The role of image expectations in linking organizational climate and innovative work behaviour

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Abstract

Purpose – This study aims to explore whether expected image outcomes (risk and gain) represent a mechanism through which perceived organizational climates, in the dimensions of tradition and reflexivity, affect key components of the innovation process (idea generation and idea realization).

Design/methodology/approach – Structural equation models have been conducted to empirically analyse 3 waves of longitudinal survey data from an Italian military organization ($N = 410$).

Findings – Results confirmed that image outcome expectations mediated the effects of perceived climate on idea generation, and that a serial mediation of image expectations and idea generation those on idea realization. Additionally, reflexivity was directly associated with idea generation.

Practical implications – The findings offer guidance for organizations that aim to strengthen employee-driven innovation, highlighting the importance of organizational climate and image outcomes expectations.

Originality/value – Advancing from existing organizational behaviour and individual innovation literature, this article contributes to extend knowledge about the role of organizational climate and image outcome expectations in enhancing innovative work behaviours.

Keywords Image outcome expectations, Innovative work behaviour, Organizational climate

Paper type Research paper

Introduction

Nowadays, organizations face greater complexity due to ever-increasing competitive pressure and introduction of new technologies (e.g. Cascio and Montealegre, 2016). That implies the impracticality to rely on fixed procedures and the need for constant change and adjustment for dealing with unexpected situations and exploiting new opportunities (Anderson *et al.*, 2014; Bagheri *et al.*, 2020). For this reason, innovation is a key factor for the success and survival of any type of organization, as the introduction of new products or processes facilitates the adaptation and the proactive response to challenges, thus leading to competitive advantages (Battistelli *et al.*, 2019; Akbari *et al.*, 2020).

Employees play a central role in the innovative process, influencing organizational innovative results by proposing new ideas and solutions (Anderson *et al.*, 2004; Janssen, 2000). Numerous empirical studies have previously indicated that employees' day-to-day innovations are a primary source for continuous improvement and consequent growth of

organizations (Crossan and Apaydin, 2010). Subsequently, researchers have examined numerous factors that can facilitate employees' innovative work behaviour (IWB) advancing positive associations of both contextual and individual variables with individual innovation (e.g. Anderson *et al.*, 2014; Büschgens *et al.*, 2013).

For the most part, individual innovation research has followed an efficiency-oriented viewpoint (Yuan, 2005), assuming that employees' innovations result from rather rational decisions aimed at maximizing personal or organizational performance (Abrahamson, 1991). However, the perception of workplace reality is mostly socially constructed and individual behaviours are often driven by their symbolic functions (Yuan and Woodman, 2010). This entails that employees engage in innovative behaviours also as a signal of their status in the social context, regardless of whether the introduction of new ideas or procedures will help improving efficiency or performance (Leary and Kowalski, 1990; Koberg *et al.*, 2003). Colleagues and supervisors' expected impressions are important drivers of innovative behaviours because they indicate the extent of social support for innovation and consequent legitimacy of the innovative actions (Rioux and Penner, 2001; Bäckström and Bengtsson, 2019). Nevertheless, such considerations have been often neglected leaving only a few studies addressing this issue (Yuan and Woodman, 2010).

Recent literature is filling this gap by advancing a sensemaking perspective on innovation (Jiang *et al.*, 2019; Farzaneh and Boyer, 2019; Shin *et al.*, 2017). From this standpoint, innovative behaviours are seen as a social process that can be initiated for their symbolic meaning rather than rational. Consequently, the importance of image outcomes becomes crucial for understanding and explaining individual innovative efforts (e.g. Yuan and Woodman, 2010; Farzaneh and Boyer, 2019).

In the organizational context, climate is the natural outcome of social sensemaking as people make sense of their workplace by extracting cues from their social surroundings (Beus *et al.*, 2018). Employees' interpretation of events, prediction of possible outcomes and adequacy of actions is influenced by organizational climate. Thus, psychological perceptions of climate represent tools to understand when innovative behaviours are socially desirable and employees read these signals to foresee potential expectancies of image gains and risks (Bogilović *et al.*, 2020; Scott and Bruce, 1994).

Drawing upon the sensemaking perspective (e.g. Shin *et al.*, 2017), this article posits a processual model linking organizational climate to employees' innovative behaviour using image outcome expectations as intermediate psychological processes. More specifically, the hypothesized model postulates that perception of tradition and reflexivity climate affect image gain and risk outcome expectations which in turn affects employees' idea generation subsequently resulting in idea realization.

This study aims at contributing to the literature on innovative work behaviours in several ways. Firstly, it introduces expected image outcomes as a mechanism explaining the indirect relationship between specific organizational climate variables, tradition and reflexivity, and IWB. This helps to clarify the way climate variables affect employees' behaviours, especially for studies testing the intermediate processes through which contextual antecedents impact individual innovation are still scarce (e.g. Shalley *et al.*, 2004; Khaola and Coldwell, 2019). Secondly, it elucidates the role of expected image outcomes in exerting both positive and detrimental effects on individual innovative behaviour. Although there is some evidence suggesting the importance of social-political constructs, such as image outcomes, for individual innovative behaviours, results have been mixed and far from conclusive (e.g. Yuan and Woodman, 2010; Kao *et al.*, 2015; Farzaneh and Boyer, 2019). Finally, it sheds a light on IWB multidimensionality by assessing the construct as a two steps process, involving idea generation and realization. Although previous conceptualizations suggested a multi-compositional and procedural nature of this variable, the majority of the research has relied on single-factor measures.

