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The impact of feedback from job and task autonomy in the relationship between dispositional resistance to change and innovative work behaviour

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Building on an interactionist approach, the present study investigated the moderating role of two task design characteristics, namely task autonomy and feedback from job, in the relationship between dispositional resistance to change and innovative work behaviour. Consistent with a trait activation perspective, it was specifically hypothesized that dispositional resistance to change would have a stronger, positive association with innovative performance when autonomy and feedback were high than when they were low. In a sample of 270 employees from the public sector, task autonomy was found to significantly interact with both composite resistance to change and with three of the four dimensions (routine seeking, short-term thinking, and emotional reaction). Simple slope analyses specifically revealed that individuals high in short-term thinking and emotional reaction exhibited positive relationships with innovative behaviour only in the case of high task autonomy, whereas in the case of low autonomy the relationship was nonsignificant. Furthermore, feedback from job was found to moderate the relationship between overarching dispositional resistance to change, short-term thinking, and emotional reaction, on one hand, and innovative performance, on the other, such that a positive and significant association emerged only in the case of high feedback.

Keywords: Autonomy; Feedback; Innovation; Innovative behaviour; Resistance to change.

With turbulent economic fluctuations, conflicting market demands and increasing competition, firms' ability to envision, plan, and implement changes has become critical for organizational adaptation, competitiveness, and overall effectiveness. However, successful accomplishment of organizational changes is less likely to occur unless firms properly manage employees' reactions to the change process (Lewin, 1952; Piderit, 2000). Resistance to change (RTC) has been widely recognized both from researchers and practitioners to represent one of the most critical foci of organizational change failures (e.g., Bordia, Hunt, Paulsen, Tourish, & DiFonzo, 2004; Coch & French, 1948; Johnson, Bernhagen, Miller, & Allen, 1996; Oreg, 2003, 2006; van Dam, Oreg, & Schyns, 2008; Zaltman & Duncan, 1997).

In particular, a personal attribute that has received increasing attention from both scholars and practi-

tioners is dispositional resistance to change, defined as an "individual's tendency to resist or avoid making changes, to devalue change generally, and to find change aversive across diverse contexts and types of change" (Oreg, 2003, p. 680). This trait-like orientation has been specifically operationalized as a multidimensional construct comprising four inter-related dimensions, which reflect the behavioural, cognitive, and affective aspects of resistance to change, respectively: routine seeking (behavioural component), which refers to individuals' preferences for stable and routine environments; cognitive rigidity (cognitive component), which represents a reluctance to consider alternative ideas and viewpoints; short-term focus (affective component), which reflects one's concerns about short-term negative consequences of the changes; and emotional reaction (affective component), which indicates the degree to

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which individuals feel stressed and uncomfortable with changes.

Several attempts have also been carried out to identify contextual variables that might help to overcome attitude and behavioural components of resistance to change. Most studies have specifically stressed the crucial role played by some situational dimensions in reducing employees' reactions to organizational change (Bordia et al., 2004; DiFonzo & Bordia, 1998; Furst & Cable, 2008; Hargie & Tourish, 2000; Lewis & Seibold, 1998; Sagie & Koslowski, 1996; Wanberg & Banas, 2000). While these researches have mainly focused on linking managerial strategies with procedural forms of resistance to change, such as attitudes and behaviours, very little attention has been paid to assessing the conditions under which the dispositional forms of resistance to change could lead to positive outcomes. However, scholars have argued and empirically demonstrated that the impact of personality traits on attitudinal and behavioural outcomes is bound to vary across situations (Tett & Burnett, 2003), in such a way that "an individual behaves in trait-like ways only in those situations that are relevant to a given trait" (Li, Crant, & Liang, 2010, p. 397).

Focusing on this issue might thus present a valuable contribution for both scholars and practitioners, as it is central to learn about how dispositional resistance to change functions across different situations, and, by consequence, to better understand the way in which it is possible to manage and redirect such trait-like forms of resistance—which would not be otherwise modifiable by common managerial strategies—towards more adaptive, change-oriented, behaviours and actions. Contrarily to the long-held assumption among researchers and practitioners that resistance is a dysfunctional obstacle to organizational changes, some scholars have indeed suggested that resistance to change is not necessarily detrimental or counterproductive, and that there are circumstances under which it can positively contribute to effective change initiatives (Ford, Ford, & d'Amelio, 2008; Knowles & Linn, 2004). However, empirical investigation of these theoretical claims is still scarce, and the need has emerged to assess the conditions under which resistance can be functional to successful implementation and accomplishment of organizational changes (Ford et al., 2008).

The major purpose of our research is thus to extend current literature on organizational change by specifically assessing under what circumstances dispositional resistance to change can be conducive to a specific form of change-oriented activity, namely innovative work behaviour. This is defined as the intentional generation and implementation of new and useful ideas within a role, a group, or an organization (West & Farr, 1990). In particular, the

moderating role of two task design characteristics, autonomy and feedback from job, will be analysed with respect to the relationship between dispositional resistance to change and innovative performance. In this regard, our research makes two significant contributions. First, it goes beyond current findings on the negative link between dispositional forms of resistance and change-related outcomes, as it assesses the possibility that resistance to change could also positively predict change-supportive behaviours.

Second, by focusing on the interaction between individual differences and contextual antecedents, our research builds on an interactionist approach (Woodman, Sawyer, & Griffin, 1993; Woodman & Schoenfeldt, 1990) to investigate the combined effects of task design characteristics and dispositional resistance to change on innovative performance for the first time.

AN INTERACTIONIST APPROACH TO DISPOSITIONAL RESISTANCE TO CHANGE AND INNOVATIVE WORK BEHAVIOUR

A great amount of studies have focused on examining the impact of personal characteristics and attributes on innovation-related outcomes (for a review, see Anderson, de Dreu, & Nijstad, 2004). Accordingly, a number of personality traits have been found to result in different levels of creativity or innovation among individuals, such as: self-confidence and toleration of ambiguity (Oldham & Cummings, 1996; Woodman et al., 1993), openness to experience (Feist, 1998, 1999; George & Zhou, 2001), creative personality (Madjar, Oldham, & Pratt, 2002), and personal initiative (Daniels et al., 2011; Frese, Kring, Soose, & Zempel, 1996). For example, Frese, Teng, and Wijnen (1999) suggested and empirically demonstrated that employees' personal initiative enhanced the suggestion of new ideas. Furthermore, openness to experience was found to be positively linked to creativity in a study conducted by Prabhu, Sutton, and Sauter (2008). Finally, a recent meta-analysis on predictors of individual-level innovation indicated that openness to experience and creative personality were positively associated with innovative performance (Hammond, Neff, Farr, Schwall, & Zhao, 2011).

