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# Predicting nonlinear effects of monitoring and punishment on employee deviance: The role of procedural justice

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## KEYWORDS

Employee deviance;  
Procedure justice;  
Coercive strategies;  
Monitoring activities;  
Control;  
Organizational  
punishment

**Summary** More is known about the widespread use of monitoring and sanctioning systems than about the reasons and conditions under which these systems ultimately work. Drawing on prior research on the effectiveness of different amounts of monitoring and punishment, this study follows a justice-based approach and suggests that (a) the relationships already found in the literature from monitoring and punishment threats to both employee deviance and procedural justice (PJ) should be modeled as curvilinear, and (b) that procedural justice (PJ) mediates these relationships. The paper then used hierarchical multiple regressions to test these predictions. Results supported both monitoring and punishment nonlinear effects on deviance, and procedural justice (PJ) was shown to be a full mediator of – i.e., it was able to explain – the effects of monitoring and punishment threats on employee deviance. Findings generally suggest that punishment mainly, but also monitoring to a large extent, work better when used in proper doses, i.e., those producing greater perceptions of procedural justice (PJ).

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## Introduction

Employee deviance is one of the key components of job performance (Rotundo & Sackett, 2002), and adequate management decisions in combating it are critical to successful work performance and overall functioning within organizations. Indeed, prior studies have shown how workplace deviance is a prevalent and costly problem for organizations (Robinson, 2008). They reported that 75% of workers have

stolen company material on at least one occasion (Coffin, 2003; McGurn, 1988), and that 95% of all organizations admit to experiencing theft by employees (Case, 2000). Similarly, other studies have documented not only the financial impact of workplace deviance, but also its negative social and psychological effects within organizations (Schat & Kelloway, 2005).

One common method for managing deviance is the implementation of normative policies and control systems that ensure that rules are in force and really govern the employee behavior at work (Alder, Schminke, Noel, & Kuenzi,

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2008; Hollinger & Clark, 1982; Sewell & Barker, 2006). Once the normative policies and rules establish what actions are acceptable and appropriate to achieve organization's purposes, monitoring activities are designed to deter employees from deviance by discovering incidents, identifying the perpetrators, and eliciting perceptions of the likelihood of being sanctioned. Some studies indicate that monitoring leading to punitive consequences is normally used in organizations (Tyler & Blader, 2005), and both can influence (and shape) employee behavior (Huselid, 1995; Jenkins, Mitra, Gupta, & Shaw, 1998; Luthans & Kreitner, 1973). It is also normal practice in organizations to focus on threats of punishment. Both the 'threatening' and the 'shaping' (or pedagogical) perspectives of punishment are important to consider, however, from a deterrence perspective, punishment is more commonly studied as the extent to which the traditional disciplinary system really intimidates the employees of an organization (Tyler & Blader, 2005). The miniaturization and reduced costs of new monitoring technologies, such as electronic point of sale (EPOS) software, closed circuit television (CCTV) and electronic article surveillance (EAS), have undoubtedly helped to increase these practices within organizations. Thus, a survey of major multiples conducted by Bamfield (1997) found that 80% of respondents described CCTV as a necessity, over 80% of employers have implemented electronic use policies (Flynn, 2005), and 50% use video surveillance primarily to guard against theft and sabotage (American Management Association, 2005).

Unfortunately, despite this widespread use of monitoring and punishment systems in discouraging deviance, their effectiveness is still a matter of significant dispute. Many practitioners are skeptical about whether coercive strategies really work (Arvey & Ivancevich, 1980; Ayres & Braithwaite, 1992; Bryant, 1984; Friedman, 1977), and the literature shows inconsistencies about how and why the employee reaction to monitoring and punishment occurs. Some prior work suggests, for instance, that monitoring and punishment by themselves may not have an inherent ability to ethically demotivate (Cialdini, 1998) or rationally deter (Tenbrunsel & Messick, 1999) inappropriate behavior in organizations. Instead, the suggestion has been made that the impact of monitoring and punishment on behavioral outcomes is greatly determined by many individual and organizational contextual factors (see, e.g., Luckenbill, 1982; Pogarsky, 2002; Wright, Caspi, Moffitt, & Paternoster, 2004). For example, the effectiveness of monitoring has been related to how it is implemented, its perceived usefulness, and its joint presence with punishment (Blanchard & Henle, 2008), as well as issues related to privacy, employees' individual differences, and prior beliefs and ethical orientations about monitoring (Alder et al., 2008; Ball, Trevino, & Sims, 1993, 1994; Van der Linden, Beckers, & Taris, 2007). Punishment systems are not exempt from this dispute either (e.g., Molm, 1994; Podsakoff, Bommer, Podsakoff, & MacKenzie, 2006). On the one hand, some prior studies suggest that these systems perform a role in deterring subordinates from deviance by reinforcing the validity of the organizational rules and helping to clarify standards. Atwater, Dionne, Camobreco, Avolio, and Lau (1998), for instance, found that contingent punishment positively affected leader effectiveness (see also, Ball et al., 1993,

