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# Procedural justice and compliance behaviour: the mediating role of emotions

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#### Abstract

Procedural justice researchers have consistently found that if authorities treat people with trust, fairness, respect and neutrality, people will not only be more willing to cooperate with authorities, but they will also be more likely to comply with authority decisions and rules. New research in this area has gone on to explore the role that emotions play in response to procedural justice and injustice. What this new research has neglected to do, however, is examine whether emotions mediate the effect of procedural justice on subsequent compliance behaviour in real life settings. Using longitudinal survey data collected in two real-life contexts (Study 1: a taxation dispute (N = 652), and Study 2: workplaces (N = 2366)), the present study will show that perceptions of procedural justice influence the emotions experienced by people, but more importantly these emotional reactions (i.e. anger and happiness) mediate the effect of justice on subsequent compliance behaviour. In other words, it is these positive and negative emotional reactions to perceived justice or injustice that go on to predict who will and will not comply with authority decisions and rules. Copyright © 2008 John Wiley & Sons, Ltd.

#### INTRODUCTION

There is now a significant body of literature published which shows that the use of procedural justice by authorities can go on to affect compliance behaviour among those being regulated. Since the late 1980s researchers have consistently found that if authorities treat people with trust, fairness, respect and neutrality, people will not only be more willing to cooperate with authorities, but they will also be more likely to comply with authority decisions and directives (e.g. Tyler, 1990). Such findings have been obtained in a number of different contexts, including law enforcement settings, regulatory settings, and workplace settings.

In recent years, procedural justice scholars have started to focus their attention on people's emotional reactions to perceived justice or injustice. A handful of studies have shown that perceptions of procedural justice (or injustice) can lead people to experience the discrete emotions of happiness, joy, pride, guilt, disappointment, anger, frustration and anxiety (e.g. Krehbiel & Cropanzano, 2000; Weiss, Suckow, & Cropanzano, 1999). Research has also shown that people's emotional state at the time of making justice judgments can determine whether or not they perceive an encounter with an authority to be procedurally fair or not (e.g. van den Bos, 2003). An interesting issue that has only just begun to receive attention in the procedural justice literature is the degree to which emotions mediate the relationship between procedural justice and subsequent behavioural reactions. There are three studies that suggest that emotions may play an important mediational role between perceptions of injustice and behavioural reactions (see Chebat & Slusarczyk, 2005; Gordijn, Yzerbyt, Wigboldus, & Dumont, 2006; VanYperen, Hagedoorn, Zweers, & Postma, 2000).

The main aim of the present study is to further extend research in this area. Specifically, the present study will explore whether emotions mediate the effect of procedural justice on subsequent real-life compliance behaviour with rules or laws.

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Using longitudinal survey data collected in two different contexts, this paper seeks to test whether procedural justice is the key variable for predicting when people will comply with an authority's decisions or rules, or whether emotions mediate the effect of procedural justice on compliance behaviour. Prior to discussing the findings of the present study, however, the paper will first seek to review the procedural justice and emotion literature.

#### **Procedural Justice and Compliance**

Research into procedural justice has been one field of study that has put a significant amount of research effort into trying to explain why people sometimes defy or resist authority decisions and rules. Procedural justice concerns the perceived fairness of the procedures involved in decision-making and the perceived treatment one receives from a decision maker. More specifically, the relational perspective on procedural justice suggests that people are not only concerned with the outcomes that they receive in an encounter with an authority, but that they are also concerned about the treatment they receive during the experience. Relational aspects of experience include neutrality, lack of bias, honesty, efforts to be fair, politeness and respect for citizens' rights. Tyler (1990, p. 7) argues that 'all of these features of a procedure are conceptually distinct from its outcome, and therefore represent the values that may be used to define procedural fairness'. Tyler & Lind (1992) argue that procedural justice is important to people because the treatment one receives from group authorities provides information about how much one is valued as a group member. Fair procedures communicate respect and value; unfair procedures communicate disrespect, marginality or even exclusion from a valued group.

Procedural justice scholars have consistently found evidence that shows that people who feel they have been treated fairly by an organisation will be more inclined to accept its decisions and comply with its rules (e.g. Lind & Tyler, 1988; Tyler, 1990; Tyler & Huo, 2002). For example, Tyler (1987, cited in Lind & Tyler, 1988, p. 65–83) interviewed a random sample of citizens living in Chicago about their encounters with police and the courts. Of the 652 citizens who had had encounters with these authorities, Tyler found that the procedural justice features of their encounter had substantial effects on their evaluations of the authorities involved and their views about the legitimacy of the authorities involved. It was found that these variables in turn went on to affect citizens' acceptance with decisions and their compliance with laws (see also Sunshine & Tyler, 2003; Tyler & Huo, 2002). Research conducted in regulatory contexts has also found that perceptions of procedural justice can lead to compliance with the law. Wenzel (2002) was interested in examining whether reminder letters that were based on principles of procedural justice would yield greater subsequent filing behaviour from taxpayers than standard Tax Office letters that made penalties salient. All letters were sent to a random sample of business taxpayers in Australia who had not filed their business tax returns on time; hence, all taxpayers were non-compliant taxpayers at the outset of the study. Although the effects were weak, it was found that the procedural justice letters did produce greater subsequent filing compliance compared to the standard tax authority letter (see also Makkai & Braithwaite, 1994; Murphy, 2005).

So in summary, there is strong evidence to suggest that procedural justice can improve compliance with an authority's decisions and rules, and this is the case in a variety of different settings. However, while the studies discussed above have shown that perceptions of procedural injustice can go on to affect people's willingness to comply with rules, the psychological mechanisms underlying why this occurs are not so clear. For example, why is it the case that some people respond in a more negative way to procedural injustice than do others, and why is it the case that some people go on to defy authority while others in the same situation do not? It is proposed here that emotional reactions may play an important mediational role in predicting who will and will not respond well to unfair treatment.

# **Emotions and Procedural Justice**

There has been very little empirical research conducted to show how emotions play a role in people's perceptions of justice (see Mikula, Scherer, & Athenstaedt, 1998; Montada, 1994; Montada & Schneider, 1989). The majority of work in this area has been done within the context of distributive justice (e.g. Adams, 1965; Chebat & Slusarczyk, 2005; Homans, 1974). Distributive justice focuses on the fairness of an allocation or distribution of outcomes. Within the distributive justice literature, Homans's (1974) argument about emotional responses to injustice has been the cornerstone for research on the topic. Homans argues simply that those treated fairly (in a distributive sense) will experience positive emotions,

whereas those who are under rewarded are likely to feel anger and those who are over rewarded tend to feel guilty (see also Adams, 1965). Little research, however, links emotions to procedural justice concerns.

