

Testing responsive regulation in regulatory enforcement

Vibeke Lehmann Nielsen

Department of Political Science, University of Aarhus, Aarhus C, Denmark

Christine Parker

Melbourne Law School, The University of Melbourne, Melbourne, Australia

Abstract

The policy ideals of responsive regulation have been developed on the basis of substantial empirical evidence. The overall formulation of responsive regulation theory itself, however, has rarely been empirically tested. This article sets out the theoretical concept of responsive regulation in the context of business regulation enforcement and discusses how we might operationalize and empirically measure it. We develop two alternative theoretical interpretations of responsive regulatory enforcement: “tit for tat” responsive regulation and “restorative justice” responsive regulation. We then measure business firms’ perceptions of the reactions and counter-reactions of a regulatory enforcement agency throughout the investigation and enforcement process. We find little evidence of tit for tat responsiveness actually occurring in practice. To the extent that tit for tat responsiveness does exist, we find a small amount of evidence that it has the hypothesized effects on behavior but not on attitudes. We find clearer evidence of restorative justice responsiveness having the hypothesized effects on attitudes but not on behavior.

Keywords: competition law, compliance, consumer protection law, enforcement, regulation, responsive regulation.

Introduction

“Responsive regulation” is a leading approach to describing *and* prescribing how regulatory enforcement action best promotes compliance (Ayres & Braithwaite 1992; Braithwaite 2002). It proposes that in order to be effective, efficient, and legitimate, regulatory policy should take neither a solely deterrent nor a solely cooperative approach. Rather, responsive regulation proposes a principled way in which to combine the insights from plural theories of compliance and enforcement, including those that propose people comply only when they calculate it is in their self-interest to do so (Grasmick & Bursik 1990; Simpson 2002; Shover & Hochstetler 2006), and those that see people complying for normative or social reasons (Tyler 2006).

Ayres and Braithwaite’s (1992) book *Responsive Regulation* describes probably the most influential version of responsive regulation. It has been explicitly adopted by a wide

Correspondence: Vibeke Lehmann Nielsen, Department of Political Science, University of Aarhus, Bartholins Allé 7, DK-8000, Aarhus C, Denmark. Email: vln@ps.au.dk

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range of regulators (e.g. Braithwaite 2002, p. 31; Braithwaite 2007; Gunningham 2007, p. 129; Leviner 2008; Mascini & Wijk 2009). It is also regularly applied, developed, and tweaked by other scholars (e.g. Haines 1997, pp. 218–229; Gunningham & Grabosky 1998; Gunningham & Johnstone 1999; Black 2001; Parker 2002; Simpson 2002; Braithwaite *et al.* 2007, pp. 114–133; Gunningham 2007, pp. 124–129; Baldwin & Black 2008). Many regulatory scholars have developed similar ideas to Ayres and Braithwaite's responsive regulation, such as "flexible enforcement" (Rees 1994; Kagan 1994, p. 387), "tit for tat" regulatory enforcement (Scholz 1984a,b, 1991; see also Burby & Paterson 1993; Harrison 1995), and "creative" enforcement strategy (May & Burby 1998). Ayres and Braithwaite's version of responsive regulation is, however, the most sustained and influential account of how and why to combine deterrent and cooperative regulatory enforcement strategies.

Researchers have rarely sought to set out general, empirically testable rules about being a "responsive" regulator. One reviewer has suggested that responsive regulation advocates a contextual mix of enforcement strategies that may be inherently untestable (Rogers 1993, p. 338). This article is a preliminary step in restating a nuanced policy-oriented theory in terms of a coherent and precise set of individual predictions (see also Nielsen 2006).

In the first part of the article, we suggest that Ayres and Braithwaite's responsive regulation can be interpreted in two ways: "tit for tat" (TFT) responsive regulation and "restorative justice" (RJ) responsive regulation. Whichever way we interpret and operationalize responsive regulation, the same hypothesis is suggested: A person who experiences responsive regulation will as a result have a more positive assessment of his or her experience of the investigation and enforcement process, more positive attitudes toward the regulator and compliance, and, crucially, better compliance behavior than a person who does not experience responsive regulation. The two interpretations of responsive regulation, however, lead to two quite different definitions of what counts as responsive regulatory enforcement behavior, and therefore two alternative and inconsistent sets of methodological recommendations about how to identify responsive regulatory enforcement in practice and test its impact.

The second part of the article suggests a methodological strategy for operationalizing and testing each of the two theories of responsive regulation. We apply these two strategies to self-report survey data from 141 Australian businesses that experienced official investigation of alleged breaches of the federal competition and consumer protection legislation.

In the third part of the article, we test the hypothesized relationship between responsive regulation and business attitudes and behavior in relation to both theories of responsive regulation, and we discuss our findings. We could find no examples of complete chains of TFT responsive interactions throughout the investigation and enforcement process in our data. Instead, we tested for the effect of TFT responsiveness between single stages within the investigation and enforcement process. Using this approach we found a small amount of evidence for TFT responsiveness having the hypothesized effects on behavior but not on attitudes. We found clearer evidence of RJ responsiveness having the hypothesized effects on attitudes but not on behavior.

The article concludes by discussing the findings and the problems with operationalizing responsive regulation for the purposes of either scholarly research or practical regulatory enforcement.

Responsive regulation: Two interpretations

Responsive regulation

Broadly speaking, theories that seek to explain regulatory compliance can be divided into three categories (Winter & May 2001), those that see people as motivated by (i) economic *calculative motivations* or the fear of detection of violations and application of sanctions (Scholz 1997; Simpson 2002, pp. 22–44); (ii) *social motivations*, or the desire to earn the respect and approval of significant others (Rees 1997; Gunningham *et al.* 2003); and (iii) *normative motivations*, or the sense of moral duty to comply and agreement with the legitimacy of particular regulation (which can include evaluations of both the substantive and procedural justice of regulation) (Tyler & Darley 2000; Tyler 2006).

The main contribution of responsive regulation theory to our understanding of regulatory enforcement and its impact on compliance is its recognition that different people have different motivations for complying or not complying with the law, and that the same person or firm can have multiple, potentially conflicting, motivations for compliance, which Braithwaite calls “multiple selves” (Ayres & Braithwaite 1992, pp. 30–35; Braithwaite 2002, p. 41). The existence of plural motivations for compliance and non-compliance in the same individual or firm is well supported in other empirical research on compliance (Grasmick & Bursik 1990; Sutinen & Kuperan 1999; Winter & May 2001).

Responsive regulation seeks to advance explanations of regulatory compliance and the practice of regulatory enforcement by proposing a theory about the way these plural motivations for compliance interact with one another and respond to plural deterrent and cooperative regulatory enforcement strategies. Responsive regulation thus synthesizes other contradictory, but well supported, theories that seek to explain the impact of regulatory enforcement strategies on regulatory compliance. It does this by proposing that enforcement strategies should be arranged in a hierarchy or “regulatory pyramid,” with more cooperative strategies deployed at the base of the pyramid and progressively more punitive approaches used only if and when cooperative strategies fail. Therefore, to make sure that they start as many “positive spirals” of reactions and counter-reactions as possible, regulators should generally start enforcement from a presumption of being cooperative. Regulatees showing the will and ability to repair any harm they have caused and to reform themselves to come into compliance should be rewarded with less harsh enforcement (Ayres & Braithwaite 1992, p. 19; Braithwaite 2002, p. 31). If regulatees fail to cooperate in response to offers of cooperation, regulators should go on to “somewhat punitive” action “only reluctantly and only when dialogue fails, and then escalate to even more punitive approaches only when the more modest forms of punishment fail” (Braithwaite 2002, p. 30). When regulatees become willing to cooperate, regulators should, according to Ayres and Braithwaite, be able to forgive a history of wrongdoing (Ayres & Braithwaite 1992, p. 33) and de-escalate down the pyramid to less harsh enforcement.

