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Guilty, Not Guilty, or . . .? Multiple Options in Jury Verdict Choices

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ABSTRACT

Three studies investigate the role and impact of alternative verdicts to the conventional choice between conviction and acquittal. The primary focus is on the Not Proven option, with a lesser charge alternative included for comparisons. The results contradict a commonly held view that the Not Proven option attracts jurors away from returning a conviction. Instead, Not Proven more often supplants outright acquittals. Judged probabilities of guilt from jurors returning Not Proven are mid-range, in contrast to the markedly higher probabilities given by those returning conviction of a lesser charge (manslaughter) and lower probabilities from those returning an acquittal. Jurors returning Not Proven report greater decisional difficulty and conflict than those returning any other verdict, including conviction on a lesser charge. No direct evidence is found that third options function as a decision-avoidant alternative to conviction or acquittal. Copyright © 2007 John Wiley & Sons, Ltd.

KEY WORDS jurors; probability of guilt; probability assessment; conviction; acquittal

INTRODUCTION

In criminal trials jurors often may be required to choose among more than the conventional two alternatives of conviction or acquittal. Nonetheless, in the half-century or so of research on juror decision-making, little systematic attention has been devoted to the effects of having more than two options in trials. The studies presented here investigate how these additional alternatives affect individual mock-jurors' decisions. More specifically, we address the following questions:

1. How do third options affect the distribution of convictions and acquittals? If the third option lies between the other two in severity, do jurors migrate to it primarily from the more lenient or the more severe alternative?
2. To what extent are third options used as decision-avoidant 'cop-outs'?
3. Do third options influence the standard of proof applied to either conviction or acquittal?

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There are three well-known contexts in which jurors may face more than two options: The Scottish system with its *Not Proven* alternative, the *Guilty But Mentally Ill* (GBMI) or *Diminished Responsibility* (DR) alternatives that sometimes are invoked in criminal proceedings, and so-called *lesser charges* (e.g. manslaughter versus murder). This paper focuses primarily on the Not Proven option and compares its impact with that of a lesser charge alternative.

In recent times the Not Proven verdict has been the subject of great controversy, with many calling for its abolition. Implicit in much of the criticism of the Not Proven verdict is the belief that if it were not available, the juries in these cases would have returned Guilty verdicts (Duff, 1996; Maher, 1983). The verdict is essentially a type of acquittal. The charges against the defendant are dismissed and she or he cannot be tried again for the same crime. Despite its long history, there is no common law or statutory definition of the verdict. In fact, judges in Scotland are actively discouraged from making such attempts to define the differences between the verdict of Not Guilty and Not Proven, but jurors must be informed of its availability to them. In spite of this, around one-third of all jury acquittals are the product of a Not Proven verdict (Scottish Office, 1994).

Empirical research investigating the role of lesser charge verdicts in insanity murder trials suggests that the inclusion of GBMI or DR significantly alters verdict choice patterns (Finkel & Duff, 1989; Roberts, Golding, & Fincham, 1987). Finkel and Duff (1989) challenged the widespread view that the GBMI verdict allows juries to avoid the difficult moral issues associated with a definitive guilt determination in insanity cases (cf. American Psychiatric Association, 1982) by finding that DR was not chosen indiscriminately, but chosen to fit with the jurors' judgments about defendant culpability. They note that investigating the role of compromise verdicts is limited because it is difficult to clearly see the function of the third verdict when there is no objectively 'correct' verdict.

Little research specifically investigates the role of lesser charges as a potential compromise option. Like GBMI and DR, manslaughter operates as an alternative, lesser charge to murder when intent is not satisfied. Some research indicates that jurors will be more likely to convict when a lesser charge verdict is available (Koch & Devine, 1999; Savitsky and Lindblom, 1986). It is possible that manslaughter, as a lesser charge, will be perceived as a more attractive option in comparison with murder and acquittal.

In fact, manslaughter may be conceived as a decision-avoidant option in that it avoids an explicit determination of guilt or innocence for murder. Thus, both manslaughter and Not Proven potentially are decision-avoidant. Decision avoidance, while not extensively studied, has been investigated in terms of preferences for decision-avoidant options, namely preference for no change (the status quo bias, Samuelson & Zeckhauser, 1988), no action (omission bias, Ritov & Baron, 1992) inaction inertia and delay. It is the no action or omission bias with which the current research is most concerned. Two explanations commonly are given for decision avoidance: Consequentialist, as in the desire to avoid the negative consequences of making a wrong choice, and decision aversiveness (e.g. difficulty in ordering preferences for alternatives).

Anderson's (2003) rational–emotional model instantiates the consequentialist explanations in terms of the *anticipation* of negative emotions such as regret. People tend to anticipate greater potential regret under conditions of decisional uncertainty and difficulty (Luce, 1998), so there are potential linkages between the consequentialist and non-consequentialist antecedents of decision avoidance. Decision makers' attributions of responsibility and feelings of self-blame have been identified as potential contributors to the experience of regret (Zeelenberg, van Dijk, & Manstead, 1998; Ordonez & Connolly, 2000; Gilovich & Medvec, 1995). It is therefore plausible that jurors making such attributions and/or possessing such feelings would be more likely to select decision-avoidant options.

Finally, selection difficulty is one of the key conditions that may be sufficient, though not a necessary cause of decision avoidance (Anderson, 2003) In a series of studies conducted by Iyengar and Lepper (1999, 2000), adding more options made decision-making less attractive. Iyengar and Lepper suggest that a reason for this is the increased potential for regret if a non-optimal option is chosen. Likewise,

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Anderson (2003) suggests that option similarity will render a decision more difficult and therefore more aversive.

It is also important to understand what standards of proof are applied by jurors to middle options and whether the presence of such options alters jurors' standards of proof for acquittal or conviction verdicts (see DeKay, 1996 for a useful discussion of standards of proof versus verdict accuracy). Kerr (1978) suggests juries are less willing to risk convicting an innocent person as the penalty to the person increases and proportionally increase the amount of evidence they view as necessary to support conviction. This is known as the severity–leniency hypothesis. Vidmar (1972) found that jurors have higher subjective standards for more serious or severe charges. This effect was more pronounced when the evidence supporting guilt was strong and virtually disappeared when the case for the prosecution was weak. Generally speaking though, there is greater evidence supporting the effect of charge seriousness on mock juror verdict preferences (Freedman, Krismer, MacDonald, & Cunningham, 1994).

It the context of standards of proof, a case can be argued for introducing a middle verdict option in terms of a rational subjective expected utility analysis of jury decision making. Connolly (1987) points out that a typical threshold probability of guilt associated with the phrase 'beyond reasonable doubt' is in the [0.9, 1] range. For a logically consistent DM a threshold probability of 0.9 implies the difference between the utility of acquitting versus convicting the innocent, is 9 times the difference in the utility of convicting versus acquitting the guilty. Note that this is the only restriction imposed by such a threshold (although as DeKay (1996) points out, it is not equivalent to a Blackstone-like ratio of erroneous convictions versus acquittals).

