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## Do Good Workplace Relationships Encourage Employee Whistle-Blowing?

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### ABSTRACT

The literature contains mixed arguments and evidence regarding how employee willingness to blow the whistle is affected by interpersonal relationships in organizations. This article examines whether there is a curvilinear relationship between interpersonal relationships and whistle-blowing intentions, by operationalizing interpersonal relationships with the person-group fit and person-supervisor fit variables. By using the 2015 Federal Employee Viewpoint Survey data, this article finds that the curvilinear relationship does exist: when the person-group fit and person-supervisor fit become very high, the intention to blow the whistle dwindles. As a result, this article argues that the impacts of workplace relationships on whistle-blowing intention would not be simply linear, but curvilinear.

### KEYWORDS

Interpersonal relationship;  
person-environment fit;  
whistle-blowing intention

Whistle-blowing is an important organizational and societal phenomenon. As a form of dissenting to workplace decisions, whistle-blowing means the use of nonroutine reporting internal or external channels including Ombudsman, hotline, inspector general, and media by organizational members (former or current) to disclose legal violations, mismanagement, abuses of authority, or threats to public health and safety (Lewis & Gilman, 2005; Miceli & Near, 1984, 1985). Attention to whistle-blowing has increased since the consumer and political activism of the 1960s and 1970s. We now know how individual and organizational wrongdoings can threaten or damage the society, and how important and invaluable whistle-blowing is for protecting public interest (Miethe, 1999; O’Leary, 2010, 2014). Organizations, to be proactive, should create an open internal environment where individuals can freely report wrongdoings using routine reporting channels, but it is invaluable to maintain the nonroutine channels and to encourage employees to whistle-blow when the routine channels fail. Although whistle-blowing could be costly to both the individual and the organization, it offers early warning signals of wrongdoing, and gives the

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organization an opportunity to resolve potential problems before they become more costly and serious (Lewis, 1995; O'Leary, 2014).

Despite its value to organizations and the society, employees may not be motivated to blow the whistle given the risks. Although a number of federal statutes and state rules protect whistleblowers, many employees still fear the reprisals associated with whistle-blowing, including subtle retaliations, such as being closely supervised or being shunned by coworkers (Brewer & Selden, 1998; Smith, 2010). Retaliation against whistleblowers frequently occurs (Jos, Tompkins, & Hays, 1989). As most cases in O'Leary's (2014) work show, public employees who exhibited dissent to organization policies and decisions faced retaliation from their coworkers, supervisors, leaders, and organizations. Miceli et al. (1999) find that 17–38% of whistleblowers in federal government suffered reprisals. Thus, an important research question is: what are the factors that encourage employees to blow the whistle?

Research has made significant progress in this regard. Business scholars have examined the impact of individual characteristics, such as motivation (Dozier & Miceli, 1985; Miceli & Near, 1984), demographics, and personalities (Chiu, 2003; Gundlach, Douglas, & Martinko, 2003), and situational and contextual factors, such as bureaucracy (Johnson, 2003), organizational structure (King, 1999), organizational norm and climate (Park & Blenkinsopp, 2009), and formal policy (Sims & Keenan, 1998). Public administration scholars see even more value in whistle-blowing, treating it as a form of ethical behavior that enhances government accountability, democracy, and public trust (Bowman, 1980; Bowman & Knox, 2008; Brewer & Selden, 1998; Cooper, 2004; deHaven-Smith, 2011; Jos, 1991; O'Leary, 2014; Rosenbloom & Gong, 2013; Smith, 2010; Sulzner, 2009; Yang, 2009). They find a positive relationship between whistle-blowing and public service motivation (Brewer & Selden, 1998), and leadership (Caillier, 2015; Caillier & Sa, 2017). They also observe that employees' whistle-blowing can be affected by managerial practices and administrative reforms. For example, at-will employment is found to discourage employees from whistle-blowing (Coggburn et al., 2009; Gertz, 2008). Contracting out to the private sector is observed to pose challenges to whistleblower protections (Kennedy & Malatesta, 2010; Rosenbloom & Piotrowski, 2005). In general, much fewer public administration studies have empirically assessed the factors that encourage employee whistle-blowing.

One area that warrants more research is how workplace relationships affect employee whistle-blowing. As organizations increasingly emphasize the human side of management, embracing teamwork, empowerment, and trust, interpersonal relationships become at least as important as job skills in achieving individual performance. Postbureaucratic reforms in government advocate for collaboration and relationship-building among coworkers, and

between superiors and subordinates. What does this mean for whistle-blowing? There is not yet a definite answer as studies taking an interpersonal perspective are small in number and have conflicting observations. Some scholars have found that close relationships prevent employees from reporting ethical violations (King, 1997; Miller & Thomas, 2005), but others conclude that whistle-blowing is more likely to occur when employees and supervisors have greater value congruence (Near & Miceli, 1996), or when coworkers have good relationships and support each other (Cortina & Magley, 2003; Rehg et al., 2008).

