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Running head: LAW, TRUST, AND COMPETITIVENESS

The Effects of Priming Legal Concepts on Perceived Trust and Competitiveness, Self-Interested Attitudes, and Competitive Behavior

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Abstract

Socio-legal scholars have suggested that, as a ubiquitous social system, law shapes social reality and provides interpretive frameworks for social relations. Across 5 studies, we tested the idea that the law shapes social reality by fostering the assumptions that people are self-interested, untrustworthy, and competitive. In Studies 1 and 2, we found that people implicitly associated legal concepts with competitiveness. Studies 3 – 5 showed that these associations had implications for social perceptions, self-interested attitudes, and competitive behavior. After being primed with constructs related to the law, participants perceived social actors as less trustworthy and the situation as more competitive (Study 3), became more against a political issue when it conflicted with their normative self-interest (Study 4), and made more competitive choices during a prisoner's dilemma game when they believed that social relations were basically zero-sum in nature (Study 5). The implications and applications of these results are discussed.

The Effects of Priming Legal Concepts on Perceived Trust and Competitiveness, Self-Interested Attitudes, and Competitive Behavior

Scholars interested in psycho-legal studies have focused their research efforts on the applications of psychology to law. Much has been learned about the psychological processes involved in the various procedural aspects of the law and legal system, such as jury decision making, eyewitness memory, expert testimony, and courtroom persuasion (see Ellsworth & Mauro, 1998; Kapardis, 2003; Wrightsman, Greene, Nietzel, & Fortune, 2002). More recently, psychology and legal scholars have commented on how legal theory and practice may benefit from a better understanding of human psychology (see Darley, Fulero, Haney, & Tyler, 2002; Hanson & Yosifon, 2004; Ross & Shestowsky, 2003), and researchers have highlighted the importance of examining, for example, trust in legal authorities (Tyler, 2001) and the perceived legitimacy of the legal system (Tyler, in press; Tyler & Jost, 2007).

Without disputing the obvious importance of these previous approaches, in this paper we adopt a notably different perspective to studying the intersection between psychology and law. Namely, we suggest that the existence of law and the manner in which the Anglo-American legal system functions may shape everyday cognition and social relations. There is a burgeoning body of research on *legal consciousness*, which is characterized as the conscious and non-conscious ways the existence of law and legal systems affect people in their everyday lives (e.g., Ewick & Sibley, 1998; Merry, 1990; Sarat, 1990; Sibley, 2005). Drawing on theorizing and research from social cognition and legal studies, we argue that people tend to associate legal concepts with competition and the pursuit of self-interest, which can affect social perceptions and judgments.

The Anglo-American legal system functions under the philosophy that the best way of eliciting the truth of a controversy is through confrontation (e.g., prosecution vs. defense,

plaintiff vs. defendant) and the zealous pursuit of one's self-interests; therefore, people may come to mentally associate legal concepts with such competition and pursuit of self-interest. Further, the very existence of laws may influence perceptions of the motivations behind other people's behavior, which may have consequences for the development of interpersonal trust. For example, Peachey and Lerner (1981; Lerner 1982; see also Tapp, 1974) argued that the mere existence of a system of rules, sanctions, and laws designed to ensure that people act decently and cooperatively implicitly influences the attributions they render about others' and their own motivations and intentions—namely, that people are inherently self-seeking, cannot be trusted, and need be controlled from acting in selfish ways (cf. Deci, Koestner, & Ryan, 1999; Lepper & Greene, 1975).

For these reasons, we suggest that the “law” in its common understandings has become associated in people's minds with notions of competition and the pursuit of self-interest. Thus, given research showing that the cognitive activation of abstract social constructs can influence social perception and behavior (Dijksterhuis, Chartrand, & Aarts, 2007; Higgins, 1996), we propose that bringing law-related concepts to mind for people can exert unconscious influences on social perceptions, attitudes, and behavior in accord with the mental constructs associated with law. If psychological representations of everyday legal concepts (e.g., law, legal, lawsuit, lawyer, judge, courts) are associated with the concepts of competition and self-interest—that is, if adversarialism and the pursuit of self-interest are a part of “legal consciousness”—then subtle activation of concepts related to the law should lead to construal of social situations, attitudes, and behavioral responses consistent with self-interestedness (cf. Kay, Wheeler, Bargh, & Ross, 2004). In the following paragraphs, we discuss in more detail why or how people might come to mentally associate legal concepts with competition and the pursuit of self-interest. We then

describe our research relying on methodologies of social cognition supporting the idea that activating the “law” through priming procedures can, depending on various circumstances and individual differences, lead to (a) perceptions that others are untrustworthy, (b) more extreme self-interested attitudes, and (c) more competitive behavior.

The Adversary System

At the core of the adversary system of law, which is largely predominant in common law, English-speaking countries, is a process characterized by opposing sides or parties to controversies gathering evidence and advocating their respective positions during formal adjudicatory proceedings to a neutral and passive decision maker, which is generally a judge or jury (Cole, Frankowski, & Gertz, 1987; Glenn, 2004). The classic view of the adversary process is a zero-sum game. Particularly in litigation, disputants often assume that the legal process is “you against me” and “winner-takes-all”: one side is right, the other is wrong; one side wins, the other loses (Marshall, 1971; Maute, 1987). Indeed, in the adversary system, lawyers are expected to pursue their client’s interests with competitive zeal within the bounds of the normative rules of the legal “game” (Maute, 1987). It is perhaps not surprising, then, that metaphors of war (“cross swords,” “custody battle”) and sport (“play hardball”) pervade both lawyer speak and more everyday language about legal processes (O’Conner, 1999; Thornburg, 1995). The adversary system can be contrasted with the inquisitorial system (which is more common in continental European countries), whereby the legal process is less adversarial, lawyers play a smaller role, and legal fact-finding is generally left up to judges or magistrates (Cole et al., 1987; Glenn, 2004; Jolowicz, 2003).

Our purpose is not to argue the relative merits of the adversary system versus other legal systems (see Kagan, 1991; 2001), but to examine how the existence of an adversarial legal

system can shape some people's understandings of human nature (Lerner, 1982; Miller, 1999). The important point for our purposes is that the adversarial model of law adheres to the philosophy that justice is most likely to be served by *competition* and pursuing one's *self-interest*. Indeed, "the adversary system is based on the assumption that the truth of a controversy will best be arrived at by granting competing parties, with the help of an advocate, an opportunity to fight as hard as possible. Few systems rely more on the self-interests of the participants" (Johnston & Lufrano, 2001, p. 147).

