Substantive Justice

How the Substantive Law Shapes Perceived Fairness

by

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Psychology of justice research has demonstrated that individuals are concerned with both the process and the outcomes of a decision-making event. While the literature has demonstrated the importance of formal and informal aspects of procedural justice and the relevancy of moral values, the present study focuses on introducing a new form of justice: Substantive justice. Substantive justice focuses on how the legal system uses laws to constrain and direct human behavior, specifically focusing on the function and the structure of a law. The psychology of justice literature is missing the vital distinction between laws whose function is to create social opportunities versus threats and between laws structured concretely versus abstractly. In the present experiment, we found that participant evaluations of the fairness of the law, the outcome, and the decision-maker all varied depending on the function and structure of the law used as well as the outcome produced. Specifically, when considering adverse outcomes, individuals perceived laws whose function is to create liability (threats) as being fairer when structured as standards (abstract guidelines) rather than rules (concrete guidelines); however, the opposite is true when considering laws whose function is to create eligibility (opportunities). In juxtaposition, when receiving a favorable outcome, individuals perceived laws whose function is to create liability (threats) as being fairer when defined as rules (concrete guidelines) rather than standards (abstract guidelines).
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**Substantive Justice: How the Substantive Law Shapes Perceived Fairness**

In 1978, Thibaut and Walker asked the question: Do people’s evaluations of the justness and fairness of a decision reached and outcome rendered depend on the formal process used? For example, do individuals perceive a process where the individual parties engage in *adversarial* turn-taking as being fairer than one where the decision-maker engages in *inquisitorial* question and answer session? Their subsequent work demonstrated how the procedural setting in which a decision-making event is situated has distinct and dramatic effects on the perceived fairness of the process, the outcome, and the decision-maker. Since their initial work on procedural justice, the research area has grown to include both the formal procedures studied by Thibaut and Walker and the informal quality of interpersonal treatment and voice studied by Tyler (Skitka, 2003; Tyler, 1987, 2006; Tyler, Degoey, & Smith, 1996; Tyler, Rasinski, & Spodick, 1985).

The present research asks a similar question to that of Thibaut and Walker: Do people’s evaluations of the justness and fairness of a decision reached and outcome rendered depend on the *substantive decision-making* criterion used? For example, do individuals perceive a law that defines speeding as *driving over the posted speed limit* as being fairer than one that defines it as *driving imprudently under the circumstances*? Substantive justice, unlike procedural justice, is concerned with how the individual evaluates the *substantive* rather than procedural law used to produce an outcome.

The overarching goal of this research is to demonstrate how the subtleties of the substantive law influence an individual’s sense of substantive justice. More specifically, the present experiment outlines how our perceptions of the justness and fairness of laws, the outcomes they produce, and the decision-maker depend in part on how the substantive functions of the law interplay with the different ways in which laws can be structured. Thus, this paper bears two burdens: First it must unpack the different functions and structures of substantive law. Second it must link those functions and structures to intrapersonal mechanisms that are sensitive to such differences.
Substantive Law

When a person receives some legal outcome, whether it is favorable or adverse, that outcome is a product of both substantive and procedural law. Substantive law defines the criterion for reaching a particular outcome in a given domain of law, e.g. criminal, torts, property, etc. For example, if the substantive criminal law defines speeding as driving over the posted speed limit then a person will receive a speeding ticket (the adverse outcome) when the speed of their vehicle is greater than the posted speed limit.

In contrast, procedural law dictates the mechanisms involved in the application of the entire body of substantive law. Using the speeding example, procedural criminal law dictates that if you choose to challenge your ticket by pleading not guilty, then you will engage in an adversarial process wherein you can challenge the evidence provided by the issuing officer supporting the claim that you violated the speeding law. This would be true regardless of the specific criminal violation (e.g. speeding, burglary, or murder), because procedural criminal law applies to the whole domain of substantive criminal law.

Despite the clear diversity of topic areas that substantive law addresses, legal scholarship has shown that there are some features of substantive law that generalize across these different legal domains. In particular, it is theorized that the functions and structures of the substantive law are relevant to an individual’s substantive justice evaluations.

The Functions of Substantive Law: Liability vs. Eligibility. Within the substantive justice framework, the function of a substantive law refers to the role that a substantive law plays in governing our social relationships with others individually or collectively. This definition of function rests on a division noted by H.L.A. Hart between the laws that command us to act or refrain from acting and the many other laws that enable, empower, and facilitate our social relations with others individually or collectively (Hart, 1961). That is, substantive laws encompass more than just the commandment to act or refrain from acting backed by the threat of punishment embodied in things like speeding tickets. From Hart’s perspective, these primary substantive laws
that command our conduct are distinct from secondary substantive laws that govern our social relationships by creating, altering, or extinguishing primary substantive laws. For example, the laws governing social security define an individual’s eligibility to receive social security benefits, which is the creation of a relationship between the individual and society.

Substantive justice captures Hart’s distinction between primary and secondary substantive laws by referring to the function of the law. As such, laws whose function it is to command action or inaction by threatening individuals with punishment are defined as substantive liability laws. Comparatively, substantive eligibility laws serve the function of creating opportunities for qualifying individuals to receive benefits from society. These two functions are not necessarily exhaustive of all the substantive functions of law; the two enumerated functions merely serve as a starting point.¹

The Substantive Structure of Law: Rules vs. Standards. Jurisprudence and legal scholarship often emphasize that substantive laws can vary along a continuum of how concretely a law is structured. For example, liability for speeding might be defined as driving over the posted speed limit. Or it might be defined as driving at an unreasonable and imprudent speed under the circumstances. The first definition has a very clear criterion for triggering liability: If your velocity is greater than the posted speed limit, you are liable for speeding. But the second definition is far more ambiguous: Unreasonable and imprudent are undefined terms. In the legal system, these two example definitions serve as endpoints along a continuum of substantive structure and are commonly referred to as “rules” for concrete laws and “standards” for abstract laws (Scalia, 1989; Sullivan, 1992; Post, 1994).

From the legal system’s perspective, the purpose of this continuum is to afford individual decision-makers differing levels of discretion when reaching an outcome, which, in turn, influences the predictability of a decision-maker (Scalia, 1989; Sullivan, 1992). Because rules

¹ In modern societies, substantive laws are infused with various purposes to further certain policies by the individuals who authored them. For the present research, however, the substantive functions of the law are focused narrowly on the individual receiving some outcome and not the individuals responsible for writing the law, adjudicating the law, or enforcing the law.
clearly delineate the facts necessary to trigger a predetermined outcome, rules necessarily constrain the decision-maker’s discretion and presumably increase the predictability of rendering a particular outcome. Conversely, the amorphous language embedded in a standard gives broad discretion to the decision-maker, which decreases the predictability of rendering a particular outcome. For example, if speeding is defined as a rule, the judge is allowed to only consider evidence regarding the vehicle’s speed and must ignore any additional considerations provided by the defendant. However, when speeding is defined as a standard, the judge is free to consider, disregard, or balance the vehicle’s speed against other considerations such as the reason given for speeding, weather conditions, or traffic conditions.