1994; Klemm, 1955; Korukonda & Hunt, 1989; O'Reilly & Puffer, 1989; Schnake, 1986; Ward & Dugger, 2000). Miles and Greenberg (1993) also found that when substandard performance was forced by threats of punishment, group performance improved, and the social loafing effect was attenuated. On the other hand, these above-mentioned studies suggest that punishment causes (rather than preventing) employee deviance. Thus, although threats of punishment might work, this same research notes that punishment threats by themselves are likely to be perceived by employees as non-contingent or "capricious," producing undesirable effects such as anxiety, depression and lower levels of effort. Given this scenario, it is imperative to examine how, when and why monitoring and punishment can each effectively influence deviance, so that companies and organizations can harness their potential benefits.

The present study intends to shed light on this issue. Prior research has suggested that certain levels of monitoring and punishment influence employee performance more than others (e.g., Ball et al., 1993, 1994; Bazerman, 1982; Hemmingsson & Lundberg, 2006; Spector, 1986), and that links exist between monitoring and punishment and the equity (justice) concept (Hovorka-Mead, Ross, Whipple, & Renchin, 2002; Podsakoff et al., 2006; Stanton, 2000). Drawing on this research, this study suggests (a) that monitoring and punishment threats have curvilinear associations with both deviant workplace behaviors directed at the organization as a whole (organizational deviance) and procedural justice (PJ); and (b), that monitoring and punishment influence organizational deviance – i.e., its effects are explained – through the mediating role of procedural justice (PJ). Finding support for these predictions would point to monitoring and punishment as discouraging employee deviance if used in proper doses, i.e., those producing greater perceptions of procedural justice (PJ). After testing these hypotheses, the paper will offer theoretical and practical implications of the results.

## Theoretical background

A broad range of terminology concerning employee deviance has evolved. Thus, employee deviance has been labeled as anti-social behavior (Robinson & O'Leary-Kelly, 1998), organizational misbehavior (Vardi & Weiner, 1996), non-compliant behavior (Puffer, 1987), workplace deviance (Robinson & Greenberg, 1998) and dysfunctional work behavior (Griffin, O'Leary-Kelly, & Collins, 1998), to name just a few. The definitions of these actions also vary. Robinson and Bennett (1995) used the term deviant workplace behaviors (DWBs) to describe any voluntary act that violates significant organizational norms and, in so doing, threatens the well-being of an organization, its members, or both. This workplace deviance approach forms part of the basis of this paper.

The application of the definition of this construct in empirical terms has produced different dimensions. One of them is organizational deviance, which represents deviant workplace behaviors targeting the organization as a whole (Bennett & Robinson, 2000). Examples of organizational deviance would include coming in late to work without giving prior notice and putting little effort into work.

By representing the organization as a whole, employers (unlike co-workers) are likely to be perceived as being responsible for fairly implementing the organizational rules, regulations, and procedures. Therefore, in this study the criterion variable will consist of employee deviant behaviors directed only at the organization (hereinafter, deviance).

Approaches that might explain how and why monitoring and punishment can influence deviance vary. Thus, the organizational and psychological research literatures offer two main strategies for controlling employee performance: (1) extrinsically-oriented coercive strategies and (2) intrinsically-oriented self-regulatory strategies (Tyler & Blader, 2005). Sanctioning and monitoring systems constitute the most common way to implement the coercion approach at work (from Lat. *coercio*, *-ōnis*: to contain, restraint, repression). These systems are linked to extrinsic motivational models of employee behavior, in which employees act rationally by weighing the benefits and costs of a decision (Blair & Stout, 2001). Employees ultimately decide whether or not to engage in deviance by assessing deterrent contingencies, such as the perceived likelihood of being caught and punished. The self-regulatory approach, on the other hand, is linked to intrinsic motivational models of human behavior, in which employees' decisions to engage or not in deviance are driven by internal desires, preferences and values (Kelman, 1958; Kelman & Hamilton, 1989; O'Reilly & Chatman, 1986). This approach in the workplace commonly uses fair outcomes and respectful supervision, as well as procedural justice (hereinafter, PJ) or resource allocation, in a way employees perceive as fair (see Conlon, Meyer, & Nowakowski, 2005, for a review).