Connolly demonstrates that the utility assignments to the four possible outcomes (convicting the guilty, acquitting the innocent, convicting the innocent and acquitting the guilty) that are compatible with such a high threshold probability are counterintuitive. Specifically, '. . . if one does [want to have a threshold of 0.9], one must be prepared to hold the acquittal of the guilty as highly desirable, at least in comparison to the other available outcomes' (Connolly, 1987, p. 111). He also shows that more intuitively reasonable utilities lead to unacceptably low threshold probability values. Conversely, Connolly demonstrates that two proposals from the literature regarding utility assignments in trial settings (Tribe, 1971; Milanich, 1981) both yield unacceptably low probability thresholds. Smithson (2006) shows that the incorporation of a third middle option with a suitable threshold can resolve this quandary, permitting a rational (subjective expected utility) agent to retain a high conviction threshold and still regard false acquittals as negatively as false convictions. The price paid for this solution is a more stringent 'standard of proof' for outright acquittal. It would be of interest to ascertain whether human decision makers' subjective probabilities of guilt behave like the 'rational agent' solution when they are offered a middle option such as Not Proven.

In the research presented here we investigate the effects of variations in the verdict choice set on mock-juror's decisions. Our primary goals are essentially descriptive: When additional verdicts are introduced into the choice set, how do mock-jurors' preferences shift? What strengths of belief in guilt are associated with verdict choices in different choice sets? Additionally, we address the question of whether mock-jurors' uses of middle options could be interpreted as tendencies to seek compromises or to avoid tough decisions. Finally, our research included an individual differences component but this is not reported here.[1]

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[1]There are several individual difference factors that might be associated with the tendency to avoid difficult decisions. Schuurmans-Stekhoven's (2005) Need For Discovery and Need for Certainty factors, Neuroticism (Effert & Ferrari, 1989; Milgram & Naaman, 1996; Milgram & Tenne, 2000) are candidates to predict procrastination and decision avoidance. Many studies demonstrate that individuals high in neuroticism are prone to negative affect (e.g. Larsen & Ketelaar, 1989; Izard, Libero, Putnam, & Haybes, 1993) and more specifically regret and self-blame (McCrae & Costa, 1986; Zuckerman, Kuhlman, Joireman, Teta, & Kraft, 2004). Legal Authoritarianism (Boehm, 1968; Narby, Cutler, & Moran, 1993) has been hypothesised to predict conviction-proneness and hence the opposite of decision-avoidance. However, none of these individual difference variables was associated with decisions in the present research, although Need For Discovery and Need for Certainty both negatively predicted perceived decisional difficulty (for NFC, $\beta = -0.175$ with $p = 0.040$ and for NFD, $\beta = -0.198$ with $p = 0.021$; model $F(2,165) = 3.386$, $p = 0.036$, multiple $R^2 = 0.028$). This result is intriguing insofar as NFC and NFD are moderately negatively correlated with each other ($R = -0.440$).

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STUDY 1

The first study investigated the Not Proven verdict and focused primarily on the first three questions posed in the introduction. Despite the absence of compelling psychological arguments for the claim that Not Proven will render jurors less likely to convict, we adopted this popular notion as our first hypothesis. Accordingly, a key design component of this study involved jurors returning a verdict under two decisional conditions: One with two verdict options (Guilty and Not Guilty) and the other with three options (Guilty, Not Proven and Not Guilty).

An ancillary point of interest is whether the same effects are observed in civil and criminal trials where different standards of proof for conviction are employed. Despite the difficulties posed in comparing a civil with a criminal case, we chose to incorporate both kinds of cases in this study.

To address the second research question, we asked participants to rate the probability that the defendant was guilty. Conditional on the extent of mobility between either Guilty or Not Guilty and Not Proven, these ratings should indicate whether jurors are applying different standards of proof to Not Proven than to outright acquittal, for instance. A difference between mean probability of guilt ratings for those returning Not Proven versus Not Guilty would indicate a corresponding difference in standard of proof. An obvious hypothesis here is that jurors whose judged probability of guilt is in the mid-range will be more likely to return a Not Proven verdict than those with more extreme ratings.

Finally, participants were asked to rate how difficult they found their decision, on three 7-point scales: perceived difficulty in arriving at a decision, anticipated regret regarding the consequences of their decision, and worry over the possibility of making a wrong decision. The hypothesis was that participants returning Not Proven verdicts would rate themselves higher on these scales than those returning either Guilty or Not Guilty verdicts.

Method

Participants and design

Participants were 104 jury-eligible Australian public servants and undergraduate students from both the Australian National University and University of Canberra. All participants volunteered to act as mock jurors as part of their involvement, and first year students from the Australian National University were awarded course credit for participation.

Participants were tested individually. All of them returned verdict decisions for two trial scenarios, one a civil case and the other a criminal case, with the order counterbalanced. For each trial they were randomly assigned to one of two conditions. In one condition they were asked to decide between two verdict options (Guilty and Not Guilty) and once again among three options (Guilty, Not Proven and Not Guilty). In the other condition this order was reversed. Participants were not aware initially that they would be returning verdicts a second time under a different set of verdict options.

Materials and procedure

All participants read two scenarios of a mock criminal and civil trial. Hypothetical scenarios were developed to better control for the variables within cases. The criminal scenario involved a victim who died as a result of being struck in the head. At the time, the victim was having difficulties with her long-term boyfriend. The night she was murdered the victim had spent the evening with another man. Her boyfriend was charged with murder, following the disappearance of key evidence and the defendant's inability to explain or account for his exact whereabouts. The civil trial involved a city council being charged with negligence following the death of a young male HIV + patient from drinking city tap water infested with a parasite called Pindia. The council argued they provided adequate warning of the risks associated with drinking the water, the victim's

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family arguing otherwise. Cases included background information, facts and arguments from both the prosecution/plaintiff and defence (details of the scenarios are available from the first author).

The different standards of proof corresponded to the requirements of civil and criminal trials. The criminal trial employed a 'beyond a reasonable doubt' standard of proof and the civil trial employed a 'balance of probabilities' standard. The explanations of these standards were presented in the Judge's Instructions to participants after the trial summary, and are included in the Appendix.

Participants initially returned a verdict according to which verdict-option condition they had been assigned. All participants were also presented with a questionnaire asking more specific questions about their verdict and the decisional difficulty items. After the completion of the questionnaire participants were asked to render their verdict again, with the alternative set of options.