Legal Socialization

Legal socialization is the process through which people acquire their attitudes, beliefs, and knowledge of the law and legal system. Researchers interested in legal socialization have largely examined how the law serves as a "moral educator" of social values and normative conduct within a society, and have examined the developmental factors involved in, for example, respect for legal authorities, law-abidingness, legal reasoning, and the perceived legitimacy of the law (e.g., Cohn & White, 1990; Fagan & Tyler, 2005; Melton & Saks, 1985; Tapp & Kohlberg, 1971). Legal socialization is believed to develop through contact with legal authorities, processes of cognitive and moral development, and direct and vicarious instruction from peers, families, and the larger community. One important way that people come to associate legal concepts with self-interest and competitiveness is through popular culture portrayals of the legal process.

Frequent and consistent media portrayals of the adversarial legal system—fictional or otherwise—undoubtedly contribute to people associating legal concepts with self-interest and competitiveness. Asimow (2007) notes:

Popular culture has taught us that the adversarial system uncovers the truth about past events. According to familiar pop culture narratives that we absorb from the cradle

onward, lawyers working within an adversary system are champions of justice and liberty...Popular culture, therefore, may reinforce our belief in adversarialism and confer legitimacy on the adversary system (pp. 655-656).

Indeed, the news is replete with coverage of adversarial trial proceedings: popular crime and legal dramas depict adversarial, lawyer-driven legal processes (e.g., *Law & Order*); syndicated television courtrooms (e.g., *Judge Judy*) may foster the belief that litigation is a normative means of resolving disputes (Podlas, 2004; 2005); the relative frequency of tort litigation is overrepresented in popular media (Bailis & MacCoun, 1996); and even television and print advertisements for legal services often aim to convince consumers that the primary role of lawyers is to fight for their clients (including toll free numbers comprising the words “WE FIGHT,” “FIGHT IT,” or “UWIN”). Although most people have never entered a courtroom, many could describe the adversarial legal process and the particular role of contesting lawyers in the adversarial system. There is good reason to believe, then, that common legal concepts will be associated in memory with self-interest and competitiveness (at least amongst constituents of nations that employ the adversary legal system).

At the same time, however, it is important to acknowledge that, even within an adversary legal system, not all areas of legal practice are *de facto* highly adversarial. Indeed, many fields of law (e.g., administrative law) involve legal practices that do not necessarily involve adversarial disputes (e.g., filing papers). Moreover, people’s experiences with the legal system in their everyday lives often do not involve the adversarial aspects of the legal system (e.g., following traffic signs, paying taxes, buying insurance, running small businesses, etc.). Nevertheless, the mass media tend to portray the more adversarial elements of the law and legal system, which, as we argue, may lead some people to mentally associate legal concepts with competition and the pursuit of self-interest. Our empirical interests, then, were in the mental associations people hold

between common legal concepts and competition and the consequences of those associations for perceptions, attitudes, and behavior.

We hypothesize, then, that exposure to the law and legal system through the course of legal socialization may produce cognitive associations between legal concepts and notions of self-interest and competitiveness (Bargh, 1996; 2004), presumably because of the adversarial nature of the legal process. These mental associations may have implications for social judgments and behavior when people think about common legal concepts. Previous research outside the legal domain has shown that activated constructs, such as those made accessible through priming, can lead people to form impressions of others in line with those constructs (for reviews, see DeCoster & Claypool, 2004; Higgins, 1996). For example, in their classic study, Srull and Wyer (1979) found that participants primed with hostility-related adjectives during a scrambled sentence task later viewed a person whose behaviors were ambiguous with respect to hostility as more hostile than did participants primed with kindness-related adjectives. More recently, researchers have demonstrated that activating social constructs can also affect behavioral tendencies (Dijksterhuis, Chartrand, & Aarts, 2007), such as when priming the stereotype of elderly persons leads people to walk more slowly (Bargh, Chen, & Burrows, 1996) or when priming situational norms associated with the library produces decreased voice intensity (Aarts & Dijksterhuis, 2003). If it is the case that some people associate common legal concepts with competition and self-interest, then activating mental representations of the law and legal system may similarly possess the power to influence perceptions, attitudes, and behavior as they pertain to competition and self-interest.

Effects of the Legal System on Trust and Cooperation

Peachey and Lerner (1981; see also Lerner, 1982) posited a related manner in which the law may become associated with self-interestedness: the legal system implies that people are inherently self-seeking and need to be controlled from doing harmful things to one another. As Lerner (1982) notes:

Consider for a moment what the children growing up in our society must come to believe, as they gradually become aware of the vast resources our society devotes to insuring that people act decently to one another—the police, system of courts, the legal profession, procedures for detection, institutions for incarceration, the enormous number of laws, by-laws, regulations, and contractual arrangements that apply to virtually every aspect of people’s lives... The two implicit but devastatingly clear questions that must arise at some level of children’s awareness are: Why would people invest so much in legal institutions that require people to act decently and cooperatively if they did not know people are essentially selfish, if not dangerous? And given all the legal devices that require and insure that people act decently, how can I ever learn whether one could trust people to behave decently on their own without any threat of external sanctions? (pp. 271-272).

Thus, the very existence of a legal system designed to define how people should and should not engage one another may serve to reduce the extent to which people are able to trust and cooperate with one another. Consistent with this reasoning, research has shown that contractual arrangements (Bohnet, Frey, & Huck, 2001; Malhotra & Murnighan, 2002), surveillance (Enzle, & Anderson, 1993; Olson, Barefoot, & Strickland, 1976; Strickland, 1958), and the sanctioning and regulating of human behavior (e.g., Fehr & Rockenbach, 2003; Houser, Xiao, McCabe, & Simth, 2008; Kruglanski, 1970; Mulder, van Dijk, De Cremer, & Wilke, 2006; Sitkin & Roth, 1993; Tenbrunsel & Messick, 1999; Van Swol, 2003) can, in some circumstances, undermine cooperation and foster perceptions of dishonesty and mistrust within social interactions. In his classic experiment, Strickland (1958) found that supervisors who were told to monitor a subordinate trusted the subordinate less than supervisors who did not monitor. More recently, Mulder et al. (2006) found that a sanctioning system (i.e., monetary punishments for non-cooperation) paradoxically undermined cooperation in social dilemmas and decreased

perceptions that others were internally motivated to cooperate. Thus, the law may have counterproductive effects on interpersonal trust and cooperation.