Interestingly, some studies have also tried to integrate these two approaches. These attempts have been based on prior empirical research demonstrating, for instance, that employees perceive monitoring as more just when they are given advance notice (Hovorka-Mead et al., 2002; Stanton, 2000), or that consistency in disciplinary procedures elicits employee perceptions of fair punishment (Ball et al., 1993, 1994; Podsakoff et al., 2006; Youngblood, Trevino, & Favia, 1992). The resulting mixed strategies not only incorporate deterrent mechanisms to influence employees through rationalizations, but they also try to make employees perceive these deterrent mechanisms as trustworthy, fair and legitimate (e.g., Henle, Kohut, & Booth, 2009; Kankanhalli, Teo, Tan, & Wei, 2003; Kidwell & Bennett, 1994; Lee & Lee, 2002; Lee, Lee, & Yoo, 2004). Thus, employees are deterred rationally, but they are also intrinsically discouraged from engaging in deviance.

As noted earlier, the literature has generally suggested that punishment threats alone cause, rather than prevent, employee deviance. However, there are quite a few exceptions in this regard. The fact that the two human behavior approaches mentioned above are compatible and can be integrated sheds light on this apparently inconsistent effect of punishment on deviance. Within the framework of fairness theory, Ball et al. (1994) state that the harshness of a punishment outcome is inversely related to perceptions of PJ. Thus, different levels of punishment may not be perceived as equally fair, and punishment would affect deviance differently depending on how intimidated employees are by the punishment threats. Consequently, among employees who find the punishment less intimidating (i.e.,

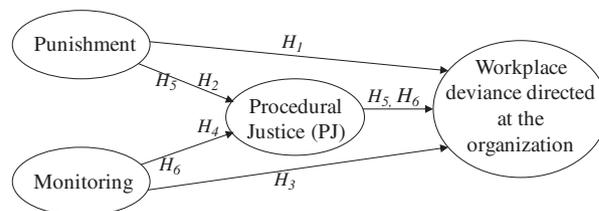
they perceive it as fair or, at least, not unfair), it could have neutral or fruitful effects on deviance. However, as the level of perceived threat of being punished increases (i.e., it is perceived as being used in high doses), punishment could have the opposite impact on both deviance and PJ. In this case, the more employees feel intimidated by the punishment, the more likely they are to perceive it as unjust and engage in deviance.

The suggestion above undoubtedly echoes the classic laws of diminishing marginal utility introduced by Marshall (1895) and later discussed in the organizational behavior field by Davis (1975). Perceptions of punishment threats may follow a dynamic of increasing negative influences on deviance and diminishing benefits on PJ, so that it is reasonable to suggest that punishment may be linked to deviance through a nonlinear U relationship and an inverted-U in the case of PJ. Therefore, although the relationship found in the literature between punishment and both PJ and deviance suggests negative and positive linear trends, respectively, we suggest that these relationships are better modeled as curvilinear.

*H1:* The relationship between punishment and deviance is a curvilinear U relationship.

*H2:* The relationship between punishment and PJ is a curvilinear inverted-U relationship.

Monitoring has generally been rated positively by workers, and prior research suggests linear negative associations of monitoring with deviance, and positive ones with PJ (Ambrose & Alder, 2000; Hollinger & Clark, 1982; Howell, 1988; Smith & Tannenbaum, 1963). However, a large amount of prior empirical research has also suggested different influences on employee behavior depending on the levels of monitoring or employee autonomy (Bazerman, 1982; Hemmingsson & Lundberg, 2006; House, 1996; Milgram, 1974; Mills, 1983; Spector, 1986). Consistent with prior research noting that high (rather than low) levels of monitoring promote employee performance and ethical behavior (e.g., Hemmingsson & Lundberg, 2006; Spector, 1986), as in the case of punishment, we suggest that the relationships between monitoring and both deviance and PJ found in the literature could be better modeled as curvilinear. More specifically, we predict that employees' perceptions about the level of monitoring used will lead them to make judgments about its fairness and behave or misbehave in consequence. Thus, we expect increasing marginal utility in the form of a curvilinear U from monitoring to PJ, and an inverted-U from monitoring to deviance (see Figure 1).



**Figure 1** Hypothesized model of punishment, monitoring, procedural justice (PJ), and organizational deviance.

*H3:* The relationship between monitoring and deviance is a curvilinear inverted-U relationship.

*H4:* The relationship between monitoring and PJ is a curvilinear U relationship.