Results

Distribution of verdicts

Table 1 displays the crosstabulation of verdicts returned by participants in each of the trials. For the criminal trial log-linear analysis indicated no significant effect from the order of verdict-options (whether participants decided with 2 or 3 options first) and found a significant association between verdicts returned in the 2-option versus 3-option tasks ($\chi^2(2) = 53.527$, $p < 0.0001$). This model fitted the data acceptably ($\chi^2(6) = 4.172$, $p = 0.653$). For the civil trial the final log-linear model found a significant order effect ($\chi^2(2) = 9.551$, $p = 0.008$) along with a significant association between verdicts returned in the 2-option versus 3-option tasks ($\chi^2(2) = 110.872$, $p < 0.0001$). This model also fitted the data acceptably ($\chi^2(3) = 3.584$, $p = 0.310$).

We now turn to the comparison of mobility between Not Proven and Guilty or Not Guilty. The criminal trial yielded far more Not Proven verdicts than did the civil trial (78 versus 17). Across both conditions in the criminal trial,

$$\Pr(\text{Guilty} \leftrightarrow \text{Not Proven} | \text{Guilty}) = (2+4)/(9+9) = 0.333,$$

whereas

$$\Pr(\text{Not Guilty} \leftrightarrow \text{Not Proven} | \text{Not Guilty}) = (33+39)/(43+43) = 0.837.$$

A 95% confidence interval around the difference between these two proportions is [0.257, 0.686].

Across both conditions in the civil trial,

$$\Pr(\text{Guilty} \leftrightarrow \text{Not Proven} | \text{Guilty}) = (3+2)/(26+36) = 0.081,$$

whereas

$$\Pr(\text{Not Guilty} \leftrightarrow \text{Not Proven} | \text{Not Guilty}) = (11+1)/(26+16) = 0.286.$$

Table 1. Crosstabulation of verdicts by experimental condition in two trials

	2-verdict first			3-verdict first			
Conditions	Guilty	Not Guilty	Total	Guilty	Not Guilty	Total	Grand total
Criminal trial							
Guilty	7	0	7	5	0	5	12
Not Proven	2	33	35	4	39	43	78
Not Guilty	0	10	10	0	4	4	14
	9	43		9	43		104
Civil trial							
Guilty	23	0	23	33	0	33	56
Not Proven	3	11	14	2	1	3	17
Not Guilty	0	15	15	1	15	16	31
	26	26		36	16		104

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A 95% confidence interval around the difference between these two proportions is [0.057, 0.362]. Contrary to the hypothesis that the Not Proven option lures people away from convictions, we find in both trials that it lures them away from full acquittals to a greater extent.

Given that participants were not aware that they would be asked to reconsider their verdict under a new set of options, we may use a between-subjects comparison of the first verdict returns to ascertain whether the availability of the Not Proven option altered the proportions of Guilty and Not Guilty verdicts out of their sum. In the criminal trial 2-verdict condition

$$\text{Guilty}/(\text{Guilty} + \text{Not Guilty}) = 9/52 = 0.173,$$

whereas in the 3-verdict condition

$$\text{Guilty}/(\text{Guilty} + \text{Not Guilty}) = 5/9 = 0.556.$$

A 95% confidence interval around the difference between these two proportions is [0.068, 0.650], so the presence of the Not Proven alternative significantly increased the preponderance of Guilty relative to Not Guilty verdicts (due to decreasing the use of Not Guilty).

In the civil trial 2-verdict condition

$$\text{Guilty}/(\text{Guilty} + \text{Not Guilty}) = 26/52 = 0.500,$$

whereas in the 3-verdict condition

$$\text{Guilty}/(\text{Guilty} + \text{Not Guilty}) = 33/49 = 0.674.$$

A 95% confidence interval around the difference between these two proportions is [−0.018, 0.348], so the presence of the Not Proven alternative did not significantly increase the preponderance of Guilty verdicts, although there is a trend in that direction.

One way of assessing whether participants are using the Not Proven option as a decision-avoidant 'cop-out' is to compare their likelihood of using it in both trials against a chance co-occurrence rate. If there is a subgroup of decision-avoidant participants, we should expect the same people using Not Proven in one trial to do the same in the other. By chance, the expected proportion of jurors returning NP in both cases is

$$\text{P(Not Proven}|\text{criminal case)} \times \text{P(Not Proven}|\text{civil case)} = (78/104)(17/104) = 0.123.$$

The observed proportion of jurors returning Not Proven in both cases is $9/104 = 0.087$. There is no indication of a group of subgroup of decision-avoidant participants.

Guilt ratings

We now consider whether the inclusion of Not Proven affects the standard of proof applied to Guilty or Not Guilty. Given the substantially larger mobility between Not Proven and Not Guilty, any effect on standard of proof would be expected to accrue to acquittals. Table 2 shows the mean subjective probability of guilt ratings (as percentages) given by participants sorted by their verdict in the 3-options decision. These data were analysed using beta regression, a GLM for beta-distributed dependent variables suited to proportions or percentages that also handles skewness and heteroscedasticity (see Smithson & Verkuilen, 2006). In the criminal trial data, the final model identifies a significant difference between the means for Not Guilty and Not Proven ($p = 0.006$) once heteroscedasticity is taken into account, and in the civil trial the same effect is found ($p < 0.0001$) without heteroscedasticity (details available from the first author). Overall, the findings suggest a tendency for participants assigning middle-range probabilities of guilt to take up the Not Proven option in preference to outright acquittal, thereby resulting in a lower average probability of guilt for the Not Guilty verdict.

Decisional difficulty

Finally, we examine whether jurors returning a Not Proven verdict find the decision more worrisome or difficult. The three relevant dependent variables here are anticipated regret, worry over making an incorrect decision and perceived difficulty of the decision. In the criminal trial one-way ANOVAs revealed no

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Table 2. Judged probability of guilt (as percentages) in two trials

Verdict	Mean	*SD*	*N*
Criminal trial			
Guilty	79.17	25.39	12
Not Guilty	41.71	12.90	14
Not Proven	52.96	16.76	78
Total	54.47	19.87	104
Civil trial			
Guilty	81.70	14.15	56
Not Guilty	17.90	14.59	31
Not Proven	43.53	22.34	17
Total	56.44	32.68	104

significant relationships between verdict and regret, worry, or difficulty. However, in the civil trial all three of these relationships were significant (for regret $F(2,100) = 4.857$, $p = 0.010$; for worry $F(2,100) = 4.738$, $p = 0.011$; and for difficulty $F(2,100) = 6.437$, $p = 0.001$). For all three variables the means were highest for those returning a Not Proven verdict, but post-hoc contrasts found significant differences between the Not Proven means and those for both of the other verdicts only for difficulty. The means for these three variables in both trials are shown in Table 7.