Literature review and hypotheses development

Perceived organizational climate and image outcome expectations

Organizational contexts are complex networks of social interactions in which individual behaviours have often a strong symbolic function (Yuan and Woodman, 2010). Employees engage in specific behaviours to influence colleagues' and supervisors' impressions of them (Chen and Fang, 2008). From an impression management perspective, in the workplace, people actively build their social status upon image outcome expectations by avoiding certain behaviours to protect their established social image while implementing others to improve it (Arkin, 1981; Schlenker, 1980).

In innovation literature expected image outcomes represent employees' concern for social and political consequences of their innovative behaviours, more specifically they are the "individual's expectations about how his or her innovative behaviour would impact other organization members' perceptions of him or her" (Yuan, 2005, p. 19). Two main types of image outcome expectations have been established, image risk and image gain (e.g. Yuan and Woodman, 2010). The first reflects the estimated risk of image damage and it restrains employees from demonstrating innovative behaviours in order to prevent potential image loss. For example, employees can avoid innovative efforts to look socially appropriate by playing it safe. The second regards the perceived possibility of image enhancement and it drives employees to engage in innovative behaviours as a deliberate effort to improve their social image (Rioux and Penner, 2001). For instance, employees might suggest new ideas to a colleague or supervisors to appear competent and hardworking.

Image outcome expectations are deeply embedded in the workplace environment and they can be activated by specific features of the organization (Yuan and Woodman, 2010). In this regard, organizational climate can deliver organizational values and norms that affect the potential image gains and risks associated with employees' behaviours (Farzaneh and Boyer, 2019). Organizational climate is defined as "the shared perception of organizational policies and procedures" (Schneider, 1990, p. 22) and refers to facets of the workplace that are observable and measurable. These perceptions have psychological value as guiding structures for socially appropriate and adaptive organizational behaviours (Schneider, 1975). On the basis of a variety of cues present in their workplace, employees generate coherent sets of perceptions and expectations regarding behaviour-outcome contingencies and tend to behave accordingly (Dieterly and Schneider, 1974). Organizational climates provide indications of the institutionalized normative systems thus disclosing the social agreeableness of specific behaviours for employees to hold (Schneider and Reichers, 1983; Scott and Bruce, 1994). This view is consistent with extensive research on organizational climate that recognizes it as a useful driver for employees' image outcome expectations (Yuan and Woodman, 2010; Schneider *et al.*, 2017). For instance, a climate can instruct members that being innovative will result in enhancing their image and make them look good or, vice versa, in risks associated with the social position making them appear as troublemakers who want to change things (Yuan and Woodman, 2010).

Although climate is often approached as an organizational or group phenomenon, it derives from the perceptual experiences of individuals (Beus *et al.*, 2018). Employees, by making sense of what is socially appreciated, actively extract information by shaping their own specific perceptions of their surrounding climate (Glick, 1985). Effects of climate, from a sensemaking perspective, rely upon each employee's capacity to anticipating how certain behaviors will be received and behave accordingly (Beus *et al.*, 2018). Consequently, this study focusses on the individual perception of climate as it can affect the employees' behavior only to the extent that they have attributed meaning to it and then acted according to the particular sense they have derived.

Organizations have multiple types of climates addressing different aspects of the environment (Schneider, 1975). Based on the Competing Values Framework (Quinn and

Rohrbaugh, 1983) different climates can be allocated in four models: human relations, open systems, rational goal and internal process. Organizational tradition climate is part of the internal process model, it focuses on stability and on ignoring or minimizing environmental uncertainty (Patterson *et al.*, 2005). Organizational tradition represents the extent to which established ways of doing things are valued and it was negatively related to the adoption of several management practices associated with creativity and innovation (Patterson *et al.*, 2005). Traditional organizations are at odds with innovation, prizing previously established procedures and "by the book" behaviours, they inform employees that those who promote changes will not be socially rewarded as considered threatening to the status quo (Taylor *et al.*, 2019). For this reason, when employees perceive organizational norms favouring tradition are likely to assume their innovative efforts to be estimated negatively by their work environment, thus expecting increased risks and reduced gains for their social image.

Reflexivity is an information-processing activity described as the extent to which employees reflect upon the work tasks they have completed and identify ways of improving performance (Hoegl and Parboteeah, 2006). Reflexivity climate is part of the open systems model and points to a second-order reflection, which is the contrary of blindly accepting and applying a certain procedure. In a reflexive organizational environment, employees evaluate and discuss the suitability of actions and are encouraged to reflect upon and communicate organizational objectives, strategies and processes continuously adjusting them to existing or expected situations (Wang *et al.*, 2019). As so, reflexive environments allow for experimentation on the task and for scanning the environment and utilize information to make changes, proving employees positive social consequences for changing, this signal support for innovation, thus employees are more likely to expect image gain outcomes from their innovative behaviours and reduced image risk involved as a result of such behaviours (West and Wallace, 1991).