The Psychology of Substantive Justice

To date, justice psychology research has explored the formal and informal procedural aspects of the decision making process (Thibaut & Walker, 1978; Tyler, 1987, 2006; Tyler, Degoe, & Smith, 1996; Tyler, Rasinski, & Spodick, 1985), the salience of outcomes to personal identity (Skitka, 2003; Skitka & Crosby, 2003), and our expectations about the proportionality of outcomes (Lerner, 1974, 2003). While the intrapersonal process of evaluating the justness or fairness of an outcome rendered can be approached from many angles, treating fairness and justice as evaluations of substantive functions and substantive structure of a law is novel. The proposed psychological mechanisms relevant to substantive justice evaluations involve two distinct frameworks: affordances and construal level.

Affordances. A classic perspective on animal and human behavior posits that at the grossest level of analysis, survival necessitates that an organism be able to do two things: (1) correctly identify the threats and opportunities afforded to it by its environment and (2) correctly act to avoid threats and approach opportunities (McArthur & Baron, 1983; Elliot & Covington, 2001). Within the natural world, threats and opportunities take on a myriad of different forms ranging from predators to potential mates. Within the human social world, substantive laws impose order on the social world and human relationships through the functional use of liability
laws to create threats and eligibility laws to create opportunities. Thus, it is hypothesized that this
same affordance framework applies to how individuals evaluate the threats and opportunities
created by substantive laws. Specifically, adverse legal outcomes are perceived as unfair and
unjust because individuals are forced by the substantive law’s compulsory power to either
approach threats or avoid opportunities.

The Outcomes for the Individual: Favorable vs. Adverse. When applied to an
individual, substantive and procedural law renders one of two possible outcomes: favorable or
adverse. From the recipient’s perspective, what is favorable and what is adverse will depend on
the substantive function of the law. In a favorable eligibility outcome, an individual successfully
approaches an opportunity provided by the law. In contrast, in a favorable liability outcome, an
individual successfully avoids a threat made by the law.

By comparison, in an adverse eligibility outcome, an individual must forgo, or avoid, an
opportunity provided by the law. For example, being ruled ineligible for social security benefits
means forgoing the opportunity to receive a benefit that exists broadly in society. Similarly, in an
adverse liability outcome, an individual must accept, or approach, a threat provided by the law.
The possible threat of sanctions becomes unavoidable because of the power of the legal system to
enforce the outcomes rendered. For example, in some states when a defendant is found guilty of
murder, the legal system has the power and authority to kill them.

Construal level. Construal level theory details how concrete or abstract goal-relevant
actions are cognitively constructed (Liberman and Trope 1998; Trope, Liberman, and Wakslak
2007). More generally, construal level theory stipulates that objects, events, or individuals can be
perceived along a dimension of intrapersonal distance using one of four theorized metrics:
physical distance, temporal distance, probabilistic distance, and social distance (Fujita, Henderson,
Eng, Trope, & Liberman, 2005; Liberman & Trope, 1998; Liberman, Sagristano, & Trope, 2002;
Trope & Liberman, 2000, 2003; Todorov, Goren, & Trope, 2007; Wakslak, Trope, Liberman, &
Alony, 2006). The fundamental premise of the theory is that close objects, events or individuals
along any of these four metrics will have concrete, specific, discrete features, while those that are
distant will be represented as abstract, unobservable, broad concepts. For example, using the
temporal distance metric, participants were assigned to one of two conditions where they were
asked to imagine receiving a $100 either tomorrow (proximal in time) or a year from tomorrow
(distal in time). When asked to describe what they would do with that money, those in the
proximal condition gave concrete statements like “deposit it in my checking,” while those in the
distal condition gave abstract statements like “save it for something.”

Knowing whether the substantive law affords you a threat or an opportunity is the first of
a two part evaluative process. To act correctly, the individual must also be able to determine the
successful methods by which opportunities can be approached and threats can be avoided. This
information is embedded in the structure of the substantive law. Eligibility and liability laws that
are concrete rules provide certainty to the individual about what will satisfy the law, e.g. driving
over the posted speed limit is satisfied when the speed of the vehicle is greater than the posted
speed limit. In contrast, when substantive laws are abstract standards, they provide far less
certainty to the individual about what will satisfy the law. For example, if the law is driving at an
unreasonable and imprudent speed under the circumstances it is difficult to know what
combination of situational factors or behaviors I might engage in that constitute behaving
unreasonably. Thus, the structure of a substantive law has direct implications for how an
individual constructs the steps necessary to avoid a threat or approach an opportunity: substantive
laws structured as rules will prime in the individual a low construal level because of the law’s
concreteness, while laws structured as standards will prime in the individual a high construal level
because of the law’s abstractness.

**Linking Substantive Functions and Structure: Affordances and Construal Level.**

Together, affordances and construal level form a general theoretical framework for
exploring why an individual’s justice evaluations would be sensitive to the functions and structure
of a substantive law. The function of a substantive law invokes in an individual the perception of
either opportunities or threats in the social environment. The structure of a substantive law primes in the individual either low, concrete construal or high, abstract construal of how to best approach those opportunities or avoid those threats created by the substantive law.

Given this general theoretical framework, one question that arises is whether individuals might have a preference or affinity for affordance-construal level pairs. For example, a preference for avoiding threats through concrete goal-relevant actions might exist because concrete construal provides the clearest and most certain plan for avoiding the threat. By extension then, liability laws that are structured as rules would be perceived as more fair and just than liability laws that are structured as standards. Indeed, this is what occurs in related research involving the individual’s trait level disposition to see threats versus opportunities in their environment, rather than in their single situation evaluation. Those individuals who were measured to be chronically vigilant to avoid threats (a prevention focus) were also more concrete thinkers. Moreover, those who were chronically eager to approach opportunities (a promotion focus) were also most abstract thinkers (Lee, Keller, Sternthal, 2010). This suggests that eligibility laws structured as standards will be perceived as more fair and just than eligibility laws that are structured as rules. Additional experimental research in this field has shown that when an individual is situationally primed to be in an approach-opportunities mindset, arguments that utilize abstract benefits rather than concrete examples are more persuasive, while the opposite is true for an avoid-threats mindset (Gun, Higgins, de Montes, Estourget, & Valencia, 2005; Forster & Higgins, 2005). Researchers have replicated this pattern with apologies: Matching abstract apologies with an approach-opportunities mindset and concrete apologies with an avoid-threats mindset is more persuasive than other apology-mindset pairings (Santelli, Struthers, & Eaton, 2009).

However, because the aforementioned research focuses on priming mindsets to avoid threats or approach opportunities, applying this literature to substantive justice evaluations only addresses instances in which the individual receives a favorable legal outcome. Theoretically, there is reason to predict that outcomes will moderate the interaction between the substantive
function and structure of the law. Outcomes matter because in the two-stage evaluation process of first identifying affordances and then selecting the appropriate actions to take, construal level is linked to this second stage of selecting the appropriate action; i.e., construal level is related to the approach/avoid behaviors and not the initial opportunity/threat assessment. In essence, the identification of opportunity versus threat has become paired with the evolutionarily successful approach versus avoid behaviors.