Attempting to address this debate, this article examines how employee inclination for whistle-blowing is influenced by personal-group fit and person-supervisor fit—two important dimensions of person-environment fit. As individual attitudes and behaviors are the result of the interaction between the environment and individual characteristics (Lewin, 1951), people have different levels of fit with their work environment (Higgins & Judge, 2004). The person-environment fit encompasses a number of dimensions, including fits with the vocation, job, group, supervisor, and organization (Kristof-Brown, Zimmerman, & Johnson, 2005). Among them, the person-group fit and person-supervisor fit capture the interpersonal relationships in the workplace. There are different ways of approaching interpersonal relationships in an organization. We use the person-environment fit perspective because it has gained increasing attention in the public administration literature. To date, public administration scholars have found person-environment fit useful in investigating retention (Starks, 2007; Vandenabeele, Hondeghem, & Steen, 2004), public service motivation (Bright, 2007, 2008; Christensen & Wright, 2011; Wright & Pandey, 2008), and job satisfaction (Vigoda-Gadot & Meiri, 2008).

## **Theoretical framework and hypotheses**

The sequential model of whistle-blowing can shed light on the impact of interpersonal relationships (with coworkers and supervisors) on whistle-blowing. The model articulates four stages of whistle-blowing (Miceli & Near, 1992): (1) a suspected questionable, unethical, or illegal event occurs; (2) an employee investigates the information related to the event, and discusses the situation with others; (3) the employee discloses; and (4) organizational members react to whistle-blowing. In stage two, interpersonal relationships affect whether employees initiate the investigation and/or talk to others about it, as well as how they talk about it. In stage three, the interpersonal relationships influence whether employees actually blow the whistle and in stage four they have an effect on whether they are afraid of potential organizational retaliation. In other words, relationships with

coworkers and supervisors influence how employees define the event, discuss with others, assess potential risks (perceived likelihood of retaliation), and eventually whether or not they blow the whistle.

### **Person-group fit**

As the team-based or group-based structure becomes prevalent in organizations, where employees have frequent interactions with their colleagues on a daily basis, organizations favor employees who have a good fit with their team or group members (Adkins, Ravlin, & Meglino, 1996). The quality of the interactions is likely to determine the level of team or group performance (Werbel & Johnson, 2001). The person-group fit captures an employee's interpersonal relationship with coworkers, emphasizing the interpersonal compatibility between them (Judge & Ferris, 1992; Kristof, 1996; Werbel & Johnson, 2001). Scholars have argued that the person-group fit increases when the group members are homogeneous and congruent in demographics (Riordan & Shore, 1997), personality traits (Hobman, Bordia, & Gallois, 2003; Strauss, Barrick, & Connerley, 2001), and values (Adkins et al., 1996).

The fit with coworkers influences an employee's intention to blow the whistle in cases of wrongdoing. The literature shows that support from coworkers can make a difference in retaliation (Chang et al., 2017; Cortina & Magley, 2003; Rehg et al., 2008). If individuals have a good relationship with colleagues, they are less likely to suffer reprisals from coworkers. O'Leary's book (2014) *The Ethics of Dissent* provides a variety of examples with potential or actual whistleblowers described as government guerrillas and how important interpersonal relationships with coworkers can be when those guerrillas take actions to express their dissents to illegal and unethical organizational policies, decisions, and leaderships. One government guerrilla case in county planning highlights that the support from coworkers can induce whistleblowing intention and behaviors (O'Leary, 2014, pp. 63–64). Therefore, it is reasonable to expect that the person-group fit decreases perceived risk of whistle-blowing and, as a result, increases the willingness to blow the whistle. In other words, the person-group fit facilitates whistleblowing by reducing the fear of retaliation.

On the other hand, too strong a good fit with the group may produce negative outcomes. A strong fit may increase group cohesion (Guzzo & Dickson, 1996; Kristof-Brown et al., 2005), the interpersonal bonds that hold a group together (Levi, 2007). Group cohesion can enhance teamwork and reduce member conflicts, but when it becomes too strong it may also have negative effects such as conformity to others, groupthink, and unwillingness to dissent (Levi, 2007; Rainey, 2009). In fact, the example in O'Leary's work (2014, p. 78) of the Hoosier National Forest case shows how colleagues can

sell out their whistleblower. In addition, King (1997) finds that a strong group norm can make a potential whistleblower stay silent. De Graaf (2010) observes that loyalty within a public organization can prevent the reporting of integrity violations.

Thus, the person-group fit may not have a linear relationship with employee willingness to engage in whistle-blowing. When perceived compatibility with coworkers increases and becomes strong, it can decrease employees' perceived risks of retaliation, reduce their anxiety regarding whistle-blowing, and increase their confidence that coworkers will support their decisions. However, when group compatibility becomes too strong, it may create a formidable group norm to which the employees feel they must conform, which reduces their willingness to blow the whistle. We assume that there will be an inverted "U" shape relationship between the person-group fit and the whistle-blowing intention.

H1: There is a curvilinear relationship between the person-group fit and the willingness of employees for whistle-blowing. When the person-group fit is not too strong, the relationship is positive; when the person-group fit becomes too strong, the relationship becomes negative.

### ***Person-supervisor fit***

Supervisors play an important part in shaping the informal norms for how employees behave (Oberfield, 2012; Van Wart, 2012). The person-supervisor fit is the most researched and most well-known aspect of the person-environment fit literature (Kristof-Brown et al., 2005), with positive effects such as job satisfaction, organizational commitment, individual performance, and reduced turnover intention (Liao, Joshi, & Chuang, 2004; Meglino, Ravlin, & Adkins, 1989). The person-supervisor fit is of critical importance in understanding whistle-blowing intentions and behaviors. The supervisors can be the subjects who committed wrongdoing and they have different leadership styles and react differently to whistle-blowing. Scholars maintain that support from the supervisors has a significant impact on both whistle-blowing intentions (Mesmer-Magnus & Viswesvaran, 2005; Near & Miceli, 1995; 1996; 2008) and retaliations (Near & Miceli, 2008; Rehg et al., 2008).

