University of Nevada, Reno

Juvenile Court Judges and their Concerns about Vulnerability, Experienced Uncertainty and the Law: Extralegal Factors, Legal Considerations and Judicial Transfer Decision-making

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Social Psychology

by

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Abstract

In American juvenile law, the judicial transfer decision, or *waiver of jurisdiction*, is a legal maneuver by which young offenders are diverted away from the juvenile justice system and subsequently processed and adjudicated within adult systems of law. Although transfer decisions have a long history in modern American jurisprudence, social science has largely neglected to perform a comprehensive inquiry of the social psychological underpinnings of judicial waivers. The extant social psycholegal research hints to potential links between transfer decision-making and three categories of variables: (a) terror management and social information-processing, (b) uncertainty management and attributional reasoning, and (c) statutory and nonstatutory sources of influence. Two social theories (i.e., the *dual-process theory of proximal/distal defenses* and *uncertainty avoidance/causal attribution theory*), as well as the literature on judicial waivers, provided three alternative predictions about the nature of the transfer decision-making process. The first theory predicts that implicit mortality salience (MS) cues activate the experiential system, including terror-reducing distal defenses. The processing of vulnerability cues by legal decision-makers could undermine their inferences about a given case and encourage biased decision-making via extralegal analysis. The second theory presumes that the social context of legal decision-making is inherently inexact or uncertain. To the extent that cases are perceived as ambiguous, legal decision-makers could be prompted to apply attributional reasoning styles designed to manage uncertainty, manage crime and improve the likelihood of identifying satisfactory decision-making outcomes. Finally, in contrast to both social theories, research purports that transfer decisions emerge from a reconciliatory-type process which differentially weighs a wide array of statutory and nonstatutory sources of influence. In order to examine the three variable-categories within the context of an ambiguous waiver of jurisdiction hearing, a two-part experimental approach was adopted. Most legal decision-making studies that have applied terror management theory have relied on traditional mortality salience (MS) induction

methodologies (e.g., death essays) without consideration of natural "social ecologies" wherein MS processes occur. Study 1, a simple four-group experiment with 192 college student participants, compared the impact of traditional MS cues (i.e., death essays) versus ecological MS cues (i.e., death-laden prosecutorial statements) on mock-juror behavior. In Study 2, a mock-waiver hearing vignette was embedded in an experimental-based survey. Sixty-four juvenile court judges provided data regarding the relations between ecological MS induction, social information-processing mode, uncertainty management, attributional reasoning orientation, legal considerations (e.g., the *Kent* Guidelines), extralegal factors (e.g., punishment attitudes) and judicial transfers. In Studies 1 and 2, the Smith-Cribbie-Bonferroni adjusted partial least squares structural equation modeling (PLS-SEM) estimator was applied for all central statistical analyses. Findings from both studies indicate that legal decision-making is not affected by vulnerability concerns. Study 1 also failed to uncover evidence that the traditional and ecological MS cues were similar (compared to control conditions) in their effects on mock-juror decision making, calling into question certain assumptions about the methods commonly used in legal-related terror management studies. Finally, data from Study 2 do not support the contention that uncertainty-managing attributional processes were active during the transfer decision-making process. Instead, waiver decisions appear to emerge out of complex interactions involving particular legal and extralegal sources of influence. These sources of influence include global and specified retributive and deterrent-based attitudes, the degree of legal experience, the perceived utility of specific *Kent* Guidelines and perceptions toward both the prosecution and juvenile offender. The closing chapter reviews the limitations and implications of the entire investigation.

Acknowledgments

The parents' strength, as it's been felt, cannot be denied; war and peace, struggle and hope, to the contradictions we abide.

From these great truths, the ripples flow, the consequences bad and good; to leave one's home and turn one's back, but the sibling understood.

The lessons small, the lessons big, and so much to recall; but through it all, the constant force, was your love to catch my fall.

From within and from without, from family to enemies; no one can object to your unique place as luminaries.

And from here I go, from places known, to where I cannot see; but through it all, that constant force, will be my love for thee. ∞

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Chapter 1: Introduction

The American criminal justice system is designed to achieve a multitude of legal aims. These aims serve various functions, including rehabilitation, restoration, due process, deterrence, incapacitation and retribution. In the last few decades, American criminal law has shifted its focus to the latter three pursuits, creating a system of jurisprudence grounded in a crime control philosophy (Conklin, 2003; Wrightsman, Greene, Nietzel, & Fortune, 2002). The adoption of a crime control model of law implies that the American legal system allocates a substantial portion of its resources to managing crime and meting out legal revenge for victims who lack other acceptable outlets by which to express moral outrage (Carroll, Perkowitz, Lurigio, & Weaver, 1987; Goodman-Delahunty, Forsterlee, & Forsterlee, 2005; Packer, 1968). Concurrently, the legal system has adopted a pessimistic view of offenders' rehabilitative prospects.

