Sentencing, severity, and social norms: A rank-based model of contextual influence on judgments of crimes and punishments

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ABSTRACT

Context effects have been shown to bias lay people's evaluations of the severity of crimes and punishments. To investigate the cognitive mechanisms behind these effects, we develop and apply a rank-based social norms approach to judgments of perceived crime seriousness and sentence appropriateness. In Study 1, we find that (a) people believe on average that 84% of people illegally download software more than they do themselves and (b) their judged severity of, and concern about, their own illegal software downloading is predicted not by its amount but by how this amount is believed (typically inaccurately) to rank within a social comparison distribution. Studies 2 and 3 find that the judged appropriateness of a given sentence length is highly dependent on the length of other sentences available in the decision-making context: The same objective sentence was judged as approximately four times stricter when it was the second longest sentence being considered than when it was the fifth longest. It is concluded that the same mechanisms that are used to judge the magnitude of psychophysical stimuli bias judgments about legal matters.

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1. Introduction

In an attempt to make application of the law as fair and unbiased as possible, various attempts at standardization have been made. Sentencing guidelines are an example of this approach, as they constrain the array of potential sentences to be handed out given the circumstances of the case under consideration (e.g., Ruback & Wrobleski, 2001). Similarly, several indices of the seriousness of crimes have been compiled (e.g., Sellin & Wolfgang, 1964). However, the success of these attempts may be undermined by strategies adopted by legal professionals when reaching a decision, such as the adoption of 'mental shortcuts' and the neglect of relevant information (e.g., Dhami, 2003; Dhami & Ayton, 2001; von Helversen & Rieskamp, 2009).

In addition, lay people's evaluations are widely variable and influenced by contextual and extra-evidential factors (e.g., Peer & Gamliel, in press; Stylianou, 2003). Such influences may undermine public consensus about the seriousness of crimes (e.g., Durham, 1993; Gerbasi, Zuckerman, & Reis, 1977; Hoffman & Hardyman, 1986; Kwan, Chiu, Ip, & Kwan, 2002; Roberts, 1992; Rossi, Simpson, & Miller, 1985).

Lay people's evaluations of legal matters influence law-related policies and decisions (e.g., Roberts, 2003; Roberts & Doob, 1989; Roberts & Stalans, 1997; Stalans & Diamond, 1990). For example, citizens in the UK can refer specific sentences, if deemed too lenient, to the Attorney General, who can review the sentence and increase the punishment. Context-induced biases could be seen to threaten the basis for this process, as it has been shown that people tend to perceive sentencing as too lenient, although this bias is fuelled by misconceptions and misinformation about the current sentencing guidelines, the severity of penalties handed out and of the crimes committed (e.g., Roberts, 2003; Stalans, 1993).

In order to determine whether the same cognitive mechanisms may be responsible for a range of contextual effects that bias lay people's evaluations of the law, we put forward—and systematically test—a relative judgment model of legal evaluations. We hypothesize that judgments about the seriousness of a crime or the appropriateness of a sentence are made in comparison to relevant information that is retrieved from memory (e.g., inaccurate beliefs about the frequency of crimes) and available in the decision-making context (e.g., sentences handed out for similar crimes). Consequently, the same sentence (or the same crime) might attract very different evaluations as a result of the influence of contextual factors. Before describing the model of how context affects legal evaluations, we first briefly discuss evidence for relative judgment within the two above-mentioned legal domains: The perceived seriousness of crimes and fairness of sentences.

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1.1. Sentencing appropriateness, crime seriousness and social norms

Previous research has showed that, despite the federal guidelines, sentencing varies to some degree between courts due both to the characteristics of the individual decision-makers (the judges) and to the social interaction within courtrooms (e.g., Bushway, Owens, & Piehl, 2012; Eisenstein & Jacob, 1977; Johnson, 2006). In the present paper we focus on the cognitive processes that underpin context effects rather than the sociological aspects of sentencing (e.g., Hamilton & Rytina, 1980; Stylianou, 2003), and draw on evidence that suggests that people rely on relative comparisons when evaluating the appropriateness of sentences. For instance, people's punitive attitudes might be rooted in comparisons made against inaccurate impressions they hold about crimes: People think that most burglaries involve the use of weapons, property damage, and harm—although in reality this is rarely the case (e.g., Roberts & Doob, 1989; Stalans, 1993; Stalans & Diamond, 1990). Thus, a key motivation for our research is that people tend not to make absolute judgments, but instead rely on relative comparisons (e.g., Stewart, Brown, & Chater, 2005).

Relative comparisons are also at the core of socially-oriented accounts of dishonest behavior and consequent worry about it. For example, social norms (e.g., Campbell, 1964; Henrich et al., 2001) can be regarded as the rules and standards that are shared by members of a community. These norms guide behavior of the individuals without the need for higher intervention such as law enforcement (e.g., Mazar & Ariely, 2006; Mazar, On, & Ariely, 2008): For instance, people are more likely to pay taxes if they believe that others (especially their own friends) do so (Posner, 2000).