Responsive regulation theory claims that this pyramid of enforcement activates different (potentially contradictory) motivations so that they interact to support compliance as well as discourage resistance, game-playing, and abuse in two main ways. First, application of the pyramid of enforcement strategies makes it beneficial for rationally calculating regulatees to be virtuous (Braithwaite 2002, p. 33). It is more rational for those who are motivated by calculations as to what is to their own benefit to “voluntarily”

comply than it is to resist and not comply, where the regulator will escalate up the enforcement pyramid. The claim here is that the fact that people and firms have multiple selves means that once they agree to negotiate with a regulator (albeit for self-interest reasons), their better self can be brought to the fore through social and normative appeals. Second, the pyramid normatively justifies the use of deterrence (which appeals to rational actor motivations) and therefore makes sure that deterrence does not break down people's moral commitment to comply with the law: "[B]y resorting to more dominating, less respectful forms of social control only when more dialogic forms have been tried first, coercive control comes to be seen as more legitimate" (Braithwaite 2002, p. 33).

Responsive regulation therefore proposes that regulatory enforcement agencies should take neither a solely deterrent nor a solely cooperative approach. Rather, a policy of responsive regulation is a "socially intelligent" way for the regulator to react to the behavior of the regulatee.

Hypothesized impact of responsive regulation on regulatees

Responsive regulation theory hypothesizes that each individual case of a regulatory enforcement agency investigating and potentially taking enforcement action against an individual or business will have an impact – for good or bad – on that individual's or business's future cooperation with regulators, commitment to compliance, and compliance behaviors. Regulatory enforcement that is not responsive will often backfire and cause lack of cooperation and law breaking in the future (Braithwaite 2002, pp. 29–30; see also Braithwaite 2003). Responsive regulation is mainly a theory about how appropriate relations between regulator and regulatee during investigation and enforcement should lead to a more cooperative attitude in the future where the regulatee will work to achieve compliance with the goals of the law (not just strict rule compliance).

Therefore, we hypothesize that regulatory enforcement that is responsive should lead regulatees to a more cooperative and compliant attitude in the future. It should also lead to behaviors in which regulatees seek to promote their own compliance. In particular, where the regulator has acted responsively through the investigation and enforcement process:

- Hypothesis 1. We expect a business to assess *the outcomes of the investigation and enforcement process* as better than where the regulator has not acted responsively. The business should see the behavior of the regulator throughout the process as fairer and less stigmatizing. It should have learned things that are generally considered positive for increasing legal compliance, such as how to comply better and that it is good to cooperate with the regulator. It should not have learned things that are negative for legal compliance, such as how to get away with breaches or to fight with the regulator.
- Hypothesis 2. We expect a business's *overall opinion of the regulator* to be more positive (not just its assessment of the particular process it has experienced) than where the regulator has not acted responsively. Thus the business should see the regulator as more procedurally and substantively just and more flexible.
- Hypothesis 3. We expect a business to do more to ensure it *complies with the relevant law*. We expect that respondents that have experienced responsive regulation would have a higher level of everyday compliance management behavior, because the theory proposes that responsive regulation is a good way to build up compliance commitment and capability of regulatees.

To test these hypotheses, we need to specify, operationalize, and measure responsive regulation. This is inherently difficult because responsive regulation itself proposes that regulatory enforcement agents should make highly contextual judgments about how to behave in particular circumstances. In the sections that follow, we set out two alternative but equally plausible theoretical interpretations of responsive regulation that seek to specify in a measurable way how a responsive regulatory enforcement agent should behave. Drawing on language used by Braithwaite and other scholars, we label these two interpretations “tit for tat” responsive regulation and “restorative justice” responsive regulation. We go on to use our data to test these two interpretations.

Tit for tat responsive regulation

The simplest interpretation of responsive regulation is that enforcement agents should start at the bottom of the enforcement pyramid and then respond tit for tat to the regulatee’s response to the regulator throughout the enforcement interaction. With this interpretation of responsive regulation, we should expect to see a chain of individual instances of interaction in which the regulator begins the investigation with an attitude of trust and expectation that the business will seek to remedy any non-compliance or have an adequate explanation or excuse for the allegation made against it. From then on the enforcement agent’s approach at each stage of the investigation and enforcement process as it unfolds should always match the regulatee’s response in the previous stage. If the regulator’s and regulatee’s responses always match each other at each stage, we can say that responsive regulation has occurred, and we would expect the benefits hypothesized to proceed from responsive regulation to occur. Figure 1 illustrates how we might measure this by identifying whether the regulator and regulatee respond to each other in a tit for tat way at each link in the chain of interactions in the investigation as it unfolds.

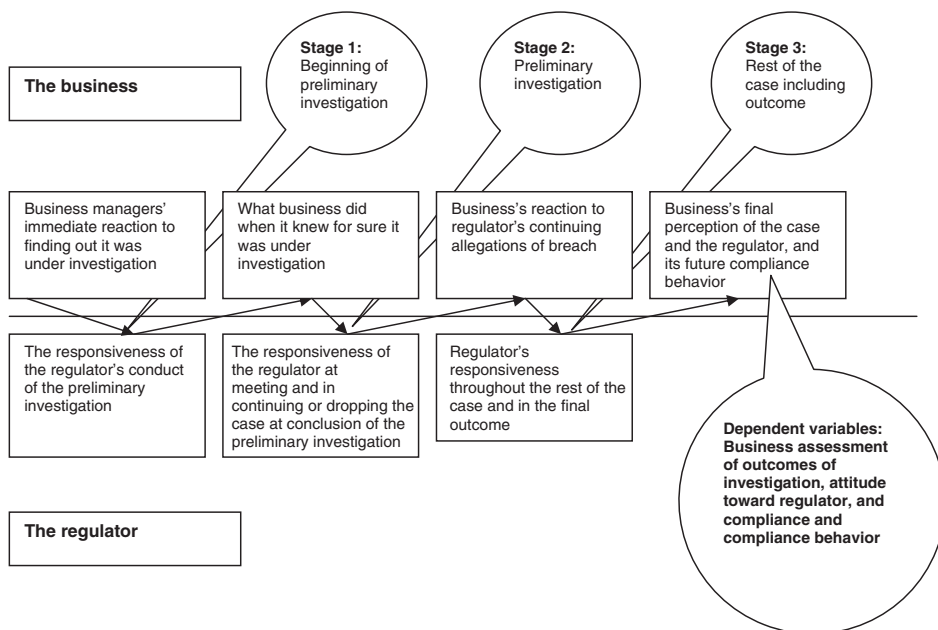


Figure 1 Measuring tit for tat (TFT) responsive regulation.

