

On Why Procedural Justice Matters in Court Hearings

Experimental Evidence that Behavioral Disinhibition Weakens the Association between Procedural Justice and Evaluations of Judges

Liesbeth Hulst, Kees van den Bos, Arno J. Akkermans, E. Allan Lind*

1. Introduction: courtroom experiments on evaluations of judges

Recent debates have questioned the robustness of priming effects in experimental social psychology. Here we present results from two randomized controlled field experiments, conducted in courtrooms among actual litigants, that may contribute to the robustness of our field.

Specifically, we examine how litigants respond to court hearings pertaining to important decisions about their bankruptcy (Study 1) and criminal sentences that can be imposed on them (Study 2). In studying litigants' reactions to these hearings, we focus on the issue of why perceptions of how fairly litigants feel they have been treated by individual judges during court hearings are positively associated with their trust in the judges in their country (Study 1) and with the legitimate power they assign to these judges (Study 2). These linkages between procedural justice judgments in court and evaluations of judges are important examples of how people's procedural justice perceptions can affect their attitudes and behaviors.¹

We propose a new conceptual explanation why procedural justice may be linked to evaluations of judges. In our explanation we note that litigants involved in court hearings will try to understand what is going on in their hearings. To do this, we assume they will inhibit ongoing action as this will allow them to pay close attention to what is going on in the courtroom. In this state of behavioral inhibition, experiences of procedural justice encountered in the courtroom are presumed to be salient and impact litigants' impressions of how much trust and legitimate power they can assign to judges in their country. Importantly, we argue that if this line of reasoning has merit, then it should be the case that weakening the state of behavioral inhibition will attenuate the association between procedural justice and litigants' evaluations of judges.

We test this line of reasoning by means of experimental manipulation. In the courtroom experiments that we will present, participants were (versus were not) reminded about having acted without behavioral

* Liesbeth Hulst (l.hulst@uu.nl), Utrecht University School of Law; Kees van den Bos (k.vandenbos@uu.nl), Utrecht University School of Law; Arno J. Akkermans (a.j.akkermans@vu.nl), Vrije Universiteit Amsterdam, Faculty of Law; E. Allan Lind (allan.lind@duke.edu), Duke University, Durham (NC). We thank the litigants for participating in our studies, the District Court Central Netherlands for giving us the opportunity to conduct these studies, and Jenny Veldman and Marissa Droste for their assistance in collecting the data. For Study 2 we received a research grant of 3,200 Euros from the District Court Central Netherlands for a research project on legitimate power of judges.

1 See, e.g., R. Folger, D. Rosenfield, J. Grove & L. Corkran, 'Effects of "voice" and peer opinions on responses to inequity', (1979) 37 *Journal of Personality and Social Psychology*, pp. 2253-2261; T.R. Tyler, *Why people obey the law* (2006); T.R. Tyler & Y.J. Huo, *Trust in the law: Encouraging public cooperation with the police and courts* (2002); L. Walker, S. LaTour, E.A. Lind & J. Thibaut, 'Reactions of participants and observers to modes of adjudication', (1974) 4 *Journal of Applied Social Psychology*, pp. 295-310.

inhibitions, a manipulation which is known to deactivate people's behavioral inhibition system.² As predicted, findings indicate that this disinhibition manipulation reliably weakened the positive association between procedural justice (as experienced by the litigants during the court hearings) and trust in judges (Study 1) and legitimate power assigned to judges (Study 2), compared to control conditions in which nothing was made salient (default condition, Study 1) or in which a control topic was made salient (control condition, Study 2).

Interestingly, the disinhibition manipulation was induced approximately 2 to 20 minutes before litigants entered their court hearings, which lasted between 15 and 30 minutes in Study 1 and 7 to 20 minutes in Study 2. Given the reliable effects and the relatively large time frames in which the experimental manipulation had an effect on litigants' post-hearing responses we think these results can serve an important role in the recent discussion on the robustness of priming effects.³ We will discuss implications for both the psychology of procedural justice and the robustness of experimental manipulations in social psychology. We will now introduce the topics of trust and legitimate power, after which we will examine the role of perceived procedural justice, followed by a detailed description of the set-up and predictions of the current research.

1.1 Trust and legitimate power

It is important for any democratic society that citizens trust their institutions of justice. Indeed, a central element of the legitimacy of the judiciary is people's trust in judges.⁴ Trust in the judges of a country may refer to more benevolent evaluation of the perceived sincerity of judges, confidence that judges perform their roles and exercise their authority in an honest and sincere manner, and perceived reliability of the judicial institution.⁵ It is through such trust that citizens confer legal institutions with the legitimacy that the justice system needs to exist and operate effectively.⁶ In Study 1, we will focus on litigants' trust in judges.

Legitimate power refers to the perception by individuals that an authority has a genuine right to prescribe behavior for them.⁷ French & Raven note that there is a similarity between the concept of legitimate power as used in psychological literature and the concept of legitimacy of authority as used by sociologists.⁸ The sociologist Weber defined legitimate authority as occurring when it is likely that people will voluntarily obey the authority because they regard the authority as rightful.⁹ Legitimate power is often contrasted with other, allegedly less effective sources of power in which acceptance of authority and obedience with the authority's directives is contingent on external threats (coercive power) or rewards (reward power¹⁰). When people attribute legitimate power to authorities, they are more likely to accept the authority and take upon themselves the obligation to obey and voluntarily follow the decisions made by the authority.¹¹ Evaluating that judges in one's country are legitimate power holders is one of the cornerstones on which constitutional and democratic nations are built. In Study 2, we focus on the legitimate power that litigants confer to judges.

1.2 The role of perceived procedural justice

Both people's judgments of trust in authorities and the legitimate power they assign to authorities can shape their willingness to accept authority and their compliance with the authority's decisions.¹² A variety of studies conducted over the past several decades have shown that higher perceptions of procedural justice tend to be strongly linked with higher levels of trust in authorities and higher perceived legitimacy of

2 K. van den Bos, P.A., Müller & A.A.L. van Bussel, 'Helping to overcome intervention inertia in bystander's dilemmas: Behavioral disinhibition can improve the greater good', (2009) 45 *Journal of Experimental Social Psychology*, pp. 873-878.

3 D. Kahneman, 'A proposal to deal with questions about priming effects' (2012), doi:10.1038/nature.2012.11535.

4 T.R. Tyler & J. Jackson, 'Popular legitimacy and the exercise of legal authority: Motivating compliance, cooperation, and engagement', (2014) 20 *Psychology, Public Policy, and Law*, pp. 78-95.

5 Tyler & Huo (2002), supra note 1.

6 Tyler (2006), supra note 1.

7 J.R.P. French Jr. & B. Raven, 'The bases of social power', in D. Cartwright (ed.), *Studies in social power* (1959), pp. 150-167. Tyler (2006), supra note 1.

8 French Jr. & Raven (1959), supra note 7.

9 M. Weber, *The theory of social and economic organization* (1947).

10 French Jr. & Raven (1959), supra note 7.

11 Tyler (2006), supra note 1.

12 Ibid.

authorities.¹³ Here we focus on the issue why it is that people's procedural justice perceptions are positively associated with trust and legitimacy ratings of authorities in general and judges in particular.

A number of psychological explanations have been offered for why procedural justice is important when people are evaluating authorities such as judges. For example, the relational model of authority proposes that individuals care about procedural justice because procedural justice conveys a message to justice recipients about their relationship with the entity enacting justice, especially with respect to their inclusion in the group.¹⁴ Thus, it has been suggested that procedural fairness has important informational value for citizens interacting with legal authorities.¹⁵ and that procedural fairness helps people to evaluate how societal authorities regard and value them.¹⁶

In the current paper we propose a psychological process that may be underlying earlier explanations of why procedural justice is important and is frequently associated with people's trust and legitimacy ratings. Our explanation of what is happening psychologically posits that perceived procedural justice plays an important role when people are busy trying to find out what is going on and how to behave in novel, unsettling, or otherwise confusing social situations,¹⁷ such as when they are summoned to court.