The person-supervisor fit emphasizes the dyadic interactions and psychological compatibility between a subordinate and a supervisor (Van Vianen, Shen, & Chuang, 2011). The compatibility can come from various factors such as life goal and value congruence, lifestyle, personality similarity, goal congruence, work style, and leadership style between the two parties (Chuang, Shen, & Judge, 2016; Kristof-Brown et al., 2005). Its effects can be understood with the leader-member exchange (LMX) model in the leadership literature (Graen & Uhl-Bien 1995; Schriesheim et al., 1999). The LMX model

focuses on the ongoing relationship that leaders and subordinates experience as they exchange mutual perceptions and negotiate on things such as the type and amount of work, loyalty, and perquisites (Van Wart, 2012). A good person-supervisor fit leads to a leader-member exchange that is characterized by trust, respect, and positivity, supporting the development of a common understanding of organizational mission and values (Rainey, 2014).

In terms of whistle-blowing, Near and Miceli (1996) conclude that whistle-blowing is more likely to occur in organizations in which employees report greater value congruence between employees and supervisors. If employees perceive that they have a good relationship with the supervisor, they are more confident about getting support for whistle-blowing from the supervisor and getting positive feedback such as financial benefits instead of retaliation. In the public sector, the literature maintains that good and effective leadership can encourage employees to blow the whistle (Caillier & Sa, 2017; O'Leary, 2014).

On the other hand, the pressures on the employees to conform come not only from peers or group members, but also from supervisors (King, 1997). Miller and Thomas (2005) provide evidence that wrongdoing is less likely to be reported when the relationship between the subordinate and supervisor is cohesive, since whistle-blowing could damage the relationship. Furthermore, it is possible for potential whistleblowers to believe that reporting the wrongdoing may result in serious retaliations because the supervisor may feel betrayed and view the whistleblower as someone who violated the psychological contract between them. The pressure to conform and the psychological contract to be nice and loyal become salient when the person-supervisor fit is very strong. In fact, most of leaders in O'Leary's work (2014) when confronting dissent from guerrillas, never welcome it, instead using various tools to retaliate, such as firings, transfer, demotion, and others. Thus, we again propose a curvilinear relationship between the person-supervisor fit and whistle-blowing intentions.

H2: There is a curvilinear relationship between the person-supervisor fit and the willingness of employees for whistle-blowing. When the person-supervisor fit is not too strong, the relationship is positive; when the person-supervisor fit becomes too strong, the relationship becomes negative.

## Data and method

### Data

The 2015 Federal Employee Viewpoint Survey (FEVS) is employed in this article. This provides general indicators of how well the Federal Government is running its human resource management systems and assesses the progress of strategic management of human resource



management for human capital in individual agencies (OPM, 2015). FEVS was administered to full-time as well as part-time employees; 82 agencies including 37 cabinet/large and 45 small/independent agencies participated in the survey. The 2015 FEVS response rate was 49.7%, with more than 420,000 who completed the survey. The literature points out the potential limitations of FEVS data with reliability and validity and the need for careful consideration in constructing variables (Fernandez, Resh, Moldogaziev, & Oberfield, 2015). However, it is true that FEVS is one of the most extensive survey data that allows researchers to investigate various and important management issues in the public sector.

### **Measurement**

The main variables were measured with 5-point Likert-type questions. We acknowledge upfront that our measurements are reasonable proxies but not perfect or direct. Such crude representation in measurement would be common in empirical research when using secondary (existing) data (Caillier, 2012; Lee & Whitford, 2008). Given the fact that FEVS offers comprehensive survey data in the public sector, we have deliberately selected survey items that best reflect theoretical conceptualization in order to obtain validity and reliability of our research constructs.

First of all, *whistle-blowing willingness* is defined as the perceived level of comfort employees have in blowing the whistle against illegal, immoral, or illegitimate practices of the organization. Our definition is consistent with the current literature (Caillier, 2015; Caillier & Sa, 2017; Near & Miceli, 1985, 1995). Whistle-blowing willingness was measured with an item: “I can disclose a suspected violation of any law, rule, or regulation without fear of reprisal.” The current research on whistle-blowing employs the same survey question to study the intention or attitude of public employees to blow the whistle, although it might not be perfect to accurately capture the willingness of whistle-blowing (Caillier, 2012, 2015; Caillier & Sa, 2017).

Concerning interpersonal compatibilities with coworkers and supervisors, the literature on person-environment fit offers varying conceptualization and measurement (Judge & Ferris, 1992; Kristof-Brown et al., 2005). In general, various fits are conceptualized with demand-ability, need-satisfaction, similarity, and value congruence between individuals and work environments and measured by needs, preferences, personality characteristics, goals, values, and attitudes (Kristof-Brown et al., 2005; Verquer, Beehr, & Wagner, 2003). Based on the current literature, this article employed survey items that can measure the nature of interaction between two parties. We acknowledge that measures of both person-group and person-supervisor fit may not be direct, but we believe that they are theoretically and conceptually relevant proxies.