The pervasiveness of crime control policies over the last 30 years have allowed strict punitive values to affect the mindsets of various legal players at virtually all levels of American law (Wrightsman et al., 2002). An implication of this is that young delinquents who commit particular criminal offenses may find themselves confronted with a system that jettisons rehabilitative principles in exchange for deterrence- and retribution-oriented legal recourses (e.g., long-term incarceration; Carlsmith, 2008; Corrado, Cohen, Glackman, & Odgers, 2003; Landau, 1978; McFatter, 1978; Meernik, 2011; Paternoster, 1989; Payne, Gainey, Triplett, & Danner, 2004; Tracy, Wolfgang, & Figlio, 1990). The presumption is that the deviant behaviors of young offenders cannot be remedied; as such, the goals of crime prevention and just deserts appear to be more readily achievable. This is unfortunate given that the impetus for constructing a juvenile justice system (JJS) independent of a system for adults was grounded largely in a rehabilitative theory of law (Binder, Geis, & Bruce, 1988). In the present day, scholars contend that juvenile court judges consider several legal theories and various legal and extralegal factors (Brannen et al., 2006; Feld, 1983; Lyons, 2011; Means, Heller, & Janofsky, 2012; Salekin, 2002; Salekin, Yff, Neumann, Leistico, & Zalot, 2002). Still, to date there is limited research regarding the extent to which certain legal theories (e.g., deterrence and retribution) and legal/extralegal factors support, or conflict with, the aim of rehabilitation.

Juvenile Crime and Transfer Decisions

Since the 1980s, general societal trends have favored the use of severe punishments as means for managing juvenile crime (Tracy et al., 1990; Wrightsman et al., 2002). In some instances, juvenile court judges render critical decisions permitting for the transfer of juvenile offenders to the adult criminal justice system (CJS). Depending on state or jurisdiction, this legal maneuver may be referred to as a *certification*, *bind-over* or *remand* for criminal prosecution. The proceeding may also be referred to as a *waiver*, *decline* or *transfer*. In effect, by waiving jurisdiction, the juvenile courts allow for the adjudication of young delinquents within adult criminal justice systems (see Griffin, Addie, Adams, & Firestine, 2011; Griffin, Torbet, & Szymanski, 1998).

Waivers of jurisdiction have a long history in the American JJS. Their legislative origins and ubiquity are inextricably intertwined with numerous perceptions, including viewpoints about the dangers of youth crime and the JJS' inability to curb juvenile recidivism. These perceptions fuel beliefs about the role of harsh non-rehabilitative punishment in the management of delinquency (Tracy et al., 1990). At present, judicial waivers are permissible in 45 states across the nation, though they often occur following a prosecutorial motion for transfer (Griffin, 2009). Although no national databases currently exist and available state-level data are inconsistent, it is estimated that over 10,000 juveniles are transferred annually. In this manner, waivers may have serious consequences with respect to the lives of juvenile offenders, society's perception of juvenile delinquency and the legal system's approach to certain youth crimes (D'Angelo, 2007; Griffin et al., 2011).

Nature of the Judicial Waiver: Gaps in the Literature and Theoretical Conjectures

Previous social scholars (e.g., D'Angelo, 2007; Jones & Cauffman, 2008; Salekin et al., 2002) have identified links between judicial transfer decisions and numerous legal contingencies (e.g., age; prior record; severity of offense). In many cases, these legal factors are relatively objective and provide judges with clues which influence their reasoning and choices. Yet, much less is known about the social and psychological processes that underlie judges' decision-making in these special cases (D'Angelo, 2007).

For instance, D'Angelo has noted that judges may favor retributive- and deterrent-based solutions (e.g., transfers) when juveniles' rehabilitative prospects are inauspicious. These so-called "get-tough"

solutions emerge out of societal beliefs which insinuate that juvenile crimes are escalating in severity and prevalence. Still, few data exist to empirically support this premise (Kappeler, Blumberg, & Potter, 2000). D'Angelo also noted that less is known about how "extralegal" factors (i.e., psychological, sociocultural) associated with particular juvenile legal cases shape judges' beliefs regarding the appropriateness of a given transfer. From what is available, research indicates that judges' decisions could be affected by specific vulnerability concerns, including perceived threats to the self, others and valued cultural prescripts (Arndt, Lieberman, Cook, & Solomon, 2005; Goodman-Delahunty et al., 2005). Other social scholars (e.g., Albonetti, 1991) have found that decision-making could be influenced by desires to mitigate uncertainty and control crime, especially when individuals are confronted with ambiguous legal antecedents (e.g., motives for criminal behavior) and consequences (e.g., recidivism likelihood).

Given that the differential roles of legal and extralegal factors in transfer decision-making are not well-understood in the extant social psycholegal literature, it is prudent to borrow principles from germane theories found in the fields of social psychology and sociology. In the current investigation, with the aid of data collected from samples of college students and actual juvenile court judges, two theories, as well as a third perspective, were considered as alternative frameworks by which to examine different hypotheses about the sociocognitive properties underlying legal evaluations and decisional behavior.