STUDY 2 AND STUDY 3

Study 2 sought a partial replication and extension of Study 1. The replication component was a comparison between juror verdicts under the 2-option and 3-option conditions used in Study 1, but using a new murder trial scenario. This comparison was extended to include a condition in which the third option was a lesser charge (manslaughter rather than murder). The primary relevant hypothesis was that a lesser charge verdict would be used more like an additional Guilty verdict whereas the Not Proven verdict would be used in a similar way to the Not Guilty verdict. Accordingly, a secondary hypothesis was that while those returning Not Proven verdicts would also report having greater difficulty in making their decision, the same would not be true for those returning the lesser charge verdict.

On the other hand, Study 3 was designed to investigate the effect of combining the Not Proven option with a lesser charge option (in this instance, manslaughter) as well as the effects of number of options and option similarity. The guiding hypothesis for this study was that increasing the number and/or similarity of the lesser charge options should induce greater decisional avoidance and thereby drive jurors to choose Not Proven.

Both studies incorporated measures of decision conflict, difficulty, regret and self-blame at three stages of the decision-making process. Also, responsibility and accountability for the verdict decision were assessed at the outset of the study. The main object here was to ascertain whether higher scores on these measures predicted a greater likelihood to choose the Not Proven verdict and whether having chosen that verdict subsequently reduced those scores. The studies also included individual differences measures as mentioned in the last part of the introduction and in Note 1: The NEO Five-Factor Inventory, the Schuurmans-Stekhoven Scales and a Legal Authoritarianism Scale.

Method

Design and participants

Participants were asked to return a verdict in a murder trial, and they were randomly assigned to one of three conditions: Two verdict options (Guilty and Not Guilty), three options with the third being Not Proven and three options with the third being Manslaughter.

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Table 3. Study 3: verdict conditions

	Conditions			
Manslaughter verdicts	1	2	3	4
Provocation	X	X	X	X
Self-defence	X		X	
Criminal negligence	—	X	—	X
Lack of intent	—	—	X	—
Unlawful & dangerous act	—	—	—	X

Note: All verdict conditions included the verdict options of guilty, not guilty and unproven.

Study 3 investigated the influence of number of options and similarity of options on verdict decision and reactions to the decision task. Participants were randomly allocated to one of the four verdict conditions. All four verdict sets contained the options of guilty, not guilty and unproven but differed with respect to what alternative manslaughter options were available. Conditions 1 and 2 each contained two manslaughter verdict options, whereas 3 and 4 each contained three manslaughter verdict options. Likewise, conditions 1 and 3 contained similar manslaughter options whereas 2 and 4 contained dissimilar manslaughter options. Option similarity was manipulated by either emphasising the common features of the charges in mitigating intent or by emphasising the distinct elements specific to each charge. The manslaughter options within each condition are set out in Table 3, and descriptions of these options are included in the Appendix.

Two murder case scenarios were used within each study to increase generalisability of findings. The two murder cases were alternated between subjects within each condition, so that half the participants within each verdict condition made their decision on the 'balcony case' and the other half made their decision on the 'pub case'.

Participants were 168 jury-eligible students from the Australian National University, 65 males and 103 females. All participants volunteered to act as mock jurors for a murder trial. First year psychology students were awarded course credit points for their participation. The Study 2 sample comprised 72 undergraduate psychology students, and the Study 3 sample had 96 final year law students, who participated as part of a seminar for their Evidence Course. Each study took approximately 60 minutes to complete.

Procedure and materials

Participants, in non-interacting groups, attended scheduled one-hour sessions in which to complete the study. Participants were randomly allocated to a verdict condition and case scenario. After completing the consent form, participants were given a case booklet (details of these are available from the first author) and instructed that they would be making a verdict decision on a real New South Wales (NSW) murder trial heard in the Supreme Court last year and they would hear the official court tape of the trial. Participants heard proof directions, evidence and verdict directions via audiotape. Transcripts of the proof and verdict directions were provided in the case booklet, to avoid potential comprehensibility limitations. Participants completed the case booklet individually and were fully debriefed upon completion.

Trial stimuli

The trial stimuli in both Study 2 and Study 3 consisted of a proof direction, evidence and a verdict direction presented on separate audiotapes. To create the tapes, actors were employed to voice the roles of defence counsel, prosecutor, witnesses and the judge. The proof and verdict directions were derived from the NSW Supreme Court Benchbook jury directions, to ensure the participants heard the directions currently being used in NSW jury trials. All participants heard the same proof directions, which set out the murder charge, the

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established facts of the case and the criminal standard and onus of proof. The verdict directions outlined the verdict options and the legal elements relevant to each charge. Although the same format was used, verdict directions differed depending on what options were relevant to the particular verdict condition (details are available from the first author).

Each case scenario had a separate audiotape of evidence. A written transcript of the evidence was not provided to participants, in order to simulate how actual jurors would be presented with case information. The evidence tapes consisted of witness testimony, cross-examination, re-examination and closing arguments presented by Prosecution and Defence.

The fact in issue for both cases was whether the defendant had the requisite intention to satisfy the charge of murder. The victim in each case scenario was portrayed as highly intoxicated and abusive towards the defendant. The evidence was manipulated to present conflicting interpretations of how the defendant's actions led to the victim's death.

The *balcony case* involved the victim falling to his death, whilst perched on a balcony ledge, as a result of the defendant's actions. The forensic and eyewitness evidence presented conflicting views with respect to whether the victim accidentally fell as a result of the defendant's actions or was deliberately pushed. No eyewitnesses were present.

The *pub case* involved the defendant pushing the victim against a brick wall outside a pub, after a physical altercation between the victim and the defendant. The evidence was conflicting with regard to whether the defendant intended for his actions to cause death and whether the actions ultimately caused the victim's death. Due to the ambiguity in the evidence, the objectively 'correct' verdict for both case scenarios was not guilty.

Case booklet

Section 1 of the case booklet consisted of questions relating to non-identifying background information about the participant, including gender, age, education level, university degree (if applicable) and previous juror service, and also included a measure where participants rated, as a juror, the importance of the verdict decision. Section 2 contained individual differences measures. All of these measures were taken prior to any manipulations.

Responsibility and accountability for the verdict decision were assessed prior to any manipulations. Decision conflict, difficulty, regret and self-blame were measured at three stages of the decision-making process: after the evidence, after the verdict directions and after the verdict decision. At the pre-decision stages, participants rated how much conflict they were currently experiencing and how much regret and self-blame they would feel if they made the wrong verdict decision. At the post-decision stage, participants gave a retrospective rating of how much conflict and difficulty they had experienced, whereas regret and self-blame were assessed against potential case outcomes: if the defendant was actually innocent or guilty. If the unproven verdict was available, a further question was included: 'how much regret (or self-blame) would feel if a verdict could not be chosen on the evidence?'