In reviewing the extant literature in this area, it can be seen that the majority of studies have tended to examine whether procedural justice goes on to predict different emotional reactions felt by participants. For example, in a laboratory study, Cropanzano & Folger (1989) found that an unfair outcome went on to produce negative emotions among participants, but only if coupled with an unfair process. If either the procedure or the outcome was fair, ill will did not result. In another experimental study, Weiss et al. (1999) were interested in more fully exploring the role of emotions in reaction to procedural injustice. Assigning 122 students to conditions crossing either a positive or negative outcome with a procedure which was fair, biased in the participant's favour, or biased in favour of another, Weiss et al. found that the emotion of happiness was overwhelmingly a function of outcome, with procedural fairness playing little role. Anger was highest when the outcome was unfavourable and the procedure was biased against the participant. Guilt was highest when the outcome was favourable and the procedure was biased in favour of the participant, and pride seemed highest whenever the outcome was favourable (for similar findings see Hegtvedt & Killian, 1999; Krehbiel & Cropanzano, 2000).

van den Bos (2003) argued that it is not uncommon for people forming justice judgments to rely on how they feel about the events they have encountered. In other words, van den Bos suggested that justice judgments might be strongly influenced by one's prior emotions. In one of his laboratory experiments van den Bos (2003) explored the possible role of affect as information in the process of forming judgments of procedural justice. To summarise, it was found that students who had been put into a positive mood prior to making procedural justice judgments were significantly more likely to judge the way in which they had been treated by the experimenter to be procedurally fair. Those in negative moods were in turn consistently more likely to judge their treatment by the experimenter to be procedurally unfair (see also van den Bos, Maas, Waldring, & Semin, 2003).

Real life studies have also reported similar findings to the experimental research discussed above. In one study conducted in the health care context, Murphy-Berman, Cross, & Fondacaro (1999) assessed the relationship between individuals' appraisals of procedural justice following health care treatment decisions. It was found that respondents who felt they had been treated fairly by their health care provider were more likely to experience increased levels of pride and pleasure as well as lower levels of anger as a result of their treatment. Similarly, Chebat & Slusarczyk (2005) reported the findings from a study they conducted in the retail banking sector. They surveyed a group of consumers who had previously made a complaint against a major Canadian bank. They were interested in testing whether emotions mediated the effect of justice concerns on their loyalty versus exit behaviour from the bank, and it was found that they did. Those consumers who felt they had been treated in a procedurally unfair manner by the bank were more likely to display negative emotions, and those who displayed negative emotions were subsequently less likely to remain loyal to that particular bank.

Finally, VanYperen et al. (2000) and Gordijn et al. (2006) were also interested in emotions as mediating variables between justice and behaviour. In a vignette study of South African workers employed by an international company, VanYperen et al. reported that negative affect did seem to mediate the effect of procedural justice on behavioural reactions. Those who reported negative emotional reactions to hypothetical scenarios of procedural injustice were more likely to indicate they would leave their place of employment, were more likely to indicate they would neglect their work duties, and were more likely to express dissatisfaction to their supervisors as a result of the injustice. Gordijn et al. (2006) presented university students in their study with a hypothetical story which described unfair treatment of members of a group towards members of another group. They found that in contrast to people who identified weakly with the group receiving the unfair treatment, people who identified strongly with the group were more likely to: (a) appraise the perpetrator's behaviour as being more unfair; (b) experience more anger; and (c) want to take action against the perpetrator of the unfair treatment. Gordijn et al. also provided strong evidence to support a mediational model, whereby the emotion of anger was found to mediate the fairness effect on subsequent retaliatory behaviour. In other words, appraisal of the treatment (fair vs unfair) coloured the emotional reaction expressed, which in turn led to feelings of wanting to take action against the perpetrator.

# **Present Study**

It is clear from the literature that procedural injustice can lead one to experience negative emotions, but it is not yet clear whether these negative emotions affect subsequent compliance behaviour. It is also clear from the previous literature that

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procedural justice can lead to positive emotional reactions, but again it is not yet clear that these positive emotions result in more compliant behaviour. Three studies have suggested that emotions may play an important mediational role between procedural justice and people's behavioural reactions (Chebat & Slusarczyk, 2005; Gordijn et al., 2006; VanYperen et al., 2000). However, neither of these studies explored the role that emotions played between peoples' perceptions of procedural injustice and their real-life compliance behaviour with rules and decisions. In the Gordijn et al. (2006) and VanYperen et al. (2000) papers, participants were asked about how they thought they would respond to a hypothetical scenario. While the Chebat & Slusarczyk (2005) study examined real life reactions and behaviour, their study was not interested in compliance behaviour with rules and laws. Instead, they examined exit versus loyalty behaviour. Given our interest is in how authorities can best nurture voluntary compliance with explicit rules and decisions, the present study sought to extend the limited research in this area by exploring the interplay between perceptions of procedural justice, people's emotional reactions to these justice perceptions, and subsequent compliance behaviour with rules and decisions. 

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Data from two real-life studies will be presented. Study 1 will present longitudinal survey data collected from taxpayers who were engaged in a long standing dispute with the Australian Taxation Office (ATO) over their involvement in controversial tax avoidance schemes. Of interest will be taxpayers' perceptions of the ATO's treatment of taxpayers (i.e. procedural justice), their emotional reactions to the treatment they received and their subsequent compliance behaviour. Of specific interest is the emotion of anger the taxpayers express towards the treatment they received from the ATO. The negative emotion of anger was chosen for three reasons. First, exploratory interviews with a small group of taxpayers revealed they harboured a high degree of anger towards the ATO (Murphy, 2003). Second, previous justice research points to the importance of anger in people's response to procedural unfairness, especially if accompanied by an unfavourable outcome (e.g. Gordijn et al., 2006; Weiss et al., 1999). Third, research into distributive justice has found that anger mediates the effect of justice perceptions on compliance behaviour (e.g. Homans, 1974).