The influence of monitoring and punishment on deviance has been shown to depend on employees' perceptions of the PJ used in implementing monitoring and punishment actions. Thus, PJ perceptions associated with monitoring and punishment should mediate the relationships of these two strategies with deviance. Meta-analytic studies have shown that PJ is negatively related to deviance (Cohen-Charash & Spector, 2001; Colquitt, Conlon, Wesson, Porter, & Ng, 2001), and prior research has argued that fairness perceptions associated with monitoring and punishment may be a crucial predictor of employees' behavioral responses to monitoring and punishment (Ambrose & Alder, 2000; Ball et al., 1993, 1994; Kidwell & Bennett, 1994). Hence, we argue that monitoring and punishment do not ultimately encourage or discourage the employee's participation in deviance. Instead, PJ perceptions elicited by monitoring and punishment are what ultimately lead employees to be more or less prone to violating workplace rules and procedures by engaging in deviance.

*H5:* PJ will mediate the relationship between punishment and deviance.

*H6:* PJ will mediate the relationship between monitoring and deviance.

## Method

### Procedure and sample characteristics

Data were collected from 270 (17.46%) of the 1547 teachers at a Spanish public university by means of a questionnaire that was posted on the Intranet and could be accessed by clicking on a link in the e-mails asking for collaboration. The sample comprised 64.6% males and 35.4% females and, while 40% were 40 years old or younger, only 4.2% were older than 60. Most (68%) of the sample held tenured positions, while the remainder did not. No contextual conditions leading us to presume varying willingness to respond were found. The research project received prior official approval. In addition, IP addresses were unidentifiable and the respondents were so informed to avoid any possible reticence and interference in responses. Eventually, there were 270 valid responses after 12 were rejected due to incorrect completion and/or incoherent information.

### Measures

All items were scored on seven-point scales ranging from (1) Strongly Disagree to (7) Strongly Agree, except in the case of deviance, where the scale ranged from (1) Never to (7) Constantly. These scales are presented in the Appendix. The main diagonal of the correlations table (Table 1) shows the Cronbach's alpha values.

### Procedural justice

We used six items from the scale developed by Moorman (1991) related to the fairness of organizational procedures.

### Punishment

The six-item scale used to measure punishment threats was based on the scale of levels of severity of disciplinary action established by Trahan and Steiner (1994). Taking into account the disciplinary procedure at the organization researched, we selected and adapted six of the 12 items from the scale. We chose sanctions we thought respondents would consider plausible in the case of deciding to engage in deviance (warning/letter of reprimand, verbal caution, etc.) (see Appendix).

### Monitoring

The five-item scale used to measure this variable was constructed on the basis of a review of the literature on organizational control (i.e., Friedman, 1977; Howell, 1988; Smith & Tannenbaum, 1963) and leadership as an instrument of goal achievement (Tucker, 1981). The wording of the items presented the figure of the monitoring agent as impersonal. Examples would be, "I could be accused at any moment [...]", and "[...] the proper use of my work tools could be checked [...]."

### Organizational deviance

We used a 12-item scale developed by Bennett and Robinson (2000) to assess employee deviance directed at the organization. Special features of the collective of teachers and their organization led us to select six DWBO-related items.

### Control variables

Drawing on the literature, we considered that gender and age could co-vary with our dependent and independent variables (i.e., Aquino, Galperin, & Bennett, 2004; Zellars, Tepper, & Duffy, 2002).

We used structural equation modeling (SEM) to ensure that the above variables were four separate constructs according to confirmatory factor analysis (CFA). To test the hypothesis of mediation, we chose and applied hierarchical multiple regression models to test Baron and Kenny's (1986) conditions for mediation and the remaining relationships among the variables under study.

## Results

An inspection of the CFA results, presented in the Appendix, reveals that all the constructs used are indeed distinct: Although the  $\chi^2$ -test is significant ( $p < .001$ ), the goodness-of-fit (GFI), comparative-fit (CFI), normed-fit (NFI), Tucker-Lewis (TLI), and incremental-fit (IFI) indices are about .90. Table 1 shows the scale means, standard deviations, reliabilities and correlations ( $r$ ) among all the variables under study. Although correlations are just good or bad signs, they suggest that our variables are significantly associated in the expected directions. As planned, multiple regression models were applied to test the relationships among the variables in our study (see Tables 2 and 3).

**Table 1** Means, standard deviations, correlations and reliabilities.

Variables	N	M	SD	1	2	3	4	5	6
1. Gender	270	1.36	.48	—					
2. Age	270	2.78	.88	-.08	—				
3. Punishment	270	1.77	1.13	.00	.14*	(.91)			
4. Monitoring	270	3.35	1.19	.05	.10†	.34**	(.72)		
5. Procedural Justice (PJ)	270	3.05	1.43	-.04	-.12*	-.11†	.12*	(.96)	
6. Organizational Deviance	270	2.54	1.29	-.17**	.03	.11†	-.10†	-.14*	(.86)

Note: The numbers in parentheses on the diagonal are coefficient alphas.

N = 270.

†  $p < .1$ .

\*  $p < .05$ .

\*\*  $p < .01$ .