However, no research has adequately assessed the relationships between dispositional forms of resistance to change and innovative performance. To our knowledge, only one study investigated the negative impact of dispositional resistance to change on the adoption of service innovation (Oreg, 2003, Study 6), revealing that high scores on this individual trait resulted in lower levels of innovation-adoption

behaviours. Furthermore, Oreg (2003, Study 3) found resistance to change to be negatively related to two personality traits that have been widely demonstrated to positively predict creative performance, precisely tolerance of ambiguity and openness to experience (for a review, see Oldham & Cummings, 1996; Shalley, Zhou, & Oldham, 2004).

Because research on change resistance has widely recognized the inhibiting effect of trait-like correlates of resistance and effective resistance behaviours (e.g., Bareil, Savoie, & Meunier, 2007; Judge, Thoresen, Pucik, & Welbourne, 1999; Oreg, 2006), there would be intuitive reasons to posit a negative association between dispositional resistance to change and innovative behaviour, which in fact denotes a form of change-oriented proactive activity. Nevertheless, the core objective of the present work is not to support a negative pattern between the two variables, but rather to show the conditions under which a dispositional inhibitor of change-related outcomes can foster those individual innovative endeavours that are necessary for successful change initiatives.

In this regard, it can be useful to consider the relationship between dispositional resistance to change and innovative behaviour from an interactionist perspective, which posits that work-related outcomes and behaviours (i.e., creativity and innovation) are the complex product of the interaction between personal characteristics and situational influences (Shalley et al., 2004; Woodman et al., 1993). A corollary of this approach that would play an important role in explaining complex interactions between contextual variables and dispositional traits is the concept of trait activation (Tett & Guterman, 2000). This principle states that personality traits can be conceived as individual responses that require trait-relevant situations, such that the relationship between personality and behavioural reactions will vary across contexts that provide specific cues (Tett & Burnett, 2003; Tett & Guterman, 2000).

Consistent with this approach, a number of authors have effectively provided empirical support on the interactions between individual attributes and social surroundings on creative and innovative outcomes. For example, Zhou and Oldham (2001) indicated that people who were high on creative personality and perceived a developmental appraisal on their work reported the highest levels of creative performance. In a similar vein, Oldham and Cummings (1996) found that highly creative individuals who work on complex and challenging task and were supported in a noncontrolling manner had the highest creativity.

With respect to the specific context of organizational change, because dispositional resistance to

change refers to an individual's relatively stable reaction towards changes in general (Oreg, 2003), the role played by this personality-based orientation on individual behavioural responses can be explored from an interactionist perspective that builds on the principle of trait activation. Consistent with this approach, dispositional resistance to change is thus bound to exert different effects on individual behavioural responses to change (i.e., innovative behaviour), depending on certain situations that would be relevant to this trait. For example, one way in which situational cues can affect the relationship between personality traits and individual responses to change is by exerting a buffering effect, such that personality-reaction relationships will become weaker as these cues strengthen. Building on this assumption, Oreg and Berson (2011) recently showed that the positive relationship between employees' dispositional resistance to change and resistance intentions was moderated by transformational leadership, so that individuals who were high in dispositional resistance to change exhibited lower levels of resistance intentions when transformational leadership was high than when it was low.

However, personal attributes that are bound to inhibit adaptive behavioural responses to a given change can also be expected to elicit positive change-oriented behaviours, depending on the effect of trait-relevant situational cues. These might specifically play a critical role in affecting the relationship between dispositional resistance to change and innovative behaviour. Indeed, individuals who have a tendency to resist to changes are bound to enact unsupportive change-related responses because change itself is perceived as a threatening, stressful event that is likely to bring about critical inconveniences. However, people who tend to feel uneasy with changes might also self-initiate a number of endeavours aimed at developing and applying valuable ideas in order to successfully face critical organizational changes.

In particular, innovative work behaviour, which indicates the voluntary development and introduction of new and useful ideas within the work environment (Janssen, 2000), represents an effective way in which people can overcome work- and organizational-related difficulties. As Janssen (2000) has asserted, innovative actions can comprise "upgrading one's skills and abilities" or "modifying task objectives, working methods, job approaches, job design, allocation and coordination of tasks, interpersonal communication" (p. 289) in order to successfully match the organizational demands. Accordingly, innovative work behaviour can help people to adaptively meet job- and organizational-related requirements in those contexts that are perceived as high-demanding. These suggestions have been supported by a number of empirical

studies within the innovation literature, which tested the possibility that, under certain conditions, increased job demands could stimulate individual adaptive responses. For example, Janssen (2000) hypothesized and found that the relationship between job demands and innovative work behaviour was moderated by employees' perceptions of effort–reward fairness, such that employees responded more innovatively to higher job demands when they perceived their efforts were equally rewarded by the organization. Conversely, in the case of low perceived effort–reward fairness, job demands were unrelated to innovative work behaviour. Additionally, Leung, Huang, Su, and Lu (2011) have recently highlighted that when perceived support for innovation was high, both role conflict and role ambiguity were positively associated to individual innovative performance.

Likewise, innovative actions can be particularly useful in the organizational context of change, which represent a high-demanding event for people who undergo it. When such critical transformations occur, employees' engagement in innovative endeavours can favour the generation and implementation of new and useful coping strategies that would increase the likelihood that they will successfully adapt to the change. Furthermore, not only can individuals activate innovative actions to adaptively cope with high-demanding organizational environments, but they are also expected to invest their efforts to meet demands that are not consistent with their personal inclinations (Bledow, Anderson, Frese, Erez, M., & Farr, 2009). In particular, high RTC people, who have a dispositional tendency to tense up, to feel uncomfortable about changes, and to find such organizational transformations particularly difficult, can engage in a number of innovative efforts that would enhance the possibility for them to cope with important change-related demands.

However, consistent with an interactionist perspective, we believe the resistance to change–innovative behaviour association will not always be positive and significant, but can vary, depending on the role played by certain situational factors. Because of their dispositional inclination to resist to changes in general, high RTC people are in fact more likely to exhibit negative, maladaptive reactions than to engage in useful, adaptive change-oriented responses (Oreg, 2003). In accordance with the principle of trait activation, we hence posit that dispositional resistance to change will exert a different effect on innovative responses depending on the relevance of contextual cues to this change-related personal orientation. In this sense, an element that can account for a significant difference in the relationship between dispositional resistance to change and innovative performance is the employees' perception of two task

design characteristics, precisely task autonomy and feedback from job.