H1. Tradition climate is positively related to image risk and negatively related to image gain.

H2. Reflexivity climate is negatively related to image risk and positively related to image gain.

Image outcome expectations and innovative work behaviour

Innovative work behaviour represents the "intentional introduction and application, within a role, group or organization of ideas, processes, products or procedures, new to the relevant unit of adoption, designed to significantly benefit the individual, the group or wider society" (West and Farr, 1989, p. 23). This type of behaviour comprises seeking new technologies, proposing new ways to accomplish goals, employing new work methods, and obtaining resources to realize new ideas.

Two dimensions of IWB are typically identified in the literature, idea generation and idea realization (Scott and Bruce, 1994; West, 2002). Idea generation concerns the phase of creating ideas that are new, or at least new in the context in which they will be implemented (Amabile and Conti, 1999; Janssen, 2000). Idea realization refers to advancing, defending and actually implementing these ideas in the workplace (De Spiegelaere *et al.*, 2014). These two constituent sub-dimensions often act interdependently and can overlap and occur simultaneously and repeatedly during the innovation process. Their relationship is to be understood not as merely sequential but rather iterative (Dorenbosch *et al.*, 2005; Messmann and Mulder, 2014; Stojcic *et al.*, 2018). Nevertheless, several studies have advanced models of employees' innovation assuming that these constituents partly build on each other starting with idea generation and ending with idea realization (e.g. Potočnik and Anderson, 2016; Holman *et al.*, 2012; Janssen, 2000; Anser *et al.*, 2020).

Employees' behaviours are often driven by expected social outcomes and oriented to be appropriate and appreciated by others (Woods *et al.*, 2018; Leary and Kowalski, 1990). Innovative behaviours have a strong social connotation as they attempt to break the status quo of shared work routines by introducing something new. Moreover, employees who are engaging in IWB are exposed to public evaluation and scrutiny which may influence their innovation efforts (Potočnik and Anderson, 2016). According to the socio-political perspective, employees engage in work activities on the basis of social image considerations (Yuan and Woodman, 2010). Colleagues' and supervisors' expected impressions are crucial activators of individual behaviours because such impressions inform on the possibility to get the necessary resources and social support to achieve goals (Leary and Kowalski, 1990).

Research on innovation has granted growing attention to image concerns and related social-political processes in organization-level studies (e.g. Arndt and Bigelow, 2000). Nevertheless, at the individual level image and impression management research is much scanter with only a few studies addressing the importance of expected image outcomes on IWB. Moreover, these works seem to hold rather ambiguous results. For instance, Yuan and Woodman (2010) found significant effects of outcome expectations on innovative behaviour, yet, the association of image gain and IWB was unexpectedly negative. The study of Kao *et al.* (2015) revealed a positive relation between image gain and IWB this time, however, image risk was not significant. More recently, Farzaneh and Boyer (2019) also reported a positive association of innovation with expected image gains but, in this case, image risk wasn't present in their model.

In sum, based on the aforementioned theoretical and empirical evidence this study posits that expected image risks and gain will be associated (negatively and positively, correspondingly) to the first step of the individual innovation process, idea generation.

H3a. Image risk is negatively related to idea generation.

H3b. Image gain is positively related to idea generation.

The mediating effects of image outcome expectations

The sensemaking approach suggests that employees make sense of their work environment and derive social expectancies that subsequently guide their behavior (Glynn and Watkiss, 2020). In essence, this standpoint outlines that employees can be driven by the desirability of the outcome of their actions. As the byproduct of social sensemaking, climates offer detailed social hints about looked-for organizational behaviours, thus signalling possible related image outcomes (Chen and Fang, 2008). So, when individuals perceive specific climate dimensions, they are likely to endure certain behaviours because of the expected social result.

In the case of innovative work behaviour, expected image outcomes relate to the symbolic function of innovation, which is to attracts others' attention while avoiding poor judgments. However, the direction of social reactions for change-oriented behaviours in organizational settings is inferred based on individual perception of climate (Kessler, 2019). Employees may behave innovatively to appear competent and conscientious to their supervisor and to gain or establish a favourable social image when they notice that climate is congruent with that. Therefore, when they perceive climate tradition, they keep away from generating new ideas for the reason that they expect innovative behaviours to put their status at risk and not add any positive image results (Janssen *et al.*, 2004; Yuan and Woodman, 2010). For instance, innovative ideas often challenge the established framework of task relationships, informal norms of traditional workplaces. Therefore, employees generating ideas run the risk of friction with colleagues and supervisors, and consequently of lowering their social status (Van der Vegt and Janssen, 2003). Moreover, tradition-oriented organizations signal that the status quo is preferable to an unknown state of affairs, thus, coming up with new ideas does

not imply an image gain as by the book behaviours are rather prized (Yuan and Woodman, 2010).

Conversely, when employees sense climate of reflexivity, they are motivated to generate ideas for the reason that they expect innovative behaviours to improve their image without putting their status at risk. For example, in reflexive environments coming up with new ideas is socially appreciated, thus employees are driven to generate ideas as a function of their expectations of "looking good" with colleagues and supervisors. Similarly, reflexive workplaces reduce image risk expectations by providing high levels of psychological safety, thus personnel are willing to provide new ideas as they do not perceive that as a possible risk for their status (Chen *et al.*, 2019; West and Farr, 1989).