**Table 2** Regression models testing nonlinear effects of both monitoring and punishment, on procedural justice (PJ) and deviance.

y	Deviance			PJ		
	Linear	Quadratic	Cubic	Linear	Quadratic	Cubic
<b>Step 1</b>						
Punishment	.107†			-.105†		
R <sup>2</sup>	.011†			.011†		
Monitoring	-.099†			.116*		
R <sup>2</sup>	.009†			.013*		
<b>Step 2</b>						
Punishment	.068			.108		
Punishment × punishment		.050			-.270**	
ΔR <sup>2</sup>		.001			.027**	
Monitoring	-.081			.133*		
Monitoring × monitoring		-.090†			-.121*	
ΔR <sup>2</sup>		.008†			.015*	
<b>Step 3</b>						
Punishment	.083			.173		
Punishment × punishment		-.068			-.794*	
Punish × punish × punish			.110			.484
ΔR <sup>2</sup>			.001			.014**
Monitoring	-.114			.214*		
Monitoring × monitoring		-.104†			-.086	
Monitor × monitor × monitor			.045			-.111
ΔR <sup>2</sup>			.001			.031**

N = 270.

†  $p < .1$ .

\*  $p < .05$ .

\*\*  $p < .01$ .

### Test of curvilinear direct relationship-related hypotheses (H1, H2, H3 and H4)

Hypotheses 1, 2, 3 and 4, concerning the predicted curvilinear relationships between monitoring/punishment and both deviance and PJ, were tested first. Table 2 shows the results of the regression analyses. As we can see, the monitoring/punishment-deviance cubic trends are not significant and, regarding deviance, linear trends are significant but weak

in the cases of both punishment ( $R^2 = .011$ ,  $p < .1$ ) and monitoring ( $R^2 = .009$ ,  $p < .1$ ). In reference to the monitoring-deviance link, the addition of a quadratic term increased the explained variance ( $\Delta R^2 = .008$ ,  $p < .1$ ) and represented a significant trend, thus supporting H3. However, the punishment-deviance quadratic trend was not significant, and H1 is not supported. Second, concerning PJ, the links between monitoring/punishment and PJ were significantly associated, as seen in the explained variance calculation

**Table 3** Regression models testing procedural justice as a mediator of the link between monitoring and punishment, and deviance.

y	Deviance (monitoring alone)		Deviance (punishment alone)		Deviance (monitoring + punishment)	
	$\beta$	t	$\beta$	t	$\beta$	t
Step 1						
Gender	-.170	-2.750**	-.170	-2.750**	-.170	-2.750**
Age	.018	.287	.018	.287	.018	.287
R <sup>2</sup>	.030*		.030*		.030*	
Step 2						
Gender	-.165	-2.673**	-.171	-2.777**	-.163	-2.672**
Age	.027	.441	.003	.048	.012	.188
Punishment			.108	1.741†	.159	2.418**
Monitoring	-.093	-1.522†			-.144	-2.200*
$\Delta R^2$	.007†		.011†		.029*	
Step 3						
Gender	-.172	-2.807**	-.177*	-2.899*	-.170*	-2.789**
Age	.008	.127	-.014	-.218	-.004	-.065
Punishment			.098	1.595	.143	2.177†
Monitoring	-.071	-1.153			-.124	-1.876†
Procedural justice	-.139	-2.237*	-.141	-2.286*	-.122	-1.976*
$\Delta R^2$	.019*		.023*		.014*	
Adjusted R <sup>2</sup>	.041		.046		.055	
F(4/5, 270)	3.760**		4.080**		4.001**	

N = 270.

† p &lt; .1.

\* p &lt; .05.

\*\* p &lt; .01.

of punishment ( $R^2 = .011$ ,  $p < .1$ ) and monitoring ( $R^2 = .013$ ,  $p < .05$ ). The addition of quadratic terms into the model increases the explained variance significantly in the cases of monitoring ( $\Delta R^2 = .015$ ,  $p < .05$ ), and punishment ( $\Delta R^2 = .027$ ,  $p < .01$ ), and they constitute significant trends that add support to H2 and H4. Cubic terms here do not represent significant trends either.

In sum, the paths of the monitoring-PJ and monitoring-deviance quadratic terms are significant. This indicates that monitoring predicts both PJ and deviance through nonlinear links, thus supporting H4 and H3, respectively. When punishment predicts PJ, the quadratic trend is also significant (Table 2-Step 2, PJ-Columns), which supports H2. Even though however, no significant quadratic trend was found when punishment predicts deviance directly ( $B = .068$ ,  $p$  n.s.) (see Table 2-Step 2, Deviance-Columns), Yet there was support for a curvilinear *indirect* trend given that PJ performed as a mediator of that link and, in turn, punishment showed curvilinear effects on PJ. This significant curvilinear *indirect* relationship of punishment on deviance, supports H1.