Regarding group compatibility, the person-group fit was measured by two questions: “The people I work with cooperate to get the job done,” and “Employees in my work unit share job knowledge with each other,” which gauges overall quality of the compatibility among work-group members through knowledge-sharing and cooperation on the job (Cronbach’s  $\alpha = 0.76$ ). Previous studies have used them to measure the quality of team or group interaction and relationship with coworkers (Choi & Rainey, 2010; Pitts, Marvel, & Fernandez, 2011).

The person-supervisor fit is defined as psychological compatibility between the subordinate and supervisor (Kristof-Brown et al., 2005; Van Vianen et al., 2011). It was measured by three questions: “Discussions with my supervisor/team leader about my performance are worthwhile,” “My supervisor/team leader provides me with constructive suggestions to improve my job performance,” and “My supervisor/team leader treats me with respect.” Along with the LMX theory (Graen & Scandura, 1987), these items reflect the quality of exchange between the subordinate and supervisor in the workplace. Since they capture both performance-related and general interactions between the subordinate and supervisor via a daily basis activity, they indicate the perceived level of compatibility of individuals with their supervisor (Cronbach’s  $\alpha = 0.92$ ). In addition, we included control variables such as perceived organizational justice with two items (see [Appendix II](#)) (Cronbach’s  $\alpha = 0.86$ ) (Cho & Sai, 2013), supervisory status, gender, disability, years of service, level of education, age, and minority. Additionally, since it is possible to have a curvilinear effect of years in public service (Cho & Lewis, 2012), we created and added to the square term of years of service.

## Method

To examine the curvilinear effect, we added in the model the square terms of both person-group fit and person-supervisor fit. Since the dependent variable, whistle-blowing willingness, was measured with a single 5-point Likert type item, ordered logistic regression is normally appropriate. However, the ordered logistic regression model violated the proportional odds assumption ( $\chi^2 = 13,711.56$ ,  $df = 39$ ,  $p = 0.000$ ). Thus, we employed an alternative analysis method, the generalized ordered logistic regression model, which calculates the impacts of each independent variable for each category of the dependent variable (Long & Freese, 2006). As shown in the [Appendix I](#), the results of the generalized ordered logistic regression model would be complicated for readers to understand. Therefore, we transformed the whistle-blowing intention from five categories into two categories that focus on whether or not to blow the whistle (the category “neither disagree nor agree” is dropped, because of the uncertainty of its interpretation). We then

**Table 1.** Frequency Distribution of Whistle-Blowing Willingness.

	Frequency	Percent
Strongly disagree	28,516	9.50
Disagree	25,208	8.40
Neither agree or disagree	50,715	16.90
Agree	111,288	37.07
Strongly agree	84,446	28.13
Total	300,173	100.00

conducted the binary logistic regression. To verify the results, we compared the analytical results of both the generalized ordered logistic regression model and the binary logistic regression, and found that they basically provided consistent results, which showed the curvilinear relationship between two fit variables and the whistle-blowing willingness. We reported the binary logistic results here to help many readers understand the results easier.

In order to check for common source biases, we conducted Harman's single-factor test by examining the unrotated factor solution with all variables of our model in a principal component factor analysis. If one single factor explains the majority of variance, the bias of common method variance is serious (Podsakoff et al., 2003). The analysis revealed four factors with eigenvalues greater than 1.0, and the first factor takes into account only 31.85% of the entire variance.

## Results and findings

### *Descriptive statistics*

Table 1 reports the frequency distribution of the respondents' willingness for whistle-blowing. More than half of the federal respondents showed that they could engage in whistle-blowing against illegal, immoral, or illegitimate practices of the organization. About 65.20% of them either strongly agree or agree to blow the whistle when they observe a suspected wrongdoing. Only 17.90% of them either strongly disagreed or disagreed. It appears that the majority of federal civil servants have the willingness to blow the whistle when they see a wrongdoing.

Table 2 shows the descriptive statistics of all variables after the transformation on whistle-blowing. The results indicate that on average respondents perceive a good person-group fit ( $M = 6.868$ ) and a person-supervisor fit ( $M = 9.801$ ). On average, federal civil servants consider their agencies' personnel practices just (appropriate and legitimate) ( $M = 6.304$ ). About 24.3% hold supervisory status. For gender, 53.9% are male while 46.11% are female. As to ethnicity, 33.1% reported themselves as minority while 66.9% did not. With regard to education, more than 69.8% had a higher education including bachelor and graduate degrees, while 30.2% did not. Approximately 13.28% employees had a disability.

**Table 2.** Descriptive Statistics ( $n = 249,458$ ).

	Min	Max	<i>M</i>	<i>SD</i>
Whistle-blowing willingness	0	1	0.785	0.411
Person-Group fit (Cronbach's $\alpha = 0.76$ )	1	9	6.868	1.844
Person-Supervisor fit (Cronbach's $\alpha = 0.92$ )	1	13	9.801	3.186
Organizational justice (Cronbach's $\alpha = 0.86$ )	1	9	6.304	2.285
Supervisory status (Supervisor =1)	0	1	0.243	0.429
Gender (Female =1)	0	1	0.461	0.498
Disability (Disabled =1)	0	1	0.867	0.339
Years of service	1	3	2.247	0.756
Education	1	3	2.051	0.808
Age	1	4	2.445	0.994
Military service	1	4	1.719	1.167
Minority (Minority =1)	0	1	0.331	0.471

### Correlation matrix

Table 3 provides the results of the correlation analysis of all variables. Person-group fit ( $r = 0.445$ ), person-supervisor fit ( $r = 0.535$ ), organizational justice ( $r = 0.634$ ), supervisory status ( $r = 0.095$ ), and education ( $r = 0.040$ ) were positively correlated with the willingness of whistle-blowing. Female ( $r = -0.042$ ), disability ( $r = -0.084$ ), years of service ( $r = -0.047$ ), age ( $r = -0.007$ ), and minority status ( $r = -0.047$ ) were negatively associated with the willingness of whistle-blowing.

