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## Brief Report

# Self-determined work motivation predicts job outcomes, but what predicts self-determined work motivation?

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### Abstract

Self-determined work motivation predicts important job outcomes, such as job satisfaction [Richer, S. F., Blanchard, C., & Vallerand, R. J. (2002). A motivational model of work turnover. *Journal of Applied Social Psychology, 32*, 2089–2113], but what predicts self-determined work motivation is less fully understood. We tested general causality orientation—specifically autonomy and control orientation—as a predictor of self-determined work motivation, which in turn was expected to predict job satisfaction and identification commitment as job outcomes. Regression analyses confirmed our hypotheses such that autonomy orientation predicted job outcomes via increased self-determined work motivation. Control orientation predicted self-determined work motivation but did not affect either of the two job outcomes. Findings are discussed with respect to the importance of individual differences in understanding job outcomes.

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**Keywords:** Causality orientation; Self-determination; Work motivation; Job satisfaction; Identification commitment

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### 1. Introduction

Employees' self-determination is an important issue in organizations (Gagné & Deci, 2005). Self-determined employees feel more committed to their organizations (Gagné & Koestner, 2002) and report fewer turnover intentions (Richer, Blanchard, & Vallerand, 2002) and physical symptoms (Otis & Pelletier, 2005). But what explains why some employees engage in their work for self-determined reasons (e.g., because my work is important to me), whereas others engage in their work for external reasons (e.g., because I might get fired if I didn't)? In the current study, we investigate the role of general causality orientation (Deci & Ryan, 1985b) in predicting self-determined work motivation. Further, based on evidence linking causality orientation to job outcomes (Baard, Deci, & Ryan, 2004) and consistent with earlier theorizing (Gagné & Deci, 2005), we test a model whereby self-determination mediates the relation between causality orientation and job-related outcomes.

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Drawing from self-determination theory (SDT; Deci & Ryan, 1985a), we define self-determination as the experience of engaging in behaviors for autonomous reasons that are fully endorsed by the self, as opposed to reasons that feel pressured or coerced. Self-determination is inherent in activities that are intrinsically motivated—i.e., undertaken for their own sake (Deci & Ryan, 1985a). However, reasons for engagement in extrinsically motivated activities—those that, like work, are undertaken as a means to some end—can vary along a continuum representing degrees of self-determination. These degrees of self-determination are also conceptualized as the extent to which individuals have internalized the value of an activity and made it their own. Specifically, according to SDT (Ryan & Deci, 2000), employees who engage in their work for *external* reasons (e.g., salary, to avoid being fired) are non-self-determined and have not internalized the value for the work. They experience their behavior not as fully self-endorsed, but rather, as coerced by outside inducements. Employees who do their work for *introjected* reasons (e.g., to avoid guilt, shame, or negative self-evaluation) are minimally self-determined—they feel similarly coerced, but in this case by a self-imposed sense of “should.” Self-determined employees, by contrast, engage in their work for *identified* or *integrated* reasons (e.g., a sense of personal importance or valuing, consistent with other personally important values). They wholly and freely endorse their behavior, without feelings of pressure or coercion, and have fully internalized the value for the work.

Employees' self-determination has been linked to positive job outcomes. For example, police officers with higher levels of self-determined work motivation reported greater intentions to remain in their jobs as long as they could before retirement (Otis & Pelletier, 2005). They were also less likely to report daily hassles, or minor events that served as a source of irritation to the individual. Fewer daily hassles, in turn, predicted lower levels of physical symptoms. In another study, self-determined work motivation was associated with a greater level of work satisfaction and lower level of emotional exhaustion, and these in turn were differentially related to turnover intentions (Richer et al., 2002). Thus, self-determined work motivation predicts desirable job outcomes. What, though, predicts self-determined work motivation?