Verdict option similarity was assessed after the verdict options were presented. Similarity was assessed along a 5-point scale ranging from black 1 (*high similarity*) to 5 (*low similarity*). Post-decision participants rated how confident they felt about their verdict choice.

Section 3 contained the murder case. Participants were presented with the proof directions, in written and audio form, and were advised to take notes whilst the evidence tape was played. After the evidence, participants made assessments regarding evidence comprehensibility and strength, defendant culpability, how responsible and accountable they felt for their decision and reactions to the decision task: degree of difficulty, conflict, anticipated regret and self-blame. The verdict direction was then presented in both audio and written form. In light of the verdict direction, which set out the legal elements of the charges, jurors again rated their reactions to the decision task. Then verdict options were presented in a list form, but prior to

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Table 4. Study 2: verdicts

Condition	Murder	Not Guilty	Not Proven	Manslaughter	Total
1	6	18	—	—	24
2	2	16	6	—	24
3	0	6	—	18	24
Total	8	40	6	18	72

making a verdict decision, participants rated how similar verdict options were in comparison to each other. Participants were then instructed to take the time to effectively review the evidence and verdict directions and select a verdict option. Participants then completed post-decision measures which examined confidence in their decision, evidence that influenced their decision, defendant culpability, difficulty, conflict and anticipatory regret and self-blame.

Results

Distribution of verdicts

For Study 2, a comparison of the top row in Table 4 with the other two rows suggests that both the Not Proven and Manslaughter options attract jurors away from both the Guilty and Not Guilty alternatives. A test of independence for the lower two rows of Table 4 with the Manslaughter and Not Proven columns combined yields $\chi^2(2) = 12.545$ ($p = 0.002$), indicating that the distributions of verdicts in those two rows are non-identical. This finding is due to the larger impact of the Manslaughter option on the likelihood that jurors would select the other two alternatives. Thus, the hypothesis that a lesser charge verdict would be used more like an additional Guilty verdict whereas the Not Proven verdict would be used in a similar way to the Not Guilty verdict was not supported.

For Study 3, inspection of the frequencies in Table 5 suggests that the first condition clearly differs from the other three whereas the remaining three conditions have similar distributions. Accordingly, a test of independence for Table 5 yields $\chi^2(9) = 25.805$ ($p = 0.002$), indicating that the distributions of verdicts in the four conditions are non-identical, but a test of independence on the 3×3 subtable comprising conditions 2–4 and all verdicts except Murder yields $\chi^2(4) = 5.805$ ($p = 0.214$), suggesting that the verdicts in conditions 2–4 may be regarded as identically distributed. Thus, a log-linear analysis incorporating the 2×2 experimental design was not undertaken. There is only limited support for the hypothesis that a greater number of and greater similarity among verdicts will engender a greater use of alternative options, and the effect is observable only in the tendency to choose one of the Manslaughter options.

Verdict similarities

In Study 2, Not Proven and Manslaughter did not have significantly different similarity ratings when compared to the Guilty verdict ($t(46) = 1.592$, ns), but Not Proven was rated as significantly more similar to

Table 5. Study 3: verdicts

Condition	Murder	Not Guilty	Not Proven	Manslaughter	Total
1	4	9	5	6	24
2	0	7	1	16	24
3	0	6	0	18	24
4	0	6	4	14	24
Total	4	28	10	54	96

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Not Guilty than the Manslaughter verdict ($t(46) = -2.366$, $p = 0.022$). In Study 3, jurors perceived the Manslaughter options as being significantly more similar to Guilty than Not Proven ($t(95) = 7.802$, $p < 0.0001$) and the Not Proven verdict being significantly more similar to Not Guilty compared to the Manslaughter options ($t(95) = -6.636$, $p < 0.0001$).

Probability of guilt

In Studies 2 and 3 participants were asked to rate the probability that the defendant was guilty of 'a crime,' thereby leaving the specific nature of the crime up to the participant. While this task introduces an ambiguity not present in Study 1 (comparing guilt ratings for different crimes), our primary object still is comparing these ratings for participants who choose Not Proven with those returning a guilty verdict either for Murder or Manslaughter and those returning a Not Guilty verdict.

In Study 2, beta regression results identified the following effects when heteroscedasticity was taken into account (details available from first author): Post-decision probability of guilt ratings for Not Proven differed significantly from jurors choosing Guilty (of murder) and Manslaughter ($z = 3.002$, $p = 0.0027$; $z = 3.538$, $p = 0.0004$) and guilt ratings for Not Guilty were lower than those for Not Proven ($z = -2.234$, $p = 0.0255$), whereas guilt ratings for Manslaughter did not differ significantly from those for Guilty ($z = 0.299$, $p = 0.773$).

In Study 3, the Murder and Manslaughter verdicts were combined due to the dearth of Murder verdicts. Beta regression revealed that post-decision guilt ratings for Not Proven differed significantly from jurors choosing Guilty and Manslaughter, and also from those choosing Not Guilty ($z = 2.858$, $p = 0.003$; $z = 3.554$, $p = 0.0004$). In both studies, the hypothesis that the lesser charge will be treated more like another Guilty verdict is supported. Likewise, the hypothesis that Not Proven will be treated like another Not Guilty verdict is rejected in Study 2; overall these results are in line with the Study 1 finding that Not Proven attracts jurors whose judged probability of guilt lies in between that typifying outright acquittal and that typifying conviction. The means and standard deviations of the judged guilt probabilities (as percentages) for both studies are shown in Table 6.

Decisional difficulty

Now, we examine whether jurors returning a Not Proven verdict find the decision more difficult than those returning other verdicts. The conflict and difficulty variables were strongly correlated at all three stages in both studies (with correlations ranging from 0.81 to 0.85), so they were added to form a composite measure of decisional difficulty. In Study 2, a priori contrasts comparing mean decisional difficulty for those returning a

Table 6. Probability of guilt in Studies 2 and 3

	N	Mean	*SD*
Study 2 judged probability of guilt (%)			
Not Guilty	40	37.85	28.23
Not Proven	6	50.00	6.32
Manslaughter	18	75.56	25.72
Murder	8	78.75	22.32
Total	72	52.83	31.33
Study 3 judged probability of guilt (%)			
Not Guilty	28	33.57	17.58
Not Proven	10	60.50	25.44
Murder/Manslaughter	58	81.22	19.42
Total	96	65.17	28.80

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Table 7. Mean decisional conflict-difficulty by verdict and stage

Trial	Verdict choice	Regret	Worry	Difficulty
Study 1				
Criminal	Guilty	3.14	4.00	4.86
	Not Guilty	3.13	4.36	4.85
	Not Proven	2.79	4.30	5.56
Civil	Guilty	2.30	3.00	3.68
	Not Guilty	2.74	3.35	3.52
	Not Proven	3.41	4.38	5.06

Verdict choice	Initial	Post-direction	Post-decision
Study 2			
Guilty	9.00	8.25	8.88
Not Guilty	7.40	7.03	7.45
Not Proven	10.67	10.50	11.17
Manslaughter	8.00	6.78	8.67
Study 3			
Guilty/Manslaughter	8.22	7.95	8.50
Not Guilty	7.32	7.86	8.18
Not Proven	10.90	9.60	10.60

Not Proven verdict against each of the other alternatives yielded significant differences from Not Guilty and Manslaughter ($t(68) = 3.172$, $p = 0.002$; $t(68) = 2.505$, $p = 0.014$) and a non-significant trend in the difference from Guilty ($t(68) = 1.527$, $p = 0.131$).