### Test of mediation-related hypotheses (H5 and H6)

In Table 3, we tested the mediating role of PJ (H5). Monitoring (Column 1) and punishment (Column 2) were first separately included as independent variables, and then together in the same model in Table 3-Column 3. We then

examined Baron and Kenny's (1986) three conditions for mediation: that is, (a) the independent variable [monitoring/punishment] has to predict the criterion variable [deviance]; (b) the proposed mediator [PJ] has to be predicted by the independent variable [monitoring/punishment] and predict the criterion variable [deviance]; and (c), the direct path between monitoring/punishment and deviance has to decrease (preferably to non-significance: full mediation) when the mediator [PJ] is added. An inspection of Table 3-Step 2 reveals significant associations of both punishment ( $B = .108$ ,  $p < .1$ ) and monitoring ( $B = -.093$ ,  $p < .1$ ) with deviance. The resulting signs are also as expected. These patterns fulfilled the first condition (a). The fulfillment of the second condition (b) is shown in correlations in Table 1 and in the multiple regression results in Table 2-Step 1 (PJ-Column) and Table 3-Step 3 (Columns 1 and 2).

Baron and Kenny's (1986) third (c) condition was tested using the Cohen and Cohen (1983) hierarchical regression models, as they recommend for investigating mediation. As Table 3 shows, we hierarchically entered control variables (Step 1), independent variables (Step 2), and the proposed mediating variable (Step 3) as regression models. An inspection of Table 3-Columns 1 and 2 reveals that the direct paths linking monitoring/punishment with deviance (Step 2) are significant, but when PJ is added in Step 3, they are no longer significant, while PJ becomes significant in both models. Thus, these results support full mediation. In other words, PJ now seems to be carrying the weight of

the effects of monitoring and punishment on deviance. Thus, these results achieve the last condition (c) of Baron and Kenny and support H5 and H6. However, when punishment/monitoring are tested in the same model (see Table 3-Column 3), and PJ is entered, punishment/monitoring paths to deviance are just less significant, so that in this case the results only support partial mediation.

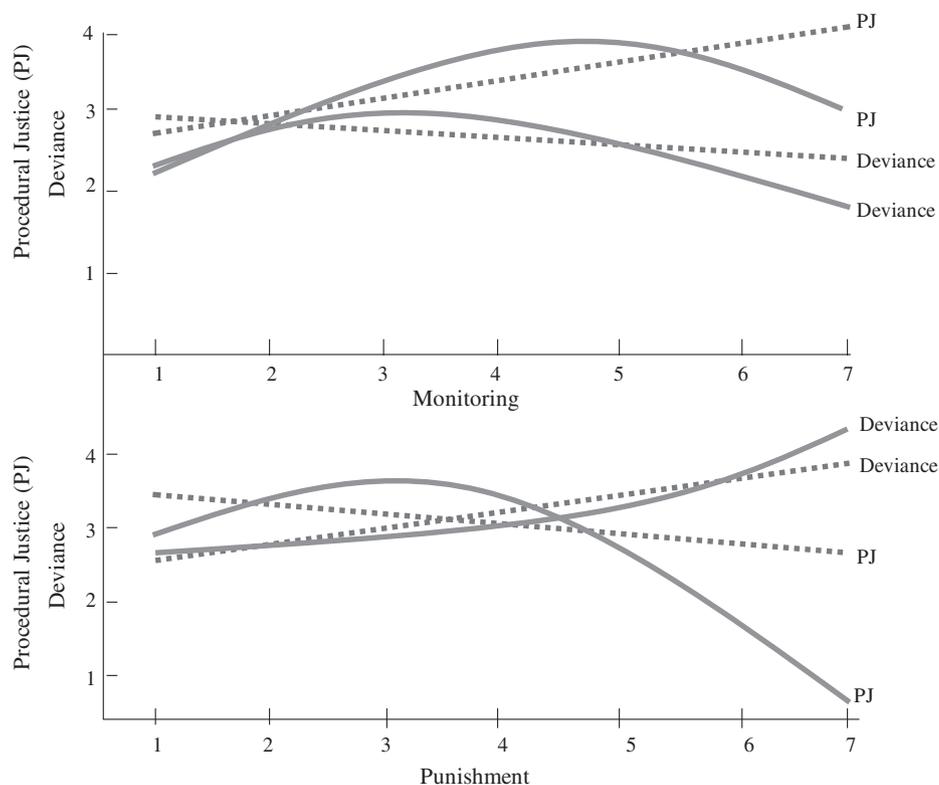
Finally, the quadratic trends of the influence of monitoring and punishment on deviance and PJ are graphically represented in Figure 2. A visual inspection of Figure 2 reveals that punishment, as expected, describes a curvilinear U relationship with deviance and an inverted-U relationship with PJ. Monitoring, on the other hand, describes a curvilinear inverted-U relationship with deviance, as expected, but failed to relate to PJ in a U-relationship, thus limiting support for H4.