To be able to identify TFT responsiveness, we need to be able to identify two things. First, what is it about *the regulatee's response* to investigation and enforcement that the regulator should be responsive to? Responsive regulation suggests that it is not the seriousness of the alleged offence to which the regulator responds, but whether the regulatee cooperates with the regulator by admitting responsibility for the (alleged) breach, correcting it, and preventing it recurring (Ayres & Braithwaite 1992, p. 36; Braithwaite 2002, p. 30). Second, what dimensions of their own *regulatory enforcement behavior* should the regulator adjust in response to the regulatee's behavior? We use Peter May and Soeren Winter's (2000, p. 149; see also Burby & Paterson 1993) conceptualization of Ayres and Braithwaite's responsive regulation as a style of "flexible enforcement" that involves "situational mixes" of "formalism" and "coercion."

The degree of *formalism* in enforcement is "the rigidity with which the rules are interpreted and applied" (May & Wood 2003, p. 119). It "varies from inspectors who stick to the rules, to inspectors who are flexible, negotiate, and try to change attitudes" (Winter & May 2001, p. 679).

The degree of *coercion* is the extent to which the application of sanctions is threatened (May & Winter 2000, p. 147). This "varies from inspectors who are skeptical of the regulated and threaten sanctions, to trusting inspectors who never use such threats" (Winter & May 2001, p. 679; see also May & Winter 1999, 2000). More positively, it can be seen as the level of "facilitation;" that is, "the willingness of inspectors to help regulatees and be forgiving" (May & Wood 2003, p. 119).

TFT responsive regulation suggests that the regulator should start with the least formal and coercive methods of investigation and enforcement and escalate up the pyramid if and when the alleged offender fails to cooperate. The regulator should de-escalate down the pyramid of formalism and coercion when the alleged offender does respond cooperatively to correct and prevent wrong-doing. The regulator must also be nimble in quickly moving between different levels of the pyramid at any moment depending on what aspect of their "self" the regulatee puts forward, so that the dynamic of response and counter-response is frequent and swift.

Thus, at each stage of the interaction the responsive regulator should act primarily with the level of formality and coercion that is appropriate to the motivation that is operating at that level of the pyramid. At the same time, in the background, he or she should threaten that he or she will escalate up the pyramid if it does not work, and promise to reward the regulatee by moving down the pyramid if it does.

Restorative justice responsive regulation

TFT responsive regulation suggests that front-line regulatory staff should communicate with the regulatee in a more or less explicitly threatening and formal way throughout the investigation and enforcement process (including issuing threats indirectly and then directly about further escalation) *depending* on the regulatee's response; that is, the outcome of each interaction. Explicit threats of coercion and formalism move increasingly to the foreground of the communication between regulator and regulatee as the regulatee fails to cooperate, and move increasingly to the background as the regulatee does cooperate. Facilitation and flexibility are in the foreground to begin with and move to the background in the face of lack of cooperation.

In his presentation of responsive regulation as restorative justice, however, Braithwaite suggests a more positive version of responsive regulation. Individual regulatory staff

dealing with a matter should be as low on both formalism and coercion as they can be in all of their communications with regulatees. This means being willing to cooperate with the regulatee to help them come into compliance, showing that they are willing to de-escalate down the pyramid when the regulatee comes into compliance, and never issuing threats of coercion and escalation. According to Braithwaite, cooperation and kindness breed cooperation and kindness, and treating people in an open-minded and respectful manner makes them more willing to listen and cooperate (Braithwaite 2002, p. 41).

But this positive approach by individual regulatory staff must occur in the context of an investigation and enforcement system that will escalate up the pyramid to the coercion of litigation and punitive enforcement. Thus Braithwaite suggests that the regulator should not actively make threats of coercion, no matter how high up the pyramid he or she has progressed. It is the law, the legal system, and the enforcement process itself that threatens the regulatee first in the background, and more in the foreground of the encounter as he or she moves up the pyramid. The regulator is certainly an agent of that process of escalation, but the individual staff who deal with the alleged offender are enjoined to communicate in a way that shows their constant openness to trying to help the offender to stop the process of escalation if the offender cooperates and complies with regulatory expectations. The regulatory enforcement staff are to present the process of escalation up the pyramid as an inexorable process to which they too are subject unless offender and regulator can work together to stop it (Braithwaite 2002, pp. 33–119; see also Ayres & Braithwaite 1992, pp. 44–47). This process of escalation in a sense speaks for itself, rather than the regulator being expected to do anything more than allow it to progress.

Thus, in RJ responsive regulation, individual regulatory staff should communicate with the regulatee in a way that is positive (that is, low on formalism and coercion) all the way through the investigation and enforcement process. The regulator must be fair, open-minded, respectful, not stigmatizing, and persuasive and cooperative rather than coercive to the extent possible. The regulator should, therefore, to the extent possible at each level of the pyramid act in accordance with Tom Tyler's (2006) notion of procedural justice. The regulator should listen to the business's point of view and be oriented toward remedying the harm caused and solving problems identified by the alleged breach in a way that meets the business's needs as well as the public interest, if possible. Moreover, the regulator should communicate belief in the possibility that the regulatee is capable of the highest standards of behavior and moral responsibility.

The positive effect of positive regulatory behavior will, however, only occur if at the same time, the law in itself is regarded as tough, the regulator is regarded as invincible, and the regulatee believes that the enforcement process will inexorably escalate to the potential for severe sanctions in court if there was in fact a breach. This latter perception must be combined with RJ responsiveness (hence to be tested by an interaction variable) to have the expected effect. The explanatory model proposed by RJ responsive regulation to be tested is illustrated in Figure 2.

In both TFT and RJ responsive regulation the regulatee perceives a conditional regulatory response strategy. The difference is that in TFT responsive regulation, the regulatee should perceive that it is individual regulatory staff who read the regulatee's behavior and attitude in each and every interaction that occurs in the enforcement process and matches them with cooperation or escalation up the pyramid of formalism

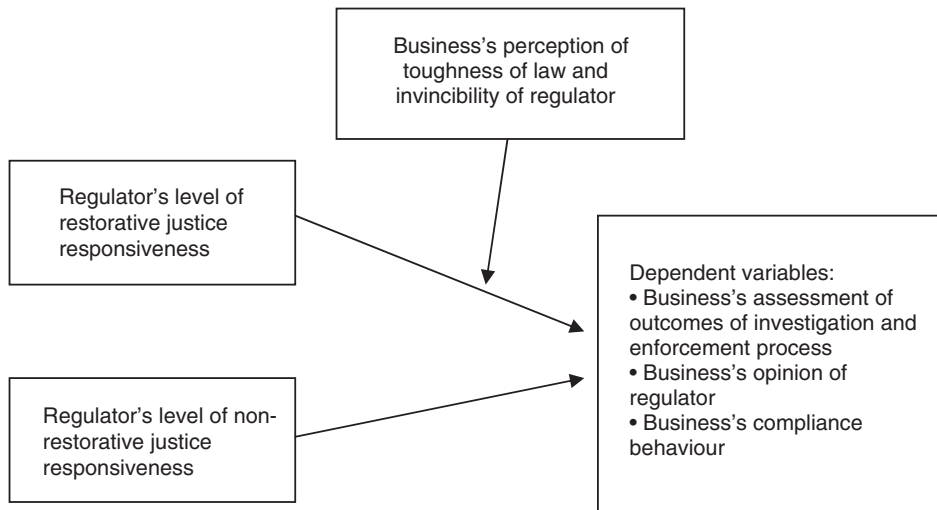


Figure 2 Restorative justice (RJ) responsive regulation: Explanatory model.

and explicit threats of coercion. RJ responsive regulation relies on the regulatee perceiving the legal system as threatening: individual regulatory staff should always seek to act positively, and not explicitly threaten escalation.