Study 2 will present longitudinal survey data collected from a sample of American employees asked to share their views about their workplace and their current work supervisors. Again, of interest will be employees' perceptions of their employer's treatment of them, employees' emotional reactions to such treatment, and their subsequent compliance behaviour with workplace rules and decisions. Instead of examining the negative emotion of anger, however, Study 2 will explore whether positive emotions can also mediate the effect of procedural justice on compliance behaviour. Happiness was the emotion of choice. Happiness was chosen for two reasons. First, previous research has revealed that people who have received procedural justice are more likely to experience feelings of happiness. Second, and perhaps more importantly, emotion research shows that the positive and negative emotions felt by people are often unrelated or have only low negative correlations, suggesting that anger and happiness are distinct emotions, not one emotion on opposite sides of a continuum (see Gordijn et al., 2006). If anger and happiness are distinct emotions, their role in mediating justice concerns may be psychologically distinct as well. Study 2 aims to examine whether this is indeed the case.

# STUDY 1—TAXATION CONTEXT

Very few studies have examined the relationship between procedural justice and compliance behaviour in the context of taxation. Taxation offers an interesting context for examining the effect that procedural justice has on taxpayer compliance behaviour because most people assume that taxpayer behaviour is dominated by financial self-interest concerns. However, research in this area has found that taxpayers also value and respond well to fair treatment when dealing with tax authorities (e.g. Feld & Frey, 2002; Murphy, 2004a; 2005; Wenzel, 2002). With negative emotions likely to be running high in a dispute, taxation disputes also provide the perfect opportunity for studying the role that negative emotions play in the procedural justice and compliance relationship.

<sup>1</sup>We propose that compliance with rules and decisions is also fundamentally different from the choice of exit versus loyalty behaviour discussed in the Chebat & Slusarczyk (2005) article. In the context of banking, customers have the power to continue or discontinue their relationship with their bank if they feel aggrieved. In regulatory contexts such as taxation, however, a power imbalance exists between taxpayers and the tax authority. No matter how aggrieved one may feel towards the treatment received from a tax authority, the choice to disengage from the tax system is usually not an option. The only avenue for retaliation or defiance is through engaging in forms of tax evasion or avoidance if the opportunity arises. For many, leaving a place of employment is also not a viable option in the short term given the financial costs associated with leaving a job. Hence, the relationship a supervisor has with their employee also consists of a power imbalance. It is for this reason that we believe it is important to explore whether emotions mediate the effect of procedural justice on compliance behaviour.

#### Method

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#### Participants and Procedure

The data were taken from a longitudinal survey of Australian taxpayers (Murphy, 2002a, 2004b). All had been penalised by the ATO for being involved in aggressive tax avoidance schemes (for a detailed description of this case study see Murphy, 2002b, 2003). In 2002, the names and addresses of 32 493 taxpayers were available for selection from the ATO's case files. The first survey was sent in January 2002 to a random sample of 6000 of these taxpayers. The sample was stratified by Australian State/Territory jurisdiction (i.e. 42% of the sample resided in the state of Western Australia, so 2549 West Australian taxpayers were sampled for the present study). Non-respondents were followed up over time. Follow-up was accomplished using an identification number attached to each questionnaire, which was in turn linked to the sample name.

In order to protect taxpayers' privacy, the ATO was responsible for all mailings of the survey and reminder letters. Taxpayers who agreed to participate were asked to return their completed questionnaires in a reply-paid envelope directly to the first author for analysis. This procedure ensured that the first author did not have access to the names or addresses of sampled taxpayers. It also ensured that the ATO did not have access to any individual taxpayers' survey responses. A total of six mailings were made and by the end of July 2002, a total of 2292 useable surveys had been received. When adjusted for out-of-scope taxpayers who had died or moved address (N = 677), a response rate of 43% was obtained. Respondents in the final sample were between 24 and 81 years of age (M = 46.50, SD = 9.30), 82% were male, their average personal income level for the previous financial year was approximately AUS\$73 000 (currently about €42 300), and their average family income was approximately AUS\$93 000 (currently about €53 900). Using the limited amount of demographic data available from the ATO's case files (i.e. state of residence and sex), it was found that the sample of tax scheme investors who completed the survey was representative of the overall scheme investor population.

At the back of the initial 2002 survey, respondents were asked if they would be willing to participate in a follow-up study in the future. A total of 1250 respondents indicated that they would be happy to be contacted again and provided the first author with their contact details. In August 2004—two and a half years after their participation in the first survey the 1250 respondents were then directly contacted again by the first author and asked to fill in a follow-up survey. Non-responders were again followed up, and after three reminder letters were sent a total of 652 respondents returned a useable questionnaire. When taking into account those who had moved address or died since completing the first survey (N = 146), this resulted in a follow-up response rate of 59%. Using the ID numbers affixed to completed survey booklets, a person's responses to the first survey could be linked with their responses to the second survey.

A longitudinal analysis, as opposed to a cross-sectional analysis, was conducted in the present study for the following reason. When using cross-sectional data, causal relationships between variables of interest become an issue. When using data collected at one time point, only relationships between key variables can be ascertained. Causal statements that one variable led to the outcome on another variable cannot be made. Following research participants over time and using longitudinal data, in contrast, allows researchers to make stronger claims about the causal relationships between the variables they are interested in. Hence, the decision to use panel data in both Study 1 and 2.

#### Measures

For the purposes of Study 1, three categories of variables were of interest: procedural justice, the negative emotion of anger and self-reported tax non-compliance. Taxpayers' perceptions of procedural justice were assessed at Time 1 via a two-item scale. The two-item procedural justice measure was based on previous research conducted by Tyler (1990). Taxpayers were asked to reflect on the ATO's treatment of them during the enforcement process (e.g. 'The Tax Office tries to be fair when making their decisions'). A higher score on this scale reflects greater perceptions of procedural fairness. To examine the causal effect that perceptions of procedural justice had on subsequent non-compliance, self-reported compliance behaviour was therefore measured at Time 2. Taxpayers were asked a series of six questions about how they thought their experiences with the ATO had affected their taxpaying behaviour; a higher score on the scale indicates taxpayers were more engaged in tax non-compliant behaviour (e.g. 'I no longer declare all of my income'). The tax non-compliance scale was developed by the first author.<sup>2</sup> The emotion of anger was measured at both Time 1 and Time 2. The measures

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<sup>&</sup>lt;sup>2</sup>Unfortunately, a comparable compliance measure was not assessed at Time 1.

were designed to assess the emotional impact enforcement action had on taxpayers (e.g. 'I felt angry with the ATO'); a higher score indicates greater levels of anger. At Time 1, anger was constructed using two items. At Time 2, anger was constructed using five items; two of which made up the Time 1 measure of anger. The anger scales were again developed by the first author. The Appendix lists all of the questions that were used to construct the scales in Study 1, as well as the reliability coefficients of each scale, the mean score and standard deviation score for each scale.