Substantial evidence supports the role of the social environment in predicting self-determination at work (Baard et al., 2004), but the role of individual differences has received considerably less attention, despite evidence and theory suggesting their importance (Black & Deci, 2000). Thus, our purpose in the current study was specifically to view the individual as an important selector and filter of surrounding environments, and therefore to focus on within-individual processes that might affect job outcomes. Following Gagné and Deci's (2005) call for examination of general causality orientation as a particularly key individual difference, we test its role in predicting self-determination and ultimately job outcomes.

General causality orientation (GCO; Deci & Ryan, 1985b) is an individual difference variable that refers to people's tendency to orient toward particular kinds of social or environmental inputs, and particular interpretations of those inputs. Causality orientation is a stable disposition over time and across domains. It thus differs from self-determination, which is domain-specific and can be influenced by both individual differences and contextual factors. Two types of causality orientations are relevant in the workplace: autonomy orientation and control orientation. Autonomously-oriented individuals tend to look for opportunities that provide self-determination, to interpret events as autonomy-supportive, and to organize their behaviors based on intrinsic interest. By contrast, control-oriented individuals tend to organize their behaviors based on deadlines, rewards, and surveillance; to interpret events as controlling; and to be motivated by extrinsic rewards. Although individuals' causality orientation and their domain-specific levels of self-determination are conceptually distinct (i.e., autonomously oriented individuals can engage in particular activities for non-self-determined reasons; control oriented individuals can engage in particular activities for self-determined reasons), we hypothesize that in the work domain, autonomy orientation will predict more self-determined reasons for engaging in work, while control orientation will predict less self-determined reasons.

Beyond the predicted association between GCO and self-determined work motivation, some emerging evidence suggests that GCO is itself associated with job outcomes. For example, autonomy orientation has been positively associated with job performance and psychological adjustment (Baard et al., 2004). Similar findings have obtained in non-work domains, as well (Black & Deci, 2000). Based on this pattern of evidence and earlier theorizing (Gagné & Deci, 2005), we propose a mediational model whereby GCO predicts self-determined work motivation, which in turn predicts job outcomes.

Regarding specific job outcomes, we focus on job satisfaction and identification commitment, both of which count among the broad indices of the health of an organization, and have been linked with positive

job outcomes such as increased organizational citizenship behaviors and job performance (Balfour & Wechsler, 1996; Kinicki, McKee-Ryan, Schriesheim, & Carson, 2002).

In sum, we hypothesize that self-determination will mediate the relation between GCO and job outcomes. Specifically, we expect that autonomy orientation will positively predict self-determined work motivation, which in turn will positively predict job satisfaction and identification commitment; and conversely, we expect that control orientation will negatively predict self-determined work motivation, which will in turn predict job satisfaction and identification commitment.

## 2. Method

### 2.1. Participants

Participants were non-faculty employees of a small liberal arts college in New England working in service and trade positions (17.8%), managerial and supervisory roles (28.0%), and administrative roles in departments such as admissions, academic departments, human resources, and library and information services (54.1%). One hundred and sixty participants (20.6% male, 79.4% female) completed the study, representing a response rate of 35.6%. This is very close to the 36.8% average found in a review of email survey response rates (Sheehan, 2001). Age in the sample was distributed as follows: 35.0% between the ages of 20 and 39; 26.3% between 40 and 49; 30.0% between 50 and 59; and 9% older than 60. Participants had worked at the college for an average of 9.57 years,  $SD = 8.08$ , and 75% were married or in a civil union. About 17.7% of the sample had a high school level of education, 53.8% held a university degree, and 28.5% had earned a post-graduate degree.

### 2.2. Procedure

An e-mail containing a brief description of the study and a link to our web-based survey was sent to all employees in the targeted categories. The survey was completed online, and consisted of five questionnaires tapping employees' causality orientation, self-determined work motivation, job satisfaction, identification commitment, and demographic information. The entire survey took approximately 20 min to complete. As a thank-you, participants were entered into a raffle for one of several gift certificates.

