Brief Report

Autonomy Orientation and Innovative Work Behavior

The Mediating Role of Creativity and Prosocial Motivation

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Abstract: *Introduction:* Innovative work behavior (IWB) has a built-in, definitional association with elements of creativity and the provision of benefits to others within the work context. Because of the properties of IWB and the nature of autonomy, as conceptualized by self-determination theory, we hypothesized that autonomy orientation would be positively associated with IWB through the mediating role of both creativity and prosocial motivation. *Aim:* The study examines the relationship of dispositional autonomy with IWB and offers evidence for potential explanatory mechanisms of how autonomous forms of motivation are associated with IWB. *Method:* We conducted a cross-sectional study in Greece and Canada, wherein employees (N = 528) completed assessments of causality orientations at work, prosocial motivation, creativity and IWB. *Results:* Autonomy orientation, creativity, and prosocial motivation were positively associated with IWB, whereas controlled and impersonal orientations were negatively associated with IWB. Mediation analyses showed that creativity and prosocial motivation mediated the relationship between causality orientations and innovative work behavior. *Discussion and conclusion:* Our findings extend prior research on the role of autonomy and prosocial motivation on innovative and creative behavior at work.

Keywords: autonomy orientation, innovative work behavior, prosocial motivation, creativity, causality orientations

Introduction

Innovative work behavior (IWB) refers to "the intentional creation, introduction, and application of new ideas within a work role, group or organization, in order to benefit role performance, the group, or the organization" (Janssen, 2000, p. 288). Built into this widely cited definition, there appears to be (a) some element of creativity and (b) the motivation to benefit others within the organization (i.e., some form of prosocial motivation). The present research focuses on creativity and prosocial motivation to connect IWB with inherent individual tendencies and high-quality motivational states covered in self-determination theory (SDT; Ryan & Deci, 2017; Ryan et al., 2021).

Although IWB relates to creativity, it is more than just creative thinking. Creativity concerns the cognitive processes involved when attempting to generate novel ideas and is classified mostly as an intrapersonal activity that takes place at the beginning of the innovation process. Workplace innovation further involves introducing, modifying, promoting, and eventually implementing these new ideas in an applied context and, thus, is best considered an interpersonal activity (Hughes et al., 2018; Lee et al., 2020). This latter part of work innovation is strengthened when there is high employee motivation to make a prosocial difference or, in other words, when the employees exhibit high prosocial motivation (Grant, 2007). We define prosocial motivation here as "the desire to expend effort to benefit other people" (Grant, 2008, p. 49). Therefore, one may argue that two distinct processes lead to IWB: one process emphasizing a strong creativity element that generates new ideas, thereby propelling workplace innovation; and another process stressing strong prosocial motivation that promotes the implementation of these new ideas to the benefit of others.

A relevant question might be whether creativity and prosocial motivation are associated with a common motivational process either of consistent environmental incentives or of a more internal type of motivation. For instance, social exchange theories that treat IWB as motivated by employees' desire to reciprocate benefits received from the organization (e.g., Atitumpong & Badir, 2018) offer the perspective of environmentally based motivators. In contrast, approaches like that found in SDT focus on more internal, autonomous forms of motivation and treat IWB

as primarily motivated by the self instead of external motivators (e.g., Devloo et al., 2015). While both perspectives have their merits, our focus in this brief report lies on the self-motivation of IWB. We use the framework of SDT, which identifies *autonomy causality orientation* as a propensity for self-motivation. We examine whether this propensity predicts IWB through the mediating effect of creativity and prosocial motivation, thereby offering evidence for why self-motivation is connected to IWB.

Self-Determination Theory, Autonomy Orientation, and IWB

According to SDT, humans naturally tend to grow and live well. However, enacting this propensity depends on fulfilling three basic psychological needs—autonomy, competence, and relatedness (Ryan & Deci, 2017). Satisfying these needs facilitates intrinsic motivation, characterized by interest, curiosity, and enjoyment as well as highly internalized forms of extrinsic motivation, wherein individuals act according to their own values. Moreover, individuals differ regarding how they respond motivationally to social cues (Koestner & Levine, 2023). *Autonomy-oriented individuals* generally follow their own interests and values, prefer aspects of the job that stimulate intrinsic motivation and experience behavior as volitional; *control-oriented individuals* generally act based on environmental reward contingencies and experience behavior as pressured by imperatives embedded in social norms; *impersonal-oriented individuals* generally lack direction and intentionality and feel that their behavior and desired outcomes lie beyond their agentic control (Halvari & Olafsen, 2020).