Study 3 produces a similar pattern, with significant differences between Not Proven and the combined Guilty (Murder)/Manslaughter option and the Not Guilty option ($t(68) = 2.588$, $p = 0.012$; $t(68) = 2.897$, $p = 0.005$). Overall, there is fairly strong support for the hypothesis that jurors returning Not Proven feel more decisional difficulty than those returning the other verdicts. Table 7 displays the means for both studies and all decision stages.

Similar analyses were carried out for the anticipated emotions of regret and self-blame. However, in both Studies 2 and 3 neither of them differed significantly between jurors returning Not Proven and jurors returning the other verdicts.

GENERAL DISCUSSION

Several instructive and interesting findings emerge from these three studies. First, the hypothesis that the Not Proven option attracts jurors away from returning a conviction has been flatly contradicted for both the civil and criminal trial scenarios in Study 1, where Not Proven drew participants away from full acquittals to a greater extent. The within-subjects mobility patterns were partly echoed in between-subjects differences on the first occasion. The presence of the Not Proven alternative significantly increased the preponderance of Guilty relative to Not Guilty verdicts for the criminal trial with a non-significant trend in the same direction for the civil trial. In Study 2 the evidence is equivocal and it is possible that this effect is stronger for a within-subjects than for a between-subjects setup. Nevertheless, the results overall indicate that the Not Proven verdict is generally not being used as a way of avoiding convictions.

Moreover, the judged probability of guilt for those participants returning a Not Proven verdict in all three studies was firmly in the middle-range of the scale, significantly higher than the mean for Not Guilty and

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lower than the mean for Guilty. In fact, these probabilities were within the range where a rational agent utilising a high threshold for conviction would return a Not Proven verdict.

Study 1 provided indirect evidence regarding the question of whether Not Proven might be used as a decision-avoidant alternative. The proportion of jurors returning a verdict of Not Proven for both trials was well within chance level, thereby indicating the absence of a subgroup using Not Proven as a 'cop-out' option. Of course, this finding does not rule out the possibility that the 'cop-out' option is situationally contingent, but it does militate against the notion that it could arise from a stable disposition.

There was no direct evidence concerning whether decision-avoidant jurors were attracted to a middle alternative. However, two sources of evidence are counter-indicative of this claim. First, the experimental manipulation of option similarity and number in Study 3 had little impact on the propensity to opt for a third option. However, the similarity manipulation may not have been effective, as similarity ratings did not differ significantly between the two 2-manslaughter-option conditions ($t(46) = -0.161$, $p = 0.873$) nor the two 3-manslaughter-option conditions ($t(46) = 0.210$, $p = 0.835$). Second, the absence of any relationship between neuroticism scores and tendency to choose Not Proven in Studies 2 and 3 suggests at least that preferences for this alternative could not be accounted for by indecisiveness due to neuroticism (at least within the normal range).

The only reasonably consistent predictor of propensity to choose Not Proven, aside from judged probability of guilt, was decisional difficulty. In the criminal case in Study 1, participants returning Not Proven did not report having greater decisional difficulty than those returning other verdicts, but in the civil case the mean difficulty rating was higher for the Not Proven verdicts. Studies 2 and 3 provided stronger evidence, with mean difficulty ratings for jurors returning Not Proven being higher than those returning any of the other verdicts. These findings are consistent with the 'cop-out' hypothesis. However, they also are consistent with jurors being close to a verdict threshold, assuming decisional conflict is a function of how close a juror is to such a threshold.

In contrast to Not Proven, the role of Manslaughter in Studies 2 and 3 appeared to be fairly similar to Murder. Although it attracted jurors away from both conviction and acquittal, it was not associated with greater decisional difficulty. Instead, in the particular scenarios used in Studies 2 and 3, this option seemed to be selected primarily because it was congruent with specific facts of each case.

In line with the above interpretation, the mean guilt ratings of jurors choosing Manslaughter echoed those of jurors returning a Guilty verdict on the murder charge. In both Studies 2 and 3 it appears that only the Not Proven verdict reflects culpability ratings distinct from those of convicting or acquitting jurors.

As with much research in jury decision-making, a great deal hinges on the specifics of the scenarios employed. The studies presented here are not invulnerable to criticisms along these lines. For instance, in Study 3 the verdicts of 'manslaughter by lack of intent' (LOI) and 'manslaughter by unlawful and dangerous act' (UADA) were differentially preferred despite being the same verdict, labelled differently. In condition 3, 58.3% of jurors chose the LOI verdict, whereas only 29% of jurors in condition 4 chose UADA.

Clearly much more empirical work would need to be completed using a variety of types of charges, scenarios and standards of proof before properly generalisable conclusions could be drawn in comparisons between lesser charge options and 'middle' options such as Not Proven. This paper nevertheless provides a starting-point and, especially regarding the Not Proven verdict, some reasonably robust and interesting findings. This research also appears to be the first attempt to systematically investigate the impact of lesser charge verdicts outside the insanity verdict arena.

We conclude with a few suggestions for further research in this area. First, the motivations for choosing 'middle' options such as Not Proven merit further exploration and clarification. Our results suggest that Not Proven is not being used as a decision-avoidant option, but is associated with middle-range culpability ratings and higher levels of decisional difficulty. However, it is far from clear what trial conditions cause jurors to prefer a 'middle' option or even to desire its availability to begin with. Moreover, we have not investigated the possible benefits of the Not Proven alternative. Its functions for jurors and other stakeholders remain to be explored.

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Second, there is considerable scope for extending the work initiated here on the role of lesser charges. Many different kinds of lesser charge options may be encountered in trials, and our studies explored only one rather serious charge (manslaughter) which was presented as an alternative to a murder conviction. An intriguing possibility here is to ascertain whether introducing an unrelated lesser charge (e.g. theft) that does not pose an alternative to the major charge nevertheless affects the distribution of verdicts for the major charge.