On this basis, this study posits that expected image outcomes mediate the association between perception of climate and the first phase of innovative work behaviour.

H4. Image outcome expectations mediate the relationship between tradition and reflexivity and idea generation.

Individual innovation process

Most researchers agree that IWB is a complex work behaviour encompassed by at least two broad sets of activities: generation and realization of ideas (e.g. West, 2000). To achieve any innovative outcome, such as original and useful new products or services, employees must engage in both types of activities. When employees come up with an innovative work-related idea then they engage in realizing that idea in an actual work role, group or organization to complete the whole innovation process (Anderson *et al.*, 2014; Yidong and Xinxin, 2013).

IWB has developed a large body of knowledge over the years and has motivated substantial research and theoretical efforts. Nonetheless, the relationship between the two sub-constructs is far from clear and has caused much confusion within the literature. Often innovation is implicitly considered as an outcome rather than a process, consequently, studies do not distinguish between different phases and while the concept of innovation as involving both the generation and the realization of ideas is theoretically well accepted (e.g. Eva *et al.*, 2019; Anderson *et al.*, 2004, 2014; De Jong and Den Hartog, 2008) the majority of the research assesses IWB with single measures encompassing the different stages (e.g. Yang *et al.*, 2020; Bos-Nehles and Veenendaal, 2019; Saeed *et al.*, 2019).

Several conceptualizations have implied a more complex recursive process of innovation (e.g. Zhou and George, 2001; Perry-Smith and Mannucci, 2017), that is to say that each phase can influence the other at any time, for example, new ideas and practices may be generated outside of the focal organization and their implementation may, in turn, trigger the generation of new ideas (e.g. Zhou and Su, 2010). However, the vast majority of conceptualizations agree that to engage in innovation one must encompass both generation and realization of ideas (e.g. Potočnik and Anderson, 2016) and that the generated ideas become innovation only once implemented in a role, team or organization (Anderson *et al.*, 2014).

Moreover, the temporal pattern of generation and realization is neither fully comprehended nor has received sufficient empirical examination (e.g. Unsworth *et al.*, 2000; Rosing *et al.*, 2018). Even if conjectural models of the innovation process, (e.g. the double diamond model; Carayannis and Wang, 2012) have often assumed a linear perspective describing a sequence of distinct phases from generation to realization of ideas, studies have not yet described the interplay between these two steps (e.g. Peralta *et al.*, 2015; Perry-Smith and Mannucci, 2017).

To address these gaps and to further the understanding of innovation, this model posits that innovation is not a unitary construct, but one that is composed of two stages, generating ideas and realizing them. Consistent with the body of literature in which individual innovation is conceived as generation and subsequent realization of ideas (e.g. Anderson

et al., 2004; Unsworth *et al.*, 2000; West and Farr, 1989), and based on the theoretical assumption that that employees that generate many ideas are also more likely to realize them (Zhou, 2016; Amabile *et al.*, 2005; Amabile, 1996) this study postulates that idea generation is directly associated with idea realization and that the realization of employee ideas is mediated by idea generation. Figure 1 shows the conceptual framework of the hypothesized model.

H5. Idea generation is positively related to idea realization.

H6. Perceived organizational climate, in the dimensions of tradition and reflexivity is associated with idea realization through the serial mediating effects of image outcome expectations and idea generation.

Method

Data collection procedure and sample

This study was conducted in an Italian military organization that was initiating different innovation programs aimed at introducing new organizational HRM practices and employee development activities. The data used in this research were collected over 2 years' time in three waves, each time marking precisely the progress of the projects. Further specification on the nature of the activities cannot be provided due to confidentiality. Participation was voluntary and employees were guaranteed full discretion of their responses. In addition, the methodology for the study was reviewed and approved on ethical matters by a joint board of research and military staff.

At Time 1, employees were invited to fill an online anonymous questionnaire including demographic variables, organizational climate (reflexivity and tradition) and image outcome expectations (image risk and gain). 735 employees from the baseline sample participated ($N = 950$; response rate 77.3%). After six months (Time 2), a second questionnaire was launched assessing idea generation, 634 employees returned the completed questionnaire (response rate 86.2% relative to Time 1). After nine months (Time 3), a third questionnaire was sent out, measuring idea realization, 410 employees returned the form, yielding a response rate of 64.6% relative to Time 2 respondents and 55.78% relative to the Time 1 respondents. Alphanumeric codes were used to match employees' questionnaires at different times.

The sample consisted of 99% of men ($n = 406$) and 1% of women ($n = 4$). The age groups were distributed as follows: 20–30 years (5.1%); 31–35 years (13.4%); 36–40 years (12%); 41–45 years (19.3%); 46–50 years (32.9%); and 51–58 years (17.2%). Tenure was distributed as follows: <8 years (4%), 9–12 years (8%), 13–18 years (17.4%), 19–25 years (18.8%), 26–32 years (44.6%), and >32 years (7.3%). A total of 292 employees (71%) held a bachelor's degree, 94 a master's degree (23%), while the remaining 24 (6%) a high school diploma.

