

RESEARCH REPORT

When in Doubt, Seize the Day? Security Values, Prosocial Values, and Proactivity Under Ambiguity

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Researchers have suggested that both ambiguity and values play important roles in shaping employees' proactive behaviors, but have not theoretically or empirically integrated these factors. Drawing on theories of situational strength and values, we propose that ambiguity constitutes a weak situation that strengthens the relationship between the content of employees' values and their proactivity. A field study of 204 employees and their direct supervisors in a water treatment plant provided support for this contingency perspective. Ambiguity moderated the relationship between employees' security and prosocial values and supervisor ratings of proactivity. Under high ambiguity, security values predicted lower proactivity, whereas prosocial values predicted higher proactivity. Under low ambiguity, values were not associated with proactivity. We replicated these findings in a laboratory experiment with 232 participants in which we measured proactivity objectively as initiative taken to correct errors: Participants with strong security values were less proactive, and participants with strong prosocial values were more proactive, but only when performance expectations were ambiguous. We discuss theoretical implications for research on proactivity, values, and ambiguity and uncertainty.

Keywords: values, proactive behavior, ambiguity

As competitive pressures rise and the pace of change accelerates, organizations need employees to scan the environment for opportunities and threats, plan in advance, and take initiative to implement ideas (Campbell, 2000; Crant, 2000; Frese & Fay, 2001; Griffin, Neal, & Parker, 2007). Research shows that when employees are proactive in these ways—taking anticipatory actions to create change (Crant, 2000; Grant & Ashford, 2008; Parker, Bindl, & Strauss, 2010)—they achieve greater job performance and career success (Seibert, Kraimer, & Crant, 2001; Van Dyne & LePine, 1998) and lead their organizations to higher performance (Frese et al., 2007). Initially, scholars focused on individual differences in personality that predisposed some employees toward proactive behaviors (Bateman & Crant, 1993; Crant, 1995). Recently, researchers have devoted growing attention to the structural conditions that facilitate proactive behaviors (e.g., Frese, Garst, & Fay, 2007; Parker, Williams, & Turner, 2006).

From a structural perspective, scholars have proposed that employees' proactive behaviors can be powerfully influenced by

ambiguity (Grant & Ashford, 2008; Griffin et al., 2007). Ambiguity—the absence of certainty and clarity—is a fundamental dimension of context (Johns, 2006) that stimulates sense-making activities (Weick, 1979, 1995). In the proactivity literature, scholars have argued that ambiguity promotes proactivity by creating uncertainty, which employees seek to resolve through proactive behaviors that improve the status quo (Grant & Ashford, 2008; Griffin et al., 2007). Indeed, evidence suggests that in ambiguous roles and situations, employees are more likely to proactively seek feedback and information (Ashford & Cummings, 1985; for a review, see Ashford, Blatt, & Vande Walle, 2003).

Nevertheless, there is reason to believe that ambiguity may inhibit proactivity. Ambiguity can be seen as a threat or stressor (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964) that can divert focus of attention and deplete energy (e.g., Meyerson, 1994). For example, ambiguity is associated with lower levels of job performance (Gilboa, Shirom, Fried, & Cooper, 2008) and extrarole behaviors (Podsakoff, MacKenzie, Paine, & Bachrach, 2000). These studies suggest that employees may respond to the stressful effects of ambiguity by narrowing their scope of attention and reducing proactive behaviors. However, because these studies did not directly examine proactive behaviors, it is unclear whether the impact of ambiguity on job performance and extrarole behaviors will generalize to proactivity.

To understand the role of ambiguity in proactivity, we adopt an integrative approach. We examine the interplay of individual and structural factors by proposing that ambiguity influences proactivity by moderating the effects of individual characteristics. According to theories of situational strength (W. Mischel, 1977), low ambiguity constitutes a strong situation in which behavior is not

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likely to vary as a function of individual differences. Under conditions of ambiguity, however, behaviors are driven by employees' individual values (Shamir, 1990). Values—guiding principles about what is important and desirable (Kluckhohn, 1951; Rokeach, 1973)—are likely to have an important impact on employees' proactive behaviors. Values operate as broad, emotionally charged motivational goals, directing attention and energy toward personally meaningful actions (Schwartz, 1992). Indeed, scholars have begun to propose that employees' values play a role in proactivity by shaping goals for change and providing standards for choosing and evaluating their contributions (Grant & Ashford, 2008; Parker et al., 2010). However, the role of values in proactive behaviors has not been theoretically developed or empirically tested (Grant & Ashford, 2008; Parker et al., 2010).

Building on theories of situational strength (W. Mischel, 1977) and values (Schwartz, 1992), we argue that ambiguity is an enabling condition for value expression, which can either discourage or encourage proactivity. We predict that employees with strong security values will perceive ambiguity as self-threatening, withholding proactivity to maintain the status quo. In contrast, employees with strong prosocial values will perceive ambiguity as an opportunity to create change for the benefit of others, seizing the opportunity to improve the status quo. We test these hypotheses in a field study at a water treatment plant and a laboratory experiment. Our research offers new insights into the role of values and ambiguity in proactivity, advancing theoretical and practical knowledge about how individual and contextual forces interact to influence whether employees take initiative to create change in organizations.