We expect both interpretations of responsive regulation to have a positive impact on regulatee attitudes and behaviors. The question for research is whether either or both of the two versions achieve the results predicted by responsive regulation and, if so, which does it better.

Data and measures

The data

Our data concern specific individual investigations by a regulatory enforcement agency, the Australian Competition and Consumer Commission (ACCC), of individual businesses accused of breaching the Australian national competition and consumer protection law, the Trade Practices Act 1974 (Cth) (TPA). The TPA applies to all Australian businesses and prohibits certain anti-competitive conduct (e.g. price fixing, abuse of market power), unfair trading practices (especially misleading and deceptive advertising), non-compliance with legislated product safety standards, and unconscionable conduct in business dealings.

The TPA and the ACCC were given a substantial job to do in changing business conduct and attitudes, at least in relation to the competition side of the legislation. At the time the TPA was passed in 1974, anti-competitive practices, or “orderly marketing” as they were euphemistically known, were normal business in Australia (Karmel & Brunt 1962, pp. 94–95; Pengilly 1974, pp. 44–45; Marr 1980, p. 185). While much has changed, Australia remains a small country with little competition relative to many other countries. Many markets are dominated by only a handful of or fewer companies (e.g. there are only two major grocery retailers who also control much of the general retail market) (Dignam 2005). In seeking to promote and enforce competition for the benefit of consumers, we might therefore expect the ACCC to continue to come up against an ingrained anti-competition culture.

From the late 1980s and early 1990s, when Braithwaite himself was an Associate Commissioner of the ACCC (or the Trade Practice Commission as it was then known), the ACCC explicitly adopted a policy of responsive regulation.¹ However, we expect there to be variation in the responsiveness of the ACCC's behavior: the ACCC has the basic conditions in place to be a responsive regulator if it chooses to do so in particular cases, but it does not always act responsively. Our study identifies whether individual investigations were handled in a responsive way or not, and whether this handling led to any differences in the compliance attitudes and behaviors of regulatees.

Our study uses data from a subsample of a survey of large Australian businesses' (i.e. businesses with more than 100 employees) experiences of the ACCC and compliance with the TPA (Nielsen & Parker 2005; Parker & Nielsen 2008b). The subsample used for this article consists of 141 large businesses that had all experienced an ACCC investigation into an alleged breach of the TPA in the previous six years.² The respondents were asked to briefly describe the last specific enforcement experience they had had in the previous six years. They were then asked a series of questions about how that investigation and enforcement process had unfolded, including what steps were taken by the ACCC and themselves at each stage of the process, as well as how they perceived the outcomes of the process, what they had learned from it, and their overall opinion of the ACCC. We discuss in more detail below how we used the responses to these questions to measure both the different dependent variables (attitudes and behavior) and the independent variable (responsive or non-responsive regulation).

The survey had an overall response rate of 43 percent,³ with a good match of size and industry to the whole large business population of Australia (Nielsen & Parker 2005, pp. 12–13), suggesting that it was broadly representative.

Our subsample of 141 respondents investigated by the ACCC represents a spread of investigations of breaches of both the competition and the consumer protection elements of the TPA. Moreover, the breaches investigated are broadly in the same proportion as the different types of breach by large businesses investigated in the same time frame according to ACCC records.⁴ This suggests that our subsample is likely to be broadly representative of the population of businesses investigated by the ACCC and therefore represents common experience of ACCC investigation and enforcement processes in action. More comprehensive data on the levels of compliance by respondents and non-respondents are not available, because the ACCC is a largely reactive regulator that collects records only about complaints and the rare cases in which it investigates and takes enforcement action. We were not allowed access to complaints and investigation data from the ACCC and there is no other data source available for checking compliance before the survey period. We did check for further non-compliance after the survey, but there have been only a few enforcement actions concluded against respondents since then – not enough for statistical analyses. Most non-compliance in this area is completely unknown as it is not subject to investigation or enforcement. This means that, as with most empirical research on business compliance, it is impossible to say how compliant or non-compliant our respondents are compared with non-respondents. Therefore, we cannot be sure what selection biases might be present in our sample.

The questionnaire was to be filled in by the most senior person in the organization responsible for trade practices compliance. Forty-two percent of the people who filled in a questionnaire were chief executive officers, company secretaries, or chief financial officers, and a further 20 percent were general counsel or compliance managers. The

person who filled in the questionnaire was in other words one who was likely to have played a central role during the identified investigation by the ACCC and therefore was likely to be a reliable informant. The median for the length of years spent working in the organization was six (with a mean of 9.54 years), and the median for the years spent in that position was four (with a mean of 5.81 years). This suggests that the people filling in the questionnaire had generally been in their organizations long enough to have sufficient knowledge to fill in the questionnaire accurately.

The ACCC engages in mostly once-off interactions with businesses, although repeated complaints can lead to repeated investigations and enforcement actions. We might expect responsive regulation to work better in situations where there are more ongoing interactions than exist in the ACCC context (Ayres & Braithwaite 1992, p. 21). Nevertheless, Australia is a small country and ACCC actions are highly publicized and closely watched by large businesses, so we can expect some of the characteristics of repeated interactions to be present in the sense that businesses have expectations about how the ACCC will act based on how they have seen it act in the past, and what their lawyers tell them will happen. Businesses can also always expect the possibility of further complaints and ACCC investigations. This means the potential for multiple interactions is present, even if it is unusual in fact. Moreover, Braithwaite and his co-authors' formulation of responsive regulation does not seem to crucially depend on multiple interactions. They see game theory as suggestive, but assume that responsive regulation can work within a set of interactions unfolding in relation to one investigation and enforcement matter, as in our data.

Dependent variables: Businesses' assessments of the outcomes of investigation, opinions of the ACCC, and compliance behavior

The expectation in both variants of responsive regulation theory is that responsiveness in a regulatory interaction triggers psychological reactions in the regulatee that lead to a higher positive assessment of the outcomes of the investigation and enforcement process, as well as a more positive overall opinion of the regulator, and finally, in the long run, a higher level of compliance behavior compared to those who do not experience a responsive regulator.

Each of our three hypotheses about the effect of responsive regulation is measured with a number of dependent variables, and each measure is an index made up of a number of items.⁵ First, we use four measures of the businesses' *assessments of the outcomes of the investigation and enforcement process* they experienced:

- Perception of fairness of the ACCC. The extent to which the business that was investigated by the ACCC later believes it was treated fairly by the ACCC throughout the investigation and enforcement process.
- Feeling of being stigmatized. The extent to which the investigation process and the way the ACCC handled it evoked counterproductive feelings of being marked as a "bad apple" in society in general and in the eyes of the regulator.
- Positive learning. In respect of legal compliance from the investigation and interaction with the ACCC.
- Negative learning. To what degree the business thinks the investigation and interaction with the ACCC taught it things that are thought to be negative to regulatory compliance.