#### Results

Factor Analysis and Correlation Matrix

A factor analysis using oblique rotation was first conducted to test for the assumed conceptual differentiation between the three categories of variables used in Study 1 (i.e. procedural justice, anger and tax non-compliance). The analysis yielded a four-factor solution explaining 61% of the variance (see Table 1).

With this sample it was found that all items loaded clearly onto their respective factors. Factor 1 comprised six items that measured self-reported tax non-compliant behaviour. Factor 2 comprised five items that measured anger at Time 2, Factor 3 comprised two items that measured perceptions of procedural justice, and Factor 4 comprised two items that measured anger at Time 1. Of interest was the finding that the Time 1 and 2 measures of anger loaded onto two separate factors. Such a finding suggests the two anger measures may have been measuring distinct concepts. This needs to be taken into account when interpreting the findings presented below. Table 2 presents the bi-variate correlations between all variables measured at Time 1 and Time 2.

Does Anger Mediate the Effect of Procedural Justice on Compliance Behaviour?

According to Baron & Kenny (1986), perfect mediation exists when four conditions are met. First, the independent variable (i.e. procedural justice) must be related to the mediating variable (i.e. emotion variables). Second, the independent

Table 1. Factor analysis differentiating categories of variables in Study 1

		Fact	or	
Item	1	2	3	4
1. Tax non-compliance				
Now use tax system in negative way	0.81			
Now look for ways to purposefully cheat	0.75			
Now more defiant towards ATO	0.63			
Now try to avoid paying tax	0.59			
Now look for ways to recoup losses	0.59			
No longer declare all income	0.58			
2. Anger Time 2				
Felt resentful towards ATO		-0.83		
Felt extremely annoyed		-0.72		
Felt full of bitterness		-0.63		
Felt angry with ATO		-0.55		
Felt wanted to get even with ATO		-0.37		
3. Procedural justice				
ATO cares about position of taxpayers			0.81	
ATO tries to be fair in decision-making			0.74	
4. Anger Time 1				
Felt wanted to get even with ATO				0.70
Felt angry with ATO				0.61
Eigenvalues	3.99	2.65	1.30	1.27
Explained variance (%)	27	18	9	8

*Note*: Principle Axis Factoring analysis, oblique rotation. Only factor loadings > 0.30 are displayed. Questions have been shortened in Table 1 due to space constraints. See Appendix for the full wording of questions.

Table 2. Bi-variate correlation matrix between all Time 1 and Time 2 measures of Study 1

Scale	1	2	3	4
<ol> <li>Procedural justice</li> <li>Anger Time 1</li> <li>Anger Time 2</li> <li>Tax non-compliance Time 2</li> </ol>	(0.73)	-0.16*** (0.60)	-0.33*** 0.28*** (0.77)	-0.11** 0.21*** 0.23*** (0.80)

Figures in parentheses are Cronbach alpha coefficients. \*\*p < 0.01; \*\*\*p < 0.001.

variable must be related to the dependent variable (i.e. non-compliance). Third, there must be a relationship between the mediator (i.e. emotions) and the dependent variable (i.e. non-compliance). Fourth, the previously significant relationship between the independent variable (i.e. procedural justice) and the dependent variable (i.e. non-compliance) is no longer significant after controlling for the mediator (i.e. emotions). In other words, if it is the case that emotional reactions truly mediate the relationship between procedural justice and compliance behaviour, then we would expect to see the relationship between the justice and compliance behaviour scales to disappear once people's emotional reactions are taken into account. If on the other hand, perceptions of procedural justice are more important in predicting compliance behaviour, and emotions play no role in the justice-compliance relationship, then entry of emotions into the model should have no effect on the relationship between justice and compliance.

So, does anger mediate the effect of procedural justice on subsequent compliance behaviour in the real life context of a taxation dispute? To test this question two hierarchical regression analyses were performed. The first used 'procedural justice' measured at Time 1 to predict level of 'anger' at Time 2 (see Table 3). This was done while controlling for the level of 'anger' respondents felt at Time 1. The second hierarchical regression analysis used 'procedural justice' at Time 1 and 'anger' at Time 2 as predictors of 'tax non-compliance' at Time 2 (see Table 4). This was again done while controlling for the level of anger felt at Time 1 (which was entered into the first step of the model). By examining the effects over two time points, the findings enable us to make more confident assessments as to the causal relationships between the variables of interest.

Not surprisingly, from Table 3 it can be seen that 'anger' at Time 1 significantly predicted feelings of 'anger' at Time 2. Those who felt angry with the ATO in 2002, were also more likely to feel angry with the ATO in 2004. More importantly, 'procedural justice' at Time 1 also significantly predicted feelings of 'anger' at Time 2, even when the level of anger at Time 1 was controlled for. In other words, those who were more likely to feel their treatment by the ATO was procedurally fair in 2002 were less likely to experience feelings of anger about their treatment two years later.

Moving onto the second regression, when examining respondents' tax compliance behaviour, the findings reported in Step 1 of Table 4 show that 'anger' at Time 1 significantly predicted 'non-compliance behaviour' at Time 2. Those taxpayers who were angrier with the ATO at Time 1 were more likely to report evading their taxation obligations at Time 2. At Step 2, 'procedural justice' at Time 1 was entered into the model. This variable was also found to significantly predict subsequent 'tax compliance behaviour' at Time 2. Those taxpayers who were more likely to feel their treatment by the ATO in 2002 was procedurally fair were less likely to evade their taxes two years later. Also of interest is the finding that

Table 3. Hierarchical regression analysis showing how 'procedural justice' measured at Time 1 predicts the emotion of 'anger' at Time 2, while controlling for level of 'anger' at Time 1

Predictor	Step 1			Step 2				
	B	$SE_B$	β	В	$SE_{B}$	β	$r^2_{\text{part}}$	
Anger T1 Procedural justice T1	0.26	0.04	0.28***	0.22 -0.29	0.03 0.04	0.24*** -0.30***	0.05 0.08	
Constant	3.27	0.08	_	3.96	0.12	_	0.00	
$R^2$		0.08			0.16			
$R^2$ change		0.08			0.09			
F change		54.35***			63.72***			
$\mathrm{d}f$		1, 630			1, 629			

<sup>\*\*\*</sup>p < 0.001.