In regard to vulnerability concerns (see Pyszczynski, Greenberg, & Solomon, 1999), the *dual-process theory of proximal/distal defenses* (DTPDD) posits that implicit mortality salience (MS) cues may activate the experiential system, including the system's terror-reducing distal defenses. The processing of vulnerability cues by mock-jurors and judges could undermine their legal inferences about a particular case and encourage biased decision-making via extralegal analysis. One caveat associated with the application of the DTPDD in the study of legal behavior results from a general limitation in the terror management empirical literature. In most terror management studies, the actual role that vulnerability concerns play in decision-making is open to critical debate, primarily because the vast majority of this research has relied on ecologically invalid methodologies (cf. Burke, Martens, & Faucher, 2010).

With respect to uncertainty concerns (see Albonetti, 1986, 1987, 1991; Albonetti & Hepburn, 1996), *uncertainty avoidance/causal attribution* (UACA) *theory* posits that legal decision-making is

inherently inexact and, as such, prompts the application of attributional reasoning styles designed to manage uncertainty, control crime and improve the likelihood of satisfactory decision-making. It is worth mentioning that UACA theory has the advantage of having been developed as a specific theory of legal decision-making. Yet, to date, there is virtually no empirical research that has investigated uncertainty management processes within the context of judicial waiver jurisprudence.

As an alternative to the two social theories, a third framework based on the germane psycholegal literature was examined (e.g., D'Angelo, 2007). This framework is termed the "*statutory–nonstatutory factors"* perspective. Research hints to the notion that most legal decisions emerge from a process which reconciles a host of legal and extralegal sources of influence. This conjecture warranted further study and was a focus of the current investigation.

Purposes of the Dissertation Projects

Social scientific study of judicial transfer decision-making is sparse. Further, this domain of social psycholegal research is largely correlational and fails to account for potential causal relations between decision-making and other critical factors. At present, there is limited information detailing how specific intrapsychic and sociocultural forces influence judicial behavior in waiver of jurisdiction cases (see D'Angelo, 2007). The value of this type of information resides in its potential to evaluate the degree to which legal and extralegal factors differentially impact transfer decision-making and, in turn, the lives of thousands of juveniles throughout the nation.

Two experiments were performed to address the aforementioned critical limitations in mock-juror and judicial decision-making research. The purpose of Study 1, a methodological investigation, was to examine the influence of traditional MS stimuli versus ecologically valid MS stimuli on mock-juror decision-making via a basic four-group experiment. The purpose of Study 2, a substantive investigation of juvenile court judges, was to use an experiment-within-survey approach in order to draw empirical links between pertinent legal considerations (e.g., crime severity; recidivism status), extralegal factors (e.g., uncertainty management; vulnerability concerns; punishment attitudes) and judicial transfer decision-making. The next chapter delves into an in-depth review of the relevant social psychological and psycholegal literature.

Chapter 2: Literature Review

The general purposes of the current study are to relate judicial transfer decision-making to terror management, uncertainty avoidance and statutory–nonstatutory factors. Adding context to these purposes stipulates that the literature review focus on four relevant areas of social and legal inquiry. In the first section, the historical roots of the juvenile justice system (JJS) are briefly detailed and a set of Supreme Court decisions leading to the construction of modern-day judicial waiver laws are traced. The second section discusses approaches the JJS currently adopts in an effort to mitigate youth offending. There is evidence to suggest that the JJS's anti-rehabilitative stance may be the result of perceived increases in juvenile recidivism, in conjunction with a societal pessimism toward the system's capacity to adequately manage juvenile crime. The third section elaborates on the impact of crime control, due process and punishment principles on JJS practices. These principles carry the potential to shape legal reasoning and decisional behavior. In the final section, the specifics of judicial waivers are discussed. The extant research reveals that juvenile court judges regularly justify their transfer decisions by considering two broad classes of factors: (a) legal considerations (e.g., recidivism), and (b) extralegal factors (e.g., punishment attitudes).

I. The Juvenile Justice System: Historical Roots and Critical Supreme Court Decisions

The involvement of children and adolescents in the modern legal system has presented society with unique and fervent controversies, especially when matters of criminal activity and general delinquency reside at the forefront. It is generally accepted among historical, social and legal scholars that the majority of contemporary practices within the American JJS emerged out of progressive shifts that occurred during the 19th and 20th centuries (Binder et al., 1988; Levine, Wallach, & Levine, 2007). Yet, the American JJS is a novel institution relative to other systems of law and current conceptualizations of "delinquency" and "transfer" are fairly new in their own right. These conceptualizations are not only traceable to events of the American Progressive era, as they have also been substantially affected by events that go back beyond the origins of the nation.

Historical roots and the "juvenile delinquency" concept. In systems of law, one area replete with social controversy centers on the *juvenile delinquency* concept. Problems stem from the fact that different cultures define "childhood" and "youth" in distinct fashions, suggesting that these definitions are

bounded by specific moments in time and space (Binder et al., 1988). This is noteworthy, because conceptualizations of childhood and adolescence shape the manner in which young individuals are socialized and treated. To the extent that these conceptualizations evolved over the course of history, definitions of delinquency followed similar trajectories of change.