Building on earlier insights, we argue here that when people are requested to appear at court hearings they will try to make sense of what is going on at the hearings and the legitimate system in which these hearings are taking place.¹⁸ One of the issues people will be trying to find out is whether they can trust the judges in their legal system¹⁹ and whether they can assign legitimacy to those power holders.²⁰ We know from earlier research that in situations such as court hearings procedural justice serves an important role in people's evaluation processes. After all, when people perceive that their case has been treated in fair manners, this will have positive effects on their evaluations whether judges can be trusted and are legitimate power holders.²¹ In contrast, unfair treatment of cases leads to lowered trust and legitimacy ratings of the judges involved in the legal system.²²

We integrate this observation with insights from cognitive psychology and basic social psychology that when people are trying to interpret what is going on, they are inclined to pause momentarily ongoing action to allow for the processing of potentially useful information and cues on what is going on and how to behave.²³ In cognitive psychology, these pause-and-check reactions are termed 'inhibition effects', since ongoing patterns of behavior are inhibited as information is checked and attitudes and behaviors are processed and re-linked.²⁴ Indeed, there now is a quite substantial body of psychological research and theory that suggests that the behavioral inhibition system²⁵ is a fundamental psychological system that facilitates sense-making processes.²⁶

13 K. van den Bos, H.A.M. Wilke & E.A. Lind, 'When do we need procedural fairness? The role of trust in authority', (1998) 75 *Journal of Personality and Social Psychology*, pp. 1449-1458; Tyler (2006), supra note 1; Tyler & Huo (2002), supra note 1.

14 T.R. Tyler & E.A. Lind, 'A relational model of authority in groups', in M.P. Zanna (ed.), *Advances in experimental social psychology* (1992), Vol. 25, pp. 115-191.

15 Tyler (2006), supra note 1.

16 E.A. Lind & T.R. Tyler, *The social psychology of procedural justice* (1988).

17 K. van den Bos, 'Humans making sense of alarming conditions: Psychological insight into the fair process effect', in M.L. Ambrose & R.S. Cropanzano (eds.), *Oxford handbook of justice in work organizations* (2015); K. van den Bos & E.A. Lind, 'The social psychology of fairness and the regulation of personal uncertainty', in R.M. Arkin et al. (eds.), *Handbook of the uncertain self* (2009), pp. 122-141.

18 Tyler (2006), supra note 1; Van den Bos & Lind (2009), supra note 17.

19 Van den Bos et al. (1998), supra note 13.

20 Tyler (2006), supra note 1.

21 Tyler (2006), supra note 1; Tyler & Lind (1992), supra note 14.

22 Tyler (2006), supra note 1; Tyler & Lind (1992), supra note 14; K. van den Bos & E.A. Lind, 'Uncertainty management by means of fairness judgments', in M.P. Zanna (ed.), *Advances in experimental social psychology* (2002), Vol. 34, pp. 1-60.

23 E.N. Aron, A. Aron & J. Jagiellowicz, 'Sensory processing sensitivity: A review in the light of the evolution of biological responsivity', (2012) 16 *Personality and Social Psychology Review*, pp. 262-282; Van den Bos (2015), supra note 17.

24 K. van den Bos & E.A. Lind, 'On sense-making reactions and public inhibition of benign social motives: An appraisal model of prosocial behavior', in J.M. Olson & M.P. Zanna (eds.), *Advances in experimental social psychology* (2013), Vol. 48, pp. 1-58.

25 C.S. Carver & T.L. White, 'Behavioral inhibition, behavioral activation, and affective responses to impending reward and punishment: The BIS/BAS scales', (1994) 67 *Journal of Personality and Social Psychology*, 67, pp. 319-333; J.A. Gray & N. McNaughton, *The neuropsychology of anxiety: An enquiry into the functions of the septo-hippocampal system* (2000).

26 See e.g., S.L. Gable, H.T. Reis & A.J. Elliot, 'Behavioral activation and inhibition in everyday life', (2000) 78 *Journal of Personality and Social Psychology*, pp.1135-1149; Van den Bos & Lind (2013), supra note 24.

Thus, on the basis of this line of reasoning we propose that litigants who appear at bankruptcy or criminal court hearings will try to make sense of what is going on in the courtroom and whether they can trust and find legitimacy in the system's judges. We assume that procedural justice will serve an important role in these sense-making processes and hence will be reliably associated with litigants' evaluations of trust and legitimate power of judges.²⁷ We further note that the behavioral inhibition system is conducive for sense-making processes and is activated when people engage in novel or potentially unsettling, or otherwise confusing situations.²⁸ And we argue that being summoned to court to have your financial or criminal history being discussed is an experience that for most litigants is novel or at least potentially unsettling. Combining all this, we propose that the behavioral inhibition system is likely to be activated when litigants are associating their experiences of procedural justice with their evaluations of trust and legitimacy of judges.

Importantly, we note that if our line of reasoning has merit, then it should be the case that when an experimental manipulation would deactivate people's behavioral inhibition system (as can be done, for instance, by experimentally reminding people about having acted without behavioral inhibitions),²⁹ then they should be less likely to engage in sense-making processes and hence less likely to rely on salient situational cues, such as their perceptions of procedural justice, when forming trust and legitimacy evaluations of judges. Arguably, then, such an experimental manipulation that has been shown to deactivate people's behavioral inhibition system³⁰ should attenuate the positive association between perceived procedural justice and evaluations whether judges in the system can be trusted and should be assigned legitimate power.

To test this research hypothesis, the current research makes use of a recently developed manipulation that does precisely this. It weakens the activation of the behavioral inhibition system without affecting other potentially relevant constructs.³¹ We used this manipulation to study the implications for understanding why perceived procedural justice is important for trust in judges (Study 1) and legitimate power assigned to judges (Study 2) in litigants' reactions to court cases. Thus, in two real-world contexts of the Dutch legal system in which courts take important decisions about bankruptcy or criminal sentences, we tested our explanation of one of the reasons why there often is a link between perceived procedural justice and trust and legitimacy ratings.

1.3 The current research

We conducted two randomized controlled field experiments with litigants who appeared at bankruptcy court hearings (Study 1) and criminal court hearings (Study 2). These experiments used a comparable set-up and in both studies litigants were randomly assigned to control or disinhibition conditions.

In the control conditions, participants were invited to participate in the study. After having indicated their willingness to participate these participants either entered their court hearing in the way litigants normally do, absent any further interventions (Study 1), or (in line with earlier research)³² were asked to answer three simple open-ended control questions about how they feel and behave on a normal day before entering the courtroom (Study 2). After their court hearing had taken place, we interviewed the participants and assessed their perceptions of how fairly and justly they have been treated by the judges in the courtroom, and how much trust they have in judges in their country (Study 1) or how much legitimate power they assign to judges in their country (Study 2). On the basis of our line of reasoning and earlier literature on procedural

27 Van den Bos & Lind (2009), supra note 17.

28 Van den Bos & Lind (2013), supra note 24.

29 See Van den Bos et al. (2009), supra note 2; K. van den Bos, P.A.M. van Lange et al., 'On the benign qualities of behavioral disinhibition: Because of the prosocial nature of people, behavioral disinhibition can weaken pleasure with getting more than you deserve', (2011) 101 *Journal of Personality and Social Psychology*, pp. 791-811.

30 See Van den Bos et al. (2009), supra note 2.

31 Van den Bos et al. (2009), supra note 2; K. van den Bos, E.A. Lind, J. Bommelé & S.D.J. VandeVondele, 'Reminders of behavioral disinhibition increase public conformity in the Asch paradigm and behavioral affiliation with ingroup members', (2015) 6 *Frontiers in Psychology*, article no. 837; K. van den Bos, P.A. Müller & T. Damen 'A behavioral disinhibition hypothesis of interventions in moral dilemmas', (2011) 3 *Emotion Review*, pp. 281-283; Van den Bos, Van Lange et al. (2011), supra note 29.