### 2.3. Measures

With the exception of the demographics items, participants responded to all questionnaires on a 7-point Likert scale. All scaled measures were subjected to confirmatory factor analysis and each yielded a single factor according to the scree criterion (Cattell, 1966), as expected.

#### 2.3.1. General causality orientation

Participants' general causality orientation was measured by the General Causality Orientation Scale (Deci & Ryan, 1985b), which includes 12 vignettes that describe everyday life situations. For each vignette, participants indicate how likely they would be to engage in three possible responses, each of which represents a type of causality orientation—autonomy, control, or impersonal. For example, in response to the scenario of being offered a new job, participants rate how likely they would be to respond autonomously (e.g., by considering how interested they are in the kind of work at the new job), in a control-oriented way (e.g., by wondering whether there are good possibilities for advancement), and impersonally (e.g., by wondering whether they can do the work without getting in over their head). We computed an average score for each orientation, with higher scores indicating more of that orientation. Only the autonomy and control subscales were used in the present study. Past reports of internal consistency were .74 for the autonomy and .69 for the control orientation (Deci & Ryan, 1985b). In the present study, the Cronbach's alphas for autonomy and control orientation were .77 and .59, respectively. While the scree criterion (Cattell, 1966) suggested a single factor for each orientation, and we therefore analyzed as such, there were multiple eigenvalues that exceeded 1.0 for the control orientation scale, and may have contributed to its low reliability in this sample.

### 2.3.2. Self-determined work motivation

Adapted from Ryan and Connell's (1989) study of self regulation, the self-determined work motivation questionnaire comprises 12 items representing four types of reasons for doing one's work: external (e.g., because that's what I am supposed to do), introjected (e.g., because I would feel guilty if I did not do my work), identified (e.g., because my work is important and beneficial for both the college and myself) and intrinsic (e.g., because I simply enjoy my work at the college). After confirming that the subscales formed a quasi-simplex pattern, we followed earlier studies (Lynch, Plant, & Ryan, 2005) in computing a relative autonomy index (RAI) as follows: 2\*intrinsic + identified – introjected – 2\*external. The overall Cronbach's alpha was .80 in the present study, with individual subscale reliabilities as follows: .47, .66, .82 and .80 for external, introjected, identified, and intrinsic regulation, respectively. The low alpha for external regulation may be a function of a cohort effect at the particular college where the study was conducted. Two of the items are "Because I want to get a raise" and "Because I'd be afraid of being unemployed," yet the college just last year completed a 2-year comprehensive review of staff salaries, the recommendations from which will be implemented next year. Thus, at the time the study was conducted, even externally-regulated employees may have felt particularly comfortable with the college's efforts to compensate them well and retain them as employees.

### 2.3.3. Job satisfaction

Job satisfaction was measured by 3 items, drawn from the Karasek Job Content Survey (Karasek et al., 1985), measuring participants' satisfaction with their jobs (e.g., Generally speaking, I am very satisfied with this job). We excluded one item ("Most people on this job are very satisfied with the job") due to concerns raised by officials at the college over its potential negative consequences for employee attitudes. Cronbach's alpha was .79 in a previous study (Baruch-Feldman, Brondolo, Ben-Dayan, & Schwartz, 2002), and .90 in the current study.

### 2.3.4. Identification commitment

We used the identification commitment subscale of the Organizational Commitment Scale (Balfour & Wechsler, 1996). The identification commitment subscale measures the degree of employees' shared purpose or mission with the organization (e.g., "I am quite proud to be able to tell people who it is I work for"). Cronbach's alpha was reported as .72 elsewhere (Balfour & Wechsler, 1996), and was .69 in the current study.

### 2.3.5. Demographic information

Participants indicated their sex, age category (<20, 20–29, 30–39, 40–49, 50–59, 60 or more), marital status (Single, Married/Civil Union), educational level (Less Than High School Diploma, High School Graduate, College/University, Post-graduate), number of years served at the college, and primary focus at work (Administrative Support, Service/Trade, and Management/Supervision).