Yet when the law uses its coercive power to render an adverse outcome, it is not changing the individual’s initial opportunity versus threat identification. Instead, an adverse outcome changes the individual’s approach -versus -avoid behavior, which has been linked in other research to high, abstract versus low, concrete construal level. As such, when an individual receives an adverse liability outcome and must approach a threat, they will perceive the fairer law to be a standard and not a rule. However, when an individual receives an adverse eligibility outcome and must avoid an opportunity, they will perceive the fairer law to be a rule and not a standard.

**Specific Hypotheses**

The present research explores the interplay between the substantive justice concerns of function and structure in the larger context of the kind of outcome received. As detailed above, theory and related research suggests that there should be an interaction between the function and structure of a substantive law that should influence the perceived fairness of the law, the outcome, and the decision-maker. Moreover, the influence of substantive justice on the perceived fairness of the law, the outcome, and the decision-maker should be contingent on the specific outcome received. As such, we expect the following:

1. **Hypothesis 1.** When considering **favorable outcomes**, if the substantive function of a law is **eligibility**, then a **standard** will be viewed as **fairer** than a **rule**; whereas, if the substantive function of the law is **liability**, then a **rule** will be viewed as **fairer** than a **standard**.
2. **Hypothesis 2.** However, when considering *adverse outcomes*, a *standard* will be evaluated as *fairer* than a *rule* when dealing with *liability*, while a *rule* will be evaluated as *fairer* than a *standard* when dealing with *eligibility*.

3. **Hypothesis 3.** Lastly, individuals should inherently prefer favorable outcomes over adverse outcomes; as such, favorable outcomes should be uniformly perceived as being fairer and more just than adverse outcomes.
Methods

Participants and Design

A full factorial design of 2(Function: Liability vs. Eligibility) by 2(Structure: rule vs. standard) by 2(Outcome: favorable vs. adverse) produced eight different between-subject conditions. Three hundred and seventy-one participants from an introductory psychology research pool participated in an online survey for course credit. The mean participant age was 18.86 years old, gender was 50.9% male, and 62.0% of participants self-identified as Caucasian/White.

Materials and Procedures

Chronology. When starting the experiment, participants were asked to fill out several individual difference scales: Personal Need for Structure (Neuberg & Newsom, 1993), Moral Foundations Questionnaire (Haidt & Graham, 2007; Graham, Haidt, & Nosek, 2008), Procedural and Distributive Belief in a Just World (Lucas, Alexander, Firestone, & LeBreton, 2007). These scales were included for exploratory purposes. For example, the personal need for structure (PNS) construct broadly represents an individual’s cognitive motivational state by tapping into an individual’s desire for simple structure and response to lack of structure (Neuberg & Newsom, 1993). Individuals who score high on both of the PNS sub-scales tend to exhibit rigidity in their thinking, manifest a preference to be decisive when making decisions, and experience discomfort in and intolerance of ambiguous situations. Thus, such an individual might likely have an inherent preference for rules relative to more ambiguous standards, which could be reflected in the individual’s perceptions of a law’s fairness. Moreover, as discussed in the introduction, much of the research linking construal level with approach and avoidance research has used individual difference measures. Based on that research, the General Regulatory Focus Measure (Lockwood, Jordan, Kunda, 2002), and the Behavioral Identification Form (Vallacher and Wegner 1987) were included for diagnostic purposes if one of the experiments manipulations proved to be ineffective.

After filling out the individual difference scales, participants were then instructed to imagine that they are working a full-time job and that they had unfortunately become recently injured. They were informed that state law requires the human resources department (HR) to
review employee issues relating to disability insurance coverage. Participants were asked to keep these facts in mind while imagining they received a letter from human resources detailing the specific state law applied by HR and the outcome rendered. This letter from HR contained the manipulations for all three variables. The texts of these manipulations are included in appendix B.

As the participant read the letter, they were first informed of the letter’s purpose (function manipulation), followed by the relevant state law (structure manipulation) that HR would be applying to their case. The letter then goes on to describe the facts involved with the participant’s injury. The letter concludes with HR reaching a decision (outcome manipulation) and providing justification for the decision by making explicit reference back to the substantive law.

**Substantive Function Manipulation.** The first manipulation involves the substantive function of the law. In the eligibility conditions, the participant is petitioning for disability insurance benefits because of a recently sustained injury. Comparatively, in the liability conditions, the participant is already receiving disability benefits and is instead asked to imagine that they might be fined money for violating a requirement of their benefits enrollment.

**Substantive Structure Manipulation.** The second manipulation describes the substantive structure of the law being applied by the human resources department. In the eligibility conditions, the function of the law was to determine whether or not the participant is eligible for disability benefits. Structurally, the definition of eligibility was manipulated to be either a rule, “less than part-time (20 hours) at their previously held job responsibilities” or a standard, “less than a reasonable amount of time at their previously held job responsibilities.”

Comparatively, in the liability conditions, the function of the law was to determine whether or not the participant was liable for violating a requirement of their disability benefits enrollment. As such, the structure of the liability law was defined either as a rule, “attending 100% of their physical therapy and doctor visits” or a standard, “actively following the doctor’s prescribed course of treatment for their injury.”
**Outcome Manipulation.** The final manipulation deals with the outcome reached by the human resources department, namely whether the participant is found to be eligible versus ineligible or liable versus not liable.

**Dependent Measures.** After the presentation of the manipulations, participants were asked five questions evaluating the substantive law using the following format: “How [fair, just, right, correct, good] do you think this law is?” Using the same question pattern, participants then rated the fairness of the outcome received, and the fairness of the entity that ultimately made the decision. All fifteen questions were on a 7 point Likert scale, ranging from very unfair to very fair.

Finally, upon completion of the dependent measures, participants were asked to fill out a brief demographics questionnaire. Additionally, to help screen participants who might have personal biases due to past experiences, specific questions relating to the subject matter were utilized such as, “Have you ever been on disability insurance or know someone who has?”
Results

Data Validation

Of the 371 participants, 61 (16%) of the participants were excluded due to having one or more of the following reasons. Thirty-eight participants were excluded for either having two or more missing values across all 15 dependent variables or for failure to complete the survey and 32 of those individuals were missing data on most of the 15 dependent variables. Four responses were excluded as they came from two separate participants who stated that they took the experiment twice. Another thirteen responses were excluded on the basis of having extreme survey duration times greater than the 95th percentile cut off of 65 minutes e.g. taking 659 minutes to complete the survey. The remaining six were excluded for either stating that they paid no or very little attention while completing the survey or had a difficult time identifying with and emotionally connecting to their imagined persona in the manipulation. This left 310 participants for the subsequent analyses.2

Analysis of Dependent Measures

Composite Dependent Measure Reliabilities. To determine whether to utilize composites of the dependent variables in subsequent analyses, Cronbach's Alpha was computed for each of the three sets of five dependent variables with the means, standard deviations, and correlations for the three indices reported in Appendix A, Table 1a. The reliabilities within each condition are summarized in Appendix A, Table 1b. The reliabilities are uniformly high across conditions, with overall reliabilities for the Law, Outcome, and Decision-Maker scales being .933, .958, and .958 respectively. As such, the remaining analyses all utilize the composite scales formed by taking the average of the individual items.3

2 Additional analyses were conducted using the individual differences measures reported in the methods. However, none of those analyses is reported here because their inclusion did not substantively impact the main analyses of the primary dependent variables.

