

Resilience and Innovation

Proposal for a special session at the

PDMA research forum

'Developing and Sharing Innovation Knowledge in a Collaborative Economy'

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Organizers and presenters (click names for background info)

[Petra de Weerd-Nederhof](#) (University of Twente – intro & panel)

[Marjolein C.J. Caniëls](#) (Open University of the Netherlands - panel & paper)

[Peter R.A. Oeij](#) (TNO Innovation for Life – Dutch RTO in Applied Scientific Research – panel & paper)

[Isabella Hatak](#) (University of Twente – panel & paper)

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**Introduction to the special session on Resilience and Innovation:
Resilient Innovation Journeys**

Petra de Weerd-Nederhof – Twente University, Enschede, The Netherlands

Finding the right organizational form in support of innovation processes is a complex endeavor especially in the light of sustained innovation performance. New Product Development has become a cross-functional responsibility instead of being solely the domain of the R&D department - thus demanding that almost all departments in an organization balance exploration and exploitation, short and long term, manufacturing and market demands. Innovative forms of organizing are needed which are dynamic, continuously changing and making use of semi-structures, links in time and sequenced steps: characteristics of structures for resilience. These may be the very characteristics of an innovative organization fostering resilient behavior for innovation performance. The linking of resilience to organizing in itself is not new, but in this special session we would like to provide a few insights on how resilience influences various aspects of the innovative organization and how organizational forms can be made more resilient specifically in the light of innovation performance in New Product Development. For example, individual knowledge workers' resilience positively influences both their creativity and their performance under pressure. Additionally, resilient leaders organize for growth and support their employees by putting responsibility as low as possible in the organization. The contributions to the special session, for which the abstracts are outlined below, and full papers will be available at the Research Forum, are meant to engage in a fruitful discussion with PDMA members and Research Forum participants on this topic and to look ahead at new avenues for research on this fascinating topic. We envisage a special session agenda as follows:

10" Introduction to the theme

60" 3 presentations of 20" each including discussion

20" panel discussion

Contributions to the Special Session Resilience and Innovation

1. **Organizational learning and resilience: how different proactive behaviors are linked to employee resilience**

Marjolein C.J. Caniëls – Open University of The Netherlands, Heerlen, The Netherlands

Simone M.J. Baaten – Open University of The Netherlands, Heerlen, The Netherlands

Studies show that resilient employees are better in attaining various organizational goals such as job performance and organizational commitment (Youssef & Luthans, 2007; Meneghel, Martínez, & Salanova, 2016a). When employees are able to cope with failure and setbacks they are likely to perform well and show organizational commitment even under conditions of stress and change (Coutu, 2002). Hence, it is in the interest of organizations to identify organizational factors and mechanisms which can help employees build resilience. A growing body of research suggests that learning from experience and failure is positively associated with resilience (Huang & Luthans, 2015; Vogus & Sutcliffe, 2007).

For example, studies in the field of organizational learning have suggested that an organizational climate that is oriented at improvement of the organization and in which employees can openly discuss problems, may be positively related to work engagement and resilience in employees (Baer & Frese, 2003; Van Dyck, Frese, Baer, & Sonnentag, 2005). A positive organizational approach to errors and failure potentially has long-term positive consequences, such as learning, innovation, and resilience (Sitkin, 1992). Such a constructive organizational approach to errors and failure can be conceived of as a personal resource that stimulates resilience in employees (Meneghel et al., 2016a).

The mechanisms that underlie the relationship between an organizational learning from errors climate and employee resilience are still poorly understood. One field of study that has attempted to shed light on these mechanisms is proactivity research. Prior research found that a learning climate can promote learning behaviors such as feedback seeking, experimenting, and discussing errors or unexpected outcomes of actions (Naveh, Katz-Navon, & Stern, 2015). Such an organizational climate is found to be positively related to the acquisition of competencies and well-being in the workplace (Van Der Heijden, Boon, Van Der Klink, & Meijs, 2009). Drawing on Social Cognitive Theory (SCT; Bandura, 1986), we pose that proactive behaviors positively mediate the relationship between an organizational learning from errors climate and employee resilience. When employees observe and experience a certain organizational climate of dealing with failures and errors, they will replicate and internalize the modelled behavior. An organizational climate that is characterized by a constructive organizational approach to failure and errors will stimulate employees not be afraid to make mistakes (Edmondson, 1999, 2003; Anderson & West, 1998). Such an environment will encourage employees to take initiative to experiment, take charge, propose creative ideas and seek for feedback (Zhou & George, 2001). In other words, an error-related organizational learning climate will stimulate proactive behavior of employees, which in turn is associated with positive individual outcomes.