Autonomy-oriented individuals regularly exhibit autonomous motivation (Deci & Ryan, 1991; Halvari & Olafsen, 2020; Lam & Gurland, 2008). Autonomous motivation (i.e., self-motivation) prototypically takes the form of intrinsic motivation, which refers to activities that are inherently enjoyable and interesting in and of themselves. A well-known hypothesis is that creativity is fostered under conditions that facilitate intrinsic motivation (i.e., the prototype of autonomous motivation) (Amabile, 1983). In such conditions, individuals are more likely to engage in IWB (Devloo et al., 2015). Thus, we hypothesize that autonomy-oriented individuals, who are more prone to be intrinsically motivated, would be more creative in their work context and more likely to engage in IWB. In other words, we expect creativity to mediate the relationship between autonomy orientation and IWB.

As we have already argued, creativity may play a role in the development of novel ideas that are associated with IWB, but prosocial motivation is vital to the modification, promotion, and implementation of these ideas. Once work behavior takes a more prosocial direction, it cannot be characterized solely by intrinsic motivation. Instead, work behavior aimed at benefiting others is regarded as extrinsically motivated because it is motivated by a separable outcome beyond the work activity itself (Forgeard & Mecklenburg, 2013). SDT especially focuses on high-quality extrinsic motivation that takes the form of identified and integrated regulation, where a person identifies with the instrumental value of an activity or has integrated that value within a broader system of principles and values (Pelletier & Rocchi, 2023). Moreover, moral prosocial behavior is ideally integrated – not intrinsically motivated – because it does not aim at enjoyment per se (Arvanitis, 2017; Arvanitis & Stichter, 2023). It is expected to occur more often in integrated individuals (Arvanitis & Kalliris, 2020), who in turn tend to experience more eudaimonic well-being (Arvanitis & Stichter, 2023). Therefore, autonomous motivation, especially integrated regulation, can explain why individuals might engage in work behavior that benefits others, even when no apparent external reward is involved. Furthermore, autonomy-oriented individuals arguably tend to engage in the modification, promotion, and implementation aspects of IWB more often through integrated regulation consistent with integrated prosocial values (and prosocial motivation). Hence, we expect autonomy orientation to be positively associated with IWB and prosocial motivation to mediate this relationship.

All in all, we expect autonomy-oriented individuals to engage more often in intrinsically motivating work, which enhances their creativity, but also in integrated work activities to help others. These two manifestations of autonomy orientation may explain its relationship with IWB. Figure 1 portrays the proposed relationship. Autonomy orientation is positively associated with IWB, and prosocial motivation and creativity mediate this relationship. Conversely, control-oriented employees who are "driven by interventions such as rewards, deadlines, and other external incentives" (Hagger & Chatzisarantis, 2011, p. 486) tend to display less autonomous forms of regulation and are thus less likely to engage in extra-role beneficial behavior such as IWB. We expect creativity and prosocial motivation to mediate the negative relationship between control orientation and IWB. We expect the same effects for impersonal-oriented individuals, but, in this case, the effect is not driven by a focus on environmental contingencies but by a lack of intentionality and control.

Method

Participants and Procedure

Before commencing our study, we conducted a Monte Carlo power analysis for the indirect effects of two parallel

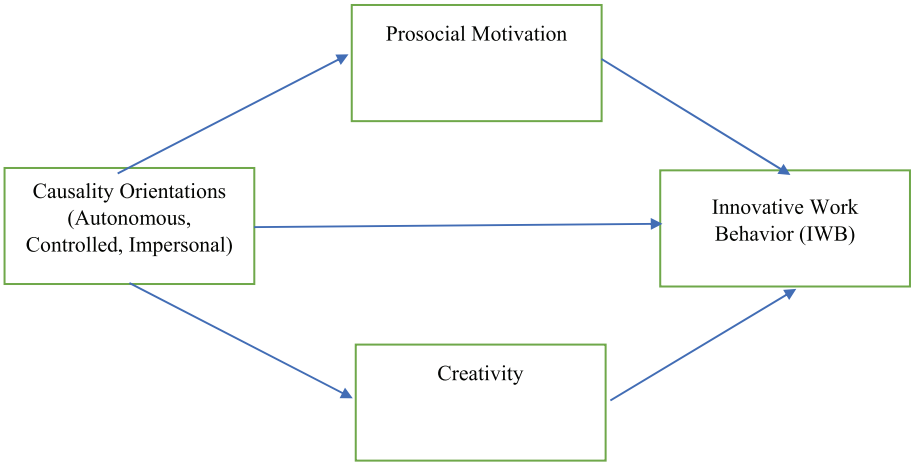

Figure 1. The proposed model: Prosocial motivation and creativity mediate the relationship between causality orientations and IWB.