## Discussion

The results confirm that perceptions of PJ and nonlinear influences govern the relationships from both monitoring and punishment to deviance. Nonlinear influence appears to suggest that monitoring and punishment may more effectively affect deviance if they are used in "correct dosages." We then questioned how to determine whether some dosages are "correct" compared to others. Both monitoring and punishment are multi-layer constructs, yet it is difficult to clearly state which elements of both monitoring and punishment determine their relation to employee deviance following curvilinear patterns. This study suggested that one reason for these curvilinear asso-

ciations would be the degree to which employees perceive that these coercive practices elicit just or unjust procedures. Furthermore, because organizational procedures comprise the methods customarily used by HR managers in determining how monitoring activities and punishment systems are conducted, organizational procedures perceived as unfair may lead employees to perceive those coercive practices *themselves* as unjust. In turn, and as a form of retaliation, the above negative perceptions may be those that ultimately lead employees to engage in deviance. The results showed that PJ acted as a mediator explaining why punishment and/or monitoring can ultimately affect deviance, and the "correct dosages" of monitoring and punishment to affect deviance to a greater degree seem to be those that arouse greater perceptions of PJ among employees.

Although some prior research has shown the mediating role of PJ in linking some forms of punishment and monitoring to employee attitudes and behaviors (e.g., Hovorka-Mead et al., 2002; Podsakoff et al., 2006; Stanton, 2000), this study extends this prior literature. First, this study contributes to this literature by focusing on deviance as a new criterion variable. Moreover, this study supports nonlinear influences of monitoring and punishment on both PJ and deviance, and so provides a better understanding about how certain doses of monitoring and punishment are more influential in employee performance (Ball et al., 1993, 1994; Hemmingsson & Lundberg, 2006; Spector, 1986). As noted, little understanding of these reactions had been reported previously, and the supported nonlinearity in this study sheds light in this regard. Furthermore, the results



**Figure 2** Final 'a posteriori' linear and quadratic trends of the relationships of monitoring and punishment with procedural justice (PJ) and organizational deviance.

link dosage theory with equity theory within the monitoring and punishment arena, thus opening up a new scenario that delves more deeply into the intricacy of these relations. Fairness appears to be present in the *etiology* of the effectiveness of monitoring and punishment on workplace deviance, whereas nonlinearity in the *morphology* of these relationships was observed. These two findings provide a useful picture in which it is easier to understand why a “dosage strategy” that seeks proper doses of monitoring and punishment generally works. Finally, the mediating role of PJ also seems to recommend that judgments and emotional variables should be considered to better understand how and when punishment can deter deviance. In effect, the single punishment-deviance link probably seems too reductionist to reflect the traditional usefulness of punishment experienced by managers. The fact that punishment presents nonlinear effects on deviance and PJ is also helpful in developing new literature in this regard.

The results are also consistent with prior empirical research noting that high (rather than low) levels of monitoring are able to promote employee performance and ethical behavior (Hemmingsson & Lundberg, 2006; Spector, 1986). Since PJ has been shown to play a mediating role in the relationship between monitoring and deviance, one could conclude that this occurs because employees perceive higher levels of monitoring as fairer. However, as we can see in Figure 2, the results do not always support this suggestion. Contrary to expectations, and according to curvilinear trends, both the relationship from monitoring to deviance and the one from monitoring to PJ mapped an inverted-U relationship. Therefore, in the end ranges both deviance and PJ decreased, which indicates that PJ cannot always explain monitoring influences on deviance because monitoring does not appear to elicit perceptions of PJ here. The effects of this monitoring, which seems to be perceived by employees as high, on deviance may be better explained here based on a simple deterrent approach. In any event, strictly based on our results, the reasons for this result remain unknown.