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Table 4. Hierarchical regression analysis exploring the mediational role of anger in the procedural justice and tax compliance relationship. Dependent variable is tax non-compliance at Time 2 (a higher score on the compliance measure reflects more tax evasion activity)

Predictor	Step 1			Step 2			Step 3			
	В	$SE_{B}$	β	В	$SE_{B}$	β	В	$SE_{B}$	β	$r^2_{\text{part}}$
Anger T1	0.18	0.03	0.22***	0.17	0.03	0.21***	0.13	0.03	0.16***	0.02
Procedural justice T1				-0.07	0.03	$-0.08^{*}$	-0.02	0.04	-0.03	0.00
Anger T2							0.16	0.04	$0.18^{***}$	0.03
Constant	1.62	0.08	_	1.78	0.11	_	1.16	0.18		
$R^2$		0.04			0.05			0.08		
R <sup>2</sup> change		0.04			0.01			0.03		
F change		31.09***			$3.94^{*}$			17.85***		
df d		1, 628			1, 627			1, 626		

p < 0.05; p < 0.01; p < 0.01; p < 0.001.

'anger' at Time 2 also predicted 'non-compliance' when entered into the model at Step 3. Those taxpayers who were angrier with the ATO at Time 2 were more likely to report evading their taxes. This was even the case when anger levels at Time 1 were controlled for. Of more importance, however, is the finding that anger appeared to mediate the effect of procedural justice on compliance behaviour. When the Time 2 'anger' measure was entered into the model at Step 3, 'procedural justice' no longer remained a significant predictor of 'non-compliant behaviour'. This significant mediation effect was confirmed via a Sobel test, which revealed that anger did significantly mediate the effect of procedural justice on compliance behaviour, z = -3.70, p < 0.001.

# STUDY 2—WORKPLACE CONTEXT

The findings reported in Study 1 indicate that people who see their treatment to be procedurally unfair are more likely to express anger, which in turn orients their subsequent compliance behaviour. Study 2 was conducted to ascertain whether similar findings could also be found in a different context. The context chosen for Study 2 was the workplace. Like Study 1, Study 2 presents longitudinal survey data. Data were collected from a sample of employees working for organisations throughout the United States. However, unlike in the taxation context, employees from companies have day-to-day experiences with authority (i.e. their work supervisors). Another point of difference between Study 1 and Study 2 was the interest in a different type of emotion. In Study 1, the discrete emotion of anger was of interest; a negative emotion. In Study 2, the discrete emotion of happiness was of interest; a positive emotion. Of interest was whether the same psychological mechanism that occurred in Study 1 with a negative emotion would occur for a positive emotion in Study 2.

#### Method

# Participants and Procedure

Study 2 was based on responses to a questionnaire that was completed by a national sample of 2366 American workers. Potential respondents were randomly selected from a list of Americans who received free television cable access in return for agreeing to participate in various research projects from time to time. The questionnaire was presented to randomly selected respondents in their homes via the internet. Potential respondents were screened to ensure that they had worked at least 20 hours a week, had a primary supervisor and had worked with their current employer for at least 3 months. Respondents meeting these criteria were invited to complete the survey in two parts, one week apart. Of those eligible to

participate, 55% chose to participate and successfully completed both parts of the wave one questionnaire, leading to a wave one sample size of 4430. Those who completed both portions of the survey also received a small cash incentive.

The employees in the study came from a variety of organisations. Twenty four per cent (24%) worked for small businesses, 20% for large companies in one location, 36% for large multi-city American companies and 20% in multinational companies. Of those who completed the survey, 58% were men, 83% were White, 41% had a University degree or higher and 48% had a household income of over US\$50000. The mean age of respondents was 43 years.

One year after completion of the first survey, respondents were again contacted and invited to participate in a follow-up study. Of those available (i.e. still in the panel, N=3865), 71% completed the wave two survey (N=2736). Respondents were again required to complete the survey in two parts, one week apart, and those who completed both portions of the survey received an additional cash payment. These respondents were screened to see if they still had the same supervisor. Those who did (N=2366) formed the group used in this analysis. An individual's responses to the first survey were linked to their responses to the follow-up survey.

#### Measures

Again, three categories of variables were of interest to Study 2: procedural justice, the positive emotion of happiness, and workplace compliance behaviour. Procedural justice in Study 2 was again only measured at Time 1, and comprised three items (e.g. 'Overall, I am fairly treated where I work'). Those scoring higher on this measure were more likely to believe they receive procedural justice at work. Happiness was measured in the same way at both Time 1 and Time 2 via a three-item scale (e.g. 'I am very happy where I work now'); a higher score reflects greater happiness. As in Study 1, workplace compliance was measured only at Time 2 via a three-item scale (e.g. 'How often do you neglect to follow work rules or the instructions of your supervisor?'). A higher score on the compliance measure indicates greater compliance with work rules (items were reverse scored). All scales were developed by the second author. The Appendix lists all of the questions that were used to construct the scales in Study 2, as well as the scale reliabilities, mean and standard deviation scores.

#### Results

Factor Analysis and Correlation Matrix

A factor analysis using oblique rotation was again conducted to test for the assumed conceptual differentiation between the categories of variables used in Study 2 (i.e. procedural justice, happiness and workplace compliance behaviour). Unlike in Study 1, the analysis yielded a three factor solution explaining 67% of the variance (see Table 5).

With this sample it was found that all items loaded clearly, and as anticipated onto their respective concepts. Factor 1 comprised five items that measured happiness (both Time 1 and Time 2 measures), Factor 2 comprised three items that measured procedural justice and Factor 3 comprised three items that measured workplace compliance behaviour. Table 6 presents the bi-variate correlations between all variables measured at Time 1 and Time 2.

Does Happiness Mediate the Effect of Procedural Justice on Compliance Behaviour?