3 While the three dependent measures are strongly correlated with each other, a $\chi^2$ difference test comparing the three factor ($\chi^2 (63) = 214.933, p < .001$) versus a two factor ($\chi^2 (76) = 714.787, p < .001$) solution where the outcome and decision-maker items were allowed to load on a single factor was significant ($\chi^2$-diff (13) = 499.795, $p < .001$). The significantly improved fit of the three-factor solution indicates that even though the Outcome and Decision-Maker composites are strongly correlated with each other, it is still better to treat the three scales separately.
Analysis of the Perceived Fairness of the Law. A 2(Substantive Function: Eligibility, Liability) x 2(Substantive Structure: Rule, Standard) x 2(Outcome: Favorable, Adverse) between subjects ANOVA was conducted on the perceived fairness of the law composite, summarized in Table 2a. A significant three-way interaction was detected, $F(1, 302) = 21.326, p < .001, \eta_p^2 = .066$, and a significant main effect for Outcome was detected, $F(1, 302) = 37.248, p < .001, \eta_p^2 = .110$. As shown in Figure 1, the three-way interaction is demonstrative of the hypothesized pattern of results, wherein the two-way interaction of substantive function with substantive structure is moderated by whether participants experience favorable versus adverse outcomes Table 2b summarizes the means for each condition. A sequence of simple effects tests was conducted to probe the significant three-way interaction.

Simple Two-Way Interaction Effect Tests. To explore the three-way interaction, a simple interaction test of each two-way interaction between substantive function and structure was conducted within each level (favorable, adverse) of the outcome variable. Within the favorable outcome conditions, the simple two-way interaction was significant $F(1, 302) = 6.93, p = .009, \eta_p^2 = .022$. Similarly, within the adverse outcome conditions, the simple two-way interaction was also significant $F(1, 302) = 14.49, p < .001, \eta_p^2 = .045$.

Simple Pairwise Comparisons of Substantive Structures. On the basis of the significant two-way interaction tests and in order to directly test the hypothesized pattern of results, simple pairwise comparison tests were conducted comparing rules versus standards within each level of substantive function and outcome.

Hypothesis 1. In the favorable liability conditions, rules ($M = 4.517$) were perceived to be significantly more fair than standards ($M = 3.860$), $F(1, 302) = 5.359, p = .021, \eta_p^2 = .017$; however, no such difference was found in the favorable eligibility conditions, $F(1, 302) = 1.473, p = .226, \eta_p^2 = .005$.

Hypothesis 2. In the adverse liability conditions, standards ($M = 3.836$) were significantly fairer than rules ($M = 2.891$), $F(1, 302) = 10.087, p = .002, \eta_p^2 = .032$. Moreover,
rules \((M = 3.636)\) were found to be significantly fairer than standards \((M = 2.900)\) in the \textit{adverse eligibility} conditions, \(F(1, 302) = 6.215, p = .013, \eta^2_p = .020,\)

\textbf{Main Effect of Outcomes.} Regarding hypothesis 3, the main effect for outcomes was significant and showed that participants perceive the fairness of the law producing a favorable outcome \((M = 4.203)\) as being significantly fairer than one producing an adverse outcome \((M = 3.316), F(1, 302) = 37.248, p < .001, \eta^2_p = .110.\)

\textbf{Analysis of the Perceived Fairness of the Outcome.} Using the same analytic plan as the previous analysis, a 2x2x2 ANOVA was conducted on the perceived fairness of the outcome composite, summarized in Table 3a. A significant three-way interaction was detected, \(F(1, 302) = 12.894, p < .001, \eta^2_p = .041,\) and a significant main effect for Outcome was detected, \(F(1, 302) = 175.443, p < .001, \eta^2_p = .367.\) As shown in Figure 2, the three-way interaction replicates the analysis of the perceived fairness of the law. Table 3b summarizes the means for each condition. Again a sequence of simple effects tests was conducted to probe the significant three-way interaction.

\textbf{Simple Two-Way Interaction Effect Tests.} To explore the three-way interaction, a simple interaction test of each two-way interaction between substantive function and structure was conducted within each level of the outcome variable. Within the \textit{favorable outcome} conditions, the simple two-way interaction was significant \(F(1, 302) = 5.44, p = .020, \eta^2_p = .018.\) Similarly, within the \textit{adverse outcome} conditions, the simple two-way interaction was also significant \(F(1, 302) = 6.60, p = .011, \eta^2_p = .021.\)

\textbf{Simple Pairwise Comparisons of Substantive Structures.} Again, on the basis of the significant simple two-way interaction, simple pairwise comparison tests were conducted comparing the perceived fairness of outcomes produced by rules versus standards within each level of substantive function and outcome.

\textit{Hypothesis 1.} In the \textit{favorable liability} conditions, rules \((M = 5.137)\) were perceived to be significantly fairer than standards \((M = 4.515), F(1, 302) = 4.768, p = .030, \eta^2_p = .016,\) while a
difference was not detected in the favorable eligibility conditions, $F(1, 302) = .502, p = .479, \eta^2_p = .002.$

**Hypothesis 2.** In the adverse liability conditions, standards ($M = 3.258$) were perceived to be significantly fairer than rules ($M = 2.537$), $F(1, 302) = 5.838, p = .016, \eta^2_p = .019.$ However, in the adverse eligibility conditions, rules ($M = 3.159$) were perceived to be only marginally significantly fairer than standards ($M = 2.611$), $F(1, 302) = 3.425, p = .065, \eta^2_p = .011.$

**Main Effects of Outcomes.** Again regarding hypothesis 3, the main effect for outcomes was significant and participants perceived a favorable outcome ($M = 4.822$) as being significantly fairer than an adverse outcome ($M = 2.891$), $F(1, 302) = 175.443, p < .001, \eta^2_p = .367.$

**Analysis of the Perceived Fairness of the Decision-Maker.** Lastly, the effect of the manipulations on the perceived fairness of the decision-maker was examined using the same analytic scheme as the prior analyses. A 2x2x2 ANOVA was conducted on the perceived fairness of the decision-maker composite, summarized in Table 4a. Again a significant three-way interaction was detected, $F(1, 302) = 11.823, p = .001, \eta^2_p = .038,$ and a significant main effect for Outcome was detected, $F(1, 302) = 170.354, p < .001, \eta^2_p = .266.$ As shown in Figure 3, the three-way interaction replicates the results of the prior two analyses. Table 4b summarizes the means for each condition. Again a sequence of simple effects tests was conducted to probe the significant three-way interaction.