Measures

All measures were drawn from internationally validated scales and assessed on a 1 to 5 Likert scale. Several studies had previously translated the study variables, following the back-
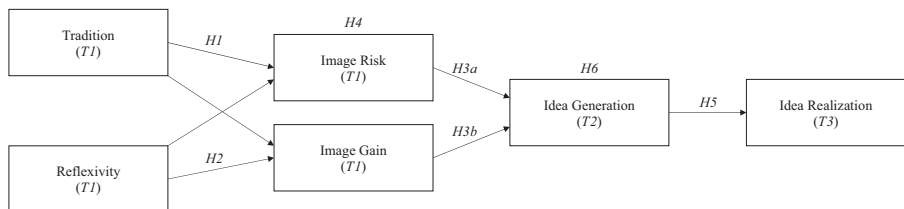

Figure 1.
Conceptual framework

translation procedures recommended by Brislin (1980), and adopted them in the Italian context (e.g. Battistelli *et al.*, 2019).

Climate: Reflexivity and tradition. Organizational climate was measured at time 1 using the two corresponding subscales of reflexivity and tradition adapted from the Organization Climate Measure (OCM; Patterson *et al.*, 2005), reflexivity (three items, e.g. "*There are regular discussions as to whether people in the organization are working effectively together*") and tradition (four items; e.g. "*This organization is not interested in trying out new ideas*"). Respondents were asked to estimate their agreement with the statements ranging from 1 ("strongly disagree") to 5 ("strongly agree").

Image Outcome Expectations: Expected image Gains and Risks. Image Outcome Expectations were assessed at time 1 using the two related constructs of Yuan and Woodman's scale (2010), image gain (three items; e.g. "If I were to do something innovative, my image in the organization would be enhanced") and image risk (three items; e.g. "Other people will think worse of me if I try to change the way things operate within the organization"). Respondents were asked to estimate their agreement with the statements ranging from 1 ("strongly disagree") to 5 ("strongly agree").

Innovation Process: Idea generation and realization. Employees' innovative process was measured using the two subscales of idea generation at time 2 (three items; e.g. "Creating new ideas for difficult issues"), and idea realization at time 3 (three items; "Transforming innovative ideas into useful applications") derived from Janssen's innovative work behaviour scale (2000) in its Italian version (e.g. Battistelli *et al.*, 2019). Employees were asked to indicate how often they engaged in the reported generation or realization of ideas during their daily work activities on a scale ranging from 1 ("never") to 5 ("always").

Control variables. Initially, control variables were intended to be used in testing the structural model. Specifically, age, tenure, and educational level were selected as these variables are related to several innovation-related constructs (e.g. Hernaus *et al.*, 2019). However, based on initial multiple regressions and ANOVAs, none of them resulted significantly associated with the study outcomes. Thus, the structural model was tested without including controls.

Common method variance

As the data for all study variables were based on employees' self-reports, several measures were applied to safeguard against the possibility of common method variance. Following Podsakoff, MacKenzie, Lee, and Podsakoff's suggestion (2003) a latent common method variable was added to the final CFA model. Results showed that the single-factor model exhibits a significantly worse fit (χ^2 = 309.728, df = 133, p < 0.01, RMSEA = 0.057 [90% CI = 0.049, 0.065], CFI = 0.95, TLI = 0.93, SRMR = 0.085). Additionally, Harman's one-factor test was performed by loading all indicators of the study constructs into an exploratory factor analysis (Harman, 1976). The results revealed that no single factor explained more than 24.79% of the total variance between the variables, which is less than the median amount of CMV variance (25%) reported in previous studies on self-reported work-related perceptions (Williams *et al.*, 1989). Overall, these findings indicate that common method bias did not significantly skew the study results.

Analytical strategy

All research analyses were performed using R software with Lavaan package (Rosseel, 2012). Anderson and Gerbing's (1988) two-step approach was followed by testing, first, a measurement model (CFA) to establish the discriminant validity among study constructs, then a structural model to estimate the fit of the hypothesized model to the data.

Hypotheses concerning direct and mediated effects were verified following Iacobucci and colleagues' procedure (2007) for mediation using structural equation modelling (Judd and

Kenny, 1981). First, a model comprising both direct and indirect effects was tested to measure each effect while controlling for the others. Then, the significance of indirect effects was calculated with the bootstrapping procedure recommended by Preacher and Hayes (2008). This method has been shown to have higher power than other mediation testing procedures (e.g. the Sobel test; MacKinnon *et al.*, 2002), while maintaining adequate control over Type I error rate. Indirect effects were estimated with five thousand resamples of the data and significance is indicated by a point estimate of the product of coefficient that has bias corrected 95% CIs in which the upper or lower bounds do not include zero.

