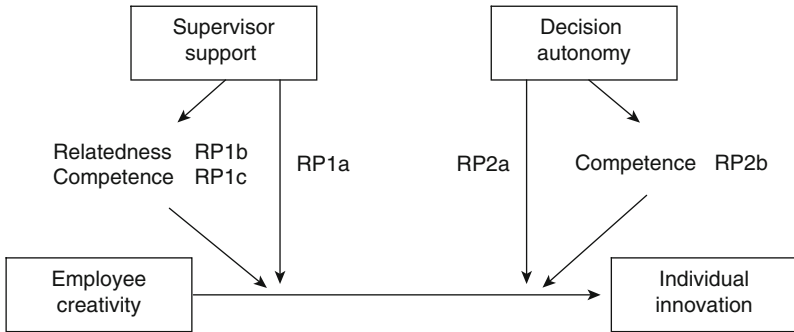


Figure 11.1 The relationship between employee creativity and individual innovation moderated by supervisor support and decision autonomy

shown to be essential in bringing creative ideas to fruition in terms of innovation implementation at higher levels (Mohamed, 2002). This is consistent with a recent meta-analysis (Rosing et al., 2011), which showed that supervisor support is more important for implementing than for generating ideas. This is additionally supported in the latest study by Škerlavaj et al. (2014). However, we propose an alternative explanation, one that bases its arguments on self-determination and intra-psychic processes as a consequence of supportive supervision, rather than resource allocation.

Supervisor support can also represent an important mechanism for connecting employees to the supporters needed for implementation (Škerlavaj et al., 2014), and thereby preventing alienation that can happen to individuals who get caught up with highly creative work. Employees are more likely to adopt activities that relevant social groups value, i.e. innovation implementation that provides a tangible value to the firm, when they feel efficacious in those activities (Ryan & Deci, 2000). In this way, individuals' relatedness with the supervisors and others increases, helping to produce a climate or context that is supportive of innovation – by promoting creativity and providing assistance and support for implementation, thereby facilitating relatedness. The satisfaction of this psychological need is crucial for the internalisation of the task (Ryan & Deci, 2000) and thus more successful implementation of highly creative ideas.

In practical terms, highly-supportive supervisors understand employees' perspectives better, welcome their initiative and provide feedback in a constructive rather than a controlling way, encouraging

subordinates to display more positive work-related attitudes (Gagné & Deci, 2005). This helps to improve the perceptions of fairness and reduce the levels of stress related to innovation (Janssen, 2004) because it enhances feelings of security. Positive and intense collaboration with a supervisor can increase an employee's self-efficacy, eventually boosting IWB. In addition, mutual understanding between supervisor and subordinate can influence the internalisation of the fact that very creative ideas also need to be implemented if an organisation is to have any benefit from them. Taken together, supportive supervision that is manifested through constructive feedback and open communication influences the feelings of competence that can enhance intrinsic motivation for the action at hand, such as implementation of highly creative ideas (Ryan & Deci, 2000).

An example of applying self-determination in leading for innovation is the case of Kelvingrove Gallery and Museum (Liedtka & Salzman, 2009). A new director came on board to renovate the building that soon became Scotland's most popular tourist destination. He has done so by utilising an innovative style of management that he describes as 'maze behaviour' – trial-and-error learning by engaging the curators (through a number of personal briefing meetings) into creating exhibits based on stories rather than professional classification. The director's belief that he can make a difference has thereby spilled-over to his colleagues at the museum. He was able to bring the staff along by building upon their self-perceptions of confidence and relating them into a joint community by remaining consistent over time. He claims that "[innovation] is often about removing obstacles [including those in people's minds] and securing resources" (Liedtka & Salzman, 2009).

The motivation for innovation implementation is therefore more likely to flourish in contexts characterised by a sense of security and relatedness (Ryan & Deci, 2000). Therefore, the implementation of highly creative ideas increases when employees are both able (competence) and enabled (relatedness) to participate in decision-making (Anderson & West, 1998), which both stem from supportive supervision. Otherwise, although a person can generate new ideas alone, the implementation of ideas will be questioned in the absence of the approval, support, and necessary resources (e.g. Axtell et al., 2000).

Research Proposition 1a: *Supervisor support moderates the relationship between employee creativity and individual innovation: the relationship is positive and linear for employees who perceive high levels of supervisor support. The relationship is, in general, weaker and curvilinear with an inverted U-shape for employees who perceive low levels of supervisor support.*

Research Proposition 1b: *Relatedness mediates the moderating effect of supervisor support on the relationship between employee creativity and individual innovation.*

Research Proposition 1c: *Competence mediates the moderating effect of supervisor support on the relationship between employee creativity and individual innovation.*

While external support initially represents an important predictor of innovation, structural job changes are more important in the long run. Cognitive evaluation theory, presented by Deci and Ryan (1985) as a sub-theory within the SDT, specifies that competence and relatedness cannot enhance intrinsic motivation and engagement in the task unless accompanied by a sense of autonomy. Individuals must experience their behaviour as self-determined, which means they must perceive an internal locus of causality for their motivation to be in full effect (Ryan & Deci, 2000). In a high decision autonomy condition, an individual has the freedom to choose a method and procedure to get the work done (Zhou, 1998). The more decisions they can make on their own, the more effort will be put into implementing their own creative ideas. In other words, the person-job integration process of innovation implementation is assured by the decentralisation of decision-making in order to promote autonomy (Drach-Zahavy, Somech, Granot & Spitzer, 2004).