Ambiguity and Proactivity

Strong situations are those that give rise to common construals, uniform expectations, and adequate incentives, whereas weak situations are those that are open to interpretation (W. Mischel, 1977; O'Reilly & Chatman, 1996). Low ambiguity, also known as clarity, is a defining feature of strong situations (Cooper & Withey, 2009; Meyer, Dalal, & Hermida, 2010). As such, low ambiguity represents a strong situation that reduces the variability in behaviors due to individual characteristics (House, Shane, & Herold, 1996). Thus, when ambiguity is low, proactive behaviors are unlikely to vary as a function of individual characteristics. Employees will make choices about proactivity on the basis of the clear roles, norms, and rewards that are available, regardless of their own traits and values.

Under high ambiguity, however, a weak situation is present: Expectations are unclear (Cooper & Withey, 2009). In the absence of clear external cues about appropriate behavior, employees are likely to turn inward to engage in sense making (Weick, 1979, 1995). In the sense-making process, values serve as guides for attention and action (Schwartz, 1992; Shamir, 1990; Verplanken & Holland, 2002). On the basis of theories of situational strength, we expect ambiguity to increase the magnitude of the relationship between values and proactivity. However, we predict that the direction of this relationship will depend on the content of the values: Under ambiguity, proactivity may be increased by some values and decreased by others.

Research has revealed two core independent dimensions along which values vary: (a) openness to change versus conservation and (b) self-enhancement versus self-transcendence (Schwartz, 1992;

Schwartz & Bardi, 2001). As an exemplar of the first dimension, we focus on security values, which represent concern for safety and stability (Schwartz, 1992). As an exemplar of the second dimension, we focus on prosocial values, which represent concern for protecting and promoting the well-being of others (Schwartz & Bilsky, 1987).

Although security and prosocial values are conceptually and empirically independent (Schwartz & Bardi, 2001), we expect that they will have contrasting effects on employees' levels of proactivity under ambiguity. When contemplating proactivity, employees often ask themselves two questions: Is it safe, and is it worthwhile (Detert & Burris, 2007; Dutton, Ashford, O'Neill, Hayes, & Wierba, 1997)? We propose that under ambiguity, employees with strong security values will focus their attention on the self-threatening nature of ambiguity, and the experience of fear and anxiety about whether it is safe. Conversely, employees with strong prosocial values will focus their attention on the worthwhile opportunity that ambiguity presents to create beneficial change.

Proactive behaviors are known to be risky, as they challenge the status quo (Van Dyne, Cummings, & McLean Parks, 1995) and have uncertain outcomes (Fay & Frese, 2000). For example, speaking up with ideas, taking charge to improve work methods, and selling issues can threaten supervisors and elicit negative reactions (Frese & Fay, 2001; Grant, Parker, & Collins, 2009; Morrison & Milliken, 2000). For employees with strong security values, ambiguity is likely to magnify these risks by raising anxiety about the uncertain consequences of proactivity. Role stress theory suggests that ambiguity creates self-threatening emotions such as anxiety (Kahn et al., 1964; Rizzo, House, & Lirtzman, 1970). This reaction is likely to be pronounced among employees with strong security values, as ambiguity jeopardizes their feelings of safety and stability. Because ambiguity poses a threat to employees with strong security values, they are likely to become more rigid (Staw, Sandelands, & Dutton, 1981) and explicitly avoid proactive behaviors, which—by creating uncertain changes—are likely to exacerbate their anxiety.

Indeed, Fay and Frese (2000) found that employees with strong security values, as indicated by conservatism, took less initiative and avoided innovation and change. We expect that these reactions will be heightened under conditions of ambiguity, which are especially threatening to the stability and order that employees with strong security values prize. This is because employees with strong security values prioritize certainty and structure and are more prone to interpret ambiguity as threatening (Schwartz, Sagiv, & Boehnke, 2000, p. 321). In contrast, employees with weak security values are more likely to embrace change (Parker et al., 2010). Thus, under ambiguity, security values will be negatively associated with proactivity.

Conversely, we expect that employees with strong prosocial values will respond to ambiguity with higher levels of proactivity. Prosocial values foster a focus on the potential benefits of proactivity for other people and the organization, with less concern for personal risks and threats (Grant & Mayer, 2009; Meglino & Korsgaard, 2004). As such, under ambiguity, employees with strong prosocial values will focus their attention on the opportunity to benefit others by initiating changes to improve the status quo (Lee & Ashforth, 1996).