TASK AUTONOMY AND FEEDBACK FROM JOB

In order for workers to effectively cope with organizational demands, they require adequate forms of support from their work environment that can sustain individual efforts for successful adaptation. Accordingly, people who exhibit high levels of dispositional resistance to change might be more likely to respond adaptively to an organizational change if they perceive a work environment that facilitates the possibility for them to generate and implement new and useful ideas, necessary for achieving change-oriented coping strategies.

In this regard, we suggest that the manner in which the work itself is designed can significantly affect the way dispositional resistance to change will lead to increased levels of innovativeness among individuals. In particular, we suppose that the relationship between dispositional RTC and innovative performance can be moderated by two task design characteristics, namely decision-making autonomy and feedback from job. Studies on job design and innovation have generally supported the positive link between certain work characteristics, on one hand, and creative and innovative performance, on the other. Overall, these researches indicate that individuals who can exert control over their work and participate in a broad variety of challenging and complex tasks exhibit higher levels of innovativeness (Axtell et al., 2000; Scott & Bruce, 1994; Urbach, Fay, & Goral, 2010).

In particular, with respect to job autonomy, which denotes the extent to which an individual has control over how to carry out a task (Hackman & Oldham, 1980), there is wide agreement among researchers on the positive role exerted by this job design component on a number of change-related outcomes, such as proactive behaviour (Frese et al., 1996; Parker, Williams, & Turner, 2006), creative performance (Amabile, Conti, Coon, Lazenby, & Herron, 1996; Amabile & Gryskiewicz, 1987; Shalley, 1991) and individual innovation (Axtell et al., 2000). For example, Zhou (1998) found that positive feedback and informational style significantly interacted with task autonomy in fostering individual creativity, in such a way that when autonomy was high, the positive effect of feedback and informational style on subsequent creative performance was stronger than when autonomy was low. Additionally, building on a self-determination perspective (Deci & Ryan, 2000), Liu, Chen, and Yao (2011) have recently demonstrated an

indirect effect of organizational autonomy support on team creativity through the mediation of team harmonious passion.

With respect to the context of change, despite no study having investigated the moderating role of task autonomy on the relationship between personal attributes and behavioural activities, we suggest that this task characteristic provides trait-relevant situational cues, which might alter the effect of dispositional resistance to change on innovative behaviour. People that are inclined to feel uncomfortable and concerned about change will be in fact reluctant to self-initiate a number of innovative endeavours, unless they perceive the possibility to discretionarily plan and apply a broad array of strategies and courses of actions aimed at better coping with change-related demands. In this regard, we posit that job autonomy provides people with freedom and latitude in making decisions about how to carry out one's job, which will stimulate the exploration of new and useful opportunities, strategies, and work methods to develop adaptive solutions (Frese & Zapf, 1994).

Furthermore, the possibility for people to discretionarily decide the way in which a given work is to be performed can foster a sense of control and responsibility for one's job. This means that high RTC employees will believe the outcomes associated to their actions—such as a better adaptation to the occurring change—are more predictable under conditions of high rather than low job autonomy (Neves & Cactano, 2006) and that they are bound to depend on their own efforts and personal initiative (Hackman & Oldham, 1976; Parker & Ohly, 2008). In such conditions, people will be hence likely to direct their efforts towards the application of innovative ideas in order to meet change-related demands. In sum, high RTC employees are expected to benefit from job autonomy because this relevant task characteristic will provide them with the necessary decision latitude, freedom, and responsibility that will make it possible for them to meet change requirements by discretionarily generating and implementing new and valuable solutions. As such, job autonomy will create a trait-relevant situation that can set the stage for individuals' engagement in a number of adaptive innovative endeavours.

Conversely, it will be less likely for high RTC employees to self-start an innovative activity if they perceive their job does not allow freedom, independence, and discretionary power. In this condition these employees might feel they do not have the possibility to search out the most suitable strategies or solutions to meet change-related demands, and will thus be more reluctant to regulate their efforts towards planning and enacting innovative courses of actions in order to successfully cope with the

organizational change. We therefore expect people high in RTC to exhibit positive levels of innovative behaviours when they feel they have overall control on how to carry out their task. However, in the case of perceived low autonomy we expect dispositional resistance to change to be less strongly associated with innovative performance.

Hypothesis 1. Task autonomy will moderate the relationship between dispositional resistance to change and innovative work behaviour, in such a way that resistance to change will be positively related to innovative work behaviour when perceived autonomy is high rather than when it is low.

Organizational psychology literature on innovation has also widely stressed the importance of providing feedback in an informational style in order to foster individual and collective innovative activity (for a review, see Shalley & Gilson, 2004; Shalley et al., 2004). In the context of organizational change, when employees who are high in dispositional resistance to change undergo a dramatic change process, the possibility for them to initiate a course of innovative actions to cope with the change-related demands is also likely to depend on whether they can receive relevant information about their work. Due to the fact that organizational change is commonly associated with perceptions of uncertainty and insecurity, people, especially those who experience it as an uncomfortable event, need to acquire knowledge about the appropriateness of their behaviours and strategies, so that they can adjust them to better adapt to change requirements. In this regard, feedback from job might represent a trait-relevant situational cue for those people who are naturally inclined to resist change, as it provides them with critical information about the effectiveness of their performance that can affect subsequent strategies and activities (Morgeson & Humphrey, 2006). It is specifically expected to reduce job-related uncertainties associated with the occurring change event and to foster individual innovative efforts to adapt to the change itself.

The critical role of feedback in providing critical signals about ones' performance and in affecting employees' choices, strategies, and behaviours has been widely recognized among scholars (for a review, see Alvero, Bucklin, & Austin, 2001; Neubert, 1998). In particular, feedback has been assumed to increase performance by providing useful information for assessing current strategies and behaviours, and to directly influence the choice of specific courses of actions in order to accomplish work-related results (Earley, Northcraft, Lee, & Lituchy, 1990; Ilgen, Fisher, & Taylor, 1979; Poortvliet, Janssen, van Yperen, & van de Vliert, 2009). Within the change

context, people will hence need to get valuable information to evaluate whether their current performance-related strategies and behaviours will help them to adaptively achieve change-related goals. In particular, acquiring clear knowledge about how tasks are accomplished would help employees to identify performance-related problems, gaps and opportunities that can dramatically affect both successful implementation of a change within one's role and individuals' adaptation to the change itself. People who tend to feel uneasy with changes might hence benefit from such information, as they have the possibility to go through different coping strategies and activate their efforts to overcome task-related difficulties, by engaging in a number of innovative courses of action.