Overview of Current Research

The foregoing analysis suggests that one facet of people's "legal consciousness" may be the more or less implicit associations people hold between legal concepts and self-interest, which we have argued may develop through legal socialization and the attributional and motivational implications of the mere existence of the law. As a ubiquitous social stimulus (Silbey & Cavicchi, 2005), the law may have important effects on social perceptions and human interactions. In our research, we examined empirically several specific hypotheses drawn from our conceptual analysis. In two initial studies, we investigated whether people generally do, in fact, hold implicit cognitive associations between the legal concepts and competitiveness. Next, we examined whether subtle exposure to cues priming legal concepts can influence people's: (a) perceptions of others' competitiveness and trustworthiness and (b) attitudes towards issues that conflict with their normative self-interest. Finally, we examined whether priming the legal concepts can affect competitive behavior during a prisoner's dilemma game. Thus, across 5 studies, we tested the hypotheses that people mentally associate legal concepts with competitiveness and, importantly, that these associations have effects on everyday psychological functioning, such that bringing law-related concepts to mind for people can engender more self-interested attitudes, weakened perceptions of others' trustworthiness, and increased competitive behavior.

STUDY 1

The goal of Study 1 was to examine whether subliminally priming participants with words commonly related to the law would increase the cognitive accessibility of

competitiveness. During a Lexical Decision Task (LDT), we presented participants with either law-related or neutral words and then assessed the accessibility of competitiveness using a word completion task including word stems that could be filled in with either competition or non-competition words. We expected that if the accessibility of competitiveness is higher after priming law-related concepts, then participants should complete more of the word stems using competition-related words.

Method

Participants

Forty two undergraduate students taking psychology course at the University of Calgary participated for bonus course credit. The sample consisted of 34 women and 8 men with a mean age of 19.90 years ($SD = 3.59$).

Materials and Procedure

Participants were informed that the study was about the relation between different forms of “verbal processing styles” and that they would complete two measures of verbal processing. First, participants completed a LDT where they decided whether letter strings appearing on a computer screen were real English words or not (e.g., PHIPSED). Unbeknownst to the participants, either law-related or neutral primes were presented subliminally prior to the targets. In the legal concept prime condition, the primes were 15 law-related words repeated four times in random order (*attorney, courtroom, courts, defendant, judge, judicial, jury, law, lawful, lawsuit, lawyer, legal, legally, trial, unlawful*). In the neutral prime condition, 30 different words (e.g., *important, prior, activity*) were presented twice in random order. Each trial within the lexical decision task consisted of the following elements in order: (a) a fixation point (+) presented for 500 ms, (b) a forward mask presented for 100ms consisting of a row of X's equal

in length to the prime, (c) presentation of the law-related or neutral prime for 25 ms, (d) a backward mask mirroring the forward mask presented for 100 ms, and (e) presentation of a letter string that remained on the screen until a lexical decision was made.

Next, participants completed the word completion task, which was placed face down on the computer desk at the beginning of the session. Participants were asked to flip-over and complete the word completion task immediately following the LDT. The word completion task consisted of 24 word fragments (e.g., P L _ _), 9 of which could be filled in to create words either related to competition or not (e.g., _ I G H T; see Kay et al., 2004). Participants were asked to complete each of the word fragments with the first word that came to mind.

Results and Discussion

Consistent with our prediction, participants who were subliminally primed with legal concept words during the LDT filled in more of the 9 word fragments with competition words ($M = 25\%$, $SD = 15\%$) than did participants primed with neutral words ($M = 16\%$, $SD = 13\%$), $t(40) = 2.15$, $p = .038$, $d = .67$. Though limited by the number of males in the sample, analyses including gender as a factor revealed neither a main effect of gender ($p = .59$) nor a prime X gender interaction on word completion ($p = .42$). To our knowledge, this study is the first to provide evidence for the notion that priming legal concepts can automatically increase the cognitive accessibility of competition.

STUDY 2

Our first study provided initial evidence that priming law-related concepts can automatically activate knowledge structures linked to competitiveness. One important limitation of Study 1, however, is that many of the law-related primes we used, although likely representative of common legal concepts, specifically referenced the more adversarial aspects of

the legal system (e.g., *lawsuit, courts, trial*). Thus, it was unclear whether people mentally associate more general legal concepts (e.g., *law, legally, lawful*) with competitiveness without the potentially biasing influence of the more adversarial law-related terms. The aim of Study 2, then, was to provide support for the idea that people implicitly associate general legal concepts with competitiveness. In this study, we employed a single category version of the Implicit Association Test (Greenwald, McGhee, & Schwartz, 1998; Karpinski & Steinman, 2006) to assess the strength of association between people's mental representations of the law and competition versus cooperation. The IAT is a method for assessing strengths of associations among concepts by asking participants to sort stimulus exemplars into different categories using fewer response options than there are categories (for a review, see Nosek, Greenwald, & Banaji, 2006). Although most studies using the IAT examine implicit attitudes, the IAT is also well-suited to gauge implicit stereotypes or beliefs, which was our interest in the current study. For example, Nosek, Banaji, and Greenwald (2002) found that during a gender-science IAT, participants generally found it easier to classify stimulus exemplars when *male* shared a response with *science* and *female* shared a response with *liberal arts* than when *male* shared a response with *liberal arts* and *female* shared a response with *science*. This finding presumably reflected the prevailing stereotype that men are better suited for science and women are better suited for liberal arts traditions. Similarly, on the basis of our conceptual analysis and the Study 1 results, we predicted that participants would find it easier to associate *law* with *compete* than the law with *cooperate* during a law-compete/cooperate Single Category IAT (SC-IAT).

Method

Participants

Thirty-nine graduate and undergraduate students taking psychology courses at the University of Essex, UK, participated for course credit or £3. Participants with high error rates (> 20%) were not included in analyses (cf. Karpinski & Steinman, 2006). The resulting sample consisted 24 females and 12 males (M age = 20.56, SD = 4.43).