Employees with strong prosocial values are more willing to confront the challenges posed by unpleasant circumstances in order to make meaningful contributions to other people and the organization (Meglino & Korsgaard, 2004). By being proactive,

employees with strong prosocial values can reduce collective uncertainty and dissatisfaction, creating better circumstances for others (e.g., Frese & Fay, 2001; Hirschman, 1970; Staw, 1984; Zhou & George, 2001). For example, employees with strong prosocial values may respond to ambiguity by taking initiative to sell issues that will improve gender equity for colleagues (Ashford, Rothbard, Piderit, & Dutton, 1998). Employees with weak prosocial values, however, place less importance on improving the situation for others (De Dreu & Nauta, 2009). As a result, they will be less likely to take advantage of ambiguity as an opportunity to proactively create change.

Hypothesis 1: Ambiguity strengthens the magnitude of the relationship between values and proactivity, such that when ambiguity is high, the relationship is (a) more strongly negative for security values and (b) more strongly positive for prosocial values.

We conducted two studies to test these predictions. In Study 1, a field study in a water treatment plant, we measured naturally occurring differences in employees' values and perceptions of ambiguity and obtained independent supervisor ratings of their proactivity. In Study 2, in the laboratory, we experimentally manipulated ambiguity, activated self-central values, and measured the incidence of proactivity in terms of taking charge to correct errors and voice suggestions for improving a task. The complementary designs of the two studies allow us to triangulate our results across subjective perceptions and objective conditions of ambiguity, as well as supervisor ratings and objective measures of proactivity.

Study 1

Method

Participants and procedure. Our sample consisted of 204 employees and their supervisors at a water treatment organization headquartered in the southeastern United States. The director of the organization provided the e-mail addresses of 648 randomly selected employees, and a member of the research team sent electronic messages inviting them to participate in a research study. We received completed surveys from 309 employees, for a response rate of 47.7%. In the survey, respondents provided the e-mail addresses of their direct supervisors, enabling us to send a brief survey to these supervisors. We received completed surveys from 232 supervisors, for a response rate of 75.1%. The supervisors provided identifiable, unique data for 204 of the employees, which constituted our final sample of matched employees and supervisors, for an overall response rate of 31.5% (204/648).¹ The employees were 70.1% male with average job tenure of 8.7 years, and the supervisors were 72.5% male with average job tenure of 9.4 years. Employee responsibilities included monitoring and repairing equipment, responding to customer questions, updating safety standards, developing and improving engineering procedures, preventing and resolving system problems, creating better ways to reduce pollution, and implementing new testing processes.

Measures. Unless otherwise indicated, all items used a 7-point Likert-type scale anchored at 1 = *disagree strongly* and 7 = *agree strongly*.

Ambiguity. Employees rated their perceptions of ambiguity using the nine-item scale developed by Breugh and Colihan (1994).

The scale uses three items each to assess ambiguity with respect to performance criteria, work methods, and scheduling. Sample items include: "I know how to get my work done (what procedures to use)"; "I am certain about the sequencing of my work activities (when to do what)"; and "It is clear to me what is considered acceptable performance by my supervisors" (all reverse scored; $\alpha = .92$).

Values. Employees reported their values in response to the question: "To what extent are the following values important to you at work?" We measured security values with a three-item scale adapted from Ryan and Connell's (1989) measure of reasons for action: "supporting myself and my family," "earning money," and "paying my bills" ($\alpha = .88$). We measured prosocial values with a three-item scale adapted from Rioux and Penner's (2001) measure of prosocial values: "improving the welfare of other people," "helping others," and "making a positive difference in other people's lives" ($\alpha = .90$).

Proactivity. Supervisors rated employees' proactive behaviors using the nine-item scale developed by Griffin et al. (2007). The scale uses three items each to assess proactivity directed toward the task, the team, and the organization. Sample items include: "Initiates better ways of doing his/her core tasks," "Develops new and improved methods to help his/her work unit perform better," and "Involves himself/herself in changes that are helping to improve the overall effectiveness of the organization" ($\alpha = .92$). Because familiarity can lead to rating biases such as liking (e.g., Judge & Ferris, 1993), in our analyses predicting proactivity, we controlled for supervisors' ratings of their familiarity with employees' behaviors ("how familiar are you with this employee's work behavior?" 1 = *not at all*, 7 = *very much*).

Results and Discussion

Means, standard deviations, and correlations are displayed in Table 1. To examine the factor structure of the items, we conducted a confirmatory factor analysis using EQS software version 6.1 with maximum likelihood estimation procedures (e.g., Bentler & Dudgeon, 1996; Kline, 1998). We specified a four-factor solution, with separate factors for security values, prosocial values, ambiguity, and proactivity.² The model achieved excellent fit with the data, $\chi^2(48) = 53.36$,

¹ To assess the possibility of nonresponse biases, we followed Rogelberg and Stanton's (2007) recommendation to conduct a wave analysis, examining whether earlier and later respondents scored differently on our key variables. There were no significant correlations between completion time and any of the variables in our study.