Results

Descriptive statistics and bivariate correlations

Table 1 shows means, standard deviations and McDonald's Omega coefficients. All study measures displayed good internal consistency ($\omega > 0.74$), Cronbach's Alpha was also evaluated to further assess reliability showing similar results (Nunnally, 1978), tradition ($\alpha = 0.79$), reflection ($\alpha = 0.76$), image risk ($\alpha = 0.82$), image gain ($\alpha = 0.93$), idea generation ($\alpha = 0.83$) and idea realization ($\alpha = 0.87$). Of interest, reflexivity significantly correlated with both image gain and image risk ($r = 0.24$, $p < 0.01$, $r = -0.16$, $p < 0.01$, respectively), while tradition correlated with image risk, but not with image gain ($r = 0.41$, $p < 0.01$, $r = -0.07$, *n.s.*, respectively). Moreover, both image gain and image risk displayed the expected correlations with idea generation ($r = 0.24$, $p < 0.01$, $r = -0.15$, >0.01, respectively), and idea generation with idea realization ($r = 0.18$, $p < 0.01$, $r = -0.12$, $p < 0.01$, respectively). Finally, idea generation displayed a positive and significant correlation with idea realization ($r = 0.52$, $p < 0.01$).

Measurement model

Confirmatory factorial analysis (CFA) using Maximum Likelihood estimation was conducted to establish a valid measurement model before testing the structural model and confirm its validity (Finney and Distefano, 2006). The CFA model yielded a good fit to the data when all items loaded on their corresponding latent variables: $\chi^2 = 216.23$, df $= 137$, χ^2/d.f. $= 1.57$, Root Mean Square Error of Approximation (RMSEA) $= 0.04$, Comparative Fit Index (CFI) $= 0.97$, Tucker–Lewis fit index (TLI) $= 0.97$, and Standardized Root Mean Square Residual (SRMR) $= 0.04$. The convergent validity was supported for all measures, as factor loadings ranged from 0.75 to 0.99 and were highly significant at $p < 0.001$ level.

Moreover, the hypothesized six-factor model was compared with three five-factor models in which climate ($\Delta\chi^2$ (5 df) $= 249,601$), expectations ($\Delta\chi^2$ (5 df) $= 1050,882$) and innovation ($\Delta\chi^2$ (5 df) $= 271,389$) related dimensions were respectively loaded on a single factor.

Additionally, the six-factor model was compared with a four-factor model with climate and expectation dimensions combined, ($\Delta\chi^2$ (9 df) $= 1289,996$). Finally, the six-factor structure was compared with a single-factor structure in which all the elements loaded on a

	Mean	SD	1	2	3	4	5	6
1. Realization	3.31	0.87	(0.86)					
2. Generation	3.39	0.71	0.52**	(0.83)				
3. Image gain	3.01	0.94	0.18**	0.24**	(0.93)			
4. Image risk	2.01	0.80	−0.13**	−0.15**	0.01	(0.83)		
5. Tradition	2.43	0.72	−0.09*	−0.05	−0.06	0.41**	(0.79)	
6. Reflexivity	3.19	0.64	0.22**	0.25**	−0.15**	0.24**	−31**	(0.74)

Note(s): $N = 410$. McDonalds's ω are presented within parentheses. *$p < 0.05$, **$p < 0.01$

Table 1.
Descriptive statistics and correlations

common factor ($\Delta\chi^2$ (15 df) = 2442,971). All of the alternative models exhibited a worse fit to the data, so the six-factor model was retained (Table 2).

Tests of hypotheses
The hypothesized model demonstrated good fit: χ^2 (df = 143) = 240.656; χ^2/df = 3.05; CFI = 0.97; TLI = 0.96; RMSEA = 0.04; SRMR = 0.05. Results show that tradition climate was positively related to image risk ($\beta = 0.40$, $p < 0.01$) whereas it was not with image gain ($\beta = 0.07$, *n.s.*). Thus, hypothesis 1 was partially supported. Reflexivity climate showed a significant and positive relation with image gain ($\beta = 0.57$, $p < 0.01$) but not with image risk ($\beta = -0.04$, *n.s.*). Consequently, hypothesis was partially sustained. Furthermore, both image risk and gain were significantly directly associated with idea generation, the first negatively ($\beta = -0.18$, $p < 0.01$), the latter positively ($\beta = 0.12$, $p < 0.01$), confirming hypothesis 3. Finally, idea generation was positively and significantly related to idea realization ($\beta = 0.86$, $p < 0.01$). Therefore, hypothesis 5 was supported.

In order to test the mediation hypotheses, six pathways were added, two from tradition and reflexivity to idea generation, two from tradition and reflexivity to idea generation, and two from image risk and gain to idea realization.

The relationship between tradition and idea generation was not significant in presence of the potential mediator ($\beta = 0.07$, *n.s.*). However, the path added by reflexivity climate and idea generation was significant and improved the model fit ($\beta = 0.37$, $p < 0.01$; $\Delta\chi^2$ [Δdf = 1] = 16.97). Therefore, the additional pathway was maintained in the final model. Moreover, in both cases the relationship between tradition and reflexivity with idea realization was not significant in presence of the potential mediators ($\beta = 0.07$, *n.s.*; $\beta = 0.03$, *n.s.*). Finally, both paths between image gain and risk and idea realization were not significant in presence of idea generation ($\beta = 0.03$, *n.s.*; $\beta = 0.03$, *n.s.*)

The bootstrap procedure recommended by Shrout and Bolger (2002) was followed to analyse the mediation effect was performed. Hypotheses 6a and b posited the mediation of image outcome expectations on the relationship between climate variables and idea generation. However, as tradition was only significantly related to image risk and reflexivity to image gain, indirect effects were tested only with regard to these outcomes. The results indicated that the image risk mediated the association between tradition and idea generation (Est. = -0.09, 95% CI = -0.18, -0.12), while image gain the relationship between reflexivity and idea generation (Est. = 0.07, 95% CI = 0.02, 0.14). Therefore, these results partially supported hypothesis 4.