Materials and Procedure

Participating individually, participants were informed that the study was concerned with examining how people associate the legal system with various concepts. For the SC-IAT, participants were asked to categorize words appearing on a computer screen into one of three categories: *law*, *compete*, or *cooperate*. In one of the critical SC-IAT blocks, participants had to press a right-hand key if the words matched the categories *law* (*contract, illegal, jurisprudence, law, lawful, legal, legalized, legally, legislation, regulation, rights, unlawful*) or *cooperate* (*cooperate, cooperation, charity, helping, nurture, share*), or a left-hand key if the words matched the category *compete* (*battle, beat, fight, competition, compete, conflict*). The law-related exemplars were selected to relate generally to the law and legal system and without the more adversarial connotations. In the other critical block, *law* was paired with *compete* and words matching those categories required a response from the left-hand key, whereas cooperation-related words required a response from the right-hand key. Participants were shown category labels on the bottom left- and right-hand sides of the screen. Category pairings were counterbalanced between participants such that half the participants used the same key to sort *law* and *cooperate* words first, whereas the remaining participants used the same key to sort *law* and *compete* words first. Each block consisted of 24 practice trials and 72 critical trials.

Following Karpinski and Steinman (2006), during the SC-IAT, error feedback was given using red X's for incorrect responses and green O's for correct responses, and participants were

given a response deadline of 1500 ms. If a given response took longer than 1500 ms, participants received the message “Please respond more quickly!” in red font color for 500 ms.

Results and Discussion

Following Karpinski and Steinman (2006), the SC-IAT data were analyzed using a *D*-score algorithm (see Greenwald, Nosek, & Banaji, 2003) that essentially reflects the differences in reaction times in standard deviation units between the two critical blocks (after eliminating responses less than 350 ms and replacing error responses with the block mean reaction time plus a penalty of 400 ms). Higher *D*-scores indicate stronger implicit associations between *law* and *compete* than between *law* and *cooperate*. Analyses showed that the average *D*-score ($M = .21$, $SD = .40$) was significantly greater than zero in the predicted direction, $t(35) = 3.09$, $p = .004$. Furthermore, the *D*-scores did not differ significantly between the counterbalanced block orders ($p = .28$) or by gender ($p = .56$). Thus, conceptually replicating and extending the results of Study 1, participants more strongly associated general legal concepts with competitiveness than with cooperativeness during a SC-IAT.

STUDY 3

Our first two studies provided evidence that people implicitly associate legal concepts with competition. Given the prevalence of legal stimuli, it is reasonable to assume, then, that priming legal concepts may influence everyday perception and behavior. Does exposure to legal stimuli influence how people perceive others' trustworthiness and competitiveness? As an initial test of this idea, in Study 3 we examined the extent to which priming participants with legal concepts would influence their social perceptions of other people's trustworthiness and competitiveness. As noted, research on trait priming has shown that primed constructs can lead

to changes in perception (usually in the assimilative direction, e.g., priming hostility leads to perceived hostility; Srull & Wyer, 1979).

Of particular interest was the question of whether priming legal concepts would influence judgments of others' trustworthiness, particularly in contexts that are ambiguous with respect to the individuals' motives for interacting. Peachey and Lerner's (1981) analysis—and the related empirical work (e.g., Mulder, et al., 2006; Strickland, 1958)—suggests that invoking laws, rules, and sanctions may reduce interpersonal trust during social interactions. We suggest that simply activating mental representations of the law and legal system may similarly influence how people construe and respond to social interactions. That is, we propose that the known link between invoking laws and rules on perceptions of trust may also exist in the abstract, such that making the inference that one is being controlled or sanctioned may not be necessary to influence reductions of perceived trustworthiness.

In Study 3, after being subliminally primed with legal-related or neutral words, participants read a scenario involving a meeting between two people that was ambiguous with respect to whether the individuals were in a cooperative or competitive relationship. On the basis of the foregoing analysis, we predicted that participants primed with legal concepts would perceive the two actors as less trustworthy, which would, in turn, lead them to construe the interaction as more competitive. A substantial body of organizational, negotiation, and social dilemma research has documented that when trust between individuals, parties, or organizations is low, cooperation declines (e.g., De Cremer & Stouten, 2003; Dirks & Ferrin, 2002; Ferrin, Bligh, & Kohles, 2007; Koeszegi, 2004; Kramer, 1999; Ross & LaCroix, 1996; McAllister, 1995; McCabe, Rigdon, & Smith, 2003; Morgan & Hunt, 1994). Thus, assessing perceived trust and competitiveness within the same context allowed us to test whether reductions of perceived

trust following activation of legal concepts might then increase perceptions of competition between the actors (i.e., trust might mediate the effect of legal concept priming on perceived competitiveness). This expected mediation pattern was predicated on the idea that trust tends to facilitate cooperation because it fosters the expectation that interacting parties will behave in mutually beneficial ways (Mayer, Davis, & Schoorman, 1995; Pruitt & Kimmel, 1977; Simpson, 2007). Thus, if priming legal concepts reduces how much participants trust the two actors, then they might perceive the interaction as one where the actors are in a competitive social interaction.

Method

Participants

One hundred twenty five introductory psychology students from the University of Waterloo participated for course credit (80 females; M age = 18.65, SD = 1.29).

Materials and Procedure

Participants were informed that they would be participating in two unrelated studies on “verbal processing” and “social perception.” During the “verbal processing” study, participants were subliminally primed with words commonly related or unrelated to the legal system during a LDT. The LDT was the same as in Study 1 but included 75 total trials instead of 60. In the legal concept priming condition, the 15 law-related words used in Study 1 were presented 5 times over. In the control condition, 15 different neutral words (e.g., *allow*, *supposed*, *taught*) were presented 5 times over.

Next, during an ostensibly unrelated study on “social perception,” participants read a scenario about a meeting between two people (see Kay et al., 2004). The scenario began with brief descriptions of the individuals (e.g., “Geoff has short, dark brown hair”) and followed with

a description of them exchanging opinions and suggestions. The scenario was worded such that the nature of the actors' motives for interacting was ambiguous (e.g., whether they were competing or cooperating, arguing or discussing). Each participant learned that the interaction was between two people of their own sex (Susan and Jennifer for female participants; Geoff and David for male participants).