² We used parcels to represent the three facets of proactivity and ambiguity, respectively. To justify the aggregation of these facets into overall measures of proactivity and ambiguity, we conducted additional confirmatory factor analyses. An eight-factor solution with all facets modeled separately achieved excellent fit, $\chi^2(224) = 367.70$, CFI = .97, SRMR = .039. The disattenuated latent factor correlations indicated convergence among the three ambiguity facets ($r = .37, .38$, and $.38$) and the three proactivity dimensions ($r = .78, .85, .94$). We conducted a higher order factor analysis, adding two second-order latent factors: one causing the three ambiguity facets and the other causing the three proactivity dimensions. The model achieved excellent fit, $\chi^2(241) = 386.76$, CFI = .97, SRMR = .05. A chi-square difference test showed that the fit of this model was not significantly worse than the eight-factor model, $\chi^2(17) = 19.06$, $p = .33$. In addition, the substantive results were consistent across the different facets of ambiguity and proactivity: The interactions between values and ambiguity remained significant for all three facets of both ambiguity and proactivity. Together, this evidence supports the decision to combine the three ambiguity facets into an aggregate ambiguity construct and the three proactivity dimensions into an aggregate proactivity construct.

Table 1
Study 1 Means, Standard Deviations, and Correlations

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. Supervisor ratings of proactivity	5.45	1.02	(.92)				
2. Ambiguity	2.09	0.74	.02	(.92)			
3. Security values	6.26	0.78	-.06	.02	(.88)		
4. Prosocial values	5.51	1.02	.02	-.25***	.07	(.90)	
5. Supervisor familiarity	6.49	0.80	.22**	-.00	.02	.01	.17*

Note. Coefficient alphas for multi-item scales appear across the diagonal in parentheses.

* $p < .05$. ** $p < .01$. *** $p < .001$.

comparative fit index (CFI) $> .99$, standardized root-mean-square residual (SRMR) = .04.

We tested our hypotheses using the moderated regression procedures recommended by Aiken and West (1991). The results, displayed in Table 2, show statistically significant interactions between ambiguity and each of the two values.³ We interpreted the forms of the interactions by plotting the simple slopes at one standard deviation above and below the mean for ambiguity. As depicted in Figures 1 and 2, ambiguity strengthened the magnitude of the relationship between the two values and proactivity. Statistically comparing the simple slopes to zero showed that under high ambiguity, security values were associated with significantly lower proactivity ($\beta = -.40, p < .001$), but under low ambiguity, this relationship was attenuated: Security values were not significantly related to proactivity ($\beta = .12, p = .18$). Furthermore, under high ambiguity, prosocial values were associated with significantly higher proactivity ($\beta = .30, p < .01$), but under low ambiguity, this relationship was also attenuated ($\beta = -.11, p = .28$). These findings support Hypotheses 1a and 1b.

This study supported our hypotheses that ambiguity served as an enabling condition for value expression but that different values would have contrasting implications for proactivity. Employees with strong prosocial values were more proactive under ambiguity, whereas employees with strong security values were less proactive under ambiguity. However, these data are subject to four important limitations. First, it is unclear whether ambiguity and values had causal effects on proactivity. Second, although focusing on employees' perceptions of ambiguity is the most direct way to capture subjective states, this approach runs the risk of conflating individual and situational characteristics (e.g., Chen, Kirkman, Kim, Farh, & Tangirala, 2010).

Third, because we measured proactivity using supervisor ratings, it is possible that halo effects or biases skewed supervisors' judgments of proactivity. Fourth, because our study focused on a single organization, it remains to be seen whether the results can be constructively replicated (Lykken, 1968) in different samples and settings with different research designs and measures.

Study 2

Method

To address these limitations, we designed a laboratory experiment. To demonstrate causality and overcome measurement biases, we independently manipulated ambiguity and activated self-central values. To rule out alternative explanations and strengthen

generalizability, we created a task in which it was possible to objectively measure proactivity with high levels of psychological realism and role immersion (Greenberg & Eskeu, 1993).

Participants, design, and procedure. We recruited 232 participants from a U.S. East Coast university. The participants were 55.2% female with an average age of 20.3 years. We used a 2 (ambiguity: low, high) $\times$ 3 (values: security, prosocial, hedonism) factorial design, with both factors varied between subjects. We inquired about their values and provided a third option, hedonism, so that participants would not be forced to choose security or prosocial values if neither was highly important to them. We selected hedonism as a comparison based on evidence indicating that of all values in the Schwartz circumplex, hedonism is the most independent of and distinct from security and prosocial values (e.g., Schwartz et al., 2001) without discouraging proactivity (e.g., Fay & Frese, 2000).

Values manipulation. Research suggests that values are most likely to influence behavior when they are both self-central and salient in a given situation (Verplanken & Holland, 2002). Because values high in self-centrality serve as fundamental guiding principles in life, it may be difficult to experimentally manipulate these values. Instead, following Verplanken and Holland (2002), we measured the naturally occurring self-centrality of these values and then introduced an experimental manipulation to enhance their salience.