mediators (Schoemann et al., 2017). Using a conservative between-variable correlation of 0.20 and an *SD* of 1 for all variables, 500 participants produced a power of 89%, so we aimed to slightly exceed that mark. We recruited 528 employees (64% female, M_{AGE} = 37.5) working across various industries and occupations as a convenience sample in Greece and Canada. We recruited one part of the Canadian sample (N = 309) using a convenience sampling method (N = 118), while we recruited the rest of the participants on Prolific Academic (N = 191) with criteria to ensure their equivalence to the convenience sample (i.e., French-speaking, living in Canada). We also recruited the Greek sample (N = 219) using a convenience sampling method. Most participants (52.8%) held a Masters' degree, and the average employment was 7.3 years. The data were collected through Google Forms (Greece) and Qualtrics (Canada) and were uploaded to the Zenodo open-access repository (https://zenodo.org/records/11576328).

Measures

General Causality Orientations

We used the Causality Orientations at Work Scale (Halvari & Olafsen, 2020) to measure the three orientations at work: autonomy, controlled, and impersonal. The scale consists of 11 different vignettes, each describing a separate incident at work and listing three ways of the employee's response to it. The three possible responses reflected either a tendency to experience interest and initiate action (i.e., an autonomy orientation), feeling compelled by contingencies in the workplace (i.e., a controlled orientation), or feeling anxious and ineffective during interactions with the work environment (i.e., an impersonal orientation).

Prosocial Motivation

We used a 5-item scale adapted from Grant and Sumanth (2009), which includes items such as "I prefer to work on tasks that allow me to have a positive impact on others."

Innovative Work Behavior

We used 9 items from De Jong and Den Hartog (2010). The IWB scale is a unidimensional measure that incorporates items to reflect four stages of IWB, i.e., exploration, generation, championing, and implementation of ideas. Participants were required to indicate how frequently they manifested the behaviors mentioned in the survey, using a 7-point Likert-type scale ranging from 1 (*almost never*) to 7 (*almost always*). A sample item is "How often do you find new approaches to execute tasks?"

Creativity

We used 3 items measuring radical creativity, developed by Madjar et al. (2011) (e.g., "I suggest radically new ways to improve products or services"). Radical or "divergent" creativity is defined as novel ideas, in the sense that they differ substantially from an organization's existing routine practices, and it takes time and energy to make them fully applicable in real-life settings.

Results

Preliminary Correlational Analyses

Consistent with our expectations, we found autonomous causality orientation to positively correlate with IWB, while

Table 1. Means, standard deviations, correlations, and alpha coefficients (along the diagonal)

	M	SD	1	2	3	4	5	6
1. Autonomous orientation	5.70	0.81	(.85)					
2. Controlled orientation	4.50	0.99	−.04	(.84)				
3. Impersonal orientation	2.80	1.07	−.60**	.34**	(.88)			
4. Prosocial motivation	5.90	1.02	.36**	−.15*	−.34**	(.94)		
5. Creativity	4.65	1.32	.37**	−.16**	−.30**	.24**	(.88)	
6. Innovative work behavior (IWB)	3.72	1.24	.25**	−.34**	−.32**	.50**	.48**	(.95)

Note. *p <.05, **p < .01.

we found controlled orientation and impersonal orientation to be negatively associated with this work outcome (see Table 1).

Mediation Effects

We tested the mediating role of prosocial motivation and creativity in the relationship between causality orientations (autonomous, controlled, and impersonal) and innovative work behavior by using 5,000 bootstrapped samples with the PROCESS macro for SPSS.

Autonomous causality orientation

Autonomous causality orientation had a significant indirect effect on IWB through prosocial motivation, b = 0.23, 95% CI [.16, .30]. Autonomous causality orientation also had a significant indirect effect on IWB through creativity, b = 0.23, 95% CI [0.17, 0 .29]. The direct effect of autonomous causality orientation on IWB was no longer significant when the two mediators entered the model, b = −0.07, p = .26, suggesting full mediation.

Controlled Causality Orientation

Controlled causality orientation had a significant indirect effect on IWB through prosocial motivation, b = −0.07, 95% CI [−0.11, −0.02]. Controlled causality orientation also had a significant indirect effect on IWB through creativity, b = −0.07, 95% CI [−0.11, −0.03]. The direct effect of controlled causality orientation on IWB was significant when the two mediators entered the model, b = −0.29, p < .001, suggesting partial mediation.