Second, we use two measures of the businesses' *overall opinion of the ACCC*; that is, an opinion that is not limited to their assessment of the ACCC's behavior in the particular enforcement process they experienced:⁶

- Procedural and substantive justice of the ACCC. Previous empirical research has shown persuasively that in general, compliance will be greater when regulators are perceived as procedurally just (Tyler 2006).
- ACCC's flexibility in its dealing with businesses. This measure (based on three items) is also concerned with the way the ACCC treats individual organizations. But while the first measure is concerned with justice and fairness, this one is concerned with how the respondents view the flexibility of the ACCC's opinion of, and enforcement approach to, businesses.

Third and finally, we also consider a measure that estimates the businesses' everyday compliance behavior – their *compliance management in practice*. The variable is constructed by adding together 14 questions containing specific statements about what the businesses' management actually do to make sure they comply with the TPA. Because the measure is based on subjective evaluations of behavior instead of objective behavioral measures, it does not measure actual behavior. However, since it is based on rather specific questions about behavior, we regard it as a proxy of behavior, and as a measure that is substantively different from the above measures of assessments and opinions.

Independent variables: Tit for tat and restorative justice responsiveness

Because TFT and RJ are two theoretically different understandings of responsive regulation, we identify and categorize responsiveness versus non-responsiveness in two different ways. The data used are, however, exactly the same for both; namely, information from 141 Australian businesses that within the previous six years had experienced an ACCC investigation into an alleged breach of the TPA (as described above).

The respondents were asked to tick "yes" or "no" or to estimate on a scale from "fits very badly" to "fits very well" in response to a series of specific questions about their own and the ACCC's behavior in the investigation process. They were *not* asked to subjectively assess whether or not they perceived the regulatory behavior of the ACCC to be "responsive." The assessment of the investigation and enforcement process as responsive or not – according to the two theories – was done afterwards by the authors as researchers, based on explicit criteria (which we explain in more detail below for each theory). The categorization of the ACCC's behavior as responsive or not is therefore *not* based on each individual business's own subjective perception of "responsiveness" as such. It is, however, based on firms' perceptions of specific aspects of their own and the ACCC's attitudes and behavior. The researchers have used these measures of firm perception to code each interaction as responsive or not, according to each of the two versions of responsive regulation. Ours is therefore a test of the extent to which the ACCC manages to get businesses to perceive their behavior as responsive or not. Further research would also gather information from staff of the regulator as to how responsive they intended their behavior to be, and from third party observation of the interaction (see Waller 2007; Mascini & Wijk 2009).

Measuring tit for tat responsiveness

Tit for tat responsive regulation states that enforcement staff should start at the bottom of the enforcement pyramid and then respond tit for tat to the regulatee's response to the regulator throughout the enforcement interaction.

We identify TFT responsiveness by measuring whether or not the ACCC's actions at each of three stages of the investigation and enforcement process matches ("responds to") what the business did at the previous stage (Fig. 1). To measure this, we coded the ACCC and business actions and reactions at each substage of the investigation process as either positive or negative. We then checked whether the positivity or negativity of the action of each party matched the positivity or negativity of the other party's action at the previous stage:

- If the business makes a positive reaction at one stage, and the ACCC responds positively at the next (or the ACCC is positive and then so is the business), we call this "positive TFT responsiveness."
- If one side acts negatively at one stage, and the other responds negatively we label this "negative TFT responsiveness."
- If the responses do not match (i.e. a positive and a negative) we label this "TFT non-responsiveness."⁷

This way of measuring is a conservative test of the theory of TFT responsive regulation, because the criteria for interactions to be categorized as responsive are strict.

Theoretically, TFT responsive regulation would result in a situation where every interaction throughout all steps of the interaction (at all measuring points) should be responsive (either negatively or positively) to the one before. This would mean that every set of interactions should be either "100 percent positive" or "100 percent negative." However, in our data none of the investigations were totally positive or negative spirals of interaction. This means we could not identify any chains of totally TFT responsive interactions.

Therefore, using these data we have to test whether or not TFT responsiveness – either positive or negative – between one stage and the next at each individual measuring point (not over the whole set of interactions) has different effects on regulatees' attitudes and compliance behavior compared with those interactions that were "non-responsive." Note that responsive regulation theory does not hypothesize that positive and negative responsiveness should have different results to each other. The point of the theory is that it is the fact that the response is matching (i.e. responsive) at all rather than whether it is positively or negatively responsive that should have the desired effect. We would, however, expect those with matching responses (i.e. those that are responsive) to have different results to those without matching responses.

In other words, to test the expectations of TFT responsiveness we would need to be able to identify entire sets of interactions with matching responses. However, in our data none of the reported interactions between the ACCC and the regulated businesses were unbroken chains of matching responses. Therefore, we had to categorize each stage of the investigation and enforcement interaction process as either TFT responsive or not, and limit ourselves to testing the plausibility of the TFT theory at single points of the interaction instead of along the entire chain.

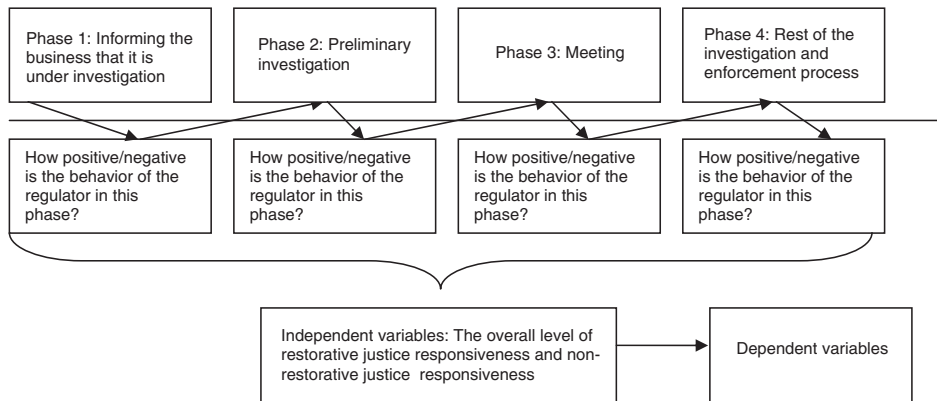


Figure 3 Measuring restorative justice (RJ) responsive regulation.

To test the plausibility of the TFT theory we use *t*-tests to compare the mean score of the attitudes and behaviors of our two groups (TFT responsive and non-TFT responsive).⁸

Measuring restorative justice responsiveness

Restorative justice responsiveness states that the regulator's behavior does not have to be responsive to the business in the sense of matching the positivity or negativity of the business. The RJ theory of responsive regulation is that the more positive the regulator manages to be, the more "responsive" it is. Negative behavior will backfire. Therefore we do not need to measure the behavior of the regulatee to see how it relates to the behavior of the regulator. We do need to measure both the levels of positive or RJ responsiveness and the negative (non-RJ) behavior shown by the ACCC throughout the entire series of interactions (Fig. 3).

We used the same stages of the enforcement interaction for measuring RJ responsiveness as we used for measuring TFT responsiveness. But we were able to add another, earlier stage regarding the way the ACCC initiated the case (because we did not have to match the ACCC's behavior to earlier business behavior): In RJ responsiveness the regulator is not supposed to match the behavior of the regulatee but should always be accommodating and constructive. It is therefore important that the regulator already behaves in this way when it approaches the alleged business at the very beginning of the investigation.