To minimize demand characteristics, our cover story stated that we were studying the determinants of persuasive skill. When participants logged in for the study, we presented them with a list of three values: security (being financially secure and physically healthy), prosocial (helping other people and contributing to society), and hedonism (having fun and enjoying life). We asked them to consider the relative importance of these three values. Although these values are theoretically independent, evidence shows that people organize their values into hierarchies, and it is the relative importance of a value—rather than the absolute importance—that

³ We conducted separate hierarchical regressions to examine the incremental variance explained by each interaction term after controlling for the other. After accounting for the interaction with security values, the interaction with prosocial values significantly increased variance explained by an additional increment of 3%, $F(1, 192) = 5.13, p = .03$. After accounting for the interaction with prosocial values, the interaction with security values significantly increased variance explained by an additional increment of 5%, $F(1, 192) = 10.75, p = .001$. We also tested the remaining possible interactions; neither the two-way interaction between security and prosocial values nor the three-way interaction between both values and ambiguity was significant.

Table 2
Study 1 Moderated Regression Analyses Predicting Proactivity

Variable	Step 1				Step 2			
	<i>b</i>	<i>SE</i>	β	<i>t</i>	<i>b</i>	<i>SE</i>	β	<i>t</i>
Supervisor familiarity	.29	.09	.22	3.20**	.30	.09	.24	3.47**
Ambiguity	.03	.08	.02	0.34	.07	.08	.06	0.89
Security values	-.08	.07	-.08	-1.11	-.14	.07	-.14	-2.00*
Prosocial values	.05	.07	.05	0.64	.09	.07	.09	1.26
Ambiguity $\times$ Security Values					-.24	.07	-.24	-3.28**
Ambiguity $\times$ Prosocial Values					.19	.08	.16	2.27*
	<i>R</i> ²			<i>F</i> (4, 194)	<i>R</i> ²			<i>F</i> (2, 192)
	.06*			2.93	.12**			6.45
	ΔR^2			.06*	ΔR^2			.06**

Note. The rows for the interactions appear in bold because they represent the tests of our hypotheses.

* $p < .05$. ** $p < .01$.

determines its impact on behavior (Schwartz, 1992; Schwartz et al., 2001). As such, we sought to activate the value that participants viewed as the most important. A total of 56 participants selected prosocial values, 100 selected security values, and 76 selected hedonism.

We increased the salience of the value that participants ranked highest using an exercise adapted from research on self-persuasion (Aronson, 1999; Heslin, Latham, & VandeWalle, 2005). We asked participants to write an essay about why their most important value (being financially secure and physically healthy, helping other people and contributing to society, or having fun and enjoying life) mattered so much to them. To encourage participants to take the exercise seriously, we informed them that their essays would be evaluated by experts in persuasive communication. Because research has shown that advocating a particular topic cultivates more positive attitudes toward the topic under consideration and motivates people to act in line with their expressed attitudes (Aronson, 1999; Grant, Gino, & Hofmann, 2011; Heslin et al., 2005), we expected that this essay would ensure that the value under consideration was salient. Indeed, when people affirm or reflect on a strongly held value, it is more likely to influence their behavior (Maio & Olson, 1998; Sherman & Cohen, 2006).

Ambiguity manipulation. After writing their persuasive essays about the importance of security, helping others, or pleasure, participants learned that we were conducting a second study to create a glossary of business concepts for high school students. They were told that MBA students had written definitions of 10 business concepts, and the focal task was to write a sentence to

illustrate each concept. We selected this task on the basis of psychological realism: At the time of the study, the business school was actually creating such a glossary. We provided a link to the school's website, which included a placeholder for the glossary initiative. All participants learned that, based on performance, the top 5% would win a \$50 Amazon.com gift certificate. Then, we manipulated the performance criteria dimension of ambiguity.⁴ In the low-ambiguity condition, participants read three detailed paragraphs on how their performance would be evaluated. In the high-ambiguity condition, participants did not receive this information, leaving the definition and measurement of performance unclear (see the Appendix).

Measures.

Proactivity. We created opportunities for proactivity by intentionally including definitional and grammatical errors in each of the 10 concepts. For example, "flextime" was incorrectly defined and included a grammatical error: "A policy *allowings* employees to use the gym at work." Because the task was to write illustrative sentences, correcting errors in the definitions themselves constituted anticipatory, change-oriented action directed toward improving the glossary, consistent with existing research on proactive behaviors such as task revision (Staw & Boettger, 1990), and voicing suggestions and taking charge to identify strategies for implementing them (Grant et al., 2011). To capture objective proactivity, we included an optional box for comments below the box where they wrote the sentence illustrating each concept. We measured proactivity by assessing whether participants took action to improve the glossary by correcting errors in the sentences. Corrections across the 10 concepts showed very high internal consistency (Kuder-Richardson Formula 20 = .98). As Detert and Burris (2007) observed, it is impossible for participants to suggest improvements if they do not notice problems in the first place. Because the errors would be easier to catch if participants spent

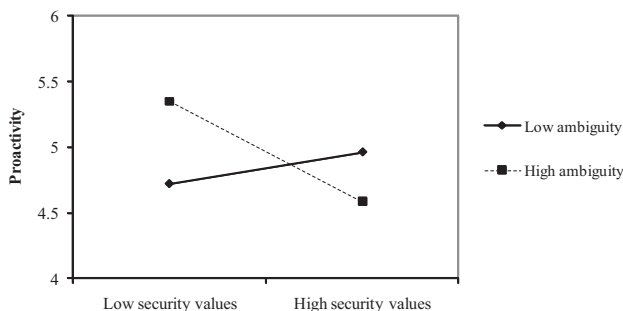


Figure 1. Study 1 simple slopes for security values.