32 See, e.g., Van den Bos et al. (2009), supra note 2; Van den Bos, Van Lange et al. (2011), supra note 29.

justice,³³ we expected to find in our control conditions substantial positive associations between litigants' perceptions of procedural justice and their trust or legitimacy ratings of the judges in their country.

The procedure in the disinhibition conditions was identical to the control conditions with one exception: Before entering the courtroom participants in the disinhibition conditions were asked to complete three open-ended questions that reminded them about times when they had acted without caring much about what other people thought of their behavior. Extensive earlier pretests revealed that reminding participants of past disinhibited behavior in this way is a manipulation that is conceptually related to the behavioral inhibition system as defined by Carver and White,³⁴ significantly lowers state behavioral inhibition,³⁵ yields comparable effects as associated individual difference variables,³⁶ and does so without affecting alternative concepts such as behavioral activation, affective states, self-monitoring, or accountability.³⁷ Furthermore, the effects of the manipulation did not interact with gender in the earlier studies in which this manipulation has been used.³⁸

After answering the three disinhibition questions (that only took 1 or 2 minutes of their time) participants entered their court hearing, after which they were interviewed about procedural justice and trust or legitimacy in the same manner as participants in the control conditions. On the basis of what we have proposed here we should observe an attenuation of the positive associations between perceived procedural justice and trust in judges (Study 1) and between perceived procedural justice and legitimacy assigned to judges (Study 2) compared to what is seen in the control conditions.

2. Study 1

In Study 1, we test our predictions in the context of bankruptcy court hearings. Our participants appeared at a court hearing following their petition for a court ruling on the basis of the Dutch Bankruptcy Act allowing them access to a legal solution to their debt burden. This legal solution takes the form of a discharge of unpaid debts in exchange for a multi-year period of payments on those debts. Thus, there is a lot at stake for these litigants. If the court approves their petition, they can be discharged from their unpaid debts, but there is no quick discharge of indebtedness. To earn this fresh start, these debtors are required, over a three- to five-year period, to devote all of their disposable income to repayment of creditors and make their best efforts to pay off as much of the debts as possible. If the court denies the debtor's petition, his or her debts remain.³⁹ The court hearings in Dutch bankruptcy courts that we study here resemble the processes and legal practices in various other nations and in other legal fora that rule on the insolvency of natural person debtors.⁴⁰

2.1 Method

2.1.1 Participants and design

Participants were 58 individuals who appeared before the District Court Central Netherlands between May 27 and December 18, 2013. Litigants participated voluntarily in the study and were randomly assigned to either

33 E.g., Lind & Tyler (1988), supra note 16; Tyler (2006), supra note 1; Tyler & Huo (2002), supra note 1.

34 Carver & White (1994), supra note 25; see also Van den Bos & Lind (2013), supra note 24.

35 Van den Bos et al. (2009), supra note 2.

36 Van den Bos et al. (2011), supra note 31; Van den Bos, Van Lange et al. (2011), supra note 29.

37 Van den Bos et al. (2009), supra note 2; Van den Bos, Van Lange et al. (2011), supra note 29.

38 See Van den Bos et al. (2009), supra note 2; Van den Bos et al. (2015), supra note 31; Van den Bos et al. (2011), supra note 31; Van den Bos, Van Lange et al. (2011), supra note 29.

39 In formal Dutch legal terms, our litigants had requested a court ruling allowing them access to a legal scheme of 'debt adjustment of natural persons' on the basis of Arts. 284-362 of the Dutch Bankruptcy Act. In accordance with literature and legislation in this area, we use the better-known term 'bankruptcy' interchangeably with the phrase 'debt adjustment' since both (personal, individual, or consumer) bankruptcy and debt adjustment refer to a formal legal response to an individual's inability to service his or her debt burden (World Bank, *Report on the treatment of the insolvency of natural persons* (2012)). In both studies participants did not have legal representatives, and there were no other parties (such as creditors) involved in the court hearings except for a public prosecutor in the criminal hearings.

40 J.J. Kilborn, 'The hidden life of consumer bankruptcy reform: Danger signs for the new U.S. law from unexpected parallels in the Netherlands', (2006) 39 *Vanderbilt Journal of Transnational Law*, pp. 77-123; World Bank (2012), supra note 39.

the control or disinhibition conditions. Between 27 and 30 participants took part in each of the conditions. There were 28 women and 30 men in the sample. Participants' ages varied between 21 and 62 years and the mean age was 40.84 years ($SD = 10.93$). Participants' educational levels varied between primary school (5 participants, 8.8% of the sample), junior pre-vocational or general secondary education (26 participants, 45.6% of the sample), senior general or vocational secondary education (19 participants, 33.3%), and pre-university secondary education, or university of applied sciences, or university (7 participants, 12.3% of the sample). One participant did not indicate her educational level. The Council for the Judiciary and the board of the District Court Central Netherlands had approved the study.

2.1.2 Experimental procedure

All participants were waiting in the hallway of the court building prior to their court hearing when approached by the experimenter. The experimenter informed participants that we were studying how people experience court hearings and asked for their participation in the study. The experimenter was blind to experimental conditions. Participants were informed that participation was entirely voluntary and that it involved completing some questions in anonymous questionnaires. When people agreed to participate they were invited to follow the experimenter to a separate room where they completed questionnaires before and after their court hearings.

For participants in the control condition of Study 1, we measured what happens in the natural setting of the bankruptcy courtroom, absent of interventions taking place before participants entered the courtroom. Thus, the control condition assessed litigants' perceptions of procedural justice and trust in judges as normally experienced by litigants.

Participants in the disinhibition condition completed the same three open-ended questions used in earlier research.⁴¹ This manipulation used the same procedures developed and extensively pretested in earlier research.⁴² Specifically, participants were asked to complete a short questionnaire consisting of three open-ended questions. Participants in the disinhibition condition were instructed as follows:

The purpose of this questionnaire is to assess how people react to being disinhibited, that is, how people behave when they do not care about what others think of their reactions and what feelings they then experience. To this end, please complete the following three questions: Please briefly describe a situation out of your own life in which you acted without inhibitions. Please briefly describe how you behaved in the situation in which you acted without inhibitions. Please briefly describe the emotions that you experienced when you acted without inhibitions.

As noted, the disinhibition condition has been found to successfully lower behavioral inhibition (assessed by a state version of an often-used and well-validated measure of BIS sensitivity by Carver & White)⁴³ and has been tested and used in a variety of earlier studies in diverse contexts.⁴⁴ The disinhibition manipulation was administered in paper-and-pencil format, and completed by participants individually in a separate room before entering their court hearing. After a few minutes, the experimenter re-appeared to collect the envelope in which participants had put their completed questionnaires. Typically, during the disinhibition manipulation participants wrote down answers that refer to having behaved in social settings without public constraints. For example, participants wrote about being with their family or friends and about feeling free and at ease.⁴⁵

The court hearings lasted between 15 and 30 minutes. After their court hearing had ended, all participants completed the post-hearing questionnaire which started with measures of the level of procedural justice

41 Van den Bos et al. (2009), *supra* note 2.

42 For details, please see Van den Bos et al. (2009), *supra* note 2; Van den Bos et al. (2011), *supra* note 31; Van den Bos, Van Lange et al. (2011), *supra* note 29.

43 Carver & White (1994), *supra* note 25; Van den Bos et al. (2009), *supra* note 2.

44 Van den Bos et al. (2009), *supra* note 2; Van den Bos et al. (2015), *supra* note 31; Van den Bos et al. (2011), *supra* note 31; Van den Bos, Van Lange et al. (2011), *supra* note 29.