### Logistic regression

Table 4 presents the results of two logistic regression models. Model 1 did not include the square terms of the two independent variables, assuming a linear effect. Model 2 included the square terms to investigate the curvilinear impact of the independent variables. We used the likelihood-ratio test to compare the two models and the result showed that they are statistically different ( $\chi^2 = 27.17$ ,  $p < 0.01$ ), suggesting that the square terms of person-group and person-supervisor fits are statistically meaningful.

Model 1 showed that when the square terms were not included, both the person-group fit ( $b = 0.186/\text{Odd ratio} = 1.205$ ) and person-supervisor fit ( $b = 0.222/\text{Odd ratio} = 1.248$ ) were statistically significant and positively associated with the willingness of whistle-blowing. Model 2 shows that when the square terms were included, the results supported Hypothesis 1. The coefficient of the person-group fit was positive ( $b = 0.234/\text{Odd ratio} = 1.265$ ) while the coefficient of the square term was negative ( $b = -0.04/\text{Odd ratio} = 0.996$ ), indicating that the effect increases at a decreasing rate. After the peak point, the person-group fit had a negative impact on whistle-blowing willingness. Model 2 also showed support for H2 regarding the curvilinear relationship between the person-supervisor fit and whistle-blowing willingness. The coefficient of the person-supervisor fit was positive ( $b = 0.263/\text{Odd ratio} = 1.301$ ), and the coefficient of the

**Table 3.** Correlation.

Variable name	1	2	3	4	5	6	7	8	9	10
1. Willingness of Whistle-blowing	1									
2. P-G fit	0.445**	1								
3. P-S fit	0.535**	0.532**	1							
4. Organizational justice	0.634**	0.537**	0.596**	1						
5. Supervisory status	0.095**	0.105**	0.073**	0.172**	1					
6. Gender	−0.042**	−0.050**	−0.027**	−0.056**	−0.089**	1				
7. Disability	−0.084**	−0.069**	−0.067**	−0.093**	−0.050**	−0.097**	1			
8. Years of service	−0.047**	0.007**	−0.040**	−0.027**	0.200**	0.074**	−0.081**	1		
9. Education	0.047**	0.084**	0.039**	0.078**	0.116**	−0.060**	−0.076**	−0.118**	1	
10. Age	−0.007**	0.028**	−0.025**	0.011**	0.112**	−0.046**	0.076**	0.430**	−0.095**	1
11. Minority	−0.047**	−0.060**	−0.034**	−0.092**	−0.058**	0.110**	0.042**	−0.013**	−0.072**	−0.045**

Notes: Number of observations = 249,458

\* $p < 0.05$ , \*\* $p < 0.01$ .

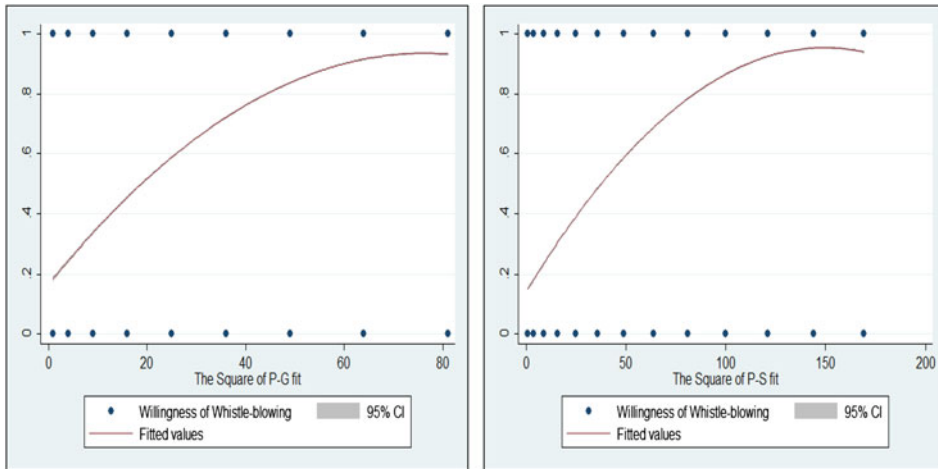
**Table 4.** The Results of the Binary Logistic Model ( $n = 249,458$ ).