Immediately following the scenario, participants answered a series of questions designed to assess whether they perceived the two actors as trustworthy (2 items: "From what you can tell, how trustworthy are the two people in the situation you just read about?" and "Generally speaking, do you feel that the two people could be trusted most of the time or trusted rarely?") and the interaction as competitive (5 items, such as "To what extent did the situation above seem to be competitive versus cooperative?" and "To what extent do you feel that the two people in the described situation were primarily concerned with their own interests versus the interests of the other?"). Each of the items was assessed on an 8-point scale. The 2 trustworthiness and 5 competitiveness items were averaged to form composite measures of perceived trustworthiness and perceived competitiveness ($\alpha = .85$ and $.76$, respectively), with higher values indicating more of each construct.

Results and Discussion

Our predictions were that subliminally priming legal concepts would lead participants to perceive the actors as less trustworthy and to construe the interaction as more adversarial. Consistent with our predictions, participants primed with legal concepts perceived the actors as *less* trustworthy ($M = 4.52$, $SD = 1.49$) than did the participants primed with neutral concepts ($M = 5.10$, $SD = 1.32$), $t(123) = 2.31$, $p = .02$, $d = .41$. Moreover, participants primed with legal concepts perceived the situation as *more* competitive ($M = 5.47$, $SD = 1.11$) than did participants

primed with neutral concepts ($M = 5.08$, $SD = 1.07$), $t(123) = 1.98$, $p = .05$, $d = .35$. Analyses including gender as a factor did not reveal a significant main effect of gender or a prime X gender interaction on either perceived trustworthiness ($ps = .72$ and $.23$, respectively) or competitiveness ($ps = .82$ and $.82$, respectively). Our findings demonstrated that, in a manner akin to the effects of invoking rules and sanctions on judgments of trust, mentally activating adversarial legal concepts led our participants to: (a) reduce the degree to which they considered the actors to be trustworthy individuals, and (b) perceive the situation as more competitive.

Mediation analyses. Perceived trust and competitiveness were significantly correlated ($r = -.25$, $p < .01$). We conducted mediation analyses to test whether the effect of priming legal concepts on perceived competitiveness was mediated by perceived trust (i.e., Law Prime \rightarrow Trust \rightarrow Competitiveness). We tested the indirect effect of law priming on perceived competitiveness through trust using Preacher and Hayes' (2004) bootstrapping procedure. We used 10,000 bootstrapped resamples of the data. Analysis revealed a bias-corrected and accelerated 95% confidence interval (BCa CI) of .006 to .139, suggesting that perceived trust was a significant mediator of the effect of law priming on perceived competitiveness because the confidence interval of the indirect effect did not contain zero.¹ The reverse mediation pattern (Prime \rightarrow Competitiveness \rightarrow Trust) was not significant (95% BCa CI of $-.16$ to $.0004$).

STUDY 4

In Study 4, we examined whether priming participants with legal concepts would affect their attitudes towards a political issue in which they had a vested interest. We were specifically interested in whether people, upon thinking about the law and legal system, would become more *opposed* to a political position that conflicted with their self-interest. Just as primed categories can assimilate social perceptions and behaviors, research has shown that stereotype activation

can produce attitudes that converge with the activated stereotype (Kawakami, Dovidio, & Dijksterhuis, 2003; Steele & Ambady, 2006). For example, Kawakami et al. (2003) found that priming participants with the elderly stereotype (vs. unrelated concepts) led to the reporting of attitudes that were more consistent with attitudes stereotypically held by the elderly (e.g., “I think that more money should be given to health care”). Steele and Ambady (2006) similarly found that priming women with the social category “female” increased their preferences for gender-stereotyped academic domains (e.g., arts over math). Utilizing materials from research on the norm of self-interest (Miller & Ratner, 1998; Ratner & Miller, 2001), we examined in Study 4 whether priming legal concepts might elicit attitudes that were more self-interested, presumably because mental representations of the law are associated in memory with concepts relevant to the pursuit of self-interest.

Miller (1999; see also Miller & Ratner, 1996) proposed that a norm of self-interest specifies that “people often act and speak in accordance with their perceived self-interest solely because they believe to do otherwise is to violate a powerful descriptive and prescriptive expectation” (p. 1053). Across a number of studies, Miller and Ratner have demonstrated that, although self-interest per se is often a poor predictor of attitudes and behavior, people still afford it great power in *predicting* attitudes and behaviors. For example, Ratner and Miller (2001) found that although having a vested versus non-vested interest in a particular policy issue did not affect participants’ attitudes towards the issue, participants expected that their peers would be against the issue only if they had a vested interest.

These studies on the norm of self-interest provided us with the appropriate research materials to assess whether priming legal concepts can influence self-interested attitudes. It is important to note, however, that we took a different approach with these stimuli. Whereas Miller

and Ratner examined the disparity between the actual and assumed influence of self-interest, we were primarily interested in whether priming legal concepts could change people's *actual self-interestedness*—that is, whether activating the law would elicit corresponding self-interested attitudes. We were specifically interested in whether priming legal concepts would influence personal attitudes towards an issue when participants had a *vested* interest. Our prediction was that if priming legal concepts heightens people's concern with their own self-interest, then participants primed with legal versus neutral concepts should become more *against* a funding shift that conflicts with their normative self-interest.

Method

Participants

Sixty one students taking introductory psychology from the University of Western Ontario (21% male; M age = 18.72, SD = 1.44) participated for course credit.

Materials and Procedure

Participants were invited to take part in two “unrelated” studies on “verbal processing” and “social and political issues.” Following informed consent, participants were given two manila folders containing the materials for the two studies.

The “verbal processing” study was completed first. It was designed to prime participants with concepts related or unrelated to the law and legal system. Instead of using the LDT procedure, however, we employed word search puzzles to prime participants with either legal or unrelated concepts (see Bargh, Gollwitzer, Lee-Chai, Barndollar, & Trotschel, 2001). Specifically, we gave participants two, 15 X 15 arrays of letters in which they had to search for the 18 words that were listed below the arrays. In the legal concept prime condition, participants first completed a word search puzzle titled “Types of Trees” (e.g., *hickory, juniper, mahogany*)

and then one titled “The Legal System” (*affidavit, attorney, barrister, courts, defendant, judge, judiciary, jury, lawsuit, lawyer, legal, litigation, plaintiff, prosecutor, regulation, subpoena, testimony, trial*). In the neutral prime condition, participants completed the same puzzle about trees and a puzzle called “The Computer” (e.g., *hardware, processor, reboot*). Participants were asked to rate the difficulty of each word search puzzle on a scale from 1 (*very difficult to complete*) to 9 (*very easy to complete*).