Feedback has further been widely argued to be a valuable means for enhancing control over various aspects one's performance (Bandura, 1977; Hackman & Oldham, 1976). Accordingly, by receiving useful information about the quality and the effectiveness of one's performance, people that are high on RTC might be provided with the required control that will help them find and introduce new and accurate solutions for overcoming performance-related constraints that would hinder successful adaptation to the occurring change. Likewise, in this condition high RTC people would be better able to detect strengths and opportunities within their own performance and to innovatively adjust them towards supporting the implementation of the change initiative.

Therefore, when people who are high in RTC have the possibility to identify useful information about their performance, they would be more willing to engage in a number of innovative endeavours aimed at proactively exploiting opportunities, filling performance gaps, and better facing change-related uncertainties, difficulties, and requirements. Conversely, without feedback, employees cannot be aware of the way in which they are working and of the quality of their performance-related strategies and behaviours. If problems and opportunities related to one's performance cannot be properly identified, people will be more reluctant to regulate their innovative efforts for developing and applying new ideas, strategies, and solutions that would help them to adaptively overcome constraints and difficulties and to successfully meet change-related demands. Lacking clear information about performance, RTC individuals would be further less able to choose appropriate courses of action and to proactively adjust their behaviour by exploring and implementing new and useful ideas for better coping with the change itself.

We therefore suggest that if high RTC employees are used to receiving knowledge from the job about the results of their work performance in their daily

work routines, they will be more likely to use feedback when an organizational change occurs in order to get valuable information about the effectiveness of their strategies, choices and behaviours to match change-related demands. In this regard, we expect that when people who are high in dispositional resistance to change receive high feedback from job, they will be more engaged in innovative endeavours than when low feedback is provided.

Hypothesis 2. Feedback from job will moderate the relationship between dispositional resistance to change and innovative work behaviour, in such a way that resistance to change will be positively related to innovative work behaviour when perceived feedback from job is high rather than when it is low.

In order to further examine our hypotheses, we finally expect significant interactive effects between different RTC dimensions, on one hand, and the two task design dimensions, on the other hand, on individual innovative behaviour. However, we will restrict this latter research proposition to an exploratory research purpose. It is hence suggested that the expected interactions will also be confirmed for the different subcomponents of dispositional resistance to change, namely: cognitive rigidity, emotional reaction, routine seeking, and short-term thinking.

METHOD

The organizational context

The present survey was conducted in a division of the administrative section of the University of Florence, which is a State University. The organizational change dealt with an organizational restructuring, based on the decentralization of functions and tasks. The new organizational structure of the University configured itself as a model based on the devolution of management responsibilities to specific units closer to the end users (scientific community, students, and territory). In particular, the core change involved the development of six administrative structures, named "Poles", which were the result of the aggregation among decentralized administrative units. Each structure comprised a complex of offices and services aimed at supporting all the activities connected to teaching and research. The purposes of the organizational restructuring were therefore: to ensure a more direct and better service to users; to allow the Governing Body to focus on strategic functions rather than on management responsibilities; to favour the transfer of a great amount of resources (human, financial and instrumental) to the new offices; and to implement and improve control

systems in order to monitor the effectiveness and the efficiency of the service provided.

Participants and procedure

The survey was conducted in the administrative division of the Bio-Medical University "Pole", which had just undergone the organizational restructuring. Overall, this division comprised 756 employees, all of whom were invited to participate in the research via an email from the human resource department. Participation was voluntary, and respondents were assured of the anonymity of their responses. After explaining the purpose of the survey, the core researcher distributed the questionnaire, which took 20 minutes to complete. A total of 303 questionnaires were returned, 33 of which were unusable because of incomplete information. The final sample hence comprised 270 participants, which resulted in a response rate of 35.7%. Forty-three per cent of employees were women and 57% were men. Employees were aged between 22 and 60 ($M = 34.68$, $SD = 8.31$), whose mean years of tenure was 7.51 ($SD = 8.43$). With respect to the education level, 52% of the participants had an undergraduate degree, 24% had a graduate degree, 24% had a master degree, and 17% had lower levels of education.

Measures

Dispositional resistance to change. Dispositional resistance to change was assessed with Oreg's (2003) Resistance to Change Scale, which comprises 17 items and is measured on a Likert scale from 1 ("strongly disagree") to 7 ("strongly agree"). The cross-national validity of the RTC scale has been confirmed in a study by Oreg et al. (2008). In this study, a 5-point version was used, in order to adapt the scale to the format of other measures in the questionnaire. Additionally, because the scale also allows separate measures for four specific subdimensions (i.e., short-term focus, cognitive rigidity, routine seeking, and emotional reaction), we used subscale scores for exploratory purposes, although the composite RTC score was retained to assess our hypotheses. All subscales were measured with four items, except routine seeking, which was assessed with five items. Sample items include: "I generally consider changes to be a negative thing" (routine seeking), "I don't change my mind easily" (cognitive rigidity), "When things don't go according to plans, it stresses me out" (emotional reaction), and "Often, I feel a bit uncomfortable even about changes that may potentially improve my life" (short-term focus). Cronbach's alpha for RTC scale was .90.

Reliability scores for short-term focus, cognitive rigidity, routine seeking, and emotional reaction were .76, .70, .69, and .76, respectively.

Task autonomy and feedback from job. These task design characteristics were measured with two scales from Morgeson and Humphrey's (2006) Work Design Questionnaire, which assesses a number of job design aspects. Psychometric qualities of the instrument were assessed and supported in a study conducted by Stegmann and colleagues (2010). All responses were rated on a scale ranging from 1 ("strongly disagree") to 5 ("strongly agree"). In particular, we assessed task autonomy using the three-item Decision-Making Autonomy subscale ($\alpha = .88$). Sample items include: "The job gives me a chance to use my personal initiative or judgement in carrying out the work", and "The job provides me with significant autonomy in making decisions". Feedback was assessed with the three-item Feedback from Job scale ($\alpha = .88$). Sample items include: "The job itself provides feedback on my performance", and "The job itself provides me with information about my performance".