## 3. Results

### 3.1. Preliminary analyses

Descriptive statistics and correlations for key variables are presented in Table 1. To test whether all participants' data could be analyzed together, the means on key variables, broken down by gender, age, marital status, education and work focus, were compared. A few isolated differences were found.<sup>2</sup> Follow-up regression analyses, however, showed that these variables had little to no effect on outcomes of interest, and all data were therefore analyzed together.

<sup>2</sup> A one-way ANOVA followed by t-tests revealed that employees aged 60 or over had lower control orientation,  $M = 37.57$ , than those aged 20–29,  $M = 45.96$ ,  $t(157) = 3.02$ ,  $p < .05$ ; and higher RAI,  $M = 22.08$ , than those aged 40–49,  $M = 9.23$ ,  $t(157) = 3.04$ ,  $p < .05$ . Employees in Management/Supervision positions,  $M = 73.41$ , were significantly higher on autonomy orientation than those in Service/Trade positions,  $M = 65.86$ ,  $t(157) = 3.92$ ,  $p < .001$ , and those in Administrative Support positions,  $M = 65.86$ ,  $t(157) = 2.57$ ,  $p < .05$ . We understand this latter finding as suggesting that individuals with certain general causality orientations are more likely to find their way into certain types of occupations. We therefore view these group differences as natural variation in the population and analyze them together.

Table 1  
Means, standard deviations and correlations among the main variables

	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. Autonomy orientation	69.97	8.33	—				
2. Control orientation	42.66	7.84	-.01	—			
3. Relative autonomy index	12.41	13.54	.26**	-.35**	—		
4. Job satisfaction	5.50	1.27	.28**	-.13	.45**	—	
5. Identification commitment	6.08	.96	.33**	-.03	.33**	.54**	—
6. Years of service	9.57	8.08	.04	-.16*	.03	.09	.08

\*  $p < .05$ .

\*\*  $p < .01$ .

### 3.2. Correlations

Correlations are presented in Table 1. As expected, autonomy orientation was positively correlated with RAI, job satisfaction and identification commitment. Control orientation was correlated negatively with RAI but was unrelated to either of the work outcomes. Further, as expected, RAI was positively correlated with job satisfaction and identification commitment.

### 3.3. Hypothesis testing

To test the mediational model, we confirmed that autonomy orientation predicted RAI and both job outcomes, and that RAI predicted the job outcomes (Baron & Kenny, 1986). We then regressed each of the job outcomes onto RAI and autonomy orientation simultaneously. RAI remained significant, and autonomy orientation, though still significant, was reduced (Table 2). Sobel tests (Baron & Kenny, 1986) for both job satisfaction,  $t = 2.90$ ,  $p < .01$ , and identification commitment,  $t = 2.40$ ,  $p < .05$ , confirmed that the relation

Table 2  
Effects of causality orientation on RAI, job satisfaction, and identification commitment

Predictor	RAI			Job satisfaction			Identification commitment		
	<i>B</i>	<i>SE</i>	$\beta$	<i>B</i>	<i>SE</i>	$\beta$	<i>B</i>	<i>SE</i>	$\beta$
<i>Model 1</i>									
Step 1									
Autonomous GCO	5.09	1.5	0.26**	1.00	0.28	0.27**	1.37	0.31	0.33***
Step 2									
Autonomous GCO				0.61	0.27	0.17*	1.01	0.31	0.26**
RAI				0.30	0.56	0.41***	0.22	0.07	0.26**
<i>R</i> <sup>2</sup>						0.23			0.17
Adjusted <i>R</i> <sup>2</sup>						0.23			0.16
<i>Model 2</i>									
Step 1									
Years of Service	0.06	0.13	0.03	0.03	0.03	0.09	0.03	0.03	0.08
Step 2									
Years of Service	-0.04	0.13	-0.02	0.02	0.03	0.07	0.03	0.03	0.08
Control GCO	-7.53	1.58	-0.36***	-0.51	0.31	-0.13	-0.11	0.36	-0.03
<i>R</i> <sup>2</sup>			0.13			0.03			0.01
Adjusted <i>R</i> <sup>2</sup>			0.12			0.01			0.00

Note: GCO, General Causality Orientation.