⁴ Because the three dimensions were highly correlated in Study 1, and they had the same substantive relationships, we chose to focus on a form of ambiguity that is pervasive in many organizations: performance criteria ambiguity. Performance criteria were also the form of ambiguity most relevant to our task, as we selected a task in which the methods would be clear to all participants so that we could create equivalent opportunities for proactivity, and the behavioral lab was not able to accommodate scheduling ambiguity.

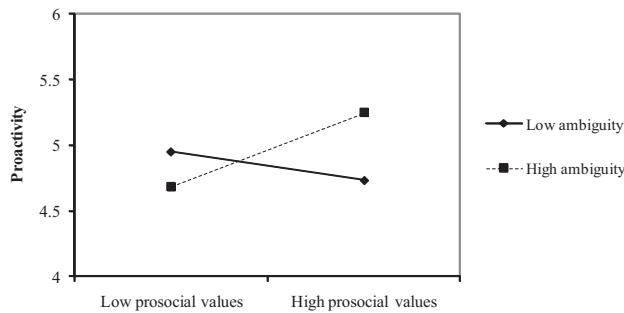


Figure 2. Study 1 simple slopes for prosocial values.

more time reading the definitions, we used the Qualtrics timing feature to track the amount of time that each participant viewed the definition page before initially clicking to type. Overall proactivity was the proportion of errors corrected as a function of time spent reading the definitions.

Manipulation checks. To assess the effectiveness of our ambiguity manipulation, we presented participants with a scale to rate the clarity of the task using a 7-point Likert-type scale anchored at 1 = *disagree strongly* and 7 = *agree strongly*. Because our manipulation focused on ambiguity of performance criteria, we adapted the three performance criteria ambiguity questions from the Breugh and Colihan (1994) scale: “The criteria for success in this task were ambiguous,” “I felt that the task instructions were unclear,” and “I was uncertain about what was expected of me in this task” ($\alpha = .87$).

To assess the effectiveness of our values manipulations, we presented participants with three items each from the Schwartz et al. (2001) security, hedonism, and prosocial values scales, using a 7-point scale anchored at 1 = *not at all like me* and 7 = *very much like me*. Items included, “I try hard to avoid getting sick. Staying healthy is very important to me” (security values; $\alpha = .87$), “I seek every chance I can to have fun. It is important to me to do things that give me pleasure” (hedonism values; $\alpha = .69$), and “It’s very important to me to help the people around me. I want to care for their well-being” (prosocial values; $\alpha = .72$).

Results and Discussion

Table 3 displays descriptive statistics by condition. To assess the effectiveness of our manipulations, we conducted a 2×2 analysis of variance (ANOVA). First, there was a significant main effect of the ambiguity manipulation on perceived ambiguity, $F(1, 152) = 8.96, p < .01$. No other effects were significant. Second, there were significant main effects of the values conditions on self-reports of security values, $F(1, 152) = 7.88, p < .01$, and prosocial values, $F(1, 152) = 48.03, p < .001$, and no other effects on self-reports of values were significant. Participants in the security condition reported significantly stronger security values than participants in the prosocial condition, $t(154) = 2.53, p = .01$. Participants in the prosocial condition reported significantly stronger prosocial values than participants in the security condition, $t(154) = 7.17, p < .001$. Third, further validating the values manipulation, participants endorsed the values matching their condition more

strongly than the opposite value. Participants in the security condition reported significantly stronger security values than prosocial values, $t(99) = 5.66, p < .001$; the reverse was true in the prosocial condition, $t(55) = 6.71, p < .001$.

Consistent with Hypothesis 1, an ANOVA comparing the focal conditions of security and prosocial values indicated a statistically significant interaction between ambiguity and values in predicting proactivity, $F(1, 152) = 4.43, p = .04$. There were no significant main effects of ambiguity or values. To interpret the form of the interaction, we conducted simple effects, assessing the impact of the values manipulations at each level of ambiguity. Consistent with Hypotheses 1a and 1b, participants with strong prosocial values were more proactive than those with strong security values under high ambiguity, $F(1, 152) = 9.87, p < .01$, but not under low ambiguity, $F(1, 152) = 0.14, p = .71$. These results show that under ambiguity, security values reduced proactivity and prosocial values enhanced proactivity.