In the underlying study, we develop and test a model, suggesting that three general categories of proactive behavior (i.e., proactive work behavior, proactive strategic behavior and proactive person-environment fit behavior) mediate the relationship between the organizational approach to errors and employee resilience.

Cross-sectional data were gathered from 108 employees in four Dutch organizations. Results demonstrate that proactive work behavior mediates the relationship between organizational learning from errors and employee resilience. No mediating effect was found of proactive strategic behavior and proactive person-environment fit behavior.

This study contributes to the literature in several important ways. First, we increase current understanding of behaviors that are associated with resilience. Especially the question how organizational factors that are relevant for resilience affect employees' proactive behaviors has received relatively little research attention. With this study, we highlight the importance of error management for positive individual outcomes. Second, we respond to calls for evidence about consequences of proactive behavior for employees' well-being and specifically resilience (Liu, Tangirala, Lee & Parker, 2016). By studying the mediating role of different proactive behaviors we shed light on whether certain proactive behaviors are more effective in promoting employee resilience than others. Third, this study applies an integrated framework of proactive behaviors to the domain of organizational learning from errors. Thereby, it offers insight into the different effects of three broad categories of proactive behaviors on an outcome variable, in this case employee resilience.

2. Resilient behaviour in innovation teams for better project results

Peter R.A. Oeij – TNO Innovation for Life, Dutch RTO in Applied Scientific Research,

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This study assumes that complexity of projects and defensive behaviour of team members could affect the innovation project that such teams are carrying out in a negative way. A possible cause for defensiveness is project complexity (Cicmil & Marshall, 2005), which cause unpredictable and unexpected situations that emerge from the interaction of many factors in innovation projects.

Complexity in projects (Vidal & Marle, 2008) is related to, for example, intricate technological and intellectual demands of the innovation goal, differing interests of stakeholders of the innovation, external influences due to decisions about strategy and finance, priorities taken by others outside the team, and team conflict. Defensive behaviour or organisational defensive routines are any action, policy, or practice that prevents organisational participants from experiencing embarrassment or threat but, at the same time, prevents them from discovering the causes of the embarrassment or threat (Argyris, 2004). If project complexity induces defensive behaviour, teams might become risk-avoidant, which is killing for innovation projects. But to avoid the pitfall of risk-avoidance teams have to mobilize much psychological effort to continuously monitor their project for 'weak signals' conducive to 'big problems' (Kahneman, 2011).

The present study investigates the team dynamics of innovation teams in dealing with critical incidents that could lead to risk-avoidance and ultimately to unsuccessful project results. For this purpose the theoretical concepts 'mindful infrastructure' (MI) and 'innovation resilience behaviour' (IRB) have been developed, which were deduced from the crisis management and safety literatures of High Reliability Organizing (Alliger et al., 2015; Weick & Sutcliffe, 2007). IRB is a set of team behaviours that ensure teams to successfully handle critical incidents in projects, while MI comprises of certain team environmental features that enable IRB. The main hypothesis is that applying MI and IRB improves the innovation team's chances of successful project results. The study consisted of 18 case studies of innovation teams and a survey among 309 team members and project leaders of such teams (Oeij, 2017). The results confirm the hypothesis, from which it is concluded that insights from crisis management and safety environments are applicable to the context of innovation management.

3. Organizational resilience in a vuca world: The interplay of leadership and personality characteristics

Isabella Hatak –University of Twente, Enschede, The Netherlands

Michel Ehrenhard –University of Twente, Enschede, The Netherlands

Relentless technological developments, coupled with volatile and uncertain environments enhance the complexity and ambiguity executives are confronted with. At the same time, disruptive innovation even further enhances these dynamics for executives involved in innovation processes and being exposed to their outcomes. Thus, the question is how leaders can cope effectively with the challenges of the volatile, uncertain, complex and ambiguous (VUCA) world that they are confronted with to ensure organizational resilience, that is understood as the organization's ability to anticipate, prepare for, respond and adapt to incremental change and sudden disruptions in order to survive and prosper.

In this paper, we argue that organizational resilience in a VUCA world requires resilient leaders; that is, entrepreneurial leaders striving for firm growth by facilitating opportunity- and advantage-seeking behaviors in the long-term interest of the firm. At the same time, VUCA challenges unveil the leader's core personality characteristics. Given that personality and leadership are inextricably linked, we argue that the VUCA-induced exposure of the leader's core personality characteristics in terms of humility versus narcissism has the potential to enhance or exacerbate the effectiveness of (entrepreneurial) leadership and thereby organizational resilience in a VUCA world.

Our reflection on the interplay of personality and leadership characteristics against VUCA challenges results in a typology of leadership styles that we discuss regarding their contribution to organizational resilience. Based on this typology we draw implications for leadership-based organizational resilience in a VUCA world that are of practical relevance for executives, recruiters, board members, and investors.