Innovative work behaviour. Innovative work behaviour was measured with the nine-item scale ($\alpha = .94$) by Janssen (2000), which comprises three different subscales: idea generation (e.g., "Creating new ideas for difficult issues"), idea promotion (e.g., "Making support for innovative ideas"), and idea realization ("Transforming innovative ideas into useful applications"). However, given correlations among factors were all high (.74 between idea generation and idea promotion, .82 between idea generation and idea realization, .80 between idea promotion and idea implementation), we used the composite score of innovative work behaviour, based on Janssen's (2000) and Scott and Bruce's (1994) indications. The unidimensionality of the scale has been tested and confirmed in a number of researches (e.g., Battistelli Picci, & Odoardi, 2008; Janssen & van Yperen, 2004; Leung et al., 2011). Employees were specifically asked to self-rate the frequency with which they enacted a number of innovative behaviours within their daily work activities. Responses to all items ranged from 1 ("never") to 5 ("always").

RESULTS

Table 1 reports descriptive statistics (means, standard deviation, Cronbach's alphas) and correlations for the major variables. Innovative work behaviour was unrelated with dispositional resistance to change, $r = .09$, *ns*, cognitive rigidity, $r = -.02$, *ns*, and routine seeking, $r = .05$, *ns*, but it was positively

TABLE 1
Means, standard deviations, and correlations

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. Gender (1 = male, 2 = female)	1.57	0.50	—											
2. Age	34.68	8.31	.04	—										
3. Education	4.77	1.73	.22**	.10	—									
4. Job tenure	7.51	8.43	.03	.60**	.12*	—								
5. Dispositional resistance to change	2.34	0.64	-.07	-.09	-.23**	-.08	(.90)							
6. Cognitive rigidity	2.83	0.80	-.14*	-.18**	-.31**	-.16**	.78**	(.70)						
7. Emotional reaction	2.48	0.85	-.08	-.04	-.18**	-.05	.87**	.59**	(.76)					
8. Routine seeking	1.96	0.62	-.11	-.06	-.10	.02	.75**	.54**	.53**	(.69)				
9. Short-term focus	2.12	0.80	-.03	.02	-.12*	.03	.88**	.58**	.80**	.59**	(.76)			
10. Decision-making autonomy	2.70	1.04	-.07	.18**	.17**	.11	.13*	.06	.14*	.13*	.10	(.88)		
11. Feedback from job	3.39	0.98	-.05	.14*	.02	.08	.24**	.20**	.17**	.17*	.24**	.47**	(.88)	
12. Innovative work behaviour	2.94	0.90	-.03	.19**	.26**	.09	.09	-.02	.13*	.05	.16*	.61**	.47**	(.94)

Internal consistency values (Cronbach's alphas) appear across the diagonal in parentheses. * $p < .05$, ** $p < .01$. $N = 270$.

correlated with both short-term focus, $r = .16$, $p < .05$, and emotional reaction, $r = .13$, $p < .05$.

To test Hypothesis 1, we performed multiple regression analyses using centred variables, and controlling for age, education, and job tenure: We entered the three control variables at the first step, with innovative work behaviour as dependent variable; at the second step the two main effect terms were entered, precisely dispositional resistance to change and decision-making autonomy; finally, at the third step the interaction term (Dispositional resistance to change \times Decision-making autonomy) was entered. Consistent with Cohen and Cohen (1983), the interaction effect should explain additional variance, above and beyond that explained by the main effects. As expected, results showed that the standardized regression coefficient associated with the interaction term was statistically significant, $\beta = .07$, $p < .01$ (see Table 2). To further examine the nature of this interaction, we performed a simple slope test by following the widely used procedure specified by Aiken and West (1991). Contrarily to our expectations, however, results indicated that dispositional resistance to change was unrelated to innovative work behaviour either in the case of low (one standard deviation below the mean), $B = -.26$, *ns*, or high autonomy (one standard deviation above the mean), $B = .03$, *ns*.

We further replicated moderated regression for each of the four RTC dimensions. The interaction between cognitive rigidity and task autonomy was hence analysed, but the standardized regression coefficient associated with the interaction term was not statistically significant, $\beta = .09$, *ns*. Conversely, resistance to change was found to significantly interact with all the other RTC dimensions, precisely: routine seeking, short-term focus, and emotional

TABLE 2
Interaction analysis for dispositional resistance to change and decision-making autonomy predicting innovative work behaviour

Variables	β	R^2	ΔR^2
<i>Hypothesis 1</i>			
Step 1. Control variables			
Age	.01		
Education	.08*		
Job tenure	-.00	.03	.03
Step 2			
Dispositional resistance to change (RTC)	.13		
Decision-making autonomy	1.47**	.33**	.30**
Step 3			
RTC \times Decision-making autonomy	.07**	.36**	.03**

* $p < .05$, ** $p < .01$. $N = 270$.

reaction. In particular, multiple regression analyses showed a significant interaction between routine seeking and task autonomy, $\beta = .12$, $p < .05$. However, simple slope tests revealed that routine seeking was not significantly associated with innovative work behaviour either in the case of low, $B = -.21$, *ns*, or high, $B = .17$, *ns*, perceived autonomy (upper right picture of Figure 1).

Innovative work behaviour was also found to be positively affected by the interaction between short-term focus and task autonomy, $\beta = .17$, $p < .01$. As shown in lower left picture of Figure 1, simple slope analyses further indicated that short-term focus was positively linked to innovative work behaviour when task autonomy was high, $B = .27$, $p < .01$, rather than low, $B = -.08$, *ns*.

Finally, the relationship between emotional reaction and innovative performance was significantly moderated by task autonomy, $\beta = .13$, $p < .05$.

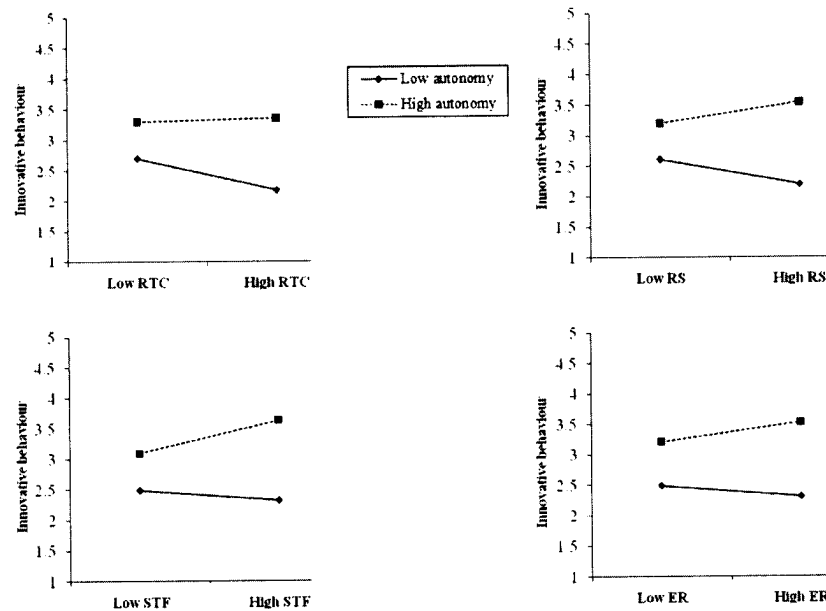


Figure 1. Regression of innovative work behaviour on dispositional resistance to change (RTC), routine seeking (RS), short-term focus (STF), and emotional reaction (ER) for high and low decision-making autonomy.