To examine this pattern further, we conducted analyses including the hedonism condition. An ANOVA indicated a statistically significant interaction between ambiguity and values in predicting proactivity, $F(2, 225) = 2.97, p = .05$, but no significant main effects of ambiguity or values. Simple effects showed that under low ambiguity, there were no differences in proactivity across the three values conditions, $F(2, 225) = 0.79, p = .45$, but under high ambiguity, proactivity differed significantly across the values conditions, $F(2, 225) = 5.14, p = .007$.⁵ The security values condition was significantly less proactive than the other two values conditions under high ambiguity, $F(1, 227) = 5.69, p < .01$, but not under low ambiguity, $F(1, 227) = 0.18, p = .67$. The prosocial values condition was significantly more proactive than the other two values conditions under high ambiguity, $F(1, 227) = 8.88, p = .003$, but not under low ambiguity, $F(1, 227) = 1.14, p = .29$.

⁵ We expected that under ambiguity, hedonism values would foster more proactivity than security values but less proactivity than prosocial values. Hedonism is a promotion-focused value that emphasizes approaching a positive state, whereas security values are prevention-focused, prioritizing the avoidance of a negative state (Schwartz et al., 2012). Because proactivity can involve rewards for the self, including raises and promotions (Seibert, Kraimer, & Crant, 2001), under ambiguity, hedonism values are likely to encourage some degree of proactivity in order to obtain pleasure. By comparison, individuals with strong security values are likely to focus on minimizing risks rather than maximizing gains. However, under ambiguity, hedonism values are less likely to encourage proactivity than prosocial values. Hedonism values tend to emphasize pleasure in the short term (Schwartz et al., 2012), whereas it often takes time for the personal benefits of proactive behaviors to accumulate (e.g., Seibert et al., 2001). In the short run, proactivity can be risky, and because hedonism values are more self-focused than other-focused (Schwartz, 1992), the personal risks are likely to dampen the pleasure that hedonists expect from proactivity. For employees with strong prosocial values, the benefits to others are likely to take precedence (Meglino & Korsgaard, 2004), resulting in the highest levels of proactivity. In summary, under ambiguity, whereas security values draw attention to the risks of proactivity, hedonism values involve not only less concern for safety but also less concern for the collective benefits that prosocial values emphasize. To explore this possibility, we conducted a planned contrast analysis within the high-ambiguity condition using weights of -1 for security values (least proactive), 0 for hedonism values, and 1 for prosocial values, which was significant, $t(113) = 3.09, p = .003$. These results are consistent with our expectation that under ambiguity, the hedonism condition was more proactive than the security condition but less proactive than the prosocial condition.

Table 3
Study 2 Descriptive Statistics by Condition

Condition	Proactivity score	Perceived ambiguity	Security values	Prosocial values	Hedonism values
Security values, low ambiguity (<i>n</i> = 42)	.24 (.77)	2.94 (1.51)	5.90 (.94)	5.20 (1.02)	5.45 (1.16)
Security values, high ambiguity (<i>n</i> = 58)	.08 (.14)	3.81 (1.70)	5.66 (1.03)	5.11 (.92)	5.43 (1.02)
Prosocial values, low ambiguity (<i>n</i> = 33)	.31 (.70)	2.82 (1.44)	5.47 (1.03)	6.22 (.59)	5.18 (.87)
Prosocial values, high ambiguity (<i>n</i> = 23)	.69 (1.49)	3.55 (1.62)	5.10 (1.17)	6.14 (.82)	5.07 (.98)
Hedonism values, low ambiguity (<i>n</i> = 40)	.11 (.30)	3.29 (1.45)	5.45 (1.11)	5.21 (.91)	5.89 (.70)
Hedonism values, high ambiguity (<i>n</i> = 35)	.34 (.85)	3.75 (1.58)	5.28 (.92)	5.49 (.82)	5.70 (.81)

Note. Standard deviations appear in parentheses.

General Discussion

In the field and the laboratory, ambiguity strengthened the magnitude of the association between values and proactivity. Security values were negatively related to proactivity, and prosocial values were positively related to proactivity, but only under high ambiguity. These results offer theoretical implications for research on proactivity, ambiguity, and values.

Theoretical Implications

Our primary contribution lies in developing and testing a novel theoretical and empirical perspective on the enabling and constraining roles of ambiguity in proactivity. Consistent with the enabling perspective, our research highlights largely overlooked and undocumented benefits of ambiguity: It can facilitate value expression. Our finding that employees with prosocial values are more proactive under ambiguity provides quantitative evidence supporting Meyerson's (1994) qualitative findings that ambiguity can operate as a source of freedom, underscoring the fact that ambiguity can have positive effects. However, our research adds nuance to this view by showing that ambiguity only has these positive effects when employees' values promote proactive behaviors. We also extend Meyerson's perspective by showing that ambiguity can facilitate not only desirable psychological experiences but also desirable behaviors.

Our research reveals a surprising irony for employees with strong security values. Scholars have suggested that when ambiguity is present, proactivity is particularly critical to organizational effectiveness (Griffin et al., 2007). We found that under the very circumstances in which proactivity is more important, employees with strong security values are less likely to engage in it. This evidence suggests that in circumstances fraught with ambiguity, employees with strong security values may pay a particularly high price for failing to be proactive. These findings that employees with strong security values are less proactive under ambiguity both challenge and qualify Grant and Ashford's (2008) proposition that ambiguity increases proactivity, showing that values play an important role in this relationship.