Finally, the current research was limited to individual juror decisions, and an obvious extension of this work would investigate whether our findings hold when jurors deliberate as a group. It is not clear whether deliberation processes enhance jurors' reasoning skills or impair them. It is also not known under what conditions groups are more or less susceptible to decision avoidance than individuals.

APPENDIX

Study 1: verdict instructions

Civil case

If you believe the defendant, the Eastern Suburbs City Council, breached its duty of care . . . you must return a verdict of guilty. If you believe the defendant did not breach their duty, you must find the Eastern Suburbs City Council, not guilty. [If you find yourself in a position where you cannot come to a verdict of guilty or not guilty, then I call on you to render a verdict of 'not proven'.] In a civil case, such as this one, the burden of proof lies with the plaintiff; they bear the burden of proving that Daniel McNamara's death was the result of the breach of duty by the Eastern Suburbs Council. The Council is presumed to be innocent until and unless you, the jury convict them. In addition to this, in judging a civil case, you, the jury, must be convinced that the prosecution has proved its issue 'on the balance of probabilities'. Simply put, this means the plaintiff must prove the case on the balance of probabilities which is more likely than not.

Criminal case

If you believe the defendant committed the murder, you must return a verdict of guilty. If you believe the defendant is innocent of the murder, you must acquit him and render a verdict of not guilty. [If you find yourself in a position where you cannot come to a verdict of guilty or not guilty, then I call on you to render a verdict of 'not proven'.] In a criminal case, such as this one, the burden of proof lies with the prosecution; they bear the burden of proving that Grant Volker did in fact kill Emma Vander. Grant Volker is presumed to be innocent until and unless you, the jury, convict him. In addition to this, in judging a criminal case the jury must be convinced that the prosecution has proved its issue beyond a reasonable doubt. These words are associated with the criminal law, but they have no technical meaning. They mean what they say in plain English. All I can say to you is this; proof 'beyond a reasonable doubt' can be contrasted with the sort of case you might have where one party sues another for a debt or over an accident, something of that kind. That is called a civil case and there the plaintiff, proves the case on the 'balance of probabilities' which is more likely than not. Now, in this court, in this case the law requires a much higher standard of proof that is beyond reasonable doubt.

Study 3: manslaughter options

Unlawful & dangerous act manslaughter (also lack of intent)

(Also the alternative verdict to murder where intent is not established, that is, to be used as the third option in the similar condition) Where an accused is charged with murder but where the Crown has failed to establish that the accused's act was done with the intention required to amount to the crime of murder there is an

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alternative verdict available—that being 'guilty of manslaughter'. The Crown must establish the following elements beyond reasonable doubt.

(1) That it was the act of the accused in pushing or bashing the deceased which caused their death.
(2) Such an act was a deliberate act of the accused.
(3) The act was unlawful—in the sense that it involved a deliberate application of force to another person without that person's consent.
(4) The act was dangerous—if it is such that a reasonable person in the position of the accused would have realised that by that act the deceased was being exposed to an appreciable risk of serious injury.

The Crown does not have to establish that the act of the accused was done with any particular intention to injure. The offence of manslaughter is complete even if no injury was intended by the accused and even if the accused had not realised that they were exposing the deceased to an appreciable risk of serious injury.

Manslaughter by criminal negligence

In order to justify a verdict of manslaughter by criminal negligence the Crown must establish beyond reasonable doubt that:

(1) the accused had a duty of care to the deceased;

Every person owes a duty to so conduct himself that he will not cause injury to another person in circumstances where a reasonable person in his position would have foreseen a risk of injury for that person. In this case it was whether the conduct of pushing or bashing the accused whilst in a vulnerable position and intoxicated created a duty of care in that the accused would have foreseen the risk of injury stemming from their actions.

(2) That the accused was negligent—the accused's act was a breach of that duty of care by pushing/bashing Mr Miller/Williamson;

A person acts in breach of that duty when they do something that a reasonable person in their position would *not* do in the circumstances.

(3) The act by the accused caused/accelerated the death of the deceased;
(4) that the act was deliberate;
(5) that the accused acted with indifference to human life or suffering and
(6) that such an act fell so short of the standard of care which a reasonable person would have exercised in the circumstances *and*
(7) the act involved such a high risk that death or really serious injury follow from it that it merited criminal punishment—i.e. that a reasonable person in the position of the accused would regard the degree of negligence as so serious that it should be treated as criminal conduct.

Manslaughter by provocation

If the Crown satisfies you beyond reasonable doubt that all the other elements of murder have been established beyond reasonable doubt and the accused was not provoked to do what he did, the appropriate verdict is 'guilty of murder'. If, however, the Crown does not satisfy you that he was not provoked, the accused will be 'not guilty of murder' but 'guilty' of the less serious offence of manslaughter (that is, manslaughter by provocation). How do you then determine whether the accused was (or may have been)

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provoked to do what he did? The law provides that an act causing death is an act done under provocation where—

The act is the result of a loss of self-control on the part of the accused that was induced by any conduct of Mr Miller/Williamson (including grossly insulting words or gestures) towards or affecting the accused; and

There must be a causal connection between the conduct of Mr Miller/Williamson and the loss of self-control by the accused. In determining whether there was such a connection, you must consider the gravity of the alleged provocation so far as the accused is concerned. There are relevant matters raised in this case by the evidence.

It is proper that you view the words or conduct in question as a whole and also in the light of any history or disputation between Mr Miller/Williamson and the accused since particular acts or words which considered separately could not amount to provocation may, in combination or cumulatively, be enough to cause the accused to lose his self-control in fact.

That is quite different from a deliberate act of vengeance, hatred or revenge, and likewise quite different from a consideration of whether in the light of his conduct Mr Miller/Williamson got his just deserts.

Manslaughter by self-defence

The Crown must prove the following elements beyond reasonable doubt:

1. You are satisfied beyond reasonable doubt that the accused used force intentionally (or recklessly), thereby inflicting death; but
2. You are of the view that it is reasonably possible that [*the accused*] did believe that his conduct was necessary in self-defence; and

As to whether [*the accused*] may have personally believed that his conduct was necessary for self-defence, you must consider the circumstances as [*the accused*] perceived them to be at the time of that conduct. You must take into consideration any extraordinary attribute of [*the accused*] which bears on his perception of those circumstances and which had a bearing on any such belief he may have formed. . . . [*deal with evidence as to intoxication, mental state etc. of the accused*].

3. The Crown has satisfied you beyond reasonable doubt that the conduct of [*the accused*] was not a reasonable response in the circumstances as [*the accused*] perceived them because the particular use of force by [*the accused*] was excessive or otherwise unreasonable.

It is *his* perception which must be considered in determining whether what he did was a reasonable response to those circumstances. The matter should not be looked at with the benefit of hindsight, but in the realisation that calm reflection cannot always be expected in a situation such as [*the accused*] found himself to be in.