In order to assess whether the emotion of happiness mediates the effect of procedural justice on compliance behaviour in the workplace setting, two hierarchical regression analyses were again performed. The first used 'procedural justice' measured at Time 1 as a predictor of 'happiness' at Time 2 (see Table 7). This was done while controlling for Time 1 happiness levels. The second hierarchical regression analysis used 'procedural justice' at Time 1 and 'happiness' at Time 2 as predictors of 'workplace compliance behaviour' at Time 2 (see Table 8). Again, 'happiness' at Time 1 was controlled for.

As can be seen in Table 7, happiness at Time 1 predicts happiness at Time 2. In other words, those who were happy in their workplace at Time 1 were also more likely to be happy in their workplace at Time 2. More importantly, perceptions of

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Table 5. Factor analysis differentiating categories of variables in Study 2

	Factor						
		1 actor					
Item	1	2	3				
1. Happiness							
My job a source of pleasure (T2)	0.84						
My job provides sense of fulfilment (T2)	0.82						
My job a source of pleasure (T1)	0.74						
My job provides sense of fulfilment (T1)	0.73						
I am happy where I work (T2)	0.55						
I am happy where I work (T1)	0.51						
2. Procedural justice							
Most issues handled in fair way		-0.91					
Decisions made in fair ways		-0.88					
I am fairly treated at work		-0.85					
3. Compliance							
Neglect to follow work rules or instructions			0.76				
Find ways to undermine my supervisor			0.59				
Slack off towards the end of the day			0.53				
Eigenvalues	4.60	1.82	1.62				
Explained variance (%)	38	15	13				

*Note*: Principle Axis Factoring analysis, oblique rotation. Only factor loadings > 0.30 are displayed. Questions have been shortened in Table 5 due to space constraints. See Appendix for the full wording of questions.

'procedural justice' at Time 1 also predict feelings of 'happiness' at Time 2. Those who were more likely to feel their work supervisor treated them with procedural justice at Time 1 were more likely to be happy at work one year later. This was so even after controlling for happiness levels at Time 1.

When examining workers' compliance behaviour, the findings reported in Step 1 of Table 8 show that 'happiness' at Time 1 significantly predicts 'compliance behaviour' at Time 2; those workers who were happier at work at Time 1 were also more likely to comply with workplace rules at Time 2. Of more interest, however, is that the effect of 'procedural justice' on 'compliance behaviour' appears to be mediated by happiness. First, 'procedural justice' predicted compliance behaviour in Step 2 of the analysis, suggesting those who felt their supervisor treated them with procedural fairness at Time 1 were more likely to comply with their rules and decisions one year later. Second, 'happiness' significantly predicted compliance behaviour in Step 3 of the analysis, suggesting that those workers who expressed more happiness while at work at Time 2 were also more likely to comply with their supervisor's rules and decisions at Time 2. Of particular interest was when the Time 2 happiness measure was entered into the model at Step 3, 'procedural justice' no longer remained a significant predictor of workers' 'compliance behaviour'. This suggests that happiness mediates the effect of procedural justice on subsequent compliance behaviour. This mediation effect was confirmed via a Sobel test, which revealed that happiness did significantly mediate the effect of procedural justice on workers' compliance behaviour, z = 3.63, p < 0.001.

Table 6. Bi-variate correlation matrix between all Time 1 and Time 2 measures of Study 2

Scale	1	2	3	4
<ol> <li>Procedural justice</li> <li>Happiness Time 1</li> <li>Happiness Time 2</li> <li>Workplace compliance Time 2</li> </ol>	(0.92)	0.42*** (0.83)	0.34*** 0.60*** (0.83)	0.12*** 0.17*** 0.19*** (0.64)

Figures in parentheses are Cronbach alpha coefficients. \*\*\*p < 0.001.

Table 7. Hierarchical regression analysis showing how 'procedural justice' measured at Time 1 predicts the emotion of 'happiness' at Time 2, while controlling for level of 'happiness' at Time 1

Predictor Happiness T1		Step 1					
	В	$SE_{B}$	β	В	$SE_{B}$	β	$r^2_{\text{part}}$
Happiness T1	0.58	0.02	0.60***	0.54	0.02	0.56***	0.25
Procedural Justice T1				0.10	0.02	$0.10^{***}$	0.01
Constant	1.53	0.06	_	1.35	0.07	_	
$R^2$		0.36			0.37		
$R^2$ change		0.36			0.01		
F change		1253.15***			28.96***		
$\mathrm{d}f$		1, 2240			1, 2239		

<sup>\*\*\*</sup>p < 0.001.

#### GENERAL DISCUSSION

The main aim of the present study was to explore the relationship between people's perceptions of procedural justice during an encounter with an authority, their emotional reactions to these perceptions and the effect that these variables had on subsequent compliance behaviour. Specifically, we were interested in testing the hypothesis that emotions mediate the relationship between people's perceptions of procedural justice and their subsequent compliance behaviour.

Previous scholars have found a strong relationship between people's views of procedural justice and their subsequent compliance behaviour. Using a number of different research methodologies (e.g. cross-sectional and longitudinal surveys, experimental studies, vignette studies), it has been found that if people feel they have been unfairly treated by an authority (i.e. procedural unfairness) then this can go on to affect their subsequent compliance behaviour in a negative way (e.g. Greenberg, 1990a; Tyler, 1990). A small number of recent procedural justice studies have gone on to explore the role that emotions play in people's perceptions of procedural justice. This prior research has found that procedural justice can lead people to experience various discrete emotions. Three studies in particular have also suggested that emotions may play an important mediational role between procedural justice and people's behavioural reactions (Chebat & Slusarczyk, 2005; Gordijn et al., 2006; VanYperen et al., 2000). What these studies did not do, however, was explore the role that these emotions played on subsequent rule following behaviour in real life situations. Hence, this was the reason for exploring whether emotion mediated the relationship between procedural justice and subsequent compliance behaviour in the present study.