Simple slope analyses specifically indicated that emotional reaction was positively and significantly associated with innovative work behaviour in the case of high, $B = .16$, $p < .05$, rather than low autonomy, $B = -.09$, ns (see lower right picture of Figure 1). The interaction analysis for resistance to change dimensions and decision-making autonomy predicting innovative work behaviour are reported in Table 3.

Hypothesis 2 was tested by using the same procedures as for Hypothesis 1. Results from multiple regression analyses showed a significant interaction between dispositional resistance to change and feedback from job, thus supporting Hypothesis 2, $\beta = .17$, $p < .05$ (see Table 4). Simple slope analyses further revealed that when feedback from job was high (one standard deviation above the mean), dispositional resistance to change was positively associated to innovative work behaviour, $B = .27$, $p < .05$, whereas when it was low (one standard deviation below the mean) dispositional resistance to change had no relationship with innovative behaviour, $B = -.07$, ns (see Figure 2).

Additionally, four multiple regressions analyses were further conducted in order to test whether the revealed interaction patterns were the same for the specific RTC dimensions, namely: cognitive rigidity, routine seeking, short-term focus, and emotional reaction. The first analysis assessed the interaction between cognitive rigidity and feedback from job, but results showed that the standardized regression coefficient associated with the interaction term was not statistically significant, $\beta = .00$, ns . Likewise,

routine seeking was not significantly moderated by feedback from job, $\beta = .05$, ns .

Conversely, all the other results reported significant interaction effects. In particular, the third analysis revealed a significant interaction between short-term focus and feedback from job, $\beta = .12$, $p < .05$. Consistent with previous results concerning the interaction between feedback and composite RTC, in the case of high feedback short-term focus was positively associated to innovative behaviour, $B = .19$, $p < .05$, whereas in the case of low feedback it was not significantly linked to innovative performance, $B = -.08$, ns .

Finally, emotional reaction was also found to significantly interact with feedback from job, $\beta = .14$, $p < .01$. Consistent with the other findings, results indicated that when feedback was high emotional reaction was positively linked to innovative behaviour, $B = .21$, $p < .05$; conversely, when feedback was low, the relationship was nonsignificant, $B = -.08$, ns . Table 5 reports the interaction analysis for resistance to change dimensions and feedback from job predicting innovative work behaviour.

DISCUSSION

Based on an interactionist approach, the aim of the present study was to assess the conditions under which dispositional resistance to change could lead to innovative behaviour at work. When crucial changes, such as organizational restructurings, occur, firms must not only be able to find out valuable ways to overcome attitude or behavioural forms of resistance

TABLE 3
Interaction analysis for resistance to change dimensions and decision-making autonomy predicting innovative work behaviour

Variables	β	R^2	ΔR^2
Step 1. Control variables			
Age	.01		
Education	.08*		
Job tenure	-.00	.03	.03
Step 2			
Cognitive rigidity (CR)	-.10		
Decision-making autonomy	.57**	.33**	.30**
Step 3			
CR \times Decision-making autonomy	.09	.34	.01
Step 1. Control variables			
Age	.01		
Education	.08*		
Job tenure	-.00	.03	.03
Step 2			
Emotional reaction (ER)	.04		
Decision-making autonomy	.54**	.32**	.29**
Step 3			
ER \times Decision-making autonomy	.13*	.34*	.02*
Step 1. Control variables			
Age	.01	.03	.03
Education	.08*		
Job tenure	-.00		
Step 2			
Routine seeking (RS)	-.02	.32**	.29**
Decision-making autonomy	.55**		
Step 3			
RS \times Decision-making autonomy	.12*	.33*	.02*
Step 1. Control variables			
Age	.01		
Education	.08*		
Job tenure	-.00	.03	.03
Step 2			
Short-term focus (STF)	.09		
Decision-making autonomy	.53**	.33**	.30**
Step 3			
STF \times Decision-making autonomy	.17**	.36**	.03**

* $p < .05$, ** $p < .01$. $N = 270$.

to change (Bordia et al., 2004; Wanberg & Banas, 2000), but also to better understand how some trait-like components of resistance could be redirected towards more adaptive, change-oriented coping behaviours, such as innovative endeavours. Building on a trait activation approach (Tett & Burnett, 2003; Tett & Guterman, 2000), it was hence suggested that when individuals high in dispositional resistance to change undergo an organizational change process, the extent to which they respond adaptively to that perceived high-demanding event might depend on the way in which the work itself is organized and accomplished. In this regard, we specifically hypothesized that in the case of high perceived task autonomy and feedback from job, high RTC employees would regulate their behaviour by enacting proactive

TABLE 4
Interaction analysis for dispositional resistance to change and feedback from job predicting innovative work behaviour

Variables	β	R^2	ΔR^2
Hypothesis 2			
Step 1. Control variables			
Age	.01		
Education	.08*		
Job tenure	-.00	.03	.03
Step 2			
Dispositional resistance to change (RTC)	.12		
Feedback from job	.38**	.22**	.20**
Step 3			
RTC \times Feedback from job	.17*	.24**	.01*

* $p < .05$, ** $p < .01$. $N = 270$.

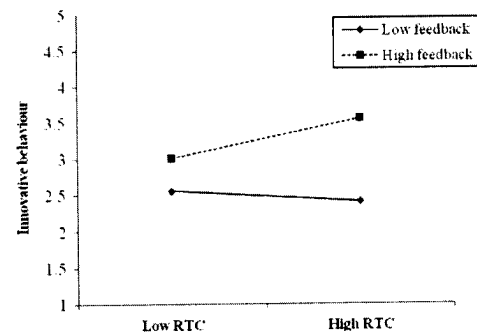


Figure 2. Regression of innovative work behaviour on dispositional resistance to change (RTC) for high and low feedback from job.

innovative courses of action, in order for them to successfully match the change-related demands.