Our work also sheds light on the important but neglected impact of values on employees' proactive behaviors. Recently, scholars have lamented the lack of research on values and proactivity (Grant & Ashford, 2008; Parker et al., 2010). Preliminary studies have been mixed: Some show links between security values and proactivity (Fay & Frese, 2000), whereas others show null relationships between prosocial values and proactivity (Grant et al., 2009). Our research takes a step toward resolving this controversy by introducing ambiguity as a critical contingency for shaping whether values influence

proactivity. Our findings answer calls to pay greater attention to contextual opportunities and constraints as moderators of the effects of individual characteristics on behaviors (Johns, 2006; Meyer et al., 2010; Tett & Burnett, 2003).

Limitations, Future Directions, Practical Implications, and Conclusion

In Study 1, we used supervisor ratings of proactivity to overcome biases due to common method and source, self-deception, and social desirability, but supervisors rarely have complete access to employees' proactive behaviors. Under ambiguity, employees with strong security values may still engage in proactivity, but do so in more covert, invisible ways in order to avoid interpersonal risks. Similarly, employees with strong prosocial values may view ambiguity as a cue that it will be beneficial to engage in more visible proactive behaviors. However, because the effectiveness of many proactive behaviors depends on supervisors recognizing and implementing them (e.g., Ashford et al., 1998; Grant et al., 2009), there is a case to be made that proactivity is most valuable when it is visible. Nevertheless, future research should triangulate supervisor ratings with coworker and self-ratings of proactivity. In Study 2, we sought to overcome these limitations by independently manipulating ambiguity and activating self-central values, and measuring their effects on an objective measure of proactivity. Because we activated values that were already self-central to participants, it is unclear whether the patterns are driven by self-centrality, salience, or both (see Verplanken & Holland, 2002). Finally, our manipulation focused on the relative importance of values, overlooking the distance between values. The effects may be attenuated for individuals who place similar importance on two values.

From a practical standpoint, our research highlights that instead of attempting to reduce ambiguity (Kahn et al., 1964) or amplify it (A. A. Michel, 2007) across the board, proactivity may be encouraged by reducing ambiguity for employees with strong security values and enhancing it for those with strong prosocial values. Managers may also provide greater clarity around proactivity to help employees with strong security values cope effectively with ambiguity. Sharing vivid stories about successful exemplars of proactivity may highlight forms of proactivity that are effective and valued, reducing attention to self-threat. Managers may also serve as role models by engaging in proactivity and discussing mistakes openly, which may reduce the threatening features of ambiguity for employees with strong security values. Overall, our research shows that ambiguity in and of itself is

neither good nor bad for proactivity; it is merely a condition under which employees are more likely to express their values.

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Appendix

Instructions for Low- and High-Ambiguity Manipulations

In Study 2, we used the following instructions to vary ambiguity in how performance would be evaluated. After reading the instructions, participants in both conditions saw a list of 10 concepts. Below each concept was a box to write a sentence illustrating the concept and an optional comments box.

High Ambiguity

*** is an interactive site for high school students interested in finding out more about the world of business. One of the features will be a glossary for high school students to learn about business concepts. ***, a professor, is working on the glossary. A group of MBA students provided the definitions you see here, and Professor *** is looking for your help writing sentences that will illustrate the definitions. Your contributions will serve as a starting point for the glossary, and will be reviewed by school faculty.

Based on performance, the top 5% of participants will win a \$50 Amazon.com gift certificate.

Low Ambiguity

*** is an interactive site for high school students interested in finding out more about the world of business. One of the features will be a glossary for high school students to learn about business concepts. ***, a professor, is working on the glossary. A group of MBA students provided the definitions you see here, and Professor

*** is looking for your help writing sentences that will illustrate the definitions. Your contributions will serve as a starting point for the glossary, and will be reviewed by school faculty.

Your task is to write one sentence using each concept. The task should take approximately 5–10 minutes. Your sentences will be rated by three business experts for clarity, conciseness, accuracy, and interest level. Based on performance, the top 5% of participants will win a \$50 Amazon.com gift certificate. Our initial data show that the top 5% of participants have written sentences marked by high attention to detail, and very straightforward, engaging, easy-to-follow examples.

To illustrate, one of the initial concepts was Chief Financial Officer, defined as a high-ranking executive who is in charge of finances: managing risks, keeping records, reporting data, and conducting planning. Here are three sentences that ranked in the top 5% because they were clear, concise, accurate, and engaging:

- “Mark Zuckerberg’s best friend in college became the chief financial officer of Facebook.”
- “The chief financial officer of a large investment bank was put into jail for publishing false financials.”
- “Because Lucy is a finance major, her dream is to rise within the ranks of her future company to become a CFO.”

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