Model	χ^2	df	$\Delta\chi^2$	Δdf	CFI	TLI	SRMR	RMSEA
- Baseline model (6 factors)	216.213	137			0.97	0.97	0.04	0.04
- Model A (5 factors, tradition and reflexivity combined)	465.814	142	249,601	5	0.91	0.89	0.07	0.07
- Model B (5 factors, gain and risk combined)	1267.095	142	1050,882	5	0.69	0.63	0.13	0.13
- Model C (5 factors, generation and realization)	487.606	142	271,389	5	0.90	0.88	0.07	0.06
- Model D (4 factors, gain and risk and tradition and reflexivity combined)	1506.209	146	1289,996	9	0.63	0.56	0.15	0.14
- Model E (single factor model)	2679.183	152	2442,971	15	0.31	0.21	0.20	0.17
Note(s): $N = 410$								

Table 2.
Fit indices for
confirmatory factor
analyses

Finally, the indirect effect of image risk and gain on idea realization through idea generation, was significant, as well as the indirect effect of tradition on idea realization through image risk and idea generation was −0.07 (95% CI = −0.16, −0.01)., while that of reflexivity trough image gain and idea generation was 0.06 (95% CI = 0.17, 0.12). Therefore, these results sustained hypotheses 5 and 6. Standardized path coefficients are reported in Figure 2 and estimates of indirect effects are described in Table 3.

Discussion

Theoretical implications

The main theoretical contribution of this study is to call attention to the relationship between climate, in the dimensions of tradition and reflexivity, and innovative behaviour as an indirect relationship, mediated by the expected image outcomes of risk and gain. The presented findings depict a more complex relationship between climate and its consequences, integrating previous research that focused attention on a direct relationship, neglecting the possible effects of mediating factors (Shanker *et al.*, 2017; Černe *et al.*, 2017). The results showed that the relationship between tradition climate and idea realization was mediated by image risk and that of reflexivity climate through image gain, both via idea generation. This, in addition to providing empirical evidence on the connection between organizational climate and innovative behaviours, suggests that image outcome expectations could represent a mechanism by which climate and individual innovation are related. From a sense-making perspective, this outcome hints at the fact that employees may initiate innovative behaviours for their symbolic meaning (e.g. Shin *et al.*, 2017).

Also, the results revealed that climate, in the dimension of tradition was directly associated with image risk and reflexivity with image gain. Consistent with prior studies (e.g. Yuan and Woodman, 2010), these findings stress the role of organizational climate in signalling employees the social support for innovative behaviours. However, interestingly, reflexivity climate was not associated with image risk nor tradition climate with image gain. The fact the reflexivity did not reduce perceived social risks nor tradition diminishes potential image gains might underline that a specific climate dimension may exert exclusive effects on social perceptions. Moreover, it's noticeable that reflexivity climate also directly influenced idea generation. As this result, in line with several prior studies (e.g. Woods *et al.*, 2018; Cangialosi *et al.*, 2020a; Messmann and Mulder, 2014), underlined the fact that when employees are encouraged to reflect and exchange on work procedures, they are facilitated in generating innovations, by recombining preceding information into new ideas.

Results showed that employees generated more ideas when they anticipated that such behaviour would benefit their social image (Bin *et al.*, 2019; Cangialosi *et al.*, 2021). Similarly, the concern for potential image risks and unfavourable social impressions negatively affected idea generation. This suggests a significant impact of social-political considerations on the
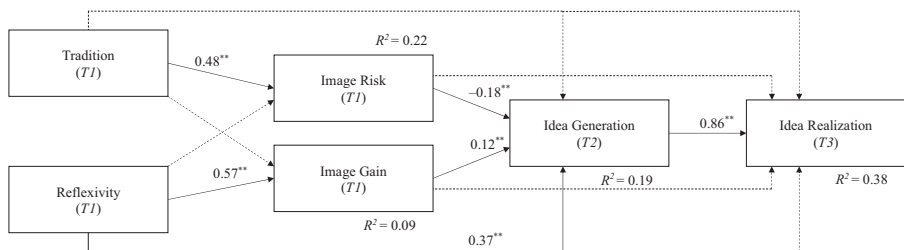
Figure 2.
Standardized path coefficients associated with the structural model (*N* = 410)

Note(s): **$p < 0.01$; *$p < 0.05$

| Indirect effects | Independent variables | | | |
| | Idea generation | | Idea realization | |
	Est.	95% CI	Est.	95% CI
Tradition – gain	0.01 (0.01)	[−0.01, 0.03]		
Tradition – risk	−0.09 (0.04)	[−0.18, −0.02]		
Tradition – gain – generation			0.01 (0.01)	[−0.01, 0.03]
Tradition – risk – generation			−0.07 (0.03)	[−0.16, −0.01]
Reflection – gain	0.07 (0.03)	[0.02, 0.14]		
Reflection – risk	−0.01 (0.02)	[−0.07, 0.03]		
Reflection – gain – generation			0.06 (0.02)	[0.17, 0.12]
Reflection – risk – generation			−0.01 (0.02)	[−0.06, 0.02]
Note(s): $N = 410$. 5,000 Bootstrap samples. Standard errors indicated within parentheses				

Table 3.
Bootstrap results for
the mediation model

employees' first step of the innovation process. This represents to our knowledge a new finding in literature as previous studies assessed IWB as a product rather than a process, hence with a single measure (e.g. Farzaneh and Boyer, 2019; Yuan and Woodman, 2010; Luo, 2015).