We coded the ACCC's attitudes and behaviors at each stage as exhibiting RJ responsiveness or lack of RJ responsiveness.⁹ As described above (Fig. 2), it is a precondition for RJ responsiveness that the business must perceive the legal system and the enforcement action itself as inexorably moving up the pyramid, even though the regulatory staff the business deals with should not be explicitly threatening coercion and escalation. To include this part of the theory of RJ responsiveness in our test, we measure businesses' perception of the toughness of the law and invincibility of the regulator.¹⁰

There is not a huge variation in this measure, so we may not expect to find much explanatory effect. It makes sense that the one regulator would have a broadly stable perception among different businesses. A further step in testing responsive regulation would be to compare different regulators with quite different images of invincibility (or vincibility!).

The ACCC's score for RJ responsiveness in each case was multiplied with the respondents' score for the measure of businesses' perception of toughness of law and invincibility of regulator to create the interaction variable that is needed to test the effect of RJ responsive regulation. The effect of RJ responsiveness compared to non-responsiveness is finally tested using ordinary least squares (OLS) regressions.

Testing the effects of responsive regulation

Testing the effects of tit for tat responsiveness

In Table 1 we show summary results of tests of whether the respondents' assessment of the outcomes of the investigation and enforcement process, their overall opinion of the ACCC, and their compliance behavior differed according to whether the ACCC behaved TFT responsively or not at each stage.¹¹

Remember that theoretically, TFT responsive regulation should result in a situation where every interaction throughout all three stages should be responsive (either negatively or positively) to the one before. However, in our data we did not find any unbroken chains of totally positive or negative spirals of interaction. We also found relatively few cases – only about one-third of all cases – in which the way businesses remembered the ACCC as behaving could be categorized as being TFT responsive (either positive or negative) at each stage of the process. Therefore, we conduct our tests for TFT responsiveness at each stage of the unfolding investigation and enforcement process, and for each of our three groups of dependent variables.

This means that in one sense our data do not provide a robust and generalizable test of the impact of TFT responsiveness because our regulator does not in fact turn out to be using true TFT responsiveness. It may be that we would find quite different results with a regulator who more successfully seeks to implement TFT responsiveness. On the other hand, we know that the ACCC had espoused the philosophy of responsive regulation; indeed, it was the inspiration for the theory. This suggests that in real life it is quite difficult for regulators to be perceived to be behaving in a way that is TFT responsive, even if they are trying to behave TFT responsively. Perhaps continuing responsiveness by both parties is more a normative ideal of how parties should interact – and perceive each other to interact – than an actual empirical phenomenon (Nielsen 2006; Mascini & Wijk 2009). In that case the ACCC might be a typical regulator.

Remember also that TFT responsive regulation theory does not hypothesize that positive and negative responsiveness should have different results to each other. The point of the theory is that it is the fact that the response is matching (i.e. responsive), not whether it is positively or negatively responsive, that should have the desired effect. RJ responsiveness on the other hand emphasizes the need for positive responsiveness rather than negative responsiveness or non-responsiveness.

The asterisks in Table 1 indicate whether there was a significant difference in respondents' attitudes and behaviors according to whether the way they remembered the ACCC as behaving was TFT responsive or not. The number of asterisks (from one to three) indicates how strong the significant association is. The up and down arrows indicate whether TFT responsiveness is associated with a higher rating for the relevant opinion or behavior (as hypothesized) or a lower rating. Blank cells are those where there was no significant difference in the scores between cases of responsiveness and non-responsiveness.

Table 1 Summary results of tests of fit for tat (TFT) responsiveness: Is there a difference in outcome depending on whether the Australian Competition and Consumer Commission (ACCC) is TFT responsive or not?

	Respondent's assessment of the outcome of the investigation and enforcement process			Respondent's overall opinion of the ACCC (after investigation)		Respondent's compliance behavior (after investigation)
	Fairness of ACCC in investigation process	Feeling of being stigmatized in process	Positive learning from process	Negative learning from process	Procedural and substantive justice of ACCC	
Was the level of ACCC TFT responsiveness at each stage associated with a significantly higher or lower rating of:						
At stage 1: Beginning of preliminary investigation		* ↑				
At stage 2(a): Preliminary investigation: Meeting	*** ↑					* ↑
At stage 2(b): Preliminary investigation: Next step		* ↓				
At stage 2(c): Preliminary investigation: Case dropped	*** ↑	*** ↓				
At stage 3(a): Rest of the case: Atmosphere	*** ↑	* ↓				
At stage 3(b): Rest of the case: Final resolution		*** ↑			* ↓	* ↓

Asterisks show significance of any association: *** $P < 0.005$; ** $P < 0.01$; * $P < 0.05$ (t -test; two-tailed). Arrows show whether the score on outcome variable went up or down with TFT responsiveness.

There are relatively few cases – only about one-third of all cases¹² – in which businesses remembered the ACCC behaving in a way that was categorized as TFT responsive (either positive or negative). In the majority of cases at each point of the investigation our respondents did not remember the ACCC to have responded in similar vein to the businesses' actions and behaviors immediately before (despite the fact that we might have expected more of a "consistency" bias in people's memories). Because of the small number of cases in which the ACCC was categorized as behaving TFT responsively, we have a small *n* for many of our tests and therefore we need to exercise caution in interpreting our results.

The most consistent finding overall is that TFT responsiveness is associated with businesses' feeling of being stigmatized or not at the end of the investigation and enforcement matter, although this is relatively weak in some cases. However, this is difficult to interpret as the direction of the association differs at different stages. Sometimes greater TFT responsiveness is associated with a lesser feeling of being stigmatized (as hypothesized), but sometimes it is unexpectedly associated with a stronger feeling of being stigmatized. Overall, at the point of the final outcome, we find a significant association between TFT responsiveness and respondents' ratings of the flexibility and procedural and substantive justice of the ACCC, but again in the "wrong" direction. TFT responsiveness is associated with lower ratings of the flexibility and justice of the ACCC. These surprising results cannot be explained by saying that perhaps we had an over-representation of cases of negative responsiveness in our data. There are in fact more cases of positive responsiveness than negative responsiveness in the data.

At three stages TFT responsiveness is, not surprisingly, significantly associated with greater ratings of the ACCC as fair. It is also weakly significantly associated with greater compliance management in practice at two stages. But there is no significant difference between respondents with experiences of the ACCC as TFT responsive and TFT non-responsive in terms of their ongoing positive and negative learning.

Overall, then, our test of TFT responsiveness gives no particular support for the effectiveness of TFT responsiveness at promoting the outcomes we hypothesized it should promote. This may be because there were so few cases in which the ACCC was categorized as behaving TFT responsively.

Testing the effects of RJ responsive regulation

We conducted regression analyses following the explanatory model shown in Figure 1 to test the relative effect of both an interaction variable made up of the ACCC's RJ responsiveness in interaction with respondents' perception of the invincibility of the ACCC and the law, and non-RJ responsiveness in relation to our three groups of dependent variables. The results are shown in Table 2.