**Simple Two-Way Interaction Effect Tests.** To explore the three-way interaction, a simple interaction test of each two-way interaction between substantive function and structure was conducted within each level of the outcome variable. Within the favorable outcome conditions, the simple two-way interaction was marginally significant $F(1, 302) = 2.99, p = .085, \eta^2_p = .010.$ Similarly, within the adverse outcome conditions, the simple two-way interaction was also significant $F(1, 302) = 8.98, p = .011, \eta^2_p = .030.$

**Simple Pairwise Comparisons of Substantive Structures.** Given that the simple two-interaction for the favorable outcome conditions was only marginally significant, no simple
pairwise comparison tests were conducted on those conditions. However, simple pairwise comparison tests were conducted in the *adverse outcome* conditions, comparing the perceived fairness of the decision-maker applying rules versus standards within adverse outcomes and each level of substantive function.

**Hypothesis 2.** A significant difference was detected in the *adverse eligibility* conditions, $F(1, 302) = 8.273, p = .004, \eta_p^2 = .027$, where the decision-maker was seen as being fairer if they applied a rule ($M = 3.513$) rather than a standard ($M = 2.683$). In the corresponding *adverse liability* conditions, while a decision-maker applying a standard ($M = 3.723$) is perceived as being fairer than one applying a rule ($M = 3.189$), the difference is marginally significant, $F(1, 302) = 3.385, p = .067, \eta_p^2 = .011$.

**Main Effects of Outcomes.** Lastly, for hypothesis 3 the main effect for outcomes was significant: Participants perceive a decision-maker who produces a favorable outcome ($M = 4.762$) as being significantly fairer than one who produces an adverse outcome ($M = 3.277$), $F(1, 302) = 109.414, p < .001, \eta_p^2 = .266$. 
Discussion

Overall Interpretation of the Results

The pattern of means and the significance of the three-way interaction across all three sets of dependent variables is strong evidence for the strength of the substantive justice manipulation as well as the outcome manipulation. Moreover, the consistent results of the simple two-way interaction tests along with the simple pairwise comparisons provide strong support for hypotheses two and three, and moderate support for hypothesis one. Beginning with hypothesis three, participants uniformly found the outcome as well as the laws and decision-makers who produced that outcome to be significantly fairer when the outcome was favorable versus adverse. As predicted by hypothesis two, in the adverse outcome conditions, across the three sets of dependent variables, participants in the eligibility conditions continually rated rules as fairer than standards with the opposite being true in the liability conditions. Regarding hypothesis one, the simple two-way interaction tests provide good evidence for concluding that in favorable outcomes, if the substantive function of the law is liability, then a rule will be viewed as fairer than a standard. The evidence, however, is less convincing when the substantive function of the law is concerned with eligibility, as none of the simple pairwise comparisons between rules and standards in the favorable eligibility conditions were significant. Thus there is only mild support for the prediction that a standard will be viewed as fairer than a rule.

4 An additional repeated measures ANOVA was conducted to test whether the individual’s response profile across the three dependent measures changed as a function of the independent variables. The only significant interaction between the response profile and an independent variable involved the Outcome manipulation, Roy’s Largest Root (2, 301) = 0.199, p < .001, η² = .166. Examining the within-subject polynomial contrasts showed that there was a significant interaction between Outcome and the quadratic contrast, F (1, 302) = 49.885, p < .001, η² = .142. When comparing the profile plots, in the favorable outcome conditions participants rated the law (M = 4.203) as less fair than the outcome (M = 4.822) and the decision-maker (M = 4.762), while in the adverse outcome conditions participants rated the law (M = 3.316) and the decision-maker (M = 3.227) as being more fair than the outcome (M = 2.891). The differential influence of the Outcome manipulation on perceived fairness and the evidence from the χ² difference test supports maintaining the conceptual boundaries and separate analyses for the three composites.
As the results clearly show, fairness evaluations of the law, outcome, and decision-maker vary depending on the function and structure of the law and the outcome it produces. In those instances producing an adverse outcome, participants in the eligibility conditions continually rated rules as fairer than standards with the opposite being true in the liability conditions. Comparatively, in instances producing favorable outcomes, when the substantive function of the law is liability, then a rule was perceived as fairer than a standard. However, individuals did not seem to differentiate between rules and standards in eligibility conditions.

Implications

In general, the findings would suggest that the structure of what individuals will perceive as the right law, the just law, the fair law for a given substantive function depends on the outcome produced. This contingency produces a quandary for legislators and other legal decision-makers, as any given law that produces adverse outcomes will experience conflict over what the just way is to structure the law.

Boundary Fairness Evaluations. One direct extension of the substantive justice findings is to identify the conditions under which an adverse outcome is perceived as being fair and a favorable outcome is perceived as being unfair. That is, are there any constellations of substantive justice, procedural justice, or other theorized justice psychology conditions that produce fairness evaluations that overcome the outcome bias? For example, will an individual still perceive an adverse liability outcome as being unfair if it is rendered by a respected, legitimate decision-maker applying a standard and using fair procedures?

Procedural justice. Another implication of the findings is the need to examine what substantive justice conditions might cause individuals to prefer unfair procedures over fair procedures. Research in the rule-of-law and moral mandates both establish that individuals are willing to violate “fair” procedures in certain circumstances, such as when the gravity of that outcome is too severe to not violate the process (such as if a judge fails to violate a procedural law that keeps exonerating DNA evidence from being presented) or when the importance of the
outcome to the self is great (Schweitzer, Sylvester & Saks 2007; Skitka & Houston, 2001). From a substantive justice perspective, one hypothesis is that under favorable eligibility conditions, where a standard is being used, individuals would perceive an “unfair process” of no secondary, external review of the outcome as being fairer than a “fair process” where there is a secondary, external review of the outcome. This counterintuitive inversion occurs because the uncertainty inherent in a standard’s ambiguous language means that there is the possibility those two decision-makers might disagree with each other.

**The P.O.V. of Justice.** As noted in the introduction, the present approach to substantive justice has focused exclusively on the individual receiving the outcome. However, the legal system is itself a complex affair involving multiple parties and perspectives on the outcome. In the legal system alone, there are differences in perspective on the basis of parties to a legal case such as the plaintiff and defendant, as well as differences in the deeper roles of law-makers, judges, and enforcement officers.

For example, does the phenomenological experience of playing the role of judge produce different substantive justice evaluations relative to individual recipients? Justice Scalia asserts that the burden of being impartial and objective places an expectation on judges to produce consistent results, which Scalia believes is only possible using rules (Scalia, 1987). If Justice Scalia’s assertion holds true to people’s perception of fairness, then an individual who receives an opposite outcome from someone in a similar position should find a standard to be less fair than a rule, regardless of the function or outcome of the law. Testing Justice Scalia’s consistency hypothesis is as simple as presenting individuals with the present paradigm plus information about an individual who received the opposite outcome.