In the next study, ostensibly about social and political issues, participants read a description of a bogus current issue pertaining to government funding for research on an enzyme deficiency (see Miller & Ratner, 1998; Ratner & Miller, 2001). In the description, participants learned that the Ontario government was considering shifting funding away from research on a set of gastrointestinal symptoms caused by an enzyme deficiency that develops in 1 in every 7 men (or women) towards the construction of highway billboards designed to reduce cell phone usage while driving. In this study, all participants received information that created a vested interest to oppose the funding shift: our male participants learned that the enzyme deficiency occurred only in men, and our female participants learned that the enzyme deficiency occurred only in women. After reading the issue, we gauged participants’ attitudes towards the funding shift by asking, “To what extent are you in favor of or against Bill 73 (i.e., shifting $\frac{3}{4}$ of the enzyme deficiency research funding to the cell phone usage billboards)?”, which was assessed on a scale ranging from 1 (*strongly against*) to 7 (*strongly in favor*). For the purpose of analyses, responses were reverse-scored so that higher scores indicated stronger attitudes *against* the bill.

Results and Discussion

Supporting our prediction, participants who completed the “Legal System” word search puzzle were more strongly against the funding shift ($M = 5.70$, $SD = .92$) than were participants

who completed the neutral puzzles ($M = 4.71$, $SD = 1.49$), $t(59) = 3.12$, $p = .003$, $d = .80$. Thus, participants who were primed with legal concepts were more opposed to a political position that conflicted with their normative self-interest than were participants who were primed with neutral concepts.

Although this effect conformed nicely to our prediction, it was not clear from these data whether activating legal concepts simply made people more against funding shifts *per se* regardless of their own vested interest. That is, because all participants had a vested interest in the funding shift, we could not discern from our data whether self-interest mattered to our participants or if priming legal concepts would have revealed a similar effect on attitudes towards the funding shift even if the participants had not been vested. Thus, we conducted another study ($N = 62$, 45% males; M age = 18.68, $SD = 1.44$) during the same academic year identical to Study 4 with one important difference: participants learned that the enzyme deficiency occurred in the opposite sex from their own (i.e., all participants were *not* normatively vested in the issue).

The results of this follow-up study confirmed that participant's self-interest was crucial: when participants were *not* vested in the issue, participants primed with the "Legal System" were not significantly more against the funding shift ($M = 5.25$, $SD = 1.34$) than participants primed with trees and computers ($M = 5.70$, $SD = 1.24$), $t(60) = -1.37$, *ns*. This pattern was significantly different from the pattern observed among those participants who had a vested interest in the issue (i.e., there was a significant priming manipulation by vestedness interaction when both samples were analyzed together), $F(1,119) = 9.93$, $p = .002$. There were, however, proportionally more males than females in the follow-up, "non-vested" study. Importantly, males and females did not differ in their attitudes towards the funding shift in either sample ($ps > .89$), and

participant gender did not significantly interact with the effect of the priming manipulation on attitudes towards the funding shift in either sample ($ps > .55$). Moreover, including participant sex as a covariate did not alter the significant prime X vestedness interaction, $F(1,118) = 9.87, p = .002$. Thus, the results of Study 4 support the notion that activating law-related concepts can elicit self-interested attitudes.

STUDY 5

In Studies 1 and 2, we showed that people implicitly associate common legal concepts with competitiveness. In Study 3, we showed that activating these concepts can affect people's perceptions of others' trustworthiness and competitiveness, and, in Study 4, we showed that priming legal concepts can elicit more self-interested attitudes. In Study 5, we sought evidence for the idea that priming legal concepts might also increase competitive behavior.

To understand the effects of priming on behavior, it is important to recognize that overt actions usually reflect multiple influences. Indeed, recent research has demonstrated that the magnitude of priming effects on behavior often depends upon various individual differences (e.g., Dijksterhuis, Chartrand, & Aarts, 2007; Wheeler & Berger, 2007; Wheeler, Morrison, DeMarree, & Petty, 2008). Thus, we also tested whether the effect of priming legal concepts on competitive behavior would potentially depend on an individual difference variable that is directly relevant to competitiveness: participants' zero-sum orientation, or the strength of their belief that in social interactions, one person's gains equate to another person's losses (Janes & Olson, 2003). This dimension has previously been shown to be predictive of competitive behavior in contexts where competition is counterproductive (Janes & Olson, 2003).

In Study 5, participants were primed with the legal or neutral concepts and then took part in a prisoner's dilemma (PD) game with another "person" where they played for points towards a

gift card. For the PD payoff matrix we employed, competition was counterproductive (i.e., competition almost inevitably resulted in fewer points for the participants). We reasoned that, among participants who generally believed that social relations are zero-sum, those who were primed with legal concepts would be more likely to make competitive choices in the game than those who were primed with neutral concepts. That is, we expected that participants who believed that social relations are basically zero-sum in nature would assimilate their behavior to the law-related primes and make more competitive responses during the PD game.

Method

Participants

Eighty six undergraduate students taking psychology courses at the University of Western Ontario participated for monetary compensation. Data from one participant were not included in the analyses because he did not follow instructions. The resulting sample consisted of 23 males and 62 females with a mean age of 21.89 years ($SD = 7.04$).

Materials and Procedure

Participants were invited to participate in “unrelated” studies on “verbal processing styles” and “decision making and social attitudes.” The “verbal processing” study included the same word search puzzles used to prime the legal or unrelated concepts in Study 4 (i.e., completing “types of trees” and “legal system” word search puzzles or “types of trees” and “the computer” word search puzzles). As in Study 4, participants were asked to make ease of completion judgments following each word search puzzle.

Next, participants were told that they would be completing a computerized decision making task along with another “participant” who was allegedly in a different testing room. To facilitate the belief that another person was actually completing the same task, the experimenter

went back and forth between two rooms and appeared to check that the other participant was ready before having the real participant begin the decision making task.

The decision making task was a 25 round, “tit-for-tat” prisoner’s dilemma (PD) game where the participants’ choices (Response 1 or Response 2) were mirrored in the next round by the other “participant.” Participants were told that they and the other participant would each receive a certain number of points depending on the choices made by both of them. To enhance participants’ motivations to take the game seriously, they were told that the number of points they received during the task would determine their chances of winning a \$50 gift card for the university’s bookstore. Prior to beginning the task, the participants were told the following about how they would receive points during the game:

This is how the task works. Should you and the other participant decide to choose Response 1, you both will receive 3 points for that round. If you choose Response 1 and the other participant chooses Response 2, then you will receive 0 points and the other participant will receive 3 points for that round. If you choose Response 2 and the other participant chooses Response 1, then you will receive 3 points and the other participant will receive 0 points for that round. Should you and the other participant decide to choose Response 2, you both will receive 0 points for that round.