Here we find significant effects in the direction we would expect in relation to all variables – except compliance management in practice, the one variable that best measures concrete behavior by our respondents. RJ responsiveness in the investigation and enforcement process therefore seems to better predict a range of attitudes and opinions than does TFT responsiveness (although we need to be cautious about this conclusion because we have had to measure two versions of the theory differently and therefore in ways that are not directly comparable). Therefore the RJ version of responsive regulation

Table 2 Explaining variation in outcome depending on whether the Australian Competition and Consumer Commission (ACCC) behaves restorative justice (RJ) responsively or not

	Respondent's assessment of the outcome of the investigation and enforcement process				Respondent's overall opinion of the ACCC (after investigation)			Respondent's compliance behavior (after investigation)
	Fairness of ACCC in investigation process	Feeling of being stigmatized in process	Positive learning from process	Negative learning from process	Procedural and substantive justice of ACCC	Flexibility of ACCC	Compliance management in practice	
RJ responsiveness combined with perception of toughness of law and regulator	0.37*** (4.45)	-0.07 (0.76)	0.34*** (3.43)	-0.31*** (3.21)	0.21** (2.70)	0.15 (1.78)	0.15 (1.73)	
Level of non-RJ responsiveness	-0.47*** (5.69)	0.44*** (4.62)	0.05 (0.47)	0.27** (2.77)	-0.42*** (5.31)	-0.34*** (4.17)	0.05 (0.62)	
Model statistics:								
<i>n</i>	91	90	92	91	140	140	140	
Adjusted R ²	0.39	0.19	0.10	0.16	0.16	0.10	0.02	
F-value of full model	27.97***	11.22***	5.90	9.59***	14.78***	8.88***	2.21	

****P* < 0.005; ***P* < 0.01; **P* < 0.05 (two-tailed).

Values are standardized regression coefficients with the absolute value of *t*-statistics in parentheses.

seems to better encapsulate what it is about the way firms are treated in the investigation and enforcement process that makes a difference to their attitudes at the end of that process. However, it does not explain differences in the best measure we have of concrete behavior.

We also ran the regression without including the variable “perception of the toughness of the law and the regulator” as part of an interaction variable with RJ responsiveness, but instead with just RJ responsiveness as the variable. We found little difference in the results. It may therefore be that RJ responsiveness in itself simply leads to more positive attitudes to the ACCC. The businesses’ perceptions of the toughness or otherwise of the law and regulator make little difference.

Our test of RJ responsiveness therefore suggests that the combination of deterrence with cooperation and accommodation has little salience to the results. It is the positivity of RJ responsiveness that makes a difference to opinions and attitudes, not the combination of positive cooperation at the face-to-face level with the perception of inexorability of tough escalation in the background. This, then, is not in fact “responsive” regulation in the sense of a combination of enforcement strategies, but rather accommodating, cooperative behavior by the regulator breeding an accommodating, cooperative attitude on the part of the regulated. We have no evidence that this accommodating, cooperative attitude actually leads to changed behavior. Indeed there are more hints of changed behavior (compliance management in practice) in our test of TFT responsiveness than of RJ responsiveness. Perhaps TFT responsiveness – with its more explicit emphasis on coercion as well as cooperation and its concern with outcomes at each stage of the process – is the better way to bring the threat of deterrence into the enforcement process to actually change behavior.

Limitations of the research

There are some potential limitations to our research strategy as a measure of alternative versions of responsive regulation that should be borne in mind. We have data only about the business memory of how the investigation process unfolded, not from the ACCC’s point of view nor from the point of view of an external observer. We also have only information taken from one survey at one point in time rather than throughout the process itself and later on. Further tests of responsive regulation could triangulate data from regulators, regulatees, and external observers and collect data at different points in time (e.g. Braithwaite *et al.* 2007).

A further limitation of our study is that all of our data relate to the one regulator. This has advantages in terms of holding constant the types of offence being investigated and a range of other circumstances. But on the other hand, a lot of the theory of responsive regulation relates to resources and skills that any one regulatory agency might simply have or not have; for example, a pyramid of strategies, general policies of how to progress matters up the pyramid, and an image of being an effective regulator. So the next step to test responsive regulation would be to compare different regulators who might be expected to be more or less responsive regulators for different reasons. This would also tell us how typical the ACCC is in its failure to have businesses perceive it as a TFT responsive regulator. We have tested responsive regulation in one particular context: reactive, once-off regulatory interaction. But this will mean different things and perhaps be more or less effective in different contexts and depending on a range of factors, such as the following.

- How much discretion do the formal rules give the regulator in relation to the processes of rulemaking and inspection, assessment of the seriousness of possible breaches, and the means and levels of sanctioning?
- Does the regulator have the final say on the disposition of the case, or must it prosecute the matter in court?
- How much consensus is there in general on the policy objectives of the regulation being enforced?
- How serious and common are the specific breaches under enforcement?
- How settled or ambiguous is the application of the law to the types of case under consideration?

This article is a preliminary step in restating a nuanced policy-oriented theory in terms of a coherent and precise set of individual predictions (see also Nielsen 2006). We hope to stimulate further ideas about the operationalization and testing of responsive regulation. Nevertheless the possibility remains that responsive regulation is, by its very nature, a theory that must be implemented differently in each situation according to the context, and that while specific sub-elements of the theory may be testable, it not possible to test the whole theory in a generally applicable way.

Conclusion

In this article we have operationalized and tested two alternative interpretations of responsive regulation – tit for tat and restorative justice responsiveness – in the context of business experiences of enforcement of Australia's federal competition and consumer protection laws. Because responsive regulation is a complex theory that makes predictions about specific and nuanced types of interaction and communication between regulators and regulatees it is difficult to measure. The difficulty that we as researchers have in operationalizing and testing responsive regulation is a difficulty that is likely to be shared by regulatory staff seeking to implement responsive regulation in practice. Both TFT and RJ versions of responsive regulation require regulatory staff to have excellent communication and relational skills in order to convey a complex set of messages about the threat of regulatory enforcement and the possibility of cooperation in a contextually sensitive way. Both versions of responsive regulation also require the regulatory enforcement agency as an institution to be able to track what is happening in each matter at each stage in not only a technical sense, but also an emotionally intelligent way, so that escalation and de-escalation up and down the pyramid occurs and is communicated appropriately.

We know that regulators often struggle to have this sort of information tracked even in a technical sense. It is even more difficult for them to have the integrity required to choose and follow through on both the technical and the relational–emotional aspects of implementing responsive regulation in practice. Even if regulators have done everything they can do to behave responsively, there is still the additional complication of how regulatees actually perceive their behavior, as our data measures. For example, as Waller (2007) shows, individual regulatory interactions will often be interpreted suspiciously by regulatees, even if this is not the regulator's intention, because of the broader context of what a regulator has done in the past and what he or she might do in the future (see also Mascini & Wijk 2009).

Responsive regulation is particularly challenging when different staff (even different regulators) deal with an alleged offender at different times or in relation to different matters. For example, a typical ACCC matter might go from call center to investigator to senior enforcement manager and lawyer to commissioner. Responsive regulation expects all of these people to have a good understanding of what has gone before and to be able to act and communicate consistently. Beyond this, effective communication of a responsive regulation strategy would require communication between different regulators dealing with similar compliance issues at the state and federal levels, or specialist industry and generalist consumer regulators (Braithwaite 2008, pp. 87–108).