Alternatively, from the judge’s perspective does this mean that being in the role of a judge should weaken the overall preference for standards, or should there be further role-based moderators involved? Recent work by Heuer and colleagues in 2007 suggests that individuals who were acting as decision-makers were more concerned with outcomes than procedure, while
recipients were concerned with procedure than outcomes. However, Lammers & Stapel’s 2009 work involving power and moral decision-making showed that individuals primed with power, those who were assigned the role of decision-maker, tend to prefer procedural-based decisions, while those not primed with power, assigned the role of decision-recipient, tend to prefer outcome-based decisions. One possible explanation for the inconsistent results could be that the role of decision-maker is further shaped by expectations regarding the decision-maker’s purpose. For example, context could prompt the decision-maker to adopt a fiduciary perspective where their primary concern is to make the best decision for the recipient, e.g., situations where a judge is trying to rehabilitate a juvenile offender. Juxtaposed against this fiduciary perspective, if context prompts the decision-maker to focus on their position, the decision-maker might be less willing to expend the energy to adopt the decision-recipient’s perspective, e.g., situations where a judge is tasked with adjudicating hundreds of similar offenses like in traffic court.

**Substantive Content Domains.** Substantive justice treats function and structure as a pair of generalizations drawn from all of the substantive legal domains, e.g., torts, property, and criminal law. However, legal philosophy still recognizes that different domains of substantive law evolved to solve specific issues faced in human relationships. At the core of the many substantive domains of law, there is typically one simple generative issue. In property law, this issue is what it means to own something, in contract law, what it means to make a promise to someone, and in unintentional torts, what it means to unintentionally hurt someone. While substantive justice is a generalization of the function and structure of the laws used to govern societies, the basic issues that the substantive domains of law rest on frame fundamental conflicts outside the law. Parents, particularly those with multiple children, often face the complaints of “But that is my toy,” “But you promised we could go if I was good,” or “But I didn’t mean to hurt her.” Exploration of these fundamental conflicts is possible when operating from within the substantive justice framework because function and structure are content neutral abstractions.
Gains and non-gains, losses and non-losses. Prospect theory provides an alternative framing for the interplay of the substantive function, structure, and outcome manipulations (Shafir & LeBoeuf, 2002; Hastie, 2001). Prospect theory tells us that people are generally loss averse in that they strongly prefer avoiding losses to acquiring gains, and specifically risk averse when they evaluate a possible gain, as they prefer minimizing the possibility of a non-gain but risk seeking when the risk might mitigate a loss. Conceptually then substantive function seems to map roughly onto gains and losses depending on the outcome e.g. eligibility represents a gain or non-gain. Similarly, the substantive structure of the law might roughly determine the probability of a gain or non-gain and a loss or non-loss.

As such, prospect theory states that under conditions of loss, individuals are prompted to engage in risk seeking behavior to mitigate the loss. Given the present findings, where in the adverse-liability conditions standards are perceived as fairer than rules, it would seem that individual’s perceive a standard as being riskier than a rule. This interpretation is consistent with construal level theory, as individuals tend to perceive concrete events as being more certain than abstract events. Yet if standards are riskier than rules, then in the favorable-eligibility conditions people should be risk averse and rules should be perceived as fairer than standards but the results do not show that and the theory does not predict that. Thus, there is some question as to either how well the eligibility functions correspond to gains or how appropriate fairness is as a measure of perceived riskiness of a law. Given the initial conceptual overlap, it would be interesting to conduct research into the how the substantive function and structure interact to predict an individual’s perceived likelihood of receiving a given outcome.

Broader psychological applications. Recognizing substantive justice as a general framework regarding how individuals evaluate and potentially construct laws to govern behavior, social relationships, and social conflicts invites a natural extension to the study of social norms—particularly injunctive norms (Cialdini, Reno, & Kallgren, 1990; Kallgren, Reno, & Cialdini, 2000). While injunctive norms do not possess the unparalleled coercive power of the law to
incarcerate or even kill someone, individuals encounter injunctive norms more frequently than they do the law. Moreover, the sanctions for violating an injunctive norm, such as ostracization from a group, are not toothless. For example, do individuals evaluate being singled out for tardiness at work—analogous to an *adverse liability outcome*—as more or less fair if the injunctive norm in the workplace is structured as a rule (don’t arrive after 8:00 AM) or a standard (don’t be unreasonably late)? The present research suggests that individuals would perceive being singled out as more fair when they violate an injunctive norm structured as a standard of being unreasonably late rather than a rule of arriving after 8:00.

This parallel also raises interesting questions regarding how descriptive norms about behavior might interact with substantive justice. Research shows that typically the strength of an injunctive norm is weakened when there is a contrary descriptive norm. For example, if the injunctive norm says you shouldn’t cheat on the test but an individual sees that everyone else is doing so, then they are more likely to cheat (Cialdini, 2003; Schultz, Nolan, Cialdini, Goldstein, & Griskevicius, 2007; Jacobson, Mortensen, & Cialdini, 2011). One legal analogue is speeding behavior: If the speed limit is 65mph but the “flow of traffic” around an individual is 70mph, they are more likely to speed. In such a case, is an *adverse liability outcome* still more palatable when a standard is used? Alternatively, is the perception that everyone else is speeding mean that the individual has the expectation that their behavior be excused as being “reasonable and prudent?”

**Limitations and Future Directions of the Present Study**

There are three distinct limitations on the present study. Foremost, the present experiment does not pit substantive justice against other justice psychology theories like procedural justice. To demonstrate the unique contribution of the substantive justice constructs of function and structure, further experiments are needed in which substantive justice as well as procedural justice are manipulated. This is necessary to establish a potential implication of procedural justice interacting with substantive justice. For example, what is the fairest kind of legal structure when the individual does not trust the decision maker? From the legal perspective, regarding structure, one
might expect a further interaction of perceived trust-worthiness or legitimacy of the decision-maker with substantive structure because structure controls the discretion afforded to the decision-maker. Specifically, as the legitimacy of the decision-maker increases, the preference for greater discretion of the decision-maker will increase, and thus the perceived fairness of standards relative to rules will increase.

Secondly, further research involving the actual experience instead of the imagined experience of outcomes would be necessary to establish the generalizability of these substantive justice findings to the real world. One of the great strengths of procedural justice is the large volume of work that has been conducted on individuals who have been found guilty of a crime and incarcerated as a result (Tyler, 2006). For example, to the extent that there are municipal or even state level variations in any substantive domain of law, comparisons of rules and standards could be tested among individuals who received an adverse outcome versus those who received a favorable outcome.