45 See Van den Bos et al. (2009), *supra* note 2; Van den Bos, Van Lange et al. (2011), *supra* note 29.

experienced in the court hearing and then assessed the main dependent variable, i.e., trust in the judges in the Netherlands.

In this post-hearing questionnaire, we measured participants' procedural justice perceptions. In line with recommendations by Lind and Tyler⁴⁶ we developed our own items targeted at the context we were studying here. We tried to avoid abstract wording to ensure that items would be clear to our sample of bankruptcy litigants. Specifically, the five items that we used to assess perceived procedural justice were as follows: 'I think the judge used all necessary information', 'I think the judge treated me in the same way as others', 'I think the judge made a good assessment between my concerns and the concerns of others', 'I think the judge gave me a good explanation about his decision', and 'I think the judge responded in a good way when I had questions'. Answers on these items were averaged to form a reliable scale of procedural justice judgments ($\alpha = .75$). All ratings in this study were made on 7-point Likert-type scales (1 = *not at all*, 7 = *very much*).

Our main dependent variable was a measure of trust in the judges in the Netherlands. Based on our analysis of literature on trust,⁴⁷ including trust in legal authorities⁴⁸ and the specific context we are studying here, we assessed trust in judges in the Netherlands by asking participants to what extent they agreed with the following statements: 'I have the feeling that the judges in the Netherlands can be trusted', 'I trust that Dutch judges take honest decisions', and 'I think that the judges handle their tasks in a sincere manner'. Participants' answers were averaged to form a reliable scale of their judgments on trust in judges ($\alpha = 0.89$). On completion of the post-hearing questionnaire,⁴⁹ participants were thanked for their participation in the research. Participants were debriefed via e-mail.

2.2 Results and discussion

2.2.1 Perceived procedural justice

To assess whether the disinhibition manipulation influenced procedural justice perceptions, we conducted a General Linear Model (GLM) analysis with the disinhibition manipulation as a dichotomous independent variable and perceived procedural justice as dependent variable. This analysis showed that procedural justice ratings were not influenced by the disinhibition manipulation, $F(1, 48) = .38, p > .54, \eta_p^2 = .01$, with participants in the control condition giving comparable procedural justice ratings ($M = 6.41, SD = .71$) as participants in the disinhibition condition ($M = 6.29, SD = .69$). Overall, participants experienced a high degree of procedural justice in their court hearings ($M = 6.35, SD = .70$).

2.2.2 Trust in judges

Our main analysis was a GLM analysis, with the disinhibition manipulation as dichotomous independent variable, perceived procedural justice as continuous independent variable, and trust in judges as dependent variable. This analysis revealed a main effect of perceived procedural justice, $F(1, 42) = 7.58, p = .009, \eta_p^2 = .15$, showing higher levels of trust in Dutch judges with increased levels of perceived procedural justice. The analysis also showed a main effect of the disinhibition manipulation, $F(1, 42) = 5.39, p = .025, \eta_p^2 = .11$, indicating more trust in judges in the control condition than in the disinhibition condition. These main effects were qualified by the predicted interaction effect between the disinhibition manipulation and participants' procedural justice judgments, $F(1, 42) = 5.32, p = .026, \eta_p^2 = .11$.⁵⁰ Figure 1 illustrates these effects.

46 Lind & Tyler (1988), supra note 16.

47 See e.g., J.B. Rotter, 'A new scale for the measurement of interpersonal trust', (1967) 35 *Journal of Personality*, pp. 651–665; D.M. Rousseau, S.B. Sitkin, R.S. Burt & C. Camerer, 'Not so different after all: A cross-discipline view of trust', (1998) 23 *Academy of Management Review*, pp. 393–404; F.D. Schoorman, R.C. Mayer & J.H. Davis, 'An integrative model of organizational trust: Past, present, and future', (2007) 32 *The Academy of Management Review*, pp. 344–354.

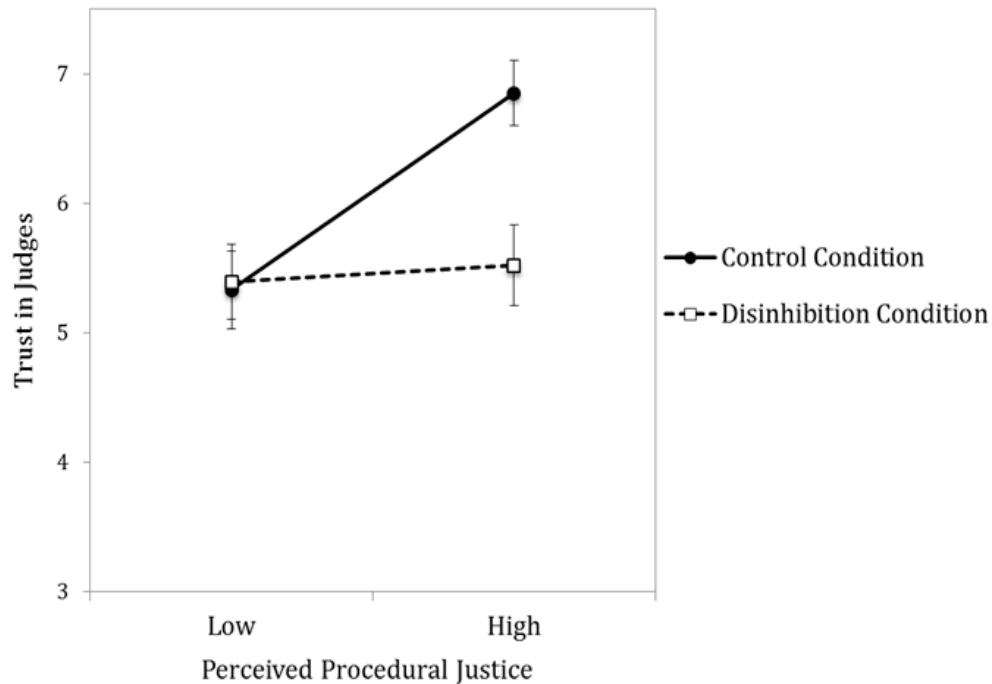
48 Tyler & Huo (2002), supra note 1; Tyler & Jackson (2014), supra note 4.

49 We report all manipulations, all data exclusions, and all measures in the study, so we note that in both studies we measured different types of reactions. The items not reported in our findings were included for exploratory purposes, did not affect the effects reported, and are available on request.

50 Inspecting Cook's (1977) distance measure in this analysis revealed that 2 of the 58 participants (3.5%) showed a distance score of more than 3 standard deviations above the mean. These participants were excluded from the main analyses. Seven other participants had to

Figure 1 Trust in judges as a function of being reminded (disinhibition condition) or not being reminded about disinhibited behavior (control condition) and low and high levels of perceived procedural justice.

Note. Trust judgments are on 7-point scales with higher values indicating higher levels of trust in Dutch judges. Levels of perceived procedural justice are estimated 1 standard deviation below the mean (low level) and 1 standard deviation above the mean (high level). Error bars represent standard errors of the mean.



To interpret the interaction effect, we conducted simple slope analyses.⁵¹ As predicted, in the control condition perceived procedural justice was strongly and significantly associated with trust in judges, $\beta = .71$, $t = 4.91$, $p < .001$, 95% CI [0.638, 1.563]. In further accordance with predictions, this effect attenuated in the disinhibition condition. In fact, in the disinhibition condition perceived procedural justice was not significantly associated with trust in judges, $\beta = .06$, $t = .24$, $p = .810$, 95% CI [-0.738, 0.932].

Thus, as can be seen in Figure 1, in the control condition there was a strong, statistically significant association between perceived procedural justice and trust in judges for participants in the control condition. The finding that in our control condition procedural justice was linked reliably to trust is consistent with what would be expected on the basis of the current literature on procedural justice.⁵² By contrast, there was no statistically significant association between perceived procedural justice and trust in judges for participants in the disinhibition condition; the link between procedural justice and trust was not found there. Hence, following the disinhibition manipulation that asked participants to complete three questions about not caring strongly about what others think of their behaviors, the positive association between perceived procedural justice and trust in judges attenuated in a significant and predictable way.