From this description, Response 1 represented a cooperative response, whereas Response 2 represented a competitive response. Our interest was whether participants primed with the law would choose more competitive responses during the PD game even though competition was counterproductive (it would inevitably lead to fewer points for the participant). For their reference, participants were shown a payout matrix summarizing the different payouts in the bottom-right corner of the screen throughout the task. Each participant was informed that the other participant was randomly chosen to make the first choice, which was always Response 1. During the task, the time it took the other person to make a response was programmed varied to facilitate the belief that the participants were completing the task with another person. A running

tally of the number of points they and the other participant had received was shown in the bottom-left corner of the screen. Our dependent variable was the number of competitive responses made during the 25 rounds (i.e., 0 to 25).

Following the PD game, participants completed the zero-sum questionnaire (ZSQ; Janes & Olson, 2003), which is a 10-item scale assessing participants' belief that social relations are basically zero-sum in nature (e.g., "In life, there are winners and there are losers"; "I believe that 'an eye for an eye' is a good philosophy to live by").² Participants responded to the items using 7-point scales (1 = *strongly disagree*, 7 = *strongly agree*), with higher scores indicating a stronger zero-sum orientation (scale $M = 3.44$, $SD = .74$). The ZSQ had limited, but acceptable, internal consistency ($\alpha = .55$).³

Results and Discussion

Following Aiken and West (1991), we regressed competitive choices (i.e., the number of Response 2's during the game) onto mean-centered ZSQ scores, a weighted effect coded variable representing the priming manipulation (1 = legal concept, -.93 = neutral), and their cross product interaction term. Neither main effect achieved statistical significance ($ts < .70$, $ps > .48$), but there was a significant priming manipulation X ZSQ interaction effect on competitive choices ($B = 3.07$, $SE = 1.20$), $t(81) = 2.56$, $p = .01$, $sr^2 = .07$. Shown in Figure 1, follow-up analyses revealed that ZSQ scores significantly predicted competitive choices within the law-related prime condition ($B = 3.86$, $SE = 1.82$), $t(81) = 2.13$, $p = .04$. Within the neutral prime condition, a non-significant relation in the opposite direction was observed between ZSQ and competitive responses ($B = -2.05$, $SE = 1.43$), $p = .16$. Analyzed differently, priming legal concepts (versus neutral words) resulted in increased competitive choices during the PD game at 1 SD above the mean of ZSQ ($B = 2.58$, $SE = 1.23$), $t(81) = 2.09$, $p = .04$, but not at 1 SD below the mean of

ZSQ ($B = -1.96$, $SE = 1.24$), $p = .12$. Additional moderated regression analyses including gender as a predictor variable did not reveal any significant effects of gender ($ps > .22$; including the prime X ZSQ X gender interaction, $p = .98$).

These results indicated that, at least in the context of this PD game, activation of legal concepts did not lead to more competitive responses overall; the behavioral effect of activation depended upon individuals' existing beliefs about the competitive nature of social relations. Specifically, participants who believed that social relations operate in a zero-sum fashion competed more during the PD game when legal (vs. neutral) concepts were activated.

GENERAL DISCUSSION

Utilizing methodologies from social cognition research, across 5 studies we found general support for the notion that activating legal concepts can influence situational construal, attitudes, and, depending on participants' zero-sum orientation, competitive behavior. In Study 1, we demonstrated that priming legal concepts increased the cognitive accessibility of competitiveness during a word completion task. In Study 2, we found that participants found it easier to associate general law-related exemplars with competition than cooperation during a SC-IAT. Further, after common legal concepts were subtly activated, participants in our studies: (a) considered unknown social actors as less trustworthy and perceived the situation as more competitive (Study 3), (b) became more against a policy issue when it conflicted with their normative self-interest (Study 4), and (c) behaved more competitively during a prisoner's dilemma game when they believed that social relations were basically zero-sum in nature (Study 5).

Limitations and Applications

Although our studies provide initial support for our hypotheses, there are at least three limitations worth noting. First, our samples were composed of mostly females. Although we did not find any significant effects of gender across our studies, males and females may differ in important ways that may limit or enhance the effects of priming legal concepts on perceived trust and competitiveness and competitive behavior in contexts not examined in the current research. For example, activating legal concepts might not increase competitive behavior in contexts where males (vs. females) are already predisposed to increase their competitive tendencies (e.g., in status conflicts; Wilson & Daly, 1985). Second, at least for Studies 4 and 5, the legal concept primes represented more abstract concepts relating to human activities and roles than the words and themes we used for the control primes (i.e., trees, computers). Thus, although our control primes were likely neutral with respect to “competitiveness,” it is not clear whether using other neutral concepts more related to human roles and activities as “control” words (e.g., computer programmers instead of computer processes) would result in similar adversarial legal concept priming effects. Finally, our samples consisted of mostly younger participants who likely did not have the more everyday encounters and experiences with the legal system, such as those involving getting married (and divorced), paying taxes, and purchasing homes. That is, younger participants may be biased to view the legal system as more adversarial because their view of the legal system primarily comes from mass media (which portrays the more adversarial elements of the law). Thus, it is unclear whether the effects observed in this paper generalize to samples with more everyday and direct experiences with the legal system.

We have also yet to fully explicate the potential moderating factors involved in the links among law, competitiveness, and the pursuit of self-interest. For example, the results of Study 5 suggest that individual differences relevant to our analysis (e.g., beliefs about the zero-sum

nature of social relations) may play an important moderating role in the effects of mentally activating legal concepts on competitive behavior. Perhaps other individual differences relevant to our analysis play a moderating role in other consequences of legal consciousness. For example, trust orientations (beliefs that people are basically trustworthy or untrustworthy; Couch, Adams, & Jones, 1996) might moderate the effects of activating the law on perceptions of trust shown in Study 2. Or people who implicitly associate legal concepts with competition more strongly (as in Study 2)—perhaps because they are heavy consumers of legal media or live in a society that more strongly adheres to an adversarial legal system—might trust others less and behave more competitively when legal concepts are mentally activated. Finally, given that we employed only one PD game playing strategy for the “other” participant in Study 5 (i.e., to always mirror the real participant’s responses), it would be interesting to examine whether similar effects might be observed using different game playing strategies (e.g., purely competitive strategies).