Lastly, given the theoretical argument that structure manipulates construal level, a question remains regarding what aspects of psychological distance, time, probability, physical distance, or social relationship distance are influenced by substantive structure. According to construal level theory, because the substantive structure manipulation alters psychological distance, it should influence all four aspects simultaneously (Trope & Liberman, 2010). To identify which aspects of psychological distance are manipulated by substantive structure, it is necessary to manipulate each aspect independently along with structure. For example, prior research has manipulated the time aspect by asking participants to think about an event occurring today versus a year from now (Trope & Liberman, 2010). Individuals could be asked to imagine receiving a speeding ticket tomorrow versus a year from now and evaluate the perceived fairness of a rule versus a standard. Isolating the aspect of psychological distance that is most influenced by substantive structure could have implications for perceptions of justice. For example, does assigning whether an individual imagines receiving a speeding ticket tomorrow versus a year from
now have a significant effect on their speeding behavior, and thus the probability that they will receive the speeding ticket?

Overall, the pattern of results fits well with what was predicted based on substantive justice theory. Individuals are sensitive to whether the function of the law as liability or eligibility affords them a threat or opportunity. Individuals are also sensitive to whether the structure of the law is concrete or abstract in how it defines the conditions necessary to produce a favorable or adverse outcome. This linkage between the process with which the law constructs affordances within the social environment and the intrapersonal psychological mechanisms that are sensitive to function and structure is fundamental to substantive justice theory. The essential logic of substantive justice is that the Law uses the inherent motivation of individuals to approach opportunities and avoid threats to constrain and direct behavior. By tapping into this motivation, the Law causes individuals to evaluate the outcome produced via these intrapersonal mechanisms that have originally existed to evaluate how best to navigate the threats and opportunities in the physical world.
REFERENCES


### Table 1a: Scale Statistics of the Three Dependent Measures

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>S.D.</th>
<th>Law</th>
<th>Outcome</th>
<th>Decision-Maker</th>
</tr>
</thead>
<tbody>
<tr>
<td>Law</td>
<td>3.789</td>
<td>1.382</td>
<td>1</td>
<td>0.642</td>
<td>0.687</td>
</tr>
<tr>
<td>Outcome</td>
<td>3.903</td>
<td>1.614</td>
<td>0.642</td>
<td>1</td>
<td>0.802</td>
</tr>
<tr>
<td>Decision-Maker</td>
<td>4.057</td>
<td>1.468</td>
<td>0.687</td>
<td>0.802</td>
<td>1</td>
</tr>
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</table>

*Note: All correlations are significant at \( p < .001 \).*

### Table 1b: Estimates of Reliabilities Within and Across Conditions

<table>
<thead>
<tr>
<th></th>
<th>Law</th>
<th>Outcome</th>
<th>Decision-Maker</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eligibility, Rule, Adverse</td>
<td>0.929</td>
<td>0.911</td>
<td>0.952</td>
</tr>
<tr>
<td>Eligibility, Rule, Favorable</td>
<td>0.924</td>
<td>0.924</td>
<td>0.936</td>
</tr>
<tr>
<td>Eligibility, Standard, Adverse</td>
<td>0.928</td>
<td>0.924</td>
<td>0.944</td>
</tr>
<tr>
<td>Eligibility, Standard, Favorable</td>
<td>0.860</td>
<td>0.919</td>
<td>0.892</td>
</tr>
<tr>
<td>Liability, Rule, Adverse</td>
<td>0.964</td>
<td>0.950</td>
<td>0.963</td>
</tr>
<tr>
<td>Liability, Rule, Favorable</td>
<td>0.944</td>
<td>0.930</td>
<td>0.927</td>
</tr>
<tr>
<td>Liability, Standard, Adverse</td>
<td>0.968</td>
<td>0.940</td>
<td>0.951</td>
</tr>
<tr>
<td>Liability, Standard, Favorable</td>
<td>0.932</td>
<td>0.960</td>
<td>0.926</td>
</tr>
<tr>
<td>Overall</td>
<td>0.948</td>
<td>0.958</td>
<td>0.957</td>
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</tbody>
</table>
Table 2a: Analysis of Variance Summary Table for Perceived Fairness of the Law.

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>η²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substantive Function</td>
<td>0.087</td>
<td>1</td>
<td>0.087</td>
<td>0.054</td>
<td>0.817</td>
<td>0.000</td>
</tr>
<tr>
<td>Substantive Structure</td>
<td>0.050</td>
<td>1</td>
<td>0.050</td>
<td>0.030</td>
<td>0.862</td>
<td>0.000</td>
</tr>
<tr>
<td>Outcome</td>
<td>60.761</td>
<td>1</td>
<td>60.761</td>
<td>37.248</td>
<td>&lt; 0.001</td>
<td>0.110</td>
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<tr>
<td>Function by Structure</td>
<td>2.208</td>
<td>1</td>
<td>2.208</td>
<td>1.353</td>
<td>0.246</td>
<td>0.004</td>
</tr>
<tr>
<td>Function by Outcome</td>
<td>0.298</td>
<td>1</td>
<td>0.298</td>
<td>0.182</td>
<td>0.670</td>
<td>0.001</td>
</tr>
<tr>
<td>Structure by Outcome</td>
<td>1.298</td>
<td>1</td>
<td>1.298</td>
<td>0.796</td>
<td>0.373</td>
<td>0.003</td>
</tr>
<tr>
<td>Function by Structure by Outcome</td>
<td>34.789</td>
<td>1</td>
<td>34.789</td>
<td>21.326</td>
<td>&lt; 0.001</td>
<td>0.066</td>
</tr>
<tr>
<td>Error</td>
<td>492.648</td>
<td>302</td>
<td>1.631</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>589.886</td>
<td>309</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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</table>

Table 2b: Estimated Marginal Means for Perceived Fairness of the Law.

<table>
<thead>
<tr>
<th>Substantive Structure</th>
<th>Favorable Substantive Function</th>
<th>Adverse Substantive Function</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Eligibility</td>
<td>Liability</td>
</tr>
<tr>
<td>Rule</td>
<td>4.043</td>
<td>4.517</td>
</tr>
<tr>
<td>Standard</td>
<td>4.390</td>
<td>3.860</td>
</tr>
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</table>

Figure 1: Estimated Marginal Means for Perceived Fairness of the Law
Table 3a: Analysis of Variance Summary Table for Perceived Fairness of the Outcome.