Contemporary American definitions of childhood and delinquency owe their denotative status to distant historical events that preceded the inception of the nation. In the time of ancient Rome, criminal justice systems rarely, if ever, made differentiations between adult criminals and what legal contemporaries term "juvenile" offenders (Binder et al., 1988). In fact, during this era, laws, codes and statutes designed to process young offenders in non-adult jurisdictions were virtually nonexistent. Similar philosophies permeated the European medieval period following the fall of the Roman Empire. Yet, the medieval period also generated new Christian-based ideals with respect to the concept of childhood and these ideals often attempted to eliminate the harsh treatment experienced by youths at the hands of adults (often their caregivers).

Although contemporary American transfer provisions attempt to reduce harsh and brutal legal treatment, the Roman and medieval periods established a historical precedence with respect to the treatment of the young *as adults*. These two distinct periods of time illustrate that societies are capable of constructing culture in ways that bestow upon systems of law the power to treat young offenders as mature adults. Because much of what underpins American jurisprudence is premised on Roman and English common law, this may explain why current American legal models provide venues by which to adjudicate the young as if they were psychosocially equivalent to adult offenders.

Despite the impact of Roman and English common law on the development of American jurisprudence, the most immediate influences came from laws and customs established during early Colonial America. Puritan practices that promoted family- and child-oriented values began to take center stage in social life (Binder et al., 1988). Colonial legal systems began to take interest in matters of the family. This interest would eventually lead to the ratification of the first juvenile status offense (*incorrigibility*; cf. Binder et al., 1988). Despite the family-centered philosophy of Colonial law, the rehabilitative ideals present in the modern JJS were not championed until the late 19th century. In the

presence of burgeoning industrialization, immigration, urbanization and related criminal activity, Protestant middle-class Americans spearheaded social movements which eventually culminated in the creation of the "juvenile delinquency" concept.[1] For the first time, criminal offenses committed by the young were decriminalized and juvenile offenders were perceived to be inherently non-adult.

Supreme Court decisions and transfer provisions. Historical evidence suggests that current transfer practices evolved out of a series of legal procedures, policies, cases and events which trace back to as early as 1899, when Chicago established the first American juvenile court (cf. Binder et al., 1988; cf. Levine et al., 2007). Before the formation of the Chicago model of juvenile law, criminal judges often adjudicated juvenile offenders and reformatory schools were primarily responsible for the rehabilitation of convicted delinquents (Binder et al., 1988). Although the approach appeared to be child-centered on its surface, many judges and schools were notorious for their punitive practices. Given that the efficacy of most reformatories was questionable at best, progressive community members began to call for reforms of the juvenile adjudication process.

In 1899, Chicago successfully ratified the *Illinois Juvenile Court Act*, leading to the creation of the first juvenile courthouse (Binder et al., 1988). The act also granted juvenile court judges *parens patriae* ("parent of the nation") powers, in effect giving them full jurisdiction over the adjudication and disposition of juvenile offenders. Although judges working out of the adult courts had applied the *parent patriae* doctrine in the past, the significance of the 1899 act was that, for the first time, the doctrine had been institutionalized within a system of *juvenile* law for the purpose of addressing juvenile delinquency.[2] In essence, the state had institutional backing to intervene in matters involving the family. As other courts began to adopt models similar to the Chicago JJS, juvenile court judges would ultimately play major roles in the adjudication of juveniles. Over time, institutional requisites were established which eventually bestowed most judges with the power to waive jurisdiction, i.e., to transfer a juvenile to the adult criminal justice system (CJS).

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[1] Binder et al. (1988) noted that the construction of the "juvenile delinquency" concept was likely the result of Protestant middle-class attempts to address non-conformity to Protestant values on the part of immigrant youth and young middle-class offenders.

[2] The *parens patriae* doctrine also applies to non-delinquency issues involving the young, including matters pertaining to neglect, abuse and dependency.

Beginning in the mid-1960s, a series of U.S. Supreme Court decisions were rendered that set up several critical mandates with respect to the treatment of juvenile offenders (cf. Binder et al., 1988; cf. Levine et al., 2007). In *Kent v. United States* (1966), following an incident in which a minor had been transferred to the adult CJS without any formal hearing, the Court decided in favor of Kent and held that juveniles under the jurisdiction of the JJS are entitled to minimal legal rights (e.g., legal hearings). Further, the *Kent* decision required that judges consider a host of transfer criteria prior to making legally binding decisions.