To summarise the findings, it was found that emotions did play an important role in the relationship between perceptions of procedural justice and subsequent compliance behaviour. Specifically, Study 1 found that in the context of a

Table 8. Hierarchical regression analysis exploring the mediational role of happiness in the procedural justice and workplace compliance relationship. Dependent variable is workplace compliance at Time 2 (a higher score on the compliance measure reflects greater compliance)

Predictor	Step 1			Step 2			Step 3			
	В	$SE_B$	β	B	$SE_B$	β	В	$SE_B$	β	$r^2_{\text{part}}$
Happiness T1	0.04	0.00	0.12***	0.03	0.01	0.15***	0.02	0.01	0.08**	0.01
Procedural Justice T1				0.01	0.01	$0.05^{*}$	0.01	0.01	0.04	0.00
Happiness T2							0.03	0.01	0.14***	0.01
Constant	2.32	0.02	_	2.31	0.02	_	2.27	0.02	_	
$R^2$		0.03			0.03			0.04		
$R^2$ change		0.03			0.01			0.01		
F change		71.32***			$5.14^{*}$			27.88***		
$\mathrm{d}f$		1, 2239			1, 2238			1, 2237		

p < 0.05; p < 0.01; p < 0.01; p < 0.001.

taxation dispute, taxpayers who felt the tax authority had handled their enforcement experience in a procedurally unfair manner were more likely to feel the specific emotion of anger. Those with greater perceptions of procedural injustice were also more likely to report evading their taxes two years later. The particularly interesting finding, however, was the finding that the effect of procedural justice on tax non-compliance disappeared when 'anger' was entered into the regression model (see Table 4). This finding suggests that the emotion of anger mediates the effect of procedural justice on subsequent compliance behaviour. Study 2 extended the findings of Study 1, by showing that positive emotions can also mediate the relationship between procedural justice and compliance behaviour in the workplace setting (see Table 8). When employees felt their supervisors treated them with procedural fairness they were more likely to comply with their supervisor's rules and decisions one year later. Those who felt happy in their workplace were also more likely to comply with their supervisor's rules and decisions. Of particular interest was the finding that showed that happiness mediated the effect of procedural justice on subsequent compliance behaviour.

Before proceeding to discuss possible theoretical explanations for this pattern of results, however, the methodological limitations of the present study should first be highlighted. First, it is important to note that a self-report measure of tax non-compliance and workplace compliance was used as the measure of compliance in the present study. A method that relies on the honesty of the surveyed participants to disclose dishonest behaviour is obviously vulnerable to a challenge to its validity. However, participants were made aware their responses would be kept confidential, and a strong tradition of research in psychology and criminology supports the validity of using self-report data in such circumstances (Maxfield & Babbie, 2008; Thornberry & Krohn, 2000). Second, and perhaps more problematic, is the finding that the explained variance in compliance behaviour in Study 2 was extremely low (see  $R^2$  values in Table 8). Such a finding suggests that the significant relationships reported in Study 2 may have been the result of the large sample size. This suggestion is supported by prior research that has found that procedural justice is most influential prior to or soon after a decision has been made (see Ambrose & Cropanzano, 2003), so a study that tests compliance some time after initial views about procedural justice may fail to find a strong effect. More research will need to be conducted in this area to ascertain whether the findings from Study 2 can be replicated.

# The Mediating Role of Emotions: Possible Theoretical Perspectives

The previous section highlighted the importance of emotions in response to procedural unfairness/fairness, and in their role in predicting compliance behaviour. But why might it be the case that emotions mediate the relationship between procedural justice and compliance? If we look at the literature on distributive justice, the mediational role of emotions in the distributive justice/compliance relationship has been explained using equity theory (Adams, 1965). According to equity theory unpleasant emotions motivate people to restore equity by altering their behaviours, attitudes, or both (Adams & Freedman, 1976; Greenberg, 1990b; Walster, Walster, & Berscheid, 1978; Williams, 1999). Specifically, tension resulting from anger motivates people to be less satisfied, less productive and less compliant under conditions of inequity. Applying this theory to procedural justice, if a person were to feel they have received more disrespectful or unfair treatment from an authority than other members of a group relevant to them, this is likely to leave them feeling aggrieved and angry. In order to restore equity, the theory predicts that emotional reactions may motivate them to engage in behaviours that attempt to rectify the perceived imbalance. This may involve the individual being disrespectful, difficult or defiant towards the authority's directives and decisions in return. Thus, equity theory posits a two-stage response to perceived unfairness: first, people experience an emotional reaction; second, they are motivated by this negative emotional response to change the situation and to re-establish equity (Mowday, 1991). Equity theory predicts that people become angrier as their perceptions that their actions are unfairly compensated increase. This in turn results in a decline in cooperation or compliance to a point that corrects the perceived inequity. The problem with an equity explanation, however, is that this model contradicts the argument for the importance of emotions as mediators. This model assumes that the fair process effect on compliance behaviour is mediated by the motivation to change the situation, not by mere emotion.3

Hence, an alternative theoretical model that may explain the findings more appropriately can be found in Lind & Tyler's (1988) group value model. The group value model assumes that people are concerned about their long-term social

<sup>&</sup>lt;sup>3</sup>We thank one of our anonymous reviewers for highlighting this issue.

relationship with authorities or institutions. The model also suggests that people value membership in social groups (Tyler, 1989). People want to belong to social groups and to establish and maintain the social bonds that exist within groups. According to the model, people also care about their standing within a group as well as how others perceive their standing within the group. Procedural justice is believed to be important to people because the treatment they receive from an authority provides information about how much they are valued as a group member (i.e. it provides information about their standing within the group). If people are treated rudely, they know that the authority they are dealing with regards them as having low status within the group. Conversely, polite and respectful treatment communicates that the authority involved regards them as having high status in the group. So in other words, fair procedures communicate respect and value, while unfair procedures communicate disrespect, marginality or even exclusion from a valued group.

Given unfair treatment communicates exclusion from a valued group, the group value model would predict that such treatment is likely to threaten one's identity as a valuable and worthwhile member of the group. And in fact, a number of studies have shown those who identify particularly strongly with a group are more sensitive to justice concerns (e.g. Ellemers, Spears, & Doosje, 2002; Gordijn et al., 2006; Kelly & Breinlinger, 1996; Tyler, 1990). In other words, those who identify strongly with the groups they belong to (i.e. their workplace, or the community of honest taxpayers) perceive unfair treatment to be particularly unfair and to be particularly threatening to one's sense of self within the group. According to Tyler (1990), poor treatment is therefore likely to lead to subsequent retaliation and resistance towards the source of the threat (i.e. in the case of the present study, towards the authority). But where do emotions enter into this process?