Additionally, in line with the impression management perspective, it discloses the key role of image outcome expectations for activating individual innovation. From an image management standpoint, this result corroborates the idea that IWBs can be a means of influencing the perceptions of colleagues (Klotz *et al.*, 2018; Cangialosi *et al.*, 2021).

Moreover, the current study confirmed the posited direct relation between idea generation and realization. Thus, this finding emphasized the procedural connotation of innovative work behaviours and contributes to the notion that generating ideas is crucial for realizing them (Amabile, 1996). Thus, this study provides a finer understanding of the association of different phases of individual innovation.

Finally, the presented outcomes highlight that the predictors of realization of ideas were mediated by image outcome expectations and idea generation. This was confirmed as the indirect paths of image gain image risk were significantly associated with idea realization trough idea generation. Thus, underlining two separated serial mediating effects. These results add to the theoretical framework that view innovation requiring two phases, and that to engage in innovation one must intentionally introduce and apply a new idea, method, or practice previously generated (Anderson *et al.*, 2004; West and Farr, 1989).

Practical implications
This study offers important implications to promote the development of innovation in organizations. First, it informs management that employees play a crucial role in developing innovative products and processes. In line with the presented conceptualization of IWB, organizations should value the importance of individual innovations as the foundation of innovation outcomes at any level.

It also advises organizations that the reasons why employees engage in innovative behaviour have often a strong social undertone. Innovating is a risky activity that breaks the status quo and it may leave unfavourable impressions on others unless it is socially supported and valued by the whole organization. Accordingly, managers and supervisors should not only require their employees to innovate but also provide reflexivity and avoid tradition climates. As so, the results show that employees' perceptions of organizational climate indirectly affect their innovative behaviour (e.g. Cangialosi *et al.*, 2020b).

Furthermore, it suggests that for management, employees' image outcome expectations of image gains and image risks are two areas to focus on, to understand why organizational

climate impacts innovative employee behaviour. Thus, highlighting the processes by which organizational climate exerts influence on employees' innovation. More specifically, it advises management on the reason why traditional settings, in which established procedures and ways of doing things are valued, prevents employees from innovating. One cause is that employees believe that acting innovatively, generating new ideas, might be detrimental for themselves and their social image (expected image risk). As a result, organizations should focus on convincing employees that enduring innovative behaviours will not lead to negative effects on their reputation nor on their careers. This can be done in several ways, for example by establishing special public rewards for innovative ideas or communicating successful ideas in organizational meetings (Yuan and Woodman, 2010). Conversely, it suggests that enhancing reflexivity in the workplace will improve individual innovation by signalling possible image gains outcomes to employees. In order to improve reflexivity management must value reflection to be mirrored in the organizational culture and climate, also, employees not only must be permitted, but also encouraged to reflect on work processes and procedures, by providing them with both the right amount of time and psychological safety.

Limitations
Despite the theoretical and practical implications previously expressed, this research has some limitations that could be addressed in future studies. First, this study assessed variables adopting self-report measures, thus self-report bias may be a problem. However, some confidence that common method variance did not affect the findings was provided with the statistical recommendations of Podsakoff *et al*. (2012). In principle, future studies would benefit from including more objective measures such as supervisor or co-worker ratings. However, research has shown that self-ratings of innovation-related behaviours are consistent with supervisor evaluations of innovative performance as well as with firm-level outcomes, such as performance and innovation (e.g. Janssen, 2000).

Second, although important aspects were included in the innovation process, future research on employees' innovation process could also comprise items on idea exploration (i.e. scanning the environment in search for ideas) and idea promotion (i.e. gaining support from others for the realization of new ideas) (Carmeli and Spreitzer, 2009).

Third, Third, control variables (age, tenure, and educational level) failed to significantly impact the results, future research should add effective control variables based on the theoretical ground to improve the validity of the research (Bernerth and Aguinis, 2016).

Lastly, data were collected from a single organization, which limits the cross-validation (i.e. generalizability) of our findings. Moreover, since the sample was drawn from military personnel the majority of the respondents were male, so results might not translate to the overall population. Therefore, to improve the generalizability of the results, future research should test the posited model in more diverse samples from different industry sectors and with a more balanced gender composition.

Conclusion
The present study examined a serial mediation model of climate, in the dimensions of reflexivity and tradition, image outcome expectations (risk and gain) and innovative work behavior (idea generation and realization). Results confirmed that both proposed image outcome expectations mediated the effects of perceived climate on idea generation, and that a serial mediation of image outcome expectations and idea generation those on idea realization. Additionally, reflexivity was found to be directly associated with idea generation. Presented findings suggest that to fully understand the role of climate on IWBs, the role of image outcome expectations should also be considered.

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