In terms of simple correlations, we note that trust in judges was significantly correlated with perceived procedural justice in the control condition, $r(26) = .67$, $p < .001$. In contrast, trust in judges was not significantly

be excluded because of missing values on the procedural justice scale, two other participants were omitted from the analyses because of missing values on the trust in judges scale, and one participant did not want to answer the experimental manipulation questions, leaving a total of 46 participants, with 20 to 26 participants in each cell of our design. R.D. Cook, 'Detection of influential observations in linear regression', (1977) 19 *Technometrics*, pp. 15-18; J. Cohen, P. Cohen, S.G. West & L.S. Aiken, *Applied multiple regression/correlation analysis for the behavioral sciences* (2003).

51 L.S. Aiken & S.G. West, *Multiple regression: Testing and interpreting interactions* (1991).

52 See e.g., Tyler (2006), supra note 1; Tyler & Huo (2002), supra note 1.

correlated with perceived procedural justice in the disinhibition condition, $r(20) = .09$, $p = .72$. The difference between these correlations was significant, $z = 2.27$, $p < .05$.

In order to examine the relative importance of fair and unfair procedural treatment, we also conducted a GLM analysis that examined the effect of the disinhibition manipulation on trust in judges at relatively high levels of perceived procedural justice (estimated at 1 *SD* above the mean of the procedural justice scale) and low levels of perceived procedural justice (estimated at 1 *SD* below the mean of the procedural justice scale).⁵³ This analysis demonstrated that, for those who had experienced high levels of procedural justice in their court hearing, there was a significant effect of the disinhibition manipulation, such that participants in the control condition reported more trust in judges ($M = 6.85$, $SE = .25$, 95% CI [6.35, 7.36]) than participants in the disinhibition condition ($M = 5.52$, $SE = .31$, 95% CI [4.90, 6.15]), $F(1, 42) = 11.26$, $p = .002$, $\eta_p^2 = .21$. For those participants who experienced relatively low levels of procedural justice in their court hearing there was no statistically significant effect of the disinhibition manipulation on trust in judges ($M = 5.39$; $SE = .29$, 95% CI [4.80, 5.97] vs. $M = 5.33$; $SE = .30$, 95% CI [4.72, 5.93], respectively), $F(1, 42) = 0.22$, $p = .88$, $\eta_p^2 = .001$. These findings corroborate our line of reasoning.

In summary, Study 1 supported our predictions, such that in the control condition where litigants went into hearings as they usually do, higher levels of perceived procedural justice were found to be strongly and significantly associated with higher levels of trust in the judges in the Netherlands. In contrast, when litigants completed three questions about not caring strongly about what others think of their behaviors before they entered their court hearing, the association between perceived procedural justice and judgments of trust in the judges in the Netherlands was found to attenuate, and in fact was not statistically significant. These effects of the disinhibition manipulation were observed after a court hearing that took about 15 to 30 minutes of litigants' time.

3. Study 2

Study 2 was conducted among defendants who appeared at criminal court hearings. These defendants were accused of having committed criminal offences under Dutch criminal law. After the court hearing, the court decides whether defendants will receive punishment. These data were collected in the context of a research project to study the legitimate power that litigants attribute to Dutch judges.

3.1 Method

3.1.1 Participants and design

Participants were 86 individuals who appeared at criminal court hearings before the District Court Central Netherlands between 11 March and 18 November 2015. Litigants participated voluntarily in the study and were randomly assigned to either the control or disinhibition conditions. In each of the conditions, 43 participants took part. There were 69 men and 14 women in the sample (3 participants did not specify their gender). Participants' ages varied between 18 and 58 years and the mean age was 32.41 years ($SD = 10.48$). There were 23 participants with lower educational levels, 29 with intermediate educational levels, and 27 with higher educational levels, in accordance with the education categories used by the official Dutch Central Bureau of Statistics.⁵⁴ There were 7 participants who did not state their educational level. The board of the District Court Central Netherlands had approved the study.

3.1.2 Experimental procedure

The experimental procedure of Study 2 was the same as in Study 1, with the following exceptions: participants in both conditions of Study 2 completed three brief open-ended questions. Participants in the

⁵³ See for the background to this procedure: Aiken & West (1991), supra note 51

⁵⁴ Centraal Bureau voor de Statistiek, *Toelichting: Bijna evenveel hoogopgeleide als laagopgeleide Nederlanders* (2008). Retrieved from <<http://www.cbs.nl/nlNL/menu/themas/onderwijs/publicaties/artikelen/archief/2008/2008-2436-wm.htm>>.

control condition were asked to complete three questions about having behaved in a normal way on a regular day. Specifically, following earlier research⁵⁵ participants received the following instruction:

The purpose of this questionnaire is to assess how people experience a normal day in their lives, that is, how people usually behave on a regular day and what feelings they then experience. To this end, please complete the following three questions: Please briefly describe a situation out of your own life in which you acted in a normal way like you do on a regular day. Please briefly describe how you behave when you act in a normal way like you do on a regular day. Please briefly describe the emotions that you experience when you act in a normal way on a regular day.

The materials used in the disinhibition condition were the same as in Study 1. The hearings in Study 2 lasted between 7 and 20 minutes. The post-hearing questionnaire of Study 2 assessed the level of procedural justice litigants experienced in the court hearing, as well as the main dependent variable of Study 2, i.e., legitimate power assigned to judges in the Netherlands.

To get an indication of the robustness of the effects studied here, we used a comparable but slightly different operationalization of perceived procedural justice. That is, in building on Van den Bos, Van der Velden & Lind,⁵⁶ we measured participants' procedural justice perceptions by asking them to indicate how much they agreed with the following statements: 'I am treated in a polite manner', 'I was treated with respect', 'I was able to voice my opinions', 'My opinion was seriously listened to', 'I am treated in a just manner', and 'I am treated fairly'. Answers on these items were averaged to form a reliable scale of procedural justice judgments ($\alpha = .95$).

Our main dependent variable was a measure of legitimate power assigned to judges in the Netherlands. We constructed these items targeted at the context we are studying here and grounded the items on literature on legitimacy.⁵⁷ Specifically, we asked participants to what extent they agreed with the following statements: 'For me, Dutch judges have legitimate power', 'I assign legitimate power to judges', and 'In general, Dutch judges have legitimate power'. Participants' answers were averaged to form a reliable scale of legitimate power assigned to judges ($\alpha = .93$).

3.2 Results and discussion

3.2.1 Perceived procedural justice

A GLM analysis with the disinhibition manipulation as dichotomous independent variable and perceived procedural justice as dependent variable, again showed that procedural justice ratings were not influenced by the disinhibition manipulation, $F(1, 79) = .025$, $p = .88$, $\eta_p^2 = .00$, with participants in the control condition giving comparable procedural justice ratings ($M = 6.18$, $SD = 1.26$) as participants in the disinhibition condition ($M = 6.29$, $SD = 1.23$). Overall, participants experienced a high degree of procedural justice in their court hearings ($M = 6.20$, $SD = 1.24$).

3.2.2 Legitimate power of judges

A GLM analysis, with the disinhibition manipulation as dichotomous independent variable and perceived procedural justice as continuous independent variable, on legitimate power of judges revealed a statistically significant main effect of perceived procedural justice, $F(1, 75) = 9.40$, $p = .003$, $\eta_p^2 = .11$, indicating lower levels of legitimate power assigned to Dutch judges with lower levels of perceived procedural justice.⁵⁸ There was no significant effect of the disinhibition manipulation, $F(1, 75) = 2.00$, $p = .162$, $\eta_p^2 = .026$. The analysis also yielded the predicted interaction between participants' procedural justice judgments and the

55 Van den Bos et al. (2009), supra note 2; Van den Bos, Van Lange et al. (2011), supra note 29..

56 K. van den Bos, L. van der Velden & E.A. Lind 'On the role of perceived procedural justice in citizens' reactions to government decisions and the handling of conflicts', (2014) 10 *Utrecht Law Review*, no. 4, <<http://doi.org/10.18352/ulr.287>>, pp. 1-26.