Impersonal Causality Orientation

Impersonal causality orientation had a significant indirect effect on IWB through prosocial motivation, b = −0.14, 95% CI [−0.19, −0.10]. Impersonal causality orientation also had a significant indirect effect on IWB through creativity, b = −0.13, 95% CI [−0.18, −0.09]. The direct effect of impersonal causality orientation on IWB was significant when the two mediators entered the model, b = −0.10, p = .02, suggesting partial mediation.

Discussion

This study found that autonomy orientation is positively associated with IWB through the mediating role of creativity and prosocial motivation. This finding is consistent with the SDT premise that autonomy-oriented individuals are expected to (a) be more creative (Gagné & Deci, 2005) and (b) act based on their evolved prosocial intrinsic tendencies (Ryan & Hawley, 2017). Simply put, IWB is expected by autonomy-oriented individuals because they are more likely to be both creative and prosocially inclined in the context of their work. We further suggest that employees with autonomy orientation tend to interpret external cues and events in the workplace as needs-supportive, which in turn promotes prosocial and intrinsic motivation and, consequently, work outcomes such as IWB (cf. Hagger et al., 2015).

We also found the expected converse effect for controlled and impersonal orientations. Individuals who tend to focus on rewards and social sanctions (i.e., control-oriented individuals) or individuals who tend to feel a lack of control and intentionality (i.e., impersonal-oriented individuals) are less expected to engage in IWB because they are both less likely in the context of their work to be creative and prosocially motivated. However, in this case, the mediation is partial, revealing that the effects of controlled and impersonal orientation on IWB are not mirror images of the autonomy orientation (and would not be expected to be, as these are distinct characteristic adaptations).

Our study emphasizes SDT's account of self-motivation and not the social exchange account, which offers competing explanations for creativity (Gerhart & Fang, 2015) and prosociality (Weinstein & Ryan, 2010). We have provided evidence for how self-motivation is associated with IWB. Since this option seems feasible, it may be the most viable one for promoting IWB. Autonomy-oriented individuals are more likely to act based on intrinsic motivation and integrated values because of a higher level of personality integration (Deci & Ryan, 1991). Personality integration, in turn, is intertwined with consistency (Arvanitis & Kalliris, 2020), and if it leads to IWB, it does

so consistently. Such consistency is not easy to achieve if an organization attempts to provide external incentives for creativity/innovation and for benefiting others in all facets of work life. In the end, if autonomy orientation and personality integration are positively associated with IWB, it makes sense to support these internal processes rather than attempt to provide a complicated structure of external incentives. More specifically, the integration process is supported by the satisfaction of the three basic psychological needs (Ryan & Deci, 2017) that correlates positively with a wealth of positive outcomes in the workplace (Deci et al., 2017). Therefore, organizations are more likely to succeed in fostering IWB by aiming to support individual tendencies for growth and development and providing environmental nutriments for autonomy, competence, and relatedness rather than attempting to establish a complex structure of external, compensation-based incentives (see also Devloo et al., 2015; Messmann et al., 2022). Apart from cultivating intrinsic tendencies through general need satisfaction, organizations could offer seminars and other activities that target stimuli for developing creativity and prosocial motivation. Finally, they could apply autonomy orientation as a criterion in the recruitment process.

This brief report is a first step in understanding how individual differences in causality orientations – or broader differences in personality integration – may impact IWB. Yet, there are important limitations to the research presented here. First, its correlational design does not allow inferences of causality, which may be better served in the future through a longitudinal design to unpack the relationships between causality orientations, creativity, prosocial motivation, and IWB. Second, we used self-report measures, considered appropriate for measuring employees' innovative behavior since it is likely that employees themselves are better aware of their own subtle IWB initiatives (Janssen, 2000). However, more measures should be employed, such as other-rated measures for creativity or the evaluation of IWB by fellow employees. Third, our research does not clarify how causality orientations are associated with prosocial motivation and creativity in everyday worklife. A possible route would be need-crafting, that is, through the individuals' awareness of need-supportive activities and the proactive propensity to create them (Laporte et al., 2021). Future work should also examine the processes of personality integration and develop measures that reflect the level of integration. A possible future path for understanding beneficial extra-role activities such as IWB is to better understand the processes of need-crafting and personality integration, which an autonomy orientation arguably fosters, and how these are related to creativity and prosociality.

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Conflict of Interest
The authors declare no conflict of interest.

Publication Ethics
All individual participants included in the study provided informed consent. All procedures performed in this study were done in accordance with the ethical standards of the 1964 Helsinki Declaration and its later amendments. While at the time of the study, there was no IRB at Athens School of Fine Arts (ASFA), the research protocol was approved by the Ethics Mentor appointed by ASFA according to the funding body's regulations and the signed grant agreement under the Skłodowska-Curie Actions of the European Union (grant agreement no. 101028279).

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