\*  $p < .05$ .

\*\*  $p < .01$ .

\*\*\*  $p < .001$ .

between autonomy orientation and job outcomes is mediated by self-determined work motivation, supporting the hypothesized path.

When we tested control orientation as a predictor, we controlled for years of service because the two variables were correlated. Control orientation predicted RAI, but did not predict the job outcomes (see Table 2). We therefore did not test for mediation (Baron & Kenny, 1986).

The results suggest that self-determined work motivation was a function of both types of causality orientation, whereas job outcomes were a function of autonomy, but not control, orientation, and further, that self-determined work motivation mediates the relation between autonomy orientation and job outcomes.

#### 4. Discussion

The present study examined the effects of general causality orientation (GCO) on self-determined work motivation, and how self-determined work motivation in turn affects job outcomes such as job satisfaction and identification commitment. Consistent with self-determination theory (SDT) and with our hypotheses, we found that autonomy orientation positively predicted self-determined work motivation, which in turn predicted both job outcomes, namely job satisfaction and identification commitment. Self-determination was a significant mediator, suggesting that it is one path through which autonomy orientation affects job outcomes. Control orientation, by contrast, was unrelated to our job outcomes of job satisfaction and identification commitment.

Our findings regarding autonomy orientation contribute empirical evidence in support of the theoretical model of work motivation proposed by Gagné and Deci (2005), which suggested GCO as a predictor of job outcomes, with that relation mediated by self-determination. One implication is that self-determination may be determined, not only by employees' social environment, but also by characteristics of the employees themselves. Specifically, while evidence suggests that employees whose autonomy is supported by the environment are more self-determined (Baard et al., 2004), evidence also suggests that autonomously oriented individuals are more likely to interpret social environments as autonomy-supportive (Black & Deci, 2000; Deci & Ryan, 1985b). Thus, individual differences play a key role in self-determination, and may do so in interaction with the social environment. Future work examining social-contextual inputs together with individual difference variables is called for.

Control orientation showed a different pattern of results. It negatively predicted self-determined work motivation, as expected, but it was not predictive of job outcomes such as job satisfaction and identification commitment. One possibility is that the low reliability of the control orientation subscale in our sample led to a non-significant relationship between control orientation and job outcomes. The internal consistency of the control orientation subscale has historically been lower than that of the autonomy subscale (e.g., Deci & Ryan, 1985b), and at least one recent study has found a Cronbach's alpha identical to our own ( $\alpha = .59$ ; Wong, 2000). It may be that the scale itself is due for a re-examination of its psychometric properties. Another possibility is that, while self-determined work motivation is a function of both autonomy and control orientations, job-related outcomes might be a function of autonomy orientation only. Such a possibility would not be inconsistent with SDT. Rather, it would simply highlight the notion that autonomy and control orientation do not operate on opposite ends of a single dimension, but rather, exist as separate dimensions. In general, our findings support the value of considering the contribution of individual differences in understanding self-determined work motivation and job-related outcomes.

Several limitations should be noted. First, the study relied exclusively on self-report data. Future studies should collect data from multiple sources, and consider using objective data (e.g., actual turnover) to measure job outcomes. Second, the current study did not measure the work environment. Future studies might assess whether causality orientation predicts self-determined work motivation and job outcomes in interaction with environmental variables, such as managerial autonomy support. Third, participants were employees working at a liberal arts college; generalizability and representativeness may therefore be somewhat limited. Future studies would benefit from larger, more diverse samples. Finally, like other studies in this area, the current study is correlational in nature; experimental designs are needed to test for a causal effect of GCO on self-determined work motivation and job outcomes. Despite these limitations, we believe we have taken a valuable step in understanding job outcomes as a function of GCO and self-determined work motivation.

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