Similarly, in the case *In Re Gault* (1967), a minor had been detained and processed after being denied the right to parental notification, the right to counsel and the right to face one's accuser. In this case, the Court determined that the detention and processing of Gault were unconstitutional, arguing that the JJS is responsible for establishing minimum standards for legitimate adjudication. The *Gault* case culminated in the development of numerous due process rights for juveniles, including the right to counsel, the right against self-incrimination, the right to cross-examine witnesses and the requirement of parental notification (Binder et al., 1988). The cases of *Kent* and *Gault* not only launched a series of new juvenile rights, but the decisions sent an implicit message that juveniles are eligible to some level of treatment commonly reserved for adult offenders. Because these cases focused mainly on due process violations and were silent with regard to the rightness of transfer waivers, the decisions indirectly legitimized the practice.

In recent years the JJS has reverted back to a crime control approach to law.[3] Virtually all states possess some provision that allows for waivers of jurisdiction (Griffin, 2009; Levine et al., 2007). The current state of transfer practices appears to have evolved mainly out of responses to increased youth crime which occurred during the 1980s and early 1990s (Salekin et al., 2002). As a result, new policies and laws were enacted that expanded the number of legal procedures that could be implemented in a waiver of

[3] Although procedural trends within the JJS have been consistent with various crime control principles, recent actions have also sought to reduce the harshness of certain juvenile punishments. Notably, in *Miller v. Alabama* (2012), the U.S. Supreme Court identified a violation of the Eight Amendment prohibiting cruel and unusual punishment. Here, the Court held that mandatory sentences of life without parole for crimes committed by juveniles, including homicide, were unconstitutional. In effect, *Miller* expands on *Graham v. Florida* (2010), wherein the Court made comparable arguments but included an exemption for homicides committed by juveniles.

jurisdiction. The next section delves deeper into the relationship between waiver of jurisdiction laws and the JJS.

II. The Juvenile Justice System: Youth Crime, Societal Perceptions and Interventions

Juvenile criminality and societal perceptions. The U.S. Department of Justice has reported that juveniles account for a meaningful minority of violent crimes (16%), aggravated assaults (14%), non-prostitution sexual offenses (18%), and forcible rapes (19%; Waite et al., 2005). As a result of these crime-related trends, societal values have fostered legal cultures wherein the processing of certain delinquents as adult criminals has become favorable (Salekin et al., 2002). In fact, between 1992 and 1999, most states in the country enacted legal procedures to facilitate the transfer of juvenile offenders to the adult CJS (e.g., expansions in eligibility criteria; U.S. Department of Justice, 2009). Yet, between 1994 and 2003, scholars observed notable decreases in the proportion of crimes committed by both adults and juveniles (Conklin, 2003; Douglas, Epstein, & Poythress, 2008; also see FBI Uniform Crime Reports, 2004). Although there are signs of gradual attenuations in juvenile crime, negative media portrayals, inaccurate scientific inquiries and concerns of the public continue to make youth violence a salient social issue (Edens, Campbell, & Weir, 2007; Kappeler et al., 2000).

Mythologies about so-called “super-predatory” juveniles and impending youth crime waves operate against the original logic of the American JJS (Myers, Lee, Giever, & Gilliam, 2011). The logic of the juvenile courts is predicated on two central assumptions (cf. Binder et al., 1988; Kappeler et al., 2000). First, the nation’s effort in creating a separate system of law designed for the young implies that society acknowledges the differences in maturation that exist between adult and juvenile offenders. That is, because juvenile offenders are less psychosocially sophisticated than their adult counterparts, it is generally accepted that children and adolescents warrant specialized legal treatment when they do participate in criminal behavior. The logic of the juvenile courts also hinges on the implicit idea that, as a consequence of the malleability of youths’ psychosocial development, the rehabilitative prospects of juvenile delinquents are better than those of adult offenders.

However, distorted media portrayals, in conjunction with data gathered from flawed empirical studies, have led some Americans to believe that the nation is under siege by an ever-increasing wave of

violent juvenile crime. In some instances, belief in the super-predator myth is perpetuated by shocking and dramatically tragic events involving young offenders (e.g., the 1999 Columbine High School massacre in Littleton, Colorado). The general discourse of the public and media as it pertains to juvenile crime has also been linked to Americans' faith in super-predator myths (Myers et al., 2011). In one study, Kappeler and colleagues (2000) reported that nearly 40% of child-related printed news articles (taken from major newspapers) focused on matters involving youth crime; similarly, 48% of child-related televised newscasts centered on issues involving young criminal offenders. In many media portrayals, the two most common story elements were a graphic depiction of the offense, coupled with flawed statistics hinting toward "inevitable" increases in youth crime (i.e., the "ticking time bomb" myth; cf. Kappeler et al., 2000).

Real and imagined trends in juvenile offending, combined with distorted media depictions about youth crime, have led the American populace into adopting crime control-oriented attitudes and principles which are inherently anti-rehabilitative and anti-juvenile (Kappeler et al., 2000). Since the 1970s, the aim of rehabilitating most offenders has been relegated to a lower priority in both the adult CJS and the JJS (Goodman-Delahunty et al., 2005; Wrightsman et al., 2002). In the context of youth offending, negative perceptions about the JJS and its rehabilitative practices have been exacerbated by reports which reveal that juvenile recidivism rates range, on average, from 30% to 70% (Levine et al., 2007). In all, juvenile offender rates, recidivism and their portrayal in the media sphere appear to operate in tandem to foster negative societal perceptions and reactions toward the original rehabilitative functions of the juvenile courts. This is problematic and counterproductive, as some scholars have observed that "get-tough" legislative policies rarely provide any general deterrent contribution and, in many cases, have the unintended consequence of augmenting the probability of recidivism among young offenders (Kappeler et al., 2000; Tracy et al., 1990).