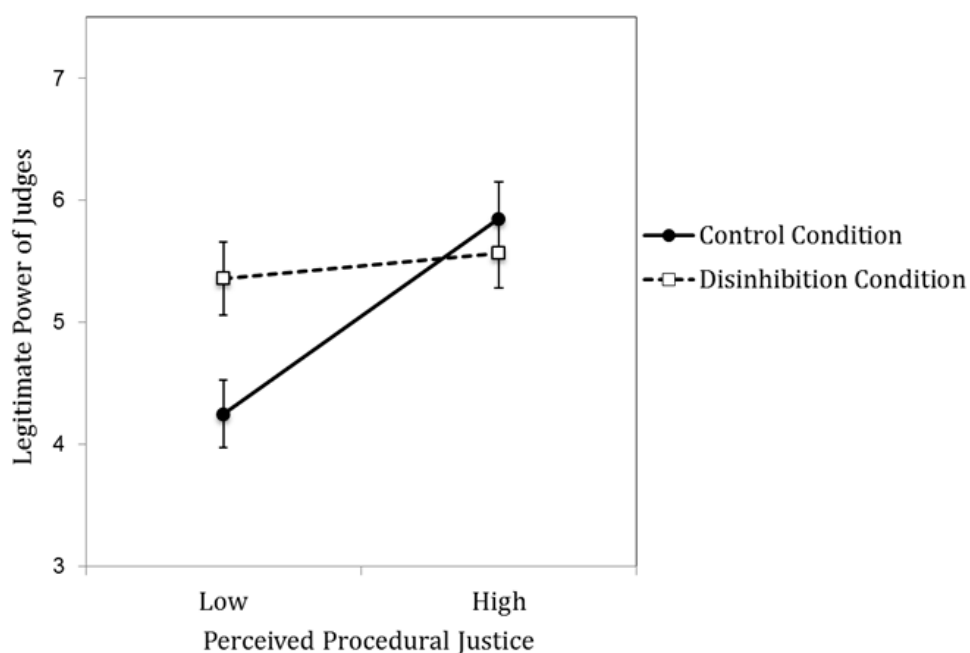
57 French Jr. & Raven (1959), supra note 7; Tyler (2006), supra note 1; Weber (1947), supra note 9.

58 Five participants had missing values on the procedural justice scale and three participants had missing values on the legitimate power scale and were omitted from the analyses, leaving a total of 79 participants, with 41 and 38 participants in each cell of our design.

disinhibition manipulation, $F(1, 75) = 5.58, p = .021, \eta_p^2 = .069$. Figure 2 shows the effects and respective standard errors.

Figure 2 Legitimate power assigned to judges as a function of being reminded about disinhibited behavior (disinhibition condition) or being reminded about behavior on a normal day (control condition) and low and high levels of perceived procedural justice.

Note. Legitimacy judgments are on 7-point scales with higher values indicating higher levels of legitimate power assigned to Dutch judges. Levels of perceived procedural justice are estimated 1 standard deviation below the mean (low level) and 1 standard deviation above the mean (high level). Error bars represent standard errors of the mean.



Simple slope analyses revealed that, in the control condition, perceived procedural justice was strongly and significantly associated with legitimate power assigned to judges, $\beta = .536, t = 3.97, p = .000, 95\% \text{ CI } [0.392, 1.207]$. This is in line with what would be expected on the basis of Study 1 and the literature on procedural justice. As in Study 1, this effect attenuated in the disinhibition condition. In fact, in the behavioral disinhibition condition, perceived procedural justice was not significantly associated with legitimate power assigned to judges, $\beta = .080, t = 0.48, p = .633, 95\% \text{ CI } [-0.332, 0.539]$. Thus, similar to Study 1, following the completion of three questions pertaining to behavioral disinhibition, the positive association between perceived procedural justice and legitimacy assigned to judges (observed reliably in the control condition) attenuated in a predictable way.

We also note that, in the control condition, legitimate power assigned to judges was significantly correlated with perceived procedural justice, $r(41) = .54, p < .001$, while in the experimental condition legitimate power assigned to judges was not significantly correlated with perceived procedural justice, $r(38) = .08, p = .633$. The difference between these correlations was significant, $z = 2.24, p < .05$.

Furthermore, for those who had experienced relatively low levels of procedural justice in their court hearing (-1 SD) there was a significant effect of the disinhibition manipulation, such that participants in the control condition reported less legitimate power assigned to judges ($M = 4.25, SE = .28, 95\% \text{ CI } [3.69, 4.81]$) than participants in the disinhibition condition ($M = 5.36, SE = .30, 95\% \text{ CI } [4.76, 5.96]$), $F(1, 75) = 7.22, p = .009, \eta_p^2 = .09$. For those participants who experienced relatively high levels of procedural justice ($+1 \text{ SD}$) there was no statistically significant effect of being in the control or disinhibition condition on

legitimate power of judges ($M = 5.85$; $SE = .29$, 95% CI [5.27, 6.43] vs. $M = 5.57$; $SE = .30$, 95% CI [4.97, 6.17], respectively), $F(1, 75) = 0.44$, $p = .51$, $\eta_p^2 = .006$.

In sum, in accordance with our predictions, when litigants completed questions that reminded them about their past disinhibited behaviors before they entered their court hearing, the association between perceived procedural justice and legitimate power assigned to judges in the Netherlands, that was found in the control condition, was found to attenuate and in fact was not statistically significant.

4. General discussion

People's trust in judges and the legitimate power assigned to these legal authorities can shape people's willingness to accept authority and their deference to and compliance with the authority's decisions.⁵⁹ Trust and legitimacy are important, therefore, for the effectiveness of societal authorities.⁶⁰ It should not come as a surprise, therefore, that national and international governmental organizations measure public trust in and perceived legitimacy of the courts and other societal institutions,⁶¹ and that major policy initiatives have been undertaken to enhance trust in and perceived legitimacy of judges, often by seeking to modernize the court system.⁶² The current randomized controlled experiments among actual litigants provide insights into why procedural justice matters when people are forming judgments of trust and legitimacy about societal authorities. As such, this research may extend on earlier explanations of why procedural justice is important, including the relational model of procedural justice.⁶³

In both experiments we found in the control conditions that higher levels of perceived procedural justice were strongly and significantly associated with higher levels of trust in judges and legitimacy assigned to judges in the Netherlands. These findings across control conditions fit with the proposition put forward in the procedural justice literature that people's experience of perceived procedural justice in encounters with individual judges and other societal authorities is important for their trust in these authorities and whether they think these authorities are legitimate power holders.⁶⁴

In further accordance with our predictions, in both experiments when litigants were exposed to the disinhibition manipulation before they entered their court hearing, the associations of perceived procedural justice with trust in judges (Study 1) and legitimacy assigned to judges (Study 2) were observed to attenuate, and in fact were not statistically significant. This experimental attenuation of the classic link between procedural justice and evaluations of judges was obtained simply by asking litigants to complete three open-ended questions that reminded them about having behaved without inhibitions. Participants completed these questions several minutes before responding to the post-hearing questionnaire.

We compared how litigants react to court hearings when behavioral inhibition is lowered experimentally before they entered the courtroom with how litigants normally react to court hearings absent of any interventions (Study 1) and what happens when litigants completed neutral control questions before they entered the courtroom (Study 2). Our dependent variables were important evaluations of judges and across studies we slightly varied operationalizations of procedural justice. It is indicative of the robustness of the hypothesis tested that in different courtroom contexts among actual bankruptcy petitioners and criminal defendants, in the control conditions we observed strong linkages between procedural justice and evaluations of judges, while in the disinhibition conditions these linkages attenuated and were statistically not significant.