	Model 1 (Linear model)			Model 2 (Curvilinear model)		
	Coef.	SE	Odd Ratio	Coef.	SE	Odd Ratio
Person-Group fit	0.186	0.004	1.205**	0.234	0.019	1.264**
Person-Supervisor fit	0.222	0.002	1.248**	0.263	0.010	1.301**
Square of P-G fit				-0.004	0.002	0.996*
Square of P-S fit				-0.003	0.001	0.997**
Organizational justice	0.645	0.004	1.906**	0.644	0.004	1.905**
Supervisory status	0.066	0.018	1.069**	0.067	0.018	1.070**
Gender	-0.097	0.014	0.907**	-0.095	0.014	0.909**
Disability	-0.197	0.020	0.821**	-0.195	0.020	0.823**
Years of service	-0.516	0.063	0.597**	-0.518	0.063	0.596**
Square of years of service	0.079	0.015	1.083**	0.080	0.015	1.083**
Education	-0.013	0.009	0.987	-0.012	0.009	0.988
Age	0.023	0.008	1.023*	0.022	0.008	1.022**
Minority	0.115	0.015	1.122**	0.116	0.015	1.123**
Constant	-4.706	0.074	0.009**	-4.960	0.091	0.007**
LR $\chi^2(df)$		118,104 (11)**			118,131.38 (13)**	
Pseudo- $R^2$		0.4544			0.4545	

Notes: \* $p < 0.05$ , \*\* $p < 0.01$ .

square term was negative ( $b = -0.003$ /Odd ratio = 0.997). Figure 1 shows the curvilinear effects of both fit variables on whistle-blowing willingness. As shown, after the both fits reached their apexes, their impacts became negative and started to decrease the willingness of whistle-blowing.

As to control variables, both the linear model and the curvilinear model show consistent results. The perceived organizational justice in Model 1 ( $b = 0.645$ /Odd ratio = 1.906) and Model 2 ( $b = 0.644$ /Odd ratio = 1.905), supervisory status in Model 1 ( $b = 0.066$ /Odd ratio = 1.069) and Model 2 ( $b = 0.067$ /Odd ratio = 1.070), age in Model 1 ( $b = 0.023$ /Odd ratio = 1.023) and Model 2 ( $b = 0.022$ /Odd ratio = 1.022), and minority in Model 1 ( $b = 0.115$ /Odd ratio = 1.122) and Model 2 ( $b = 0.116$ /Odd ratio = 1.123) were positively associated with the willingness to blow the whistle. Female in Model 1 ( $b = -0.097$ /Odd ratio = 0.907) and Model 2 ( $b = -0.095$ /Odd ratio = 0.909), disability in Model 1 ( $b = -0.197$ /Odd ratio = 0.821) and



**Figure 1.** The Curvilinear Impacts of P-G and P-S Fits on the Willingness of Whistle-blowing.

Model 2 ( $b = -0.195/\text{Odd ratio} = 0.823$ ) were negatively associated with the willingness for whistle-blowing. We attempted to examine the curvilinear effect of years in public service and found that it has a curvilinear effect. That is, the coefficient of years of service was negative ( $b = -0.516/\text{Odd ratio} = 0.597$ ) in Model 1 and ( $b = -0.518/\text{Odd ratio} = 0.596$ ) in Model 2 while the coefficient of the square term became positive ( $b = 0.079/\text{Odd ratio} = 1.083$ ) in Model 1 and ( $b = 0.080/\text{Odd ratio} = 1.083$ ) in Model 2. The level of education is not statistically significant in both models.

## Discussion

The existing studies on whistle-blowing have addressed the effect of interpersonal relationships with group members and supervisors (Cortina & Magley, 2003; Near & Miceli, 2008). Scholars argue that the amount of support an individual can have from coworkers and supervisor is critical not only to motivating effective whistle-blowing (Near & Miceli, 1995; O'Leary, 2014), but also to preventing retaliation (Near & Miceli, 2008; O'Leary, 2014; Rehg et al., 2008). Our results support this general observation. In cases like the Nevada Four and the Seattle Regional Office presented in O'Leary's work (2014), guerrillas are able to take actions because their colleagues and supervisor help each other. The findings from the linear effect model are consistent with the existing literature, suggesting that good interpersonal relationships with group members and supervisors can facilitate whistle-blowing.

Starting from the argument that when person-group fit and person-supervisor fit are too strong they may demotivate employees to engage in whistle-blowing, we tested the curvilinear effects of the two fit variables. The results support both of our hypotheses in that both fits have turning points where their effects could become negative. Although the coefficients

for the original terms of both fits are much larger than the ones for the square terms—person-group fit (0.233 vs.  $-0.004$ ) and person-supervisor fit (0.263 vs.  $-0.003$ ), the analytical results are clear that whistleblowing willingness of public employees can turn down due to the very strong interpersonal relationships with coworkers and supervisor.

Our empirical results provide clarification to the literature where there are ambiguities about the effects of interpersonal relationships in the workplace on whistle-blowing intentions through person-group fit and person-supervisor fit. Prior studies on retaliation against whistle-blowing contend that a whistleblower would be less likely to experience reprisal when he or she has good relationships with his or her colleagues and supervisor (Cortina & Magley, 2003; Near & Miceli, 2008; Rehg et al., 2008). However, other studies argue that whistle-blowing may be constrained by coworkers' peer pressure (Near & Miceli, 1996), and that group norms and loyalty negatively influence whistle-blowing intentions (King, 1997; De Graaf, 2010). Additionally, the relationship with supervisors can be a critical pressure that hinders whistleblowing (King, 1997). Our results show that it is possible that when the person-group fit and person-supervisor fit get very high it may prevent employees from blowing the whistle in cases of wrongdoings.