The results also seem to support the idea found in the literature that punishment threats alone are hardly effective, but instead trigger deviance. This finding is consistent with recent studies, such as Henle et al. (2009), which suggested that employee perceptions of punishment alone may not have main effects on deviance or may even increase it. In this regard, Liao, Luo, Gurung, and Li (2010) did not support punishment severity and punishment certainty as being related to employee intention to avoid Internet misuse either. In addition, the results appears to be somewhat consistent with Zoghbi (2006)’s prior study suggesting that unfair treatment by supervisors produces fear, which in turn leads employees to engage (or take refuge?) in cyberloafing as their only escape. In our view, we consider that punishment threats are unable to discourage deviance because they were studied while acting alone. Alone they could be perceived as more indiscriminate or non-contingent (Cherrington, Reitz, & Scott, 1971) and, therefore, likely to constitute “empty threats” that pave the way for deviance. Without the direction monitoring provides, employees could feel threatened but not neces-

sarily controlled and, thus, perceive this situation not only as unjust but also as unpunished (Ball et al., 1994; Youngblood et al., 1992). Impunity and injustice at the same time could very likely lead them to perceive themselves as being able, without risk, to retaliate by engaging in deviance. Indeed, if monitoring represents the *probability of detection* and punishment represents *the cost of detection*, the effects of punishment’s interaction with monitoring appear to be able to elicit perceived certainty of being caught and sanctioned among employees, ultimately decreasing deviance (Paternoster, 1987). We are aware that in the daily working context some managers display more optimism about the use of punishment than what our results offer. However, as noted, prior studies provide signs that punishment can be useful for management in controlling deviance if its effects are moderated with monitoring.

Some results from our study indicate the need for future research. First, as discussed above, the significant correlation between punishment and monitoring suggests punishment-monitoring synergies in affecting deviance when a deterrent approach is followed. Second, there is broad consensus that fear produces a tendency to flee, and that fear is an unpleasant and highly uncontrolled emotion (e.g., Gray, 1988). Based on this irrationality, we speculated about whether punishment would encourage deviance, due to the way the employee copes with fear of punishment. In our opinion, parallel to the fear-driven compliance of employees desired by organizations, employees could undertake deviance as a form of escape, and not only as a form of retaliation to injustice (Blau, 1964). Future research could deal with these issues.

Finally, we believe that our study has significant limitations. We present a causal model, and yet use a cross-sectional design, and this could be a major limitation of our research. Hence, the study could suffer from mono-method/source bias. In addition, since our respondents are questioned about misconduct, social desirability bias could be present as well. Second, many results are weakly significant. This suggests the need for additional analyses in future research. Finally, although public university education in Spain is currently deregulated and, therefore, competes with the private universities in similar patterns, the state university that supplied the sample has certain job conditions that are still inherent to workers in the public sector. Thus, it might be debatable whether, for example, the punishment in our public university context would be the same among employees in the private sector.

In conclusion, the nature of the relationships of monitoring and punishment with deviance and PJ appears more accurately described by a quadratic curve than by a linear trend. Furthermore, the results suggest PJ as a full mediator of these relationships. Equity and nonlinear explanations about how, when and why monitoring and punishment systems perform open up a new scenario in which to better understand how organizations can effectively combat workplace deviance. Thus, managers are encouraged to administer coercion in “correct dosages”, which appear to be the ones that successfully communicate just procedures to employees in the workplace.

**Appendix.** See Table A1.

**Table A1** Confirmatory factor analysis results of all variables under study.

**Items and standardized path coefficients**

*Punishment*

	I recognize I have sometimes complied with the rules of my job for fear of...	
X2	warning/letter of reprimand from my superiors	.89
X4	my supervisor intervening and watching me more closely	.85
X1	verbal caution from my boss	.84
X3	providing coaching or additional training classes for the employee	.78
X6	my organization will start disciplinary action with the intention of dismissing me	.75
X5	transfer to a different position or unit	.73

*Monitoring*

	I perceive...	
X9	I may be accused at any moment of not strictly fulfilling my job obligations	.80
X11	my co-workers and (or) client relationships are controlled by the university	.63
X7	pressure in my job to achieve goals	.60
X8	the proper use of my work tools may be checked by my organization	.56
X10	regulations that really govern my behavior at work	.35

*Procedural justice*

	How fairly are the organization's procedures designed to...	
Y13	hear the concerns of everyone affected by a university decision?	.93
Y15	have all parties affected by a decision included in the decision-making process?	.92
Y14	allow for requests for clarifications or additional information about a university decision?	.91
Y16	help you to collect accurate information for decision-making?	.90
Y17	provide opportunities to appeal against or challenge a company decision?	.90
Y12	provide useful feedback regarding university decisions and its implementation?	.77

*Organizational deviance*

	I recognize that I...	
Y22	put little effort into my work	.87
Y20	intentionally worked slower than I could have worked	.86
Y23	take an additional or longer break than is acceptable at my workplace	.83
Y18	spend too much time fantasizing or daydreaming instead of working	.63
Y21	neglect to follow my boss' instructions	.54
Y19	come in late to work without giving prior notice	.53

Note: Cmin = 541.808; df = 224;  $p < .001$ ; Cmin/df = 2.419; GFI = .86; CFI = .93; IFI = .93; TLI = .91; NFI = .88; RMSEA = .073.

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