The results of Study 3 also suggest that interpersonal trust may play an important mediating role in the effects of priming the law on competitive behavior. Indeed, Smeesters, Wheeler, and Kay (2009) recently highlighted the important role perceptions of interpersonal others play in prime-to-behavior effects. In Study 5, we did not assess participants’ perceptions of how trustworthy the other “participant” was. Our conceptual analysis and the results of Study 3, however, suggest that the effect priming legal concepts on increased competitiveness during the PD game among people scoring higher on the ZSQ may result from corresponding reductions in interpersonal trust. That is, priming the law may have resulted in a decreased expectation that the “other” participant would cooperate, which, in turn, led participants who believed that social relations are basically zero-sum in nature to compete more. Similarly, given the results of Study

4, it would be interesting to examine whether increased self-interested attitudes evoked by the activation of legal concepts leads some people to trust others less or to behave more competitively (as we found in Studies 3 and 5, respectively). Examining such questions will help us better understand the circumstances under which, and the types of people for whom, invocations of the law influences trust and cooperation.

More generally, our research begins to answer the call made by Peachey and Lerner (1981) for psychological research examining the unrecognized psychological and behavioral consequences of the mere existence of the law. Specifically, they suggested that the model of human nature implicit in the law may lead people to accept the assumption that people are inherently self-seeking (labeled by Tapp, 1974, as the myth of lawlessness) and need to be controlled by rule of law (labeled by Tapp, 1974, as the myth of legality). The research presented here provides initial support for these ideas by demonstrating that subtly activating common legal concepts leads to reduced interpersonal trust and increased self-interestedness. An additional aspect of Peachey and Lerner's (1981) analysis, however, is that these processes may become self-fulfilling. Ironically, the solution or remedy for reduced trust and cooperation instigated by exposure to law may be the desire for more law! In this way, "legal institutions become self-contained feedback mechanisms that call for an even greater exercise of the law" (Peachey & Lerner, 1981, p. 440).

Of course, whether invocations of the law in more everyday disputes lead to less cooperation, reduced trust, and stronger attitudes against opposing viewpoints likely depend on a number of factors, including, for example, existing levels of trust between parties, one's apparent or real vestedness in an issue or dispute, and whether such invocations are considered legitimate (see Tyler & Jost, 2007). Nevertheless, our results begin to suggest that introductions of law into

disputes (e.g., “I’ll have to call my lawyer”) that might otherwise be settled through customs and norms may change the very nature of disputes (see Ellickson, 1991). Specifically, our results begin to suggest that invocations of the law may lead disputing parties to perceive each other as less trustworthy and more competitive, which may have implications for whether they cooperate with one another. Although there are likely a number of practical factors that influence whether parties are given to pursue dispute resolution through the “law,” one such factor might be the existing procedural requirements (e.g., the Statute of Limitations) that force parties to pursue legal remedies sooner than they might want to. Introducing the law in such circumstances may not only reduce trust and increase competitiveness between parties per the processes we have examined, but may also reduce the time that disputing parties are able to spend on non-legal—and presumably more cooperative—dispute resolution.

General Conclusions

We opened this paper by suggesting that, as a ubiquitous social system, law can shape social reality and provide interpretive frameworks for social relations. Indeed, the mere existence of law and the manner in which Anglo-American legal systems operate (i.e., as adversarial systems) may lead people to adopt the assumptions that people are basically self-seeking and cannot be trusted. We assumed that much of what people learn about law and the legal system comes from processes of legal socialization, including the consumption of popular culture portrayals of the adversarial legal process. The present studies contribute to the existing psycho-legal research literature by supporting the idea that legal consciousness has important implications for everyday cognition and action. Indeed, As Silbey (2005) noted, “law is not merely an instrument or tool working on social relations, but is also a set of conceptual

categories and schema that help construct, compose, communicate, and interpret social relations” (p. 327).

Taken to the extreme, one might infer from our analysis and research that the law has limited social value. This conclusion, however, is not the one we draw. Although some psycho-legal scholars have debated whether law is a “good” thing (see, e.g., Fox, 1993; Melton, 1992), the specific goal in our research was to better understand the psychology of law by examining empirically the implicit associations people hold between common legal concepts and competitiveness and the potential consequences of those associations for social perceptions and behavior. Our view is that the law serves many important functions in society, including, among other things, the provision of services, environmental protection, and advancing human rights (see Galligan, 2006). Nevertheless, our findings provide empirical support for the notion that people implicitly associate the law with competitiveness and that activating the law can have adverse effects on interpersonal trust and cooperation.

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Notes

¹ We conducted another study at the University of Calgary ($N = 86$; 33% male) using nearly the same scenario and similar dependent measures of perceived trust and competitiveness. This replication study revealed similar effects of subliminal legal concept (vs. neutral) priming on perceived trust ($p = .02$, $d = .51$) and competitiveness ($p = .19$, $d = .29$) in the predicted directions. Importantly, although the direct effect of legal concept priming on perceived competitiveness was not statistically significant (although the effects sizes between studies are similar; see Shrout & Bolger, 2002), analyses of the indirect effect of legal concept priming on competitiveness through trust revealed significant mediation (95% BCa CI of .02 to .50), replicating the pattern reported in the current study. Moreover, analyses conducted with the measures standardized and the datasets combined ($N = 211$, 35% male) revealed significant effects of legal concept priming on perceived trust ($p = .001$, $d = .45$) and competitiveness ($p = .018$, $d = .33$). Additional analyses including gender as a factor revealed no main effects of gender ($ps > .15$) or prime X gender interactions ($ps > .31$). The same mediation pattern was observed with the combined sample (95% BCa CI of .018 to .118).

² We assessed zero-sum beliefs after the other tasks because we were concerned that administering the ZSQ items at the beginning of the session would both prime competitiveness and introduce demand characteristics. Importantly, the priming manipulation did not influence scores on the ZSQ overall ($p = .89$).

³ Previous administrations of the ZSQ resulted in Cronbach's alphas of .61 and .70 (Janes & Olson, 2003).

Figure Caption

Figure 1. Competitive choices during the Prisoner's Dilemma game as a function of priming legal concepts and participants' zero sum orientation.

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