Thus, increasing person-group fit is a good strategy for improving reporting on violations of laws, rules, and regulations in government. The common perspective on preventing and identifying wrongdoings is to establish structural conflicts following the principle of checks and balance. Our results suggest that this perspective probably cannot be applied to regular employees. If employees are not compatible with their groups and coworkers, they may be more likely to notice the wrongdoings by others, but they may not be motivated to report them. Conflicts and self-interests may generate some motivation for reporting the wrongdoing, but conflicts also mean greater likelihood of retaliation, which dampens the motivation.

Similarly, the literature is relatively ambiguous in terms of the effects of the person-supervisor fit on employees' whistle-blowing intentions. While some scholars imply that strong cohesion with the supervisor or leader encourages employee whistle-blowing (Cortina & Magley, 2003; Near & Miceli, 2008), others indicate that it discourages employee whistle-blowing (King, 1997; Miller & Thomas, 2005). Our analysis takes into account the possibility of curvilinear effects, and finds that the person-supervisor fit has a turning point. That is, when the bond or compatibility between an employee and his/her supervisor is very strong, it may prevent the employee from blowing the whistle. Along with the literature on the impact of the leadership on whistleblowing (Caillier & Sa, 2017; O'Leary 2014), the result highlights the importance of leadership in creating and maintaining a communication environment in which employees feel more comfortable to report suspected wrongdoing.

That both the person-group fit and the person-supervisor fit facilitate employee whistle-blowing in government is informative and valuable. It shows that interpersonal relationships matter a great deal even in government, which was traditionally viewed as an impersonal bureaucratic machine. Even today, government agencies tend to emphasize rules and regulations instead of personal relations when making decisions, and public administrators are normatively expected to report suspected wrongdoings regardless of their relationships with their coworkers and supervisors. Our results show, however, that interpersonal relationships make a big difference even for issues such as whistle-blowing, which involves great risk and tends to require actions based on rules.

Public administration scholars have recently used the person-environment fit theory, and this article extends the line of research on person-environment fit and shows that two fit variables have critical impacts on an important public administration phenomenon that has been insufficiently studied. Furthermore, this article contributes to the contradictory argument of the current literature on the effect of interpersonal relationship on whistle-blowing willingness. The literature offers ambivalent arguments on the relationship between interpersonal relationships and whistle-blowing intention (Chang et al., 2017; Cortina & Magley, 2003; De Graaf, 2010; King, 1997; Miller & Thomas, 2005; Near & Miceli, 1996; Rehg et al., 2008). This study finds that the interpersonal relationships with coworkers and supervisors in public organizations would not have a linear effect, but a curvilinear effect on whistle-blowing intentions.

## Conclusion

The importance of whistle-blowing in government cannot be overstated. When public institutions can internalize whistle-blowing, it can be a valuable and important opportunity for public agencies not only to prevent potential problems before they become costly, but also to restore public integrity and accountability. Unfortunately, we still do not have sufficient knowledge about its determinants. Although the literature on whistle-blowing has explored the role of interpersonal relationships in the workplace, there is still confusion. This article incorporates the fit perspective to see how the person-group fit and person-supervisor fit affect employees' whistle-blowing willingness. Given the confusion and sometimes competing arguments about the effects of interpersonal relationships, we hypothesize the impact of the relationships is curvilinear and test the hypotheses with survey data from the federal government. We find that both the person-group fit and person-supervisor fit tend to increase employees' self-reported willingness for whistle-blowing. As a result, we argue that public managers and leaders should realize that interpersonal compatibility and person-environment fit in the workplace good can hearten the willingness of whistle-blowing. Moreover, good interpersonal compatibility



is important for building a healthy communication environment where employees feel comfortable to blow the whistle when they see wrongdoings. However, public managers and leaders should understand that interpersonal compatibility could stay public employees silent when it is very high. The article extends the recent public management research on person-environment fit, further supporting the construct's relevance and power in explaining public organizational behavior.

The study has several limitations. The first limitation is about the nature of the data. This study used the cross-sectional data, which leads to the concern for definitive causation. Thus, it is necessary to build time-series data and analysis that help overcome the issues of causation although the causal inferences were built on theories. Second, this study employed a single self-reported question to measure the dependent variable, willingness for whistle-blowing. In particular, self-reported intentions may differ from what the respondents would actually do when they face real wrongdoings; that is, self-reporting may inflate their positive responses due to social desirability biases. It is possible that without facing a real situation, the respondents did not think about the potential reactions from their group and supervisors. The problem of relying on self-reported data is a general one in the literature on whistle-blowing because it is difficult to measure actual whistle-blowing behaviors on a large sample (Caillier, 2017; Miceli & Near, 2005). Future studies may identify a group of actual whistleblowers, match them with coworkers who are not whistleblowers, measure their person-environment fit variables, and then assess whether the fit variables affect whistle-blowing behaviors.

Another limitation is that the dependent variable, willingness for whistle-blowing, is measured globally without differentiating the seriousness of wrongdoings committed by different individuals. In particular, since the two independent variables touch on coworkers and supervisors respectively, it would have been desirable to measure willingness for whistle-blowing against wrongdoings committed by coworkers and supervisors respectively. In addition, the seriousness of wrongdoing can vary widely from a paper clip stealing to huge embezzlement. As Caillier (2017) found that the severity of wrongdoing affects whistle-blowing, individuals may tolerate and stay silent on a small wrongdoing while they would actively engage in whistle-blowing if the wrongdoing costs were high financially or ethically. Therefore, future studies need to differentiate who commits wrongdoing and the level of its severity and include them respectively and together.