It is not only the regulator that may have different personnel handling each stage of an interaction with an alleged offender. There are also a range of people within the business organization that may be involved in communication with the regulator at different stages and – more importantly – have different reactions (or lack of a reaction) that affect whether the business as whole changes its attitude and behavior. It is not necessarily surprising, then, that we find little evidence of even enforcement interactions that were apparently perceived as amounting to responsive regulation having any impact on business behavior. Just because those staff concerned with regulation and compliance experience responsive regulatory enforcement does not necessarily mean that the message will translate to the broader organization. The potential for responsive regulation is therefore bounded by the capacity for institutional integrity of the regulatory enforcement agency, as previous studies have shown (Waller 2007; Mascini & Wijk 2009). But it is also bounded by the capacity for institutional integrity of the business firm itself, where firms are the subject of enforcement (as in our data). One factor that might make a difference is whether there is a single very senior responsible person in the firm, probably the CEO, who takes responsibility for the interaction with the regulator and can also institutionalize what he or she has learnt from that interaction in the policies and practices of the firm. Whether or not the firm also has a lawyer or compliance professional who can take responsibility for helping the CEO and the firm respond professionally, positively, and creatively to the enforcement interaction might also make a difference to whether responsive regulation is possible in practice, just as the training and skills of regulatory enforcement staff will likely make a difference. We leave further exploration of the relationship between individual firm officers, the firm itself, and the regulator to other researchers.¹³

The two versions of responsive regulation conceptualize and operationalize the relationship between the regulator's use of coercion and broadly negative messages and of cooperation and broadly positive messages differently. TFT responsiveness gives each individual regulatory staff member who is dealing with an alleged offender the job of calibrating in detail the exact mix of coercion and cooperation in their messages to the regulatee according to location on the pyramid. In other words, TFT responsive regulation gives the individual regulatory staff member a crucial role in bringing coercion, or the threat of coercion, into the forefront of the regulatory encounter where an alleged offender behaves like a "bad apple." RJ responsive regulation leaves the role of coercion more to the regulatory system rather than to the regulator as an individual. RJ responsiveness emphasizes the normative requirements of fairness, respect, and cooperation in individual regulatory staff and leaves coercion to the law. RJ responsiveness is simpler to implement because it requires a relatively consistent positive approach by each individual

regulator, although it requires the systemic, institutional backup of a pyramid of sanctions that will almost automatically come into operation.

It is not surprising then that we find a clearer effect of RJ responsiveness on positive attitudes on the part of regulatees. Positive regulator behavior breeds positive regulatee attitudes. But we do not know if this simply leaves “good apples” as good apples and “bad apples” as bad apples – albeit with better attitudes. On the other hand, we find a hint in our results that if TFT responsiveness can be implemented effectively – and this is quite a big if – it may do more to force change in compliance management behavior. This makes analytical sense. TFT responsiveness brings coercion into the equation more clearly, albeit in a way that may be difficult to implement. Human relationships and interactions are incredibly complex and contradictory, so that what seems inconsistent and contradictory might not be as impossible in practice as we imagine.

More micro-research is needed on the very language or rhetoric of how regulators communicate threat and cooperation, and how regulatees “hear” those messages in the light of what else they know of that regulator and the regulatory and legal system more broadly as well as how, if at all, those messages get translated into organizations. One fruitful avenue for further research might be to pull apart and reassemble the building blocks of both TFT and RJ responsive regulation to examine more closely to what extent regulatees’ different background perceptions of the regulatory system might affect how they perceive and respond to TFT threats of coercion. RJ responsive regulation hypothesizes that the background threat of a legal system with big guns makes a consistently positive enforcement style more effective. We found no evidence of this, but further research comparing regulatee experiences with different regulators is needed. Conversely, we might hypothesize that threats directed tit for tat at regulatees by individual enforcement staff might be more effective where there is a background perception of the law and the regulator as fair, just, and reasonable. Certainly, the theory of responsive regulation raises a number of intriguing questions about the potential of regulatees’ experiences and perceptions of threat and cooperation in the regulatory system to connect with plural internal motivations to influence compliance attitudes and behaviors. If this sort of interaction and connection is possible, then it will have profound effects on assisting regulation to meet its goals.

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Notes

- 1 Indeed, Braithwaite attributes his development of the theory of responsive regulation in part to colleagues at the Trade Practices Commission (Fisse & Braithwaite 1993, pp. 230–237).
- 2 Note that not all 141 filled in all questions so our n are often smaller than 141 in the tests reported below.
- 3 This underestimates the actual response rate because we cut 4.3% of the responses actually received for the study because those respondents were too small (fewer than 100 employees) for our sample of large businesses. If we, quite reasonably, assume that similarly 4.3% of the entire list of companies surveyed (including non-respondents) were “too small,” then we would have a response rate of 45%. Our response rate compares well with the 35.5% average response rates for similar questionnaire research of top management of business (Baruch 1999).
- 4 A table of data showing this is available at Technical Appendix 1 to the preprint version of this paper available at <http://www.cartel.law.unimelb.edu.au/go/related-projects/the-australian-competition-and-consumer-commission-enforcement-and-compliance-project> and also at Nielsen and Parker (2005, pp. 14–15).
- 5 A detailed account of our operationalizations, means, and standard deviations is available in Technical Appendix 2 to the preprint version of this paper available at <http://www.cartel.law.unimelb.edu.au/go/related-projects/the-australian-competition-and-consumer-commission-enforcement-and-compliance-project>.
- 6 The relevant questions were asked earlier in the questionnaire than were the questions concerning investigation with the ACCC; that is, without reference to the investigation.
- 7 The details of how exactly we coded the actions and reactions and calculated their positivity or negativity, and also in how many cases the ACCC’s behavior is categorized as positively responsive, negatively responsive, and non-responsive are provided in Technical Appendix 3 to the preprint version of this paper available at <http://www.cartel.law.unimelb.edu.au/go/related-projects/the-australian-competition-and-consumer-commission-enforcement-and-compliance-project>.
- 8 The TFT theory is a single-variable theory (TFT responsive interaction or not) and therefore we use a single-variable statistical test and not a multivariate test such as OLS regression.
- 9 The criteria for coding are shown in detail in Technical Appendix 4 (Table A4.1) to the preprint version of this paper available at <http://www.cartel.law.unimelb.edu.au/go/related-projects/the-australian-competition-and-consumer-commission-enforcement-and-compliance-project>.
- 10 The measure used is shown in Technical Appendix 4 (Table A4.2) to the preprint version of this paper available at <http://www.cartel.law.unimelb.edu.au/go/related-projects/the-australian-competition-and-consumer-commission-enforcement-and-compliance-project>. John Braithwaite commented on previous analyses of our data (Parker & Nielsen 2008a) and suggested a number of items that should be used to measure “image of invincibility”. This measure is an index made up of those items. We put the items Braithwaite had suggested into a factor analysis, excluded those that did not fit, and used the rest for this measure.
- 11 The full results are available in Technical Appendix 5 to the preprint version of our paper available at <http://www.cartel.law.unimelb.edu.au/go/related-projects/the-australian-competition-and-consumer-commission-enforcement-and-compliance-project>.
- 12 See Technical Appendix 3 to the preprint version of our paper available at <http://www.cartel.law.unimelb.edu.au/go/related-projects/the-australian-competition-and-consumer-commission-enforcement-and-compliance-project>.
- 13 We have begun to explore some of these issues from the same data set in Parker *et al.* (2009).

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