Juvenile recidivism and public reaction to legal interventions. Statistics from the Department of Justice illustrate that juveniles account for a meaningful proportion of reported criminal offenses (Waite et al., 2005). Moreover, scholars have observed that the problems associated with youth offending are compounded by substantial recidivism rates among this special population (Levine et al., 2007; Tracy et al., 1990). As such, public and legislative responses to juvenile crime are likely to be shaped by the degree to

which currently active legal interventions are perceived to be successful in reducing youth offending and reoffending (Goodman-Delahunty et al., 2005).

In some communities, informal interventions have been designed in line with the original rehabilitative principles once championed by the JJS. For example, when processing first-time juvenile offenders, some communities have opted to process offenders outside the criminal courts, resulting in the use of community-driven informal courts (e.g., teen courts) or similar programs. In some cases, these informal courts have been fairly successful in yielding favorable outcomes for juveniles (e.g., reductions in recidivism; Forgays, 2008). Still, the questionable efficacy of similar community-driven legal interventions implies that some juvenile offenders may still be at risk of experiencing negative intervention-related outcomes, including repeat offending (Stickle, Connell, Wilson, & Gottfredson, 2008). Despite the fact that young offenders tend to commit violations that they are unlikely to repeat in the future (Feld, 1999; Green, 1984; Levine et al., 2007; Tracy et al., 1990; Wolfgang, Figlio, & Sellin, 1972), social psycholegal scholars also acknowledge that the efficacy of the JJS may be dubious.

The considerable rate of recidivism is problematic for both the young and society. Recidivism suggests that many repeat and chronic offenders are at risk of continuing criminal endeavors well into adulthood (Green, 1984; Watt, Howells, & Delfabbro, 2004; Wolfgang et al., 1972). Recidivism also provides most states with a justification to abandon rehabilitative principles and adopt anti-juvenile orientations in their stead (Kappeler et al., 2000). In this context, the goals of rehabilitation are given substantially less weight than the pursuit of public safety and community interest (Goodman-Delahunty et al., 2005).

In the presence of juvenile criminality, along with a general acceptance of crime control values, it may not be surprising to find that some justice functionaries in the legal system endorse strong punitive and anti-rehabilitative positions against young offenders. This is illustrated in the social construction of various waiver laws, which have become more commonplace due to legislative claims that the JJS failed to ameliorate the problem of juvenile offending and reoffending. In essence, legislatures have sought solutions to juvenile crime by equating remediation with “harsh” (anti-rehabilitative) punitive treatment (Tracy et al., 1990). That is, the adjudication and disposition of juvenile offenders within adult criminal jurisdictions are

perceived by some lawmakers as "rational" because adults CJSs seemingly possess the requisite resources to mete out harsh punishments, and such punishments are the only means by which to allay juvenile crime and recidivism.[4] In sum, although the legal system's treatment of juvenile offenders is a function of statutory contingencies (e.g., the *Kent* criteria) and public discourses (e.g., medial portrayals), notions regarding the appropriateness of "harsh" legal interventions also stem from variant (and, at times, competing) ideas about punishment, the management of crime and the rights of individuals.

III. The Juvenile Justice System: Punishment Attitudes, Crime Control and Due Process

The psychology of waiver provisions is not monolithic. Rather, the inherent complexities of transfer laws and transfer decision-making are epitomized through the collection of differing beliefs, values and attitudes held by lawmakers and legal decision-makers. The manners in which juvenile laws are created and enforced are contingent on ideas about what societal reactions are appropriate given specific norm violations. At the same time, responses to violations must balance competing legal goals, such as social control versus individual liberty and the rights of victims versus the rights of offenders. In effect, American criminal institutions—including juvenile jurisdictions of law—are tasked with the arduous challenge of vindicating valued social norms via punitive strategies that must account for the differential needs of the individual and the state. In other words, the construction and application of juvenile laws are functions of the dynamic critical relationships between punishment-related parameters, crime control motives and due process concerns.