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**Appendix I: The Results of Generalized Ordered Logistic Regression.**

Category	Variable	Coef.	SE	Odd Ratio
Strongly disagree	P-G fit	0.398	0.017	1.489**
	P-S fit	0.351	0.009	1.420**
	Square of P-G fit	-0.026	0.002	0.974**
	Square of P-S fit	-0.014	0.001	0.986**
	Organizational justice	0.645	0.004	1.907**
	Supervisory status	-0.022	0.021	0.978
	Gender	0.057	0.016	1.059**
	Disability	-0.226	0.020	0.797**
	Years of service	-0.461	0.072	0.631**
	The square of years of service	0.072	0.017	1.074**
	Education	-0.017	0.010	0.983
	Age	0.064	0.009	1.066**
	Minority	-0.007	0.016	0.993
	Constant	-3.379	0.090	0.034**
Disagree	P-G fit	0.209	0.015	1.232**
	P-S fit	0.232	0.008	1.261**
	Square of P-G fit	-0.007	0.001	0.993**
	Square of P-S fit	-0.004	0.001	0.996**
	Organizational justice	0.608	0.003	1.836**
	Supervisory status	-0.021	0.015	0.979
	Gender	-0.102	0.012	0.903**
	Disability	-0.167	0.016	0.846**
	Years of service	-0.399	0.054	0.671**
	Square of years of service	0.060	0.013	1.061**
	Education	-0.031	0.007	0.969**
	Age	0.055	0.007	1.056**
	Minority	0.134	0.012	1.143**
	Constant	-3.775	0.072	0.023**
Neither agree nor disagree	P-G fit	-0.021	0.014	0.979
	P-S fit	0.052	0.008	1.053**
	Square of P-G fit	0.013	0.001	1.013**
	Square of P-S fit	0.007	0.000	1.007**
	Organizational justice	0.535	0.003	1.708**
	Supervisory status	0.256	0.012	1.292**
	Gender	-0.078	0.009	0.925**
	Disability	-0.073	0.014	0.929**
	Years of service	-0.111	0.042	0.895**
	Square of years of service	-0.001	0.010	0.999
	Education	0.005	0.006	1.005
	Age	-0.034	0.005	0.966**
	Minority	-0.044	0.010	0.957**
	Constant	-3.818	0.063	0.022**
Agree	P-G fit	-0.705	0.017	0.494**
	P-S fit	-0.415	0.010	0.660**
	Square of P-G fit	0.073	0.001	1.075**
	Square of P-S fit	0.036	0.001	1.037**
	Organizational justice	0.544	0.003	1.723**
	Supervisory status	0.378	0.011	1.460**
	Gender	-0.098	0.010	0.907**
	Disability	0.098	0.015	1.103**
	Years of service	-0.039	0.044	0.961
	Square of years of service	-0.008	0.010	0.992
	Education	0.031	0.006	1.032**
	Age	-0.028	0.005	0.972**
	Minority	-0.024	0.010	0.976
	Constant	-3.276	0.067	0.038**
<i>n</i>		300,173		
LR $\chi^2$ (df)		221,457.43(52)		
Pseudo- $R^2$		0.253		

Notes: The reference category is "strongly agree."

\* $p < 0.05$ , \*\* $p < 0.01$ .



**Appendix II: Measurement.**

Dependent variable		
Whistle-blowing willingness	I can disclose a suspected violation of any law, rule, or regulation without fear of reprisal. <sup>a</sup>	
Independent variables		Factor loading
Person-group fit	The people I work with cooperate to get the job done. <sup>a</sup>	0.869
	Employees in my work unit share job knowledge with each other. <sup>a</sup>	0.855
Person-supervisor fit	Discussions with my supervisor/team leader about my performance are worthwhile. <sup>a</sup>	.913
	My supervisor/team leader provides me with constructive suggestions to improve my job performance. <sup>a</sup>	0.906
	My supervisor/team leader treats me with respect. <sup>a</sup>	0.853
Control variables		
Organizational justice	Arbitrary action, personal favoritism, and coercion for partisan political purpose are not tolerated. <sup>a</sup> Prohibited personnel practices (e.g., illegally discriminating for or against any employee/applicant, obstructing a person's right to compete for employment, knowingly violating veterans' preference requirements) are not tolerated. <sup>a</sup>	
Supervisory status	What is your supervisory status? Non-supervisor/Team leader =0 Supervisor/Manager/Senior leader =1	
Gender	Are you? Male =0 Female =1	
Disability	Are you an individual with a disability? No =0 Yes =1	
Years of service	How long have you been with the Federal Government (excluding military)? ≤5 years =1, 6–14 years =2, ≥15 years =3	
Education	What is the highest degree or level of education you have completed? Education prior to a Bachelor's degree =1 Bachelor's degrees =2 Post-Bachelor's degree =3	
Age	What is your age group? <40 = 1, 40–49 = 2, 50–59 = 3, ≥60 = 4	
Minority	Minority status? Nonminority =0 Minority =1	

Note: <sup>a</sup>Items were measured on a 5-point scale (strongly disagree, disagree, neither disagree or agree, agree, strongly agree).