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>$\eta_p^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substantive Function</td>
<td>0.008</td>
<td>1</td>
<td>0.008</td>
<td>0.005</td>
<td>0.943</td>
<td>0.000</td>
</tr>
<tr>
<td>Substantive Structure</td>
<td>0.291</td>
<td>1</td>
<td>0.291</td>
<td>0.178</td>
<td>0.674</td>
<td>0.001</td>
</tr>
<tr>
<td>Outcome</td>
<td>287.823</td>
<td>1</td>
<td>287.823</td>
<td>175.443</td>
<td>&lt; 0.001</td>
<td>0.367</td>
</tr>
<tr>
<td>Function by Structure</td>
<td>0.950</td>
<td>1</td>
<td>0.950</td>
<td>0.579</td>
<td>0.447</td>
<td>0.002</td>
</tr>
<tr>
<td>Function by Outcome</td>
<td>0.000</td>
<td>1</td>
<td>0.000</td>
<td>0.000</td>
<td>0.989</td>
<td>0.000</td>
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<tr>
<td>Structure by Outcome</td>
<td>1.686</td>
<td>1</td>
<td>1.686</td>
<td>1.028</td>
<td>0.311</td>
<td>0.003</td>
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<td>Function by Structure by Outcome</td>
<td>21.153</td>
<td>1</td>
<td>21.153</td>
<td>12.894</td>
<td>&lt; 0.001</td>
<td>0.041</td>
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<td>Error</td>
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<td>302</td>
<td>1.641</td>
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<tr>
<td>Corrected Total</td>
<td>804.489</td>
<td>309</td>
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</table>

Table 3b: Estimated Marginal Means for Perceived Fairness of the Outcome.

<table>
<thead>
<tr>
<th>Substantive Structure</th>
<th>Favors Eligibility</th>
<th>Favors Liability</th>
<th>Avers Eligibility</th>
<th>Avers Liability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rule</td>
<td>4.716</td>
<td>5.137</td>
<td>3.159</td>
<td>2.537</td>
</tr>
<tr>
<td>Standard</td>
<td>4.919</td>
<td>4.515</td>
<td>2.611</td>
<td>3.258</td>
</tr>
</tbody>
</table>

Figure 2: Estimated Marginal Means for Perceived Fairness of the Outcome
Table 4b: Analysis of Variance Summary Table for Perceived Fairness of the Decision-Maker.

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>$\eta^2_p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substantive Function</td>
<td>2.288</td>
<td>1</td>
<td>2.288</td>
<td>1.470</td>
<td>0.226</td>
<td>0.005</td>
</tr>
<tr>
<td>Substantive Structure</td>
<td>1.666</td>
<td>1</td>
<td>1.666</td>
<td>1.070</td>
<td>0.302</td>
<td>0.004</td>
</tr>
<tr>
<td>Outcome</td>
<td>170.354</td>
<td>1</td>
<td>170.354</td>
<td>109.414</td>
<td>&lt; 0.001</td>
<td>0.266</td>
</tr>
<tr>
<td>Function by Structure</td>
<td>2.901</td>
<td>1</td>
<td>2.901</td>
<td>1.864</td>
<td>0.173</td>
<td>0.006</td>
</tr>
<tr>
<td>Function by Outcome</td>
<td>2.661</td>
<td>1</td>
<td>2.661</td>
<td>1.709</td>
<td>0.192</td>
<td>0.006</td>
</tr>
<tr>
<td>Structure by Outcome</td>
<td>0.000</td>
<td>1</td>
<td>0.000</td>
<td>0.000</td>
<td>0.997</td>
<td>0.000</td>
</tr>
<tr>
<td>Function by Structure by Outcome</td>
<td>18.408</td>
<td>1</td>
<td>18.408</td>
<td>11.823</td>
<td>0.001</td>
<td>0.038</td>
</tr>
<tr>
<td>Error</td>
<td>470.207</td>
<td>302</td>
<td>1.557</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>665.561</td>
<td>309</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4b: Estimated Marginal Means for Perceived Fairness of the Decision-Maker.

<table>
<thead>
<tr>
<th>Substantive Structure</th>
<th>Favorable Substantive Function</th>
<th>Adverse Substantive Function</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Eligibility</td>
<td>Liability</td>
</tr>
<tr>
<td>Rule</td>
<td>4.695</td>
<td>4.976</td>
</tr>
<tr>
<td>Standard</td>
<td>4.843</td>
<td>4.535</td>
</tr>
</tbody>
</table>

Figure 3: Estimated Marginal Means for Perceived Fairness of the Decision-Maker
APPENDIX B

SAMPLE STIMULUS
A. Smith  
Human Resources  
1345 S. Nobel, Phoenix, AZ 85316

J. Doe  
1456 W. 7th Street  
Phoenix, AZ 85942

Dear J. Doe

Regarding your request for disability coverage, Human Resources has determined the following:

Arizona Revised Statutes §12.51.6 states that “full-time employees are eligible for disability coverage when their injuries result in them working [Substantive Manipulation, Rule: less than part-time (20 hours) at their previously held job responsibilities.” Standard: less than a reasonable amount of time at their previously held job responsibilities.”]

You have provided medical evidence that your recent eye injury requires you to take frequent, extended breaks due to eyestrain, fatigue and migraines. As such, Human Resources has determined that pursuant to Arizona law you are [Outcome Manipulation, Yes: eligible for disability coverage X No: ineligible for disability coverage] [Outcome/Substance Matching, Yes/Rule: because your injury prevents you from working more than 20 hours. No/Rule: because your injury does not prevent you from working more than 20 hours. Yes/Standard: because your injury prevents you from working more than a reasonable amount of time. No/Standard: because your injury does not prevent you from working more than a reasonable amount of time.]

Sincerely,

A. Smith  
Head of Disability Claims for the Office of Human Resources
Dear J. Doe

Regarding your current disability coverage, Human Resources has determined the following:

Arizona Revised Statutes §12.51.6 states that “Full-Time Employees on disability will be fined if they are not [Substantive Manipulation, Rule: attending 100% of their physical therapy and doctor visits.” Standard: actively following the doctor’s prescribed course of treatment for their injury.”]

In reviewing your current medical information you have supplied to us, it is clear that you have failed to attend a recent medical appointment. You have provided medical evidence regarding your recent eye injury that requires you to take frequent, extended breaks due to eyestrain, fatigue and migraines. As such, Human Resources has determined that pursuant to the law you are [Outcome Manipulation, Yes: liable and will be fined X No: not liable and will not be fined] [Outcome/Substance Matching, Yes/Rule: because you failed to attend a recent medical appointment. No/Rule: because your injury prevented you from attending a recent medical appointment. Yes/Standard: because you failed to actively follow the doctor’s prescribed course of treatment. No/Standard: because your injury has not prevented you from actively following the doctor’s prescribed course of treatment.]

Sincerely,

A. Smith
Head of Disability Claims for the Office of Human Resources
APPENDIX C

INSTITUTIONAL REVIEW BOARD APPROVAL FORM
To: Nicholas Schweitzer  
FAB

From: Mark Roosa, Chair  
Soc Beh IRB

Date: 04/23/2009

Committee Action: Exemption Granted

IRB Action Date: 04/23/2009

IRB Protocol #: 0904003937

Study Title: Perceptions of Fairness

The above-referenced protocol is considered exempt after review by the Institutional Review Board pursuant to Federal regulations, 45 CFR Part 46.101(b)(2).

This part of the federal regulations requires that the information be recorded by investigators in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects. It is necessary that the information obtained not be such that if disclosed outside the research, it could reasonably place the subjects at risk of criminal or civil liability, or be damaging to the subjects' financial standing, employability, or reputation.

You should retain a copy of this letter for your records.