Emotion theorists usually conceptualise personal emotions as complex reactions to specific situations or events. Mackie, Devos, and Smith (2000), for example, suggest that specific emotions experienced by individuals are triggered by appraisals (cognitions or interpretations) of whether an event appears to favour or harm the individual's goals or desires. They note that anger 'is typically conceptualised as resulting from appraisals that some other person or group has harmed the self' (Mackie et al., 2000, p. 602). Combining the emotion and group value model perspectives, therefore, we suggest that any actions from an authority perceived to be unfair would be perceived by individuals as harming one's identity as a valued group member. We suggest a likely response to such an identity threat is a heightened negative emotional reaction, which in turn determines the subsequent action taken.

Recent evidence to suggest that such a mechanism does occur comes from Gordijn et al.'s (2006) and Mackie et al.'s (2000) studies. As noted in the introduction to this paper, Gordijn et al. (2006) presented participants in their study with a vignette. It was found that people who identified strongly with the group being treated unfairly in the vignette were more likely to: (a) appraise the perpetrator's behaviour as being more unfair; (b) were more likely to experience anger; and (c) were more likely to want to take action against the perpetrator of the unfair treatment. Gordijn et al. also provided strong evidence to support a moderation-mediational model, whereby the identity effect no longer predicted retaliatory behaviour once the emotion of anger was entered into the model. In other words, the emotion of anger was found to mediate the identity effect of procedural justice on behaviour. While not specifically interested in justice issues, Mackie et al. (2000) were interested in assessing whether emotions mediated the relationship between identity threats and intentions to take action against the source of the threat. Using data collected across three studies (one correlational and two experimental), Mackie et al. found that the specific emotion of anger mediated the effect of threat appraisals on tendency to move against the source of the threat (see also Dijker, 1987; Fiske, Cuddy & Glick, 2001; Smith, 1993). The findings of these two studies suggest that emotions may be an important consideration in the future development of the group value model. Of course more research is needed to confirm whether this is indeed the case, and we suggest future studies may want to focus attention on the role that emotions play in the context of the group value framework.

#### CONCLUSION

While the findings of the present study have been able to extend prior procedural justice research by showing that emotions can mediate the relationship between procedural justice and compliance behaviour, the findings also have wider implications for how regulators and authority figures can more effectively nurture compliance among those they regulate. Having a better understanding of why and when people are motivated to comply with decisions and rules can provide authorities with more effective strategies aimed at managing those they regulate. As noted by Lange (2002), regulating is

not just about formal law, but also involves the generation, expression and management of emotions. The findings of the present study specifically point to the importance of considering the potential impact decisions and policies have on people's subsequent emotional reactions. Studies 1 and 2 show that emotions play an important role in predicting when a person will or will not comply with their obligations (see also Murphy & Harris, 2007). In particular, policies or decisions that elicit negative emotions appear to lead to subsequent non-compliance among those affected (see Study 1). In contrast, policies and decisions that elicit positive emotions appear to foster compliance with rules (see Study 2). It is suggested that learning to better manage such emotions will leave regulators and authorities with a better ability to shape compliance in the future. Hence, the challenge for authorities will be to gain support for their decisions and rules through using strategies that are seen to be procedurally fair.

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#### **APPENDIX**

Contained in the Appendix is a complete list of the measures used in the analyses of this paper. Items are listed in order of Study. It also details the original scale formats, the recoding of data if applicable (reverse scoring indicated with the letter r), reliability coefficients of each scale, the mean score and standard deviation obtained on each scale.

#### STUDY 1—TAXATION CONTEXT

#### Time 1 Measures (2002 survey): Tax Context

Procedural Justice

Items measured on a 1 = strongly disagree to 5 = strongly agree scale; (Cronbach's  $\alpha = 0.73$ ; M = 2.07, SD = 0.82).

- The ATO cares about the position of taxpayers
- The ATO tries to be fair when making their decisions

Anger

Items measured on a 1 = 'not likely to feel this' to 4 = 'almost certain to feel this' scale (Cronbach's  $\alpha = 0.60$ ; M = 2.22, SD = 0.88).

- I felt angry with the Tax Office
- I felt I wanted to get even with the Tax Office

# Time 2 Measures (2004 survey): Tax Context

Anger

Items measured on a 1 = 'definitely did not feel this' to 5 = 'definitely felt this a great deal' scale (Cronbach's  $\alpha = 0.77$ ; M = 3.84, SD = 0.81).

- I felt full of bitterness
- I felt angry with the ATO
- I felt that I wanted to get even with the ATO
- I felt resentful towards the ATO
- I felt extremely annoyed

Self-reported Tax Non-compliance

Items measured on a 1 = strongly disagree to 5 = strongly agree scale (Cronbach's  $\alpha = 0.80$ ; M = 2.01, SD = 0.71).

- I now try to avoid paying as much tax as possible
- I no longer declare all of my income
- I now use the tax system in a negative way to recoup the financial losses I have incurred
- I am now more defiant towards the ATO
- I now look for ways to purposefully cheat the tax system
- I now look for many ways to recoup my financial losses

#### STUDY 2—WORKPLACE CONTEXT

# Time 1 Measures: Workplace Context

Procedural Justice

Items measured on a 1 = strongly disagree to 5 = strongly agree scale (Cronbach's  $\alpha = 0.92$ ; M = 3.38, SD = 0.97). Think about the way that decisions affecting you are made and how you are treated where you work. Would you agree or disagree that...

- Decisions that affect me are usually made in fair ways at my company
- Overall, I am fairly treated where I work
- Most of the issues involving me are handled in fair ways where I work

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# Happiness

Items measured on a 1 = strongly disagree to 5 = strongly agree scale (Cronbach's  $\alpha = 0.83$ ; M = 3.66, SD = 0.98). Would you agree or disagree with the following statements

- My job is a source of pleasure
- My job provides me with a sense of personal fulfilment
- I am very happy where I work now

# **Time 2 Measures: Workplace Context**

# Happiness

The happiness measures used in Study 2 were identical at both Time 1 and Time 2 (Cronbach's  $\alpha = 0.83$ ; M = 3.67, SD = 0.96).

### Workplace Compliance

Respondents were asked three questions about their compliance behaviour in the workplace; a higher score on this scale indicates greater compliance with workplace rules and decisions (items measured on a 1 = never to 7 = always scale; (Cronbach's  $\alpha = 0.64$ ; M = 6.10, SD = 0.93). Given this item was highly skewed, a square root transformation was performed (M = 2.46, SD = 0.21).

How often do you...

- Find ways to undermine your supervisor (r)
- Slack off towards the end of the day (r)
- Neglect to follow work rules or the instructions of your supervisor (r)

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