Norm vindication: The five goals of punishment. Legal punitive action is one of the central elements of any system of law. In American jurisprudence, legal punishment is a socially sanctioned way by which to vindicate societal norms. Nonetheless, legal punishment is multifaceted. Philosophical, social and legal theories of justice suggest that the nature of punishment is complex because legal systems are required to achieve multiple goals if those systems are to adequately defend and legitimately maintain social order (cf. Carroll et al., 1987; Goodman-Delahunty et al., 2005). In this regard, punishment attitudes

[4] Tracy and colleagues (1990) pointed out an important irony regarding lawmakers' beliefs about the efficacy of "harsh" punishments. These authors note that, with the exception of murderers, some juvenile offenders may actually receive better (i.e., lenient) treatment in the adult courts than within the JJS. However, to date there have been no systematic and comprehensive inquiries to assess the veracity of this assertion.

are comparably complex and nuanced social psychological phenomena. Theories of justice indicate that the psychological correlates of punishment are at least five-fold, such that norm vindication necessitates an analysis of matters involving deterrence, incapacitation, rehabilitation, restorative justice and retribution. In this section, these facets of punishment are briefly reviewed.

Deterrence: General and specific senses. In legal theory, the simplest and most definitive feature of *deterrence* is the practice of implementing punishments as strategies by which to dissuade individuals from engaging in criminal activity (Carroll et al., 1987; Chung & Bagozzi, 1997; Chung & Pardeck, 1994; Goodman-Delahunty et al., 2005). Deterrence motives have at their origins the assumption that legally sanctioned castigations harbor the ability to threaten crime-prone persons. The intention behind these threats is to compel the crime-prone into adopting rational cost-benefit calculi that encourage forgoing seemingly profitable and illegal behaviors that would place their lives (i.e., capital punishment), freedoms (e.g., incarceration) and/or properties (e.g., monetary fines) in legal peril. The legal theory underlying deterrence dictates that crucial relationships exist between potential and actual criminals, threats of punishment and widespread crime prevention.

Given that the rationales for deterrence-based laws center on preventing all future illegal activities, legal theory makes distinctions between actual and potential recidivism probabilities (Carroll et al., 1987). In cases where the motives are to prevent the future wrongful actions of actual known offenders, *specific deterrence* assumes that legally mandated punishments will suffice in preventing those convicted from repeating other illegal acts. In this sense, specific deterrence is synonymous with the prevention of recidivism. In contrast, *general deterrence* motives and practices are not geared to prevent the unlawful acts of known offenders. Rather, general applications of deterrence-oriented policies assume that the public punishment of actual offenders—who, themselves, are not the targets of behavioral change—will oblige potential crime-prone others into rejecting lives of illegality (Goodman-Delahunty et al., 2005). In American criminal law, perhaps the most popular deterrent, in both the specific and general senses, is incapacitation. Although legal theory implies that incapacitation reflects a special class of deterrence, a closer examination reveals that incapacitation-based practices stem from social aims and psychological perceptions that differ from rote crime prevention motives.

Incapacitation: On the issues of public safety and recidivism. The legal concept of *incapacitation* is the component of criminal justice systems with perhaps the most explicit and direct social consequences. Punishment theorists note that within the context of criminal law, incapacitation is both essential and pragmatic. This idea is premised on beliefs regarding the necessity of incarceration and isolation in assuring the protection of the public at large. In particular, the removal of norm violators from public society is perceived as a readily available preventative legal recourse with an optimal likelihood of obviating future criminality on the part of apprehended offenders (Carroll et al., 1987; Chung & Bagozzi, 1997; Chung & Pardeck, 1994; Goodman-Delahunty et al., 2005).

The perceived associations between incapacitation, public safety and recidivism indicate that, at a psychological level, the underlying rationale for detaining specific offenders is influenced by incarcerators' perceptions about those offenders' proclivities to reoffend. Perceptions regarding recidivism likelihood carry substantial implications which determine the methodologies society selects in order to predict recidivism. For instance, *actuarial approaches* attempt to exploit mathematical models that account for the individual, behavioral and social factors associated with recidivism. Similarly, *structured clinical approaches* utilize current data on environmental and behavioral correlates, though the purpose of the data is to identify psychological treatments. In contrast, *selective incapacitation* methods (as exemplified by so-called "three-strikes" laws) presume that career criminality is linear, predictable and enduring (Goodman-Delahunty et al., 2005). In this regard, it seems tenable to suspect that the manner in which criminality is perceived—as either temporary or unchanging—informs legal decision-makers' beliefs about the degree to which the isolation of a particular offender will assist in (or detract from) protecting the public good. Yet, legal scholars have purported that the protection of communities necessitates interventions in which the focus is to modify offenders' undesirable behaviors while in the custody of the state. Accordingly, legal theory presumes that the best interests of both society and offender are mete out concurrently via the implementation of rehabilitative-based principles and methods.

Rehabilitation: The best interests of society and offender. Most theories of punishment uphold the idea of rehabilitating offenders as an essential property of a system of punitive action (Carroll et al., 1987; Chung & Bagozzi, 1997; Chung & Pardeck, 1994; Goodman-Delahunty et al., 2005). These perspectives

hold that the concept of rehabilitation is grounded in naïve theories that view illegal behavior as a function of social, psychological and cultural forces. In this regard, norm violations manifest from factors beyond offenders' personal dispositions.