59 Tyler (2006), *supra* note 1.

60 M. Hough, J. Jackson & B. Bradford, 'Legitimacy, trust, and compliance: An empirical test of procedural justice theory using the European social survey', in J. Tankebe & A. Liebling (eds.), *Legitimacy and criminal justice: An international exploration* (2013), pp. 326-352.

61 See e.g., TNS Political & Social, *Flash Eurobarometer 385: Justice in the EU* (2013). Retrieved from <ec.europa.eu/public_opinion/flash/fl_385_en.pdf>.

62 Judicial Council of California, *Trust and confidence in the Californian Courts* (2006); National Center for State Courts, *National action plan: A guide for state and national organizations* (2000).

63 Tyler & Lind (1992), *supra* note 14.

64 Tyler (2006), *supra* note 1; Tyler & Huo (2002), *supra* note 1.

The favorability of the courts' decision could not be measured in Study 1.⁶⁵ In Study 2 we did assess outcome favorability⁶⁶ and there we found that outcome favorability did not significantly moderate our findings. Future research could examine when outcome favorability would in fact moderate the interactive effect of perceived procedural justice and disinhibition.

The basic pattern of findings of the current studies among court litigants is consistent with findings in two other independent experimental studies.⁶⁷ In these studies, participants were experimentally reminded of having acted with inhibitions by means of open-ended questions similar to the disinhibition manipulation used in the current study. Following this inhibition manipulation, participants showed more positive responses following the presence of opportunities to voice their opinions and more negative responses following the absence of those opportunities, compared to participants in a control condition who had been asked neutral questions. These findings were obtained in scenario studies, so they should be interpreted with caution. This noted, the data from these studies provide support for our line of reasoning that behavioral inhibition system activation acts as one of the factors that can explain why people tend to be strongly influenced by perceived procedural justice. Higher levels of behavioral inhibition may lead people to become more sensitive to what happens in their social surroundings, and, as a result, react more strongly to procedural justice issues.

Findings of the current courtroom experiments also match a series of other experimental studies that consistently implied that activation of the behavioral inhibition system leads people to be more heavily influenced by situational demands.⁶⁸ For example, inhibited participants were more likely to refrain from help in bystander situations⁶⁹ and were more likely to be pleased with favorable but undeserved outcomes⁷⁰ than disinhibited participants. The present courtroom study fits with that earlier body of research in suggesting that higher levels of behavioral inhibition lead people to be more heavily influenced by what happens in their social environment (in the current study, how fairly and justly a judge is treating them).

The results across studies are consistent in that perceived procedural justice was positively related to the dependent variables in the control condition but not in the disinhibition condition. While consistent in that sense, the two studies did not yield identical results, as a close inspection of Figures 1 and 2 reveals. The main effect of the disinhibition variable was significant in Study 1 but not in Study 2. Furthermore, the nature of the interaction effects, as identified using slope analyses,⁷¹ showed different patterns in Studies 1 and 2. That is, results of Study 1 in the insolvency hearings indicate that the experience of high procedural justice is linked with litigants having high trust in judges (a *fair* process effect, see Figure 1). And results of Study 2 in the criminal courtroom indicate that the experience of low procedural justice is linked with defendants assigning low levels of legitimate power to judges (an *unfair* process effect, see Figure 2). The specific pattern of results could be related to the different types of court hearings, differences between people involved in these different hearings and/or the fact that we studied different dependent variables (trust and legitimate power) in Studies 1 and 2. With this being noted, both interaction patterns support the pioneering line of reasoning put forward in the current paper. Obviously, future research is needed to substantiate and explore the possible implications that follow from the findings presented here.

65 Only a minority (22.4%) of the participants had been informed at their hearing what the judge's decision would be, namely that their petition would be approved. In all other cases and in line with court practices (77.6%), participants were told at the hearing that they could phone the court at a given date to find out what the judge's decision would be. Given these court practices, we could not examine possible effects of litigants' outcomes being favorable or unfavorable.

66 J. Brockner & B.M. Wiesenfeld, 'An integrative framework for explaining reactions to decisions: Interactive effects of outcomes and procedures', (1996) 120 *Psychological Bulletin*, pp. 189-208.

67 L. Hulst, K. van den Bos, A.J. Akkermans & A.E. Lind, 'On the psychology of perceived procedural justice: Implications of reminders of inhibited behavior on reactions to voice and no-voice procedures', (2017) 6 *Frontiers in Psychological and Behavioral Science*, no. 1, pp. 1-12.

68 Van den Bos et al. (2009), supra note 2; Van den Bos et al. (2015), supra note 31; Van den Bos et al. (2011), supra note 31; Van den Bos, Van Lange et al. (2011), supra note 29; Van den Bos & Lind (2013), supra note 24.

69 Van den Bos et al. (2009), supra note 2.

70 Van den Bos, Van Lange et al. (2011), supra note 29.

71 Aiken & West (1991), supra note 51.

4.1 Implications

Our findings indicate that our disinhibition manipulation, which has been tested and used in a variety of earlier studies in different contexts including the psychology laboratory, shopping malls, and train stations,⁷² also worked in important real-world courtroom contexts. Here the manipulation was induced (approximately 2 to 20 minutes) before litigants entered their court hearings, which lasted between 15 and 30 minutes in Study 1 and between 7 and 20 minutes in Study 2. The current priming manipulation had reliable effects on reactions of actual litigants to their court hearings.⁷³ Viewed in this way, we think that one possible implication of these results is that they can serve an important role in the recent discussion on the robustness of priming effects.⁷⁴

For example, as noted by Van den Bos and Lind,⁷⁵ it is our impression that contemporary psychological science sometimes tends to prefer minimal manipulations even at the risk of low replicability of the findings obtained using such manipulations. It seems to us that experimenters need to give thought to the right balance between minimal manipulation and maximal knowledge yield for the science. The open-ended questions paradigm that we used in our studies is pretty minimal since it asks participants to give brief reactions to some simple questions only. But the paradigm tends to yield robust and replicable results, in part because participants seem to assimilate readily toward the disinhibited behaviors they have performed in their social lives and hence adapt their current mindsets to a state of moderate behavioral disinhibition. Thus, the open-question format that we used in the majority of our studies seems to fit this call for minimal manipulations and maximal output quite nicely.

The attenuation of the positive association between perceived procedural justice and trust and legitimacy ratings that we found in the disinhibition conditions is especially telling given that strong and reliable links between procedural justice and other reactions have been documented in many other (albeit often non-legal) settings. Our findings in the control conditions are in accordance with these earlier results.⁷⁶ The suggestion that follows from our findings in the disinhibition conditions is that with the current disinhibition manipulation we were able to switch off a robust procedural justice phenomenon, namely that litigants associate procedural justice perceptions with trust and legitimacy judgments.

Findings from the current experiments may help to obtain insight into a thus far unexplored explanation of why there is a link between procedural justice and trust and legitimacy ratings of societal authorities. We argue above that because litigants are often trying to make sense of what is going on and how to behave at their court hearings, they will tend to inhibit ongoing action and activate the behavioral inhibition system to facilitate processes of sense making.⁷⁷ We assumed that in this state of behavioral inhibition experiences of procedural justice would impact litigants' impressions of how much trust and legitimate power they can assign to judges in their country, and the findings of both our studies support this line of reasoning.

As such, an important corollary of this reasoning is that the magnitude of fair process effects should depend on how much people are in sense-making mode: the stronger their sense-making tendencies, the stronger the fair process effect is likely to be. This reasoning may help to explain both the present findings and others in the justice literature. Future research could test this implication, for example by means of operationalizing sense-making variables by means of manipulation or individual disposition.