Autonomy itself facilitates the perceptions of self-competence that employees need in order to overcome difficulties connected with the implementation of highly creative ideas. This is illustrated by the well-known examples of Google, 3M and Virgin, who allowed their employees to devote a portion of their time to personal (side) projects. As a result, not only creativity but also implementation flourished, offering innovations such as Gmail and AdSense. Particularly interesting and somewhat less familiar example is the case of FINN.no, Norway's largest online marketplace (Hauglum et al., 2014). Founded in 2000, it was already twice named the Greatest Place to Work in Norway (2011 and 2012). Knowing there's a strong link between employee engagement and innovation capacity, the company pursues a strong people-practice for innovation. It has defined a high-level process to visualise the connections between goals and where teams and individuals have different levels of autonomy. When goals are prioritised and understood, teams or individuals can go about creating insights, generating ideas and finding the right actions to implement. Employees are encouraged to conduct experiments without formal authorisation procedures in order to generate and deliver creative ideas. According to their corporate logic, idea generation needs direction; however, if you want ideas

with impact you need an empowered problem owner (i.e. a knowledgeable and competent employee) who can take ownership for execution (Hauglum et al., 2014).

On the contrary, if an individual works in a low autonomy environment with little freedom to decide how to work on a task and having little control over its execution, he or she is likely to experience diminished intrinsic motivation (Zhou, 1998) to work towards the implementation of creative ideas. While, in studies on task autonomy, the tendency is to assume that job characteristics remain the same over time (Amabile et al., 1996), autonomy requirements seem to transform throughout the innovation journey. We propose that the moderating effect of decision autonomy makes the relationship between idea generation and implementation positive and linear, thereby increasing the implementation levels of highly creative ideas.

*Research Proposition 2a: Decision autonomy moderates the relationship between employee creativity and individual innovation: the relationship will be positive and linear for employees with high levels of autonomy. The relationship will be, in general, weaker and curvilinear with an inverted U-shape for employees with low levels of autonomy.*

*Research Proposition 2b: Competence mediates the moderating effect of decision autonomy on the relationship between employee creativity and individual innovation.*

## Conclusion with implications

Relational and social aspects of job design that might stimulate initiative in examined processes have been underestimated in past research. Thus, we drew on the SDT and proposed moderating roles of supervisor support and decision autonomy through mechanisms of competence and relatedness, buffering the curvilinear relationship (Škerlavaj et al., 2014) between creativity and innovation in order to make it positive and linear. The elements of the SDT can be used as managerial remedies to unlock the potential of highly creative individuals with 'overly' novel ideas.

Our theoretical discourse suggests two practical paths that organisations can take in order to improve the implementation of highly creative ideas. First, supervisors should exhibit high levels of instrumental and socio-emotional support. This can contribute to the creation of a more desirable climate denoted by relatedness and serve as a practical way in which to provide more tangible resources (e.g. via training) to stimulate competence. Second, we show that creative employees need high levels

of decision autonomy in order to feel more competent, which in turn helps them to bring their creative ideas to fruition. While this situation is known in the case of creativity, it may, in fact, be surprising for innovation. It is not the control that is suitable for implementation, but rather tight supportive relationships with supervisors, accompanied by high levels of autonomy that are positively related both to creativity (Amabile et al., 1996) and innovation (Spreitzer, De Janasz & Quinn, 1999). Managers who seek to increase innovation implementation from creativity among their employees should ensure that employees have a sense of control over their situations rather than provide a tight control with little support and guidance. Even if employees are very creative, this approach would stifle their idea implementation and detrimentally influence on individual innovation.

Since this study was conceptual in nature, our contributions relate to initial conceptualisations of the contextual influences, boundary conditions and especially interactions among personal, job design and managerial-level variables that are salient for either creativity or innovation, and for their relationship at the individual level. We have done so by applying the elements of the multi-level theory in addition to the SDT as our over-arching framework. Future research should test our propositions empirically with a two-level approach, applying random coefficient-modelling techniques (hierarchical linear modelling/multi-level analysis).

Research propositions can be applied to both large organisations and even more so to SMEs, in light of the fact that small firms may not have an abundance of resources to effectively implement creative ideas, but rather need to capitalise on employees' creative ideas and their motivational states. They are also less bureaucratic and may be in a better position to generate novel and useful ideas than larger firms, through developing a supportive and autonomous work context. Therefore, they should be more focused on improving innovation implementation, while large organisations still struggle with stimulating creativity among individuals and teams. Nevertheless, future research should also tackle the differences in the cross-level innovation processes in different sizes of firms and industries, and test additional work-environment variables, such as the nature and quality of relationships with colleagues and work climate, as both could influence the proposed associations.

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