Overall, our results provided partial support for Hypothesis 1, as resistance to change significantly interacted with task autonomy in predicting innovative work behaviour, but simple slopes were not significant either when autonomy was high or when it was low. Furthermore, it was indicated that: (1) Short-term focus and emotional reaction significantly interacted with task autonomy in affecting innovative work behaviour, and simple slopes were found to be positive in the case of high autonomy; (2) routine seeking significantly interacted with task autonomy in predicting innovative performance, but simple slopes were found not to be significant either in the case of high or low autonomy; and (3) task autonomy did not significantly moderate the relationship between cognitive rigidity and innovative work behaviour. Conversely, Hypothesis 2 was supported, as resistance to change was found to significantly interact with feedback from job, predicting individual innovative performance. Furthermore, the relationship between two of the four RTC subdimensions (short-term focus and emotional reaction) and innovative

TABLE 5
Interaction analysis for resistance to change dimensions and
feedback from job predicting innovative work behaviour

Variables	β	R^2	ΔR^2
Step 1. Control variables			
Age	.01		
Education	.08*		
Job tenure	-.00	.03	.03
Step 2			
Cognitive rigidity (CR)	-.12*		
Feedback from job	.47**	.23**	.20**
Step 3			
CR \times Feedback from job	.00	.23	.00
Step 1. Control variables			
Age	.01		
Education	.08*		
Job tenure	-.00	.03	.03
Step 2			
Emotional reaction (ER)	.07		
Feedback from job	.43**	.22**	.19**
Step 3			
ER \times Feedback from job	.14**	.24**	.02**
Step 1. Control variables			
Age	.01		
Education	.08*		
Job tenure	-.00	.03	.03
Step 2			
Routine seeking (RS)	-.01		
Feedback from job	.44**	.21**	.19**
Step 3			
RS \times Feedback from job	.05	.22	.00
Step 1. Control variables			
Age	.01		
Education	.08*		
Job tenure	-.00	.03	.03
Step 2			
Short-term focus (STF)	.06		
Feedback from job	.42**	.22**	.19**
Step 3			
STF \times Feedback from job	.12*	.23*	.01*

* $p < .05$, ** $p < .01$. $N = 270$.

performance was significantly moderated by feedback from job. These findings effectively confirmed a significant moderating role of both task autonomy and feedback from job in the relationship between dispositional resistance to change and innovative work behaviour.

However, although in the case of high feedback resistance to change was positively and significantly associated to innovative work behaviour, high levels of task autonomy were insufficient to instil innovative courses of action among high RTC individuals. Similarly, when people perceived high task autonomy, the link between routine seeking and innovative work behaviour was positive but nonsignificant. A possible explanation for this result might be that, contrarily to the hypothesized assumptions, task autonomy is not really perceived from high RTC individuals as innovation-supportive. This task

design characteristic is indeed commonly associated with increased levels in creativity and innovation within nonchanging contexts (Amabile et al., 1996; Shalley, 1991), as it provides employees with the necessary freedom and independence to develop and implement new and useful ideas within the work environment. However, it could be that when a change process occurs, the expected pattern will not emerge because autonomy, by enhancing the freedom of choice and discretion, might diminish the feeling of confidence and reassurance, which would be necessary for high RTC individuals to engage in self-starting coping endeavours (i.e., innovative behaviour). Conversely, feedback from job, by providing constant information about the appropriateness of task performance and strategies, will reduce the individual's sense of uncertainty, thus allowing high RTC employees to regulate their behaviours towards more adaptive change-oriented actions. Future research might therefore address this argument in order to better understand which contextual factors are effective moderators of the relationship between dispositional resistance and innovative performance.

Furthermore, despite the single slopes not being significantly different from zero, a significant interaction between job autonomy and dispositional resistance to change in predicting innovative work behaviour implies that the slopes of the regression are significantly different from each other. In this case, simple slope test specifically revealed that the relationship between resistance to change and innovative behaviour was less negative when perceived job autonomy was high than when it was low. Accordingly, another possible interpretation of this result is that job autonomy exerted a buffering effect by alleviating the negative consequences of resistance to change on employees' innovative endeavours. This could hence suggest that despite job autonomy not being sufficient to elicit innovative responses among high RTC employees, the possibility for these people to discretionarily decide the way of carrying out their own task and to exert a control on their job activities protected them from the negative effects of their change-averse personality. In this sense, job autonomy can be regarded as a critical work design dimension that can help organizations and their members counteract and overcome dispositional resistance to changes.

With respect to single RTC subscales, moderation analyses provided interesting findings, as both task autonomy and feedback from job were found to significantly moderate the relationship between the affective components of resistance (emotional reaction and short-term focus) and innovative performance. Conversely, these work design characteristics were insufficient to elicit engagement in innovative courses of action among those employees who

reported high levels of cognitive rigidity and routine seeking—which reflect the cognitive and behavioural components of resistance to change, respectively.

It seems thus that affective aspects of resistance are more bound to be redirected towards adaptive coping strategies than behavioural and cognitive components. In this regard, it is worth noting that, unlike other RTC components, emotional reaction and short-term thinking were positively and significantly correlated with innovative behaviour. These results might be explained if we take into account the results of certain studies within creativity and innovation literature, which provided empirical support on the positive link between negative affective states and creative performance. For example, George and Zhou (2002), building on a mood-as-input model, indicated that negative moods were positively related to creative performance when perceived recognition and rewards for creative performance and clarity of feelings were high. Furthermore, the results of a study carried out by Zhou and George (2001) demonstrated that under the presence of high levels of useful feedback from co-workers, co-workers helping organizational support, employees with high job dissatisfaction exhibited the highest creativity. These findings suggest that negative affect or feelings of dissatisfaction with current conditions might instil creative initiatives among employees, in order to improve their environment or their task, thereby adapting themselves to difficult situations.