Thus, social norms theories can be interpreted as relative approaches: Judgments about the seriousness of a crime are determined by comparisons relative to beliefs about the social context. For instance, the perceived seriousness of (and decisions about) not paying taxes and littering depends on the beliefs about how many other people commit such crime and negligent behavior (e.g., Cialdini, Reno, & Kallgren, 1990; Orviska & Hudson, 2002; Posner, 2000; Traxler, 2010; Yankelovich, 1984). However, the precise nature of the comparisons made to hypothesized internalized standards has not been extensively explored. Thus, we examine in more detail the relationship between the frequency of an individual's own dishonest behavior and their beliefs about the frequency of other people's dishonest behavior (the internalized standards). We specify the cognitive processes underlying these comparisons, the outcome of which determines the perceived seriousness of law infringements and of crimes in general.

1.2. A relative judgment model

We hypothesize that the cognitive processes that underlie lay people's judgments about the seriousness of crimes and the appropriateness of sentences are the same as those underpinning judgments about other psychophysical, economic and social stimuli. Several theoretical accounts have been developed to explain quantitatively how judgments are influenced by comparison context; in this paper, we test the predictions of these theories as applied to judgments of sentence severity and crime seriousness. Adaptation Level Theory (ALT; Helson, 1947, 1948) proposes that people's evaluations of stimuli are a function of all previously experienced relevant stimuli. As people experience reality, they form an internalized 'reference level' for a particular outcome ('the adaptation level'); any incoming stimuli will be then be judged against the reference level. For example, a person might believe that, on average, people drive at 80 miles/h on motorways in the UK (i.e., 10 miles/h over the speed limit). When driving, this person will therefore consider her driving of 5 miles/h over the speed limit as a relatively minor infraction, and its seriousness to be low. Similarly, according to ALT, a recent sentence handed out for a given crime would be evaluated as lenient, appropriate or strict depending on how much it differs from the mean of sentences encountered for similar crimes.

However, the effects of other contextual indicators have been observed in a series of evaluation tasks, and suggest that ALT may not be able to account for a series of phenomena. First, the *range* of the contextual stimuli can influence the subjective evaluation of a stimulus (e.g., Janiszewski & Lichtenstein, 1999; Volkmann, 1951). That is, the subjective value of a stimulus depends on where it falls within the set of values of the reference distribution—i.e., how far it deviates from the smallest and largest values in the set (the *range* principle). Thus, the same stimulus might be evaluated differently depending on prior beliefs. For instance, the appraisal of the fairness of a sentence of 3 years for a crime of robbery might be determined by beliefs about the typical maximum and minimum sentence lengths handed out for robberies in general. A person who believes that the sentences generally handed out for robberies range from 1 to 5 years will be inclined to regard the 3-year sentence as more severe than will a person who believes that the sentences for robbery range from 1 to 9 years of imprisonment.

Second, *rank* effects have been observed, whereby the subjective magnitude of a stimulus is determined by its ranked position within the contextual stimuli. The Decision by Sampling model (DbS; Stewart, Chater, & Brown, 2006) offers a description of the psychological processes underpinning rank effects, although DbS has not previously been applied in legal contexts. Applied to the present context, DbS hypothesizes that people, when facing with a task such as evaluating the fairness of a given sentence, retrieve from memory a sample of sentences handed out in similar situations; they also sample instances that are relevant to the situation at hand and that are available in the decision-making context. The subjective value of the sentence under consideration (e.g., its fairness) is determined by a series of binary ordinal comparison between the sentence length itself and the lengths of the sentences (a) retrieved from memory and (b) available in the decision-making context. The perceived fairness of the sentence is directly determined by its relative ranked position within the sample. For instance, if someone has to evaluate the fairness of a sentence of 2 years in prison for a case of burglary, she might retrieve from memory a few other sentence lengths that she has recently encountered; as an example, six of these might be shorter than 2 years, while two are actually longer. The relative rank value of the sentence of 2 years would therefore be calculated according to that retrieved sample: (number ranked lower)/(sample size) = .75. As long as different samples are retrieved from memory (e.g., because of differences in the use of the media; Gebotys, Roberts, & DasGupta, 1988; Graber, 1980; Roberts & Doob, 1989; Stalans, 1993), the same verdict might be regarded rather differently. We test this in Study 1.

Range Frequency Theory (RFT; Parducci, 1965) offers a descriptive model of rank and range effects. Specifically, assume an ordered set of n contextual items $[x_1, x_2, \ldots, x_i, \ldots, x_n]$. Then, if M_i is the subjective psychological magnitude of x_i,

$$M_i = wR_i + (1-w)F_i \tag{1}$$

where R_i is the range value of stimulus x_i:

$$R_i = \frac{x_i - x_1}{x_n - x_1} \tag{2}$$

and F_i is the frequency value, or relative ranked ordinal position, of the item i in the ordered set:

$$F_i = \frac{i-1}{n-1} \tag{3}$$

Eq. (1) embodies the claim of RFT that the evaluation of a stimulus is a compromise of both rank (Eq. 3) and range (Eq. 2) principles, with w being a weighting parameter.

Rank and range principles were initially validated in the domain of psychophysics (Parducci, Calfee, Marshall, & Davidson, 1960; Parducci & Perrett, 1971) where people performed such tasks as evaluating the loudness of sounds. The theory later received considerable experimental