If you are satisfied that [*the accused*] had, or that it is reasonably possible that he may have had, a belief personally held that his conduct was necessary for his defence, then you turn to the next question, namely—whether, the Crown has nevertheless proved beyond reasonable doubt that the conduct of [*the accused*] was not a reasonable response to the circumstances as perceived by [*the accused*]? Here, again, even if [*the accused*] was honestly mistaken in his perception of those circumstances, provided you are satisfied that it was or might have been his perception of them, and that response was reasonable in those circumstances, the Crown will have failed to eliminate self-defence. The Crown will only succeed if it satisfies you beyond reasonable doubt that the conduct of [*the accused*] was not a reasonable response in the circumstances as [*the accused*] perceived them to be at the time of the conduct in question.

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REFERENCES

American Psychiatric Association. (1982). *Statement on the insanity defense*. Washington, DC: American Psychiatric Association.

Anderson, C. J. (2003). The psychology of doing nothing: Forms of decision avoidance result from reason and emotion. *Psychological Bulletin*, *129*, 139–166.

Boehm, V. R. (1968). Mr. Prejudice, Miss Sympathy, and the authoritarian personality: An application of psychological measuring techniques to the problem of jury bias. *Wisconsin Law Review*, 732–750.

Connolly, T. (1987). Decision theory, reasonable doubt, and the utility of erroneous acquittals. *Law and Human Behavior*, *11*, 101–112.

DeKay, M. L. (1996). The difference between Blackstone-like error ratios and probabilistic standards of proof. *Law and Social Inquiry*, *21*, 95–132.

Duff, P. (1996). The not proven verdict: Jury mythology and ''moral panics''. *Juridical Review*, *41*, 1–12.

Effert, B. R., & Ferrari, J. R. (1989). Decisional procrastination: Examining personality correlates. *Journal of Social Behavior and Personality*, *4*, 151–156.

Finkel, N., & Duff, P. (1989). The insanity defense: Giving jurors a third option. *Forensic Reports*, *2*, 235–263.

Freedman, J. L., Krismer, K., MacDonald, J. E., & Cunningham, J. A. (1994). Severity of penalty, seriousness of the charge, and mock jurors' verdicts. *Law and Human Behavior*, *18*, 189–202.

Gilovich, T., & Medvec, V. H. (1995). The experience of regret: What, when and why. *Psychological Review*, *102*, 379–395.

Iyengar, S. S., & Lepper, M. R. (1999). Rethinking the value of choice: A cultural perspective on intrinsic motivation. *Journal of Personality and Social Psychology*, *76*, 349–366.

Iyengar, S. S., & Lepper, M. R. (2000). When choice is demotivating: Can one desire too much of a good thing? *Journal of Personality and Social Psychology*, *79*, 995–1006.

Izard, C. E., Libero, D. Z., Putnam, P., & Haybes, O. M. (1993). Stability of emotion experiences and their relations to traits of personality. *Journal of Personality and Social Psychology*, *64*, 847–860.

Kerr, N. L. (1978). Severity of prescribed penalty and mock juror verdicts. *Journal of Personality and Social Psychology*, *36*, 1431–1442.

Koch, C. M., & Devine, D. J. (1999). Effects of reasonable doubt and inclusion of a lesser charge on jury verdicts. *Law and Human Behavior*, *23*, 653–674.

Larsen, R. J., & Ketelaar, T. (1989). Extraversion, neuroticism, and susceptibility to positive and negative mood induction procedures. *Personality and Individual Differences*, *10*, 1221–1228.

Luce, M. F. (1998). Choosing to avoid: Coping with negatively emotion-laden consumer decisions. *Journal of Consumer Research*, *24*, 409–433.

Maher, G. (1983). Reasonable doubt and the jury. *Scots Law Times*, *17*, 97–100.

McCrae, R. R., & Costa, P. (1986). Personality, coping, and coping effectiveness in an adult sample. *Journal of Personality*, *54*, 385–405.

Milanich, P. G. (1981). Decisional theory and standards of proof. *Law and Human Behavior*, *5*, 87–96.

Milgram, N. N., & Naaman, N. (1996). Typology in procrastination. *Personality and Individual Differences*, *20*, 679–683.

Milgram, N. N., & Tenne, R. (2000). Personality correlates of decisional and task avoidant procrastination. *European Journal of Personality*, *14*, 141–156.

Narby, D. J., Cutler, B. L., & Moran, G. (1993). A meta-analysis of the association between authoritarianism and jurors' perceptions of defendant culpability. *Journal of Applied Psychology*, *78*, 34–42.

Ordonez, L. D., & Connolly, T. (2000). Comment: Regret and responsibility: A reply to Zeelenberg et al. *Organizational Behavior and Human Decision Processes*, *81*, 132–142.

Ritov, I., & Baron, J. (1992). Status quo and omission biases. *Journal of Risk and Uncertainty*, *5*, 49–62.

Roberts, C., Golding, S., & Fincham, F. (1987). Implicit theories of criminal responsibility: Decision making and the insanity defense. *Law and Human Behavior*, *11*, 207–232.

Samuelson, W., & Zeckhauser, R. (1988). Status quo bias in decision making. *Journal of Risk and Uncertainty*, *1*, 7–59.

Savitsky, J. C., & Lindblom, W. D. (1986). The impact of the guilty but mentally ill verdict on juror decisions: An empirical analysis. *Journal of Applied Psychology*, *16*, 686–701.

Schuurmans-Stekhoven, J. (2005). *The optimal ignorance model*. Unpublished PhD thesis: The Australian National University, Canberra, Australia.

Scottish Office. (1994). *Juries and verdicts*. Edinburgh: Scottish Office.

Smithson, M. (2006). Scale construction from a decisional viewpoint. *Minds and Machines, 16*, 339–364.

Smithson, M., & Verkuilen, J. (2006). A better lemon-squeezer? Maximum likelihood regression with beta-distributed dependent variables. *Psychological Methods*, *11*, 54–71.

DOI: 10.1002/bdm

Tribe, L. H. (1971). Trial by mathematics: Precision and ritual in the legal process. *Harvard Law Review*, *84*, 1329–1393.
Vidmar, N. (1972). Effects of decision alternatives on the verdicts and social perceptions of simulated jurors. *Journal of Personality and Social Psychology*, *22*, 211–218.
Zeelenberg, M., van Dijk, W. W., & Manstead, S. R. (1998). Reconsidering the relation between regret and responsibility. *Organizational Behavior and Human Decision Processes*, *74*, 254–272.
Zuckerman, M., Kuhlman, D. M., Joireman, J., Teta, P., & Kraft, M. (2004). A comparison of three structural models for personality: The big three, the big five, and the alternative five. *Journal of Personality and Social Psychology*, *85*, 757–768.

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