Building on Oreg's (2003) tripartite conceptualization of dispositional resistance to change, the affective component of resistance examined in our study is actually different from the affective states described earlier. The former indeed reflects a stable inclination to feel distressed, uneasy, and concerned about the change and the negative short-term consequences it could bring about, rather than a momentary emotion or mood. Therefore, it could be that in the case of either high autonomy or high feedback from job, the positive link between affective aspects of RTC and innovative performance will occur via specific emotional states. Likewise, the relationship between affective components of resistance and individuals' innovativeness could be interpreted from a stress-oriented perspective. Indeed, individuals who exhibit high levels of resistance, in terms of personality-based characteristics (i.e., high levels of emotional reaction and short-term focus), tend to perceive changes as stressful, threatening events. Accordingly, when people who are high on dispositional forms of resistance undergo intensive organizational changes, they might experience unpleasant and tormented emotional states that could in turn activate negative, maladaptive responses to change, such as affective, cognitive, or behavioural forms of resistance (Oreg, 2006). However, the

expected experience of stress in these employees could also lead to more adaptive forms of change-related reactions, such as innovative behaviours, depending on the presence of an innovation-supportive context. The production and implementation of new and useful ideas is effectively a form of coping conduct through which an individual can both proactively change his or her work environment and adaptively respond to its requirements. Job demands have indeed been argued to activate an elevated state of arousal which can lead an employee to perform a number of coping activities, in order for him or her to successfully meet such requirements (Bunce & West, 1995; Janssen, 2000; Karasek, 1979; Karasek & Theorell, 1990; West, 1989). Therefore, when high RTC people—especially those who report high levels in the affective components of resistance—undergo important, high-demanding organizational changes, they might experience stress or negative emotional states that, under condition of an innovation-supportive context, will in turn elicit innovative coping responses. Future researches should hence address these issues in order to better understand how people who are naturally inclined to resist changes can self-start innovative courses of actions that are necessary for successful implementation of change initiatives.

Overall, our findings add to research on resistance to change and innovation, as they help deepen the knowledge on what circumstances can lead dispositional forms of resistance to enhance positive, change-oriented outcomes. In line with extant literature on organizational change, our results support the long-held assumption that it is possible to overcome resistance to change through valuable and appropriate practices (e.g., Kotter & Schlesinger, 1979; Levay, 2010; Poole, Gioia, & Gray, 1989). However, our study goes beyond current literature, as it specifically addresses the analysis of the effect of contextual antecedents on dispositional forms of resistance to change, rather than on attitude or behavioural ones. Past research showed that resistance to change can vary depending on certain situational variables (e.g., Furst & Cable, 2008); our findings suggest that dispositional resistance, which is a stable individual trait, can also elicit different levels of change-oriented, coping responses (i.e., innovative work behaviour), and that the extent to which high RTC individuals will engage in such an activity depends on the level of feedback they receive from their task, and, to a lesser extent, on the possibility for them to autonomously decide how to carry out their job.

Furthermore, our findings also contribute to the literature on innovation, which indicates that employees can use innovative behaviour as an effective way to face difficult job demands (Bunce & West, 1995; Janssen, 2000; Leung et al., 2011). An

interesting implication of this issue is that dispositional resistance to change, despite its general negative impact on change-related outcomes (Johnson et al., 1996; Miller, Johnson, & Grau, 1994; Piderit, 2000; Rush, Schoel, & Barnard, 1995), could also favour adaptive coping behaviours (i.e., proactive performance or innovative behaviour) when some innovation-supportive factors are present. Our study specifically contradicted Oreg's (2003) findings on the negative relationship between dispositional resistance to change and innovation.

Yet, it is worth noting that our conceptualization of innovation was substantially different from that provided by Oreg (2003). In fact, Oreg's study was focused on innovation implementation (Klein & Sorra, 1996), which specifically refers to employees' effective, committed, use of organizational innovations. Conversely, building on West and colleagues' framework (Janssen, 2000; West, 1989; West & Farr, 1990), we considered innovation as a self-starting, proactive behaviour whereby new and useful ideas—which might help employees to successfully cope with change-related demands—are intentionally developed and implemented by the individuals. Accordingly, our results indicated that work design characteristics can instil the activation of discretionary innovative efforts among high RTC employees, in order for them to better face relevant organizational changes, rather than fostering their adherence to organizational innovations. Future research should hence analyse the impact of dispositional resistance to change on the frequency with which organizational members adopt, implement and routinize those innovations that are planned, championed, and introduced by the organizations and their top management.

Our results also have important practical implications for appropriate management of the change process. Although several organizational strategies have been identified that are helpful to reduce employees' attitudes and behavioural forms of resistance, there is still scarce knowledge on how to properly manage high RTC individuals in order for them to positively adapt to changes. In this regard, our findings suggest that a possible way for obtaining successful coping behaviours is to design employees' activities in such a way that employees could receive constant feedback about the effectiveness and appropriateness of their task performance: This work design practice could help reduce the individual perceptions of uncertainty and instability, thereby favouring effective planning and enacting of innovative courses of action.

Our study is not without limitations. First, because the research was conducted on a relatively small sample, from the public sector, it is not possible to generalize our findings to other organizational contexts. Future research might therefore replicate these

analyses on a larger sample and in different areas of both the private and the public sector. Second, our cross-sectional design excluded the interpretation that innovative work behaviour was caused by dispositional resistance to change. Other researches should thus investigate plausible causal relationships through longitudinal designs or experiments. Third, all data was collected from the same sources through self-report measures, such that our results could be influenced by common method bias. Measures of innovative performance should hence comprise either supervisory or co-workers ratings, as well as objective indicators in future research designs. Another limitation of this research is the low response rate, which threatened the generalizability of our results. Future tests of the relationships suggested in this study should hence be carried out on a more representative sample. Finally, because innovation-related behaviours that were assessed in this study comprised general extrarole efforts that people might self-enact during their daily activities, we do not have enough knowledge to confirm that such courses of action were effectively performed to support the organizational change. People who tend to feel uneasy and stressed with changes in general might in fact experience distress or negative emotional states that would lead them to exploit their innovativeness for counterproductive purposes, such as avoiding or hampering the implementation of the change initiative. Accordingly, future researches should either use different measures or adapt current scale of innovative work behaviour to the context to change, in order to properly assess whether innovation-related activities are effectively enacted by employees to proactively work toward the change.

In conclusion, this study extends research on resistance to change and innovation by showing that when feedback from job and, to a lesser extent, task autonomy are present, a positive association between dispositional resistance to change and innovative work behaviour is elicited, contrary to the well-known negative link between resistance to change and change-related outcomes. In this sense, consistent with an interactionist approach, our findings contributed to the change literature, by demonstrating that, beyond attitude and behavioural reactions, dispositional resistance can also vary in the degree to which it fosters or inhibits adaptive behaviours, depending on the moderating role of perceived task design characteristics. Moreover, our research also contributed to the innovation literature, by proving that some personality traits that are potentially associated to maladaptive change-related reactions can significantly interact with work design aspects in fostering individual innovation, which is an invaluable resource for successful organizational change initiatives.

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