As we have noted, the disinhibition manipulation that we used here among actual court litigants has been shown to reliably lower the state of behavioral inhibition⁷⁸ and has no effects on other relevant constructs.⁷⁹ Thus, the strong link between perceived procedural justice and trust in judges that we found in the control conditions of both experiments and the weak link observed in the disinhibition conditions can be explained

72 Van den Bos et al. (2009), *supra* note 2; Van den Bos et al. (2015), *supra* note 31; Van den Bos et al. (2011), *supra* note 31; Van den Bos, Van Lange et al. (2011), *supra* note 29.

73 When we calculated the exact number of minutes between the manipulation and the filling out of the post-hearing questionnaires, this did not affect the results reported.

74 Kahneman (2012), *supra* note 3.

75 Van den Bos & Lind (2013), *supra* note 24.

76 See e.g., Tyler (2006), *supra* note 1; Tyler & Huo (2002), *supra* note 1.

77 Van den Bos & Lind (2009), *supra* note 17; Van den Bos & Lind (2013), *supra* note 24.

78 Van den Bos et al. (2009), *supra* note 2.

79 Van den Bos, Van Lange et al. (2011), *supra* note 29.

by the logic that lowering activation of the behavioral inhibition system attenuates the positive association between perceived procedural justice and trust and legitimacy ratings of judges. More generally, these field experiments are among the first to suggest that activation of the behavioral inhibition system is one of the factors that can explain the positive association between perceived procedural justice and trust in and legitimacy conferred on important societal authorities.

The suggested psychological processes of activation of the behavioral inhibition system as one of the factors that can explain people's reactions to procedural justice may underlie existing explanations of why procedural justice is important, including the relational model of procedural justice.⁸⁰ As such, our findings, and the line of reasoning that experiences of procedural justice play a role in processes of sense making, elaborate, rather than contradict, the Tyler & Lind analysis.⁸¹ Future research is obviously needed to assess empirically the possible relationship between the relational model of procedural justice and our inhibition explanation of the link between procedural justice and trust in judges. For now, we argue that the present findings are not inconsistent with the existing procedural justice literature, but instead may help to provide a deeper understanding of this literature.

The current study can also help to predict conditions under which trust and legitimacy ratings are likely to be less strongly linked to litigants' procedural justice perceptions. Our line of reasoning is that one of the factors that can explain the link of procedural justice with trust and legitimacy is the fact that litigants are likely to be in a state of behavioral inhibition, the result of being in a confusing situation in which they want to make sense of what is going on. It is likely that in many formalized legal contexts (e.g., court or police hearings) activation of the behavioral inhibition system is the rule rather than the exception, which would mean that evaluations of judges will be linked with procedural justice perceptions most of the time. But activation of the behavioral inhibition system may well be less strong for people for whom interactions with the court are less confusing and who are less busy trying to understand what is going on. This would be the case, for example, with people with substantial experience and familiarity with the courts. This brings us to a discussion of the limitations of the current studies and the possible directions for future research.

4.2 Limitations and future research

We acknowledge that the associations we report between litigants' procedural justice ratings and their judgments of trust and legitimacy are correlational. In our line of reasoning, we build on existing research that has demonstrated that people's perceptions of procedural justice affect their subsequent reactions (a general phenomenon termed the 'fair process effect'⁸²). The statistically non-significant links of procedural justice with trust and legitimacy ratings that we found in the disinhibition conditions in both studies is consistent with our line of reasoning. We predicted that when a disinhibition manipulation lowers behavioral inhibition, then sense-making processes are less engaged and people do not rely on perceived procedural justice in forming their judgments of trust and legitimacy. As noted earlier, our disinhibition manipulation did not affect procedural justice ratings. This suggests that procedural justice judgments are generated by processes that are psychologically different from judgments of trust and perceived legitimacy.

The current disinhibition manipulation builds on previous research and theory on the working of the behavioral inhibition system as playing a central role in processes of sense-making, and the assumption that activation of this psychological system is instigated by various stimuli that trigger general sense-making processes.⁸³ The idea behind the disinhibition manipulation was to adapt participants' current mindsets to a state of moderate behavioral disinhibition.⁸⁴ The manipulation reminded participants about some

80 Tyler & Lind (1992), supra note 14.

81 Ibid.

82 See, e.g., Folger et al. (1979), supra note 1; K. van den Bos, 'What is responsible for the fair process effect?', in J. Greenberg & J.A. Colquitt (eds.), *Handbook of organizational justice: Fundamental questions about fairness in the workplace* (2005), pp. 273-300; Van den Bos (2015), supra note 17.

83 E.N. Aron & A. Aron, 'Sensory-processing sensitivity and its relation to introversion and emotionality', (1997) 73 *Journal of Personality and Social Psychology*, pp. 345-368; Gable et al. (2000), supra note 26; J. Kagan, 'The concept of behavioral inhibition to the unfamiliar', in J.S. Reznick (ed.), *Perspectives on behavioral inhibition* (1989), pp. 1-24; Van den Bos & Lind (2013), supra note 24.

84 Van den Bos et al. (2009), supra note 2; Van den Bos & Lind (2013), supra note 24.

behaviors they had performed earlier. It seems likely that the effects of this ‘mindset’ manipulation were predominantly perceptual rather than affecting litigants’ behavior in the courtroom, which fits with the view that important components of the psychology of procedural justice have to do with how people perceive fair and unfair treatment by important societal authorities.⁸⁵

Rather than attempting to include all variables in one design that may disturb the effects studied,⁸⁶ especially in these noisy courtroom contexts among litigants, we build on earlier evidence that validates the claim that our disinhibition manipulation weakens state behavioral inhibition.⁸⁷ Ideally, we would have preferred larger sample sizes. However, the current research studies already demanded long periods of data collection, making this a multi-year project, and there are practical constraints on materials that can be used in these court contexts and sample sizes that can be obtained. We hope that our studies in consequential field settings have provided convincing evidence that activation of the behavioral inhibition system is one of the factors that can explain the positive association between procedural justice and trust and legitimacy. We note that future research is needed to examine the magnitude of the effect as well as other possible underlying mechanisms.

4.3 Conclusions

In order to better understand why litigants’ trust in, and legitimacy assigned to, judges is influenced by their perceptions of procedural justice, we examined a conceptual connection between the psychology of behavioral inhibition and disinhibition and the often-observed link between procedural justice and trust and legitimacy ratings. Specifically, we suggested that litigants in legal contexts are often psychologically inhibited as they are trying to make sense of the situation, and that this leads them to rely on procedural justice as a salient situational cue. In two experiments among actual court litigants, evaluations of a country’s judges were found to be strongly and reliably associated with perceived procedural justice in the control conditions which resembled the default setting in which the court hearings normally take place (Study 1), and when neutral control questions were used (Study 2). In both studies, following an experimental manipulation consisting of answering three questions only that had been shown to weaken people’s state behavioral inhibition, the associations of procedural justice with trust and legitimacy ratings of judges attenuated and were not statistically significant. To conclude, by being able to both replicate and attenuate the link between procedural justice and trust and legitimacy ratings in each study, the current paper helps to understand when the link between procedural justice perceptions and trust and legitimacy ratings of societal authorities is likely to be stronger or weaker. The empirical findings thus obtained in two controlled courtroom experiments suggest that activation of the behavioral inhibition system is one of the factors that can explain why perceived procedural justice happens to be important for people’s trust in judges and the legitimate power assigned to these societal authorities. ■

85 Tyler & Lind (1992), *supra* note 14; Van den Bos & Lind (2013), *supra* note 24.

86 S.J. Spencer, M.P. Zanna & G.T. Fong, ‘Establishing a causal chain: Why experiments are often more effective than mediational analyses in examining psychological processes’, (2005) 89 *Journal of Personality and Social Psychology*, pp. 845-851.

87 Van den Bos et al. (2009), *supra* note 2.