The acknowledgement that undesirable acts result from multiple etiologies rationalizes the use of various rehabilitation programs, many of which incorporate elements of cognitive-behavioral science and social skills training (e.g., problem-solving skills). In this manner, rehabilitative aims encourage legal systems to engage in a form of *therapeutic jurisprudence*, wherein the systems themselves operate as agents whose task is to promote remedial solutions to deviant behavior (cf. Delahunty et al., 2005). This approach to law, which began around the 1990s, seeks to determine how rules and legal actions affect the social and mental health of those caught in the system. It also attempts to apply social and mental health science research in the construction of new policies and statutes (Levine et al., 2007). As such, the intent behind rehabilitation is to assist offenders in developing self-sustaining prosocial lifestyles; less emphasis is placed on issues involving incapacitation and isolation. Yet, the process of rehabilitation is not solely treatment-oriented. Legal systems expect that part of the rehabilitative process entails that offenders accept responsibility for their unlawful acts and, whenever possible, rectify situations that resulted from those acts. This expectation indicates that a property of rehabilitative-like punishment is the notion of restorative justice.

Restoration: Reparation and social justice. Restorative justice is a principle of penal theory that accounts for the subjective needs of three separate parties: victims, offenders and communities. Restorative justice theory begins with the assumption that norm violations cause literal and symbolic harm to both victims and society (Levine et al., 2007). As such, restoration demands that offenders recognize the harm caused to victims and social order. It also requires that victims understand the reasons why offenders engage in specific instances of crime (Wrightsman et al., 2002).

The aims of reparative legal practices focus on placing communities, victims and offenders in a psychological (or symbolic) state that existed prior to the occurrence of a norm violation. Although certain crimes yield consequences that are inherently irreparable (e.g., homicide), restorative justice seeks to achieve a level of optimal (rather than absolute) psychological repair. Restoration theories draw attention to

crucial social psychological correlates that confirm the rule of law cannot avoid addressing the needs of participants caught in the legal system. These needs center on matters such as procedural fairness, remorse and trust (Delahunty et al., 2005).

Historically, restorative justice has had a major influence across systems of law for millennia. Prior to the late 11th century, the consequences of criminal acts were perceived to be incurred by parties directly involved—namely, victims, offenders and local communities. From this standpoint, restoration was an efficient solution that served a pragmatic social function. Yet, nearing the close of the 11th century, crimes were reconceptualized as actions taken against larger state institutions. Shifts in the perception of which parties automatically deserve vindication had the effect of compelling state-level entities to jettison restorative practices in exchange for deterrent- and retributive-based philosophies and methodologies (cf. Benson, n.d.). To an extent, shifts of this sort contributed to a strengthening of retributive justice.

Retribution: Vengeance and retributive justice. Among philosophers and social psychologists, *retribution* is perhaps one of the most researched concepts in the area of penal theory (Carroll et al., 1987; Chung & Bagozzi, 1997; Chung & Pardeck, 1994; Goodman-Delahunty et al., 2005). Retributive justice concepts are comprised of social, affective and cognitive qualities. These qualities operate in tandem to encourage specific justice-related actions that are deemed appropriate under particular circumstances. In fact, Vidmar (2001) proclaimed that retribution is a ubiquitous phenomenon that resides at the center of most human interactions, ranging from the mundane to the outlandish. In most instances, the aims of retribution are two-fold: (a) behavioral control, and (b) revenge (also cf. D. T. Miller & Vidmar, 1981).

The double-motive of retribution appears to map onto corresponding rational/cognitive and affective elements, both of which contribute to the social construction of retributive justice. Because societies champion culture-specific methods for regulating certain behaviors, it must follow that members of distinct societies hold differing beliefs about the justifications for behavioral control. That is, different societies adopt different punishments in order to achieve different social and behavioral control goals. In the United States, the "logic" or rationale underlying retributive justice is *utilitarian* in nature (Vidmar, 2001). This form of justice attempts to mete out restoration, deterrence, norm-vindication and legitimacy. This "logic" is integrated, to varying degrees, in the legal schemas of Americans. In turn, these beliefs

influence how Americans think they ought to appraise certain norm violations and their corresponding punishments.

Retributive justice also incorporates affective elements—namely, moral outrage and the desire to dispense just deserts (cf. Carroll et al., 1987; Chung & Bagozzi, 1997; Chung & Pardeck, 1994; Goodman-Delahunty et al., 2005). Here, the revenge motive of retributive justice engenders desires to raise the dignities of the violated through a process that diminishes the dignities of violators. In its affective form, the function of the revenge motive appears to be psychological rather than utilitarian because it serves the purpose of establishing "equilibrium" or subjective balance via anger reduction. From this, Vidmar (2001) advanced a six-stage model of retribution, whereby: (a) a norm violation is perceived, (b) observers draw inferences about the violator's blameworthiness, (c) observers appraise whether the violation threatens the self, others or society, (d) depending on a-c, specific negative emotions and thoughts are elicited, (e) emotions and thoughts elicit specific punishment responses, and (f) retributive actions restore psychological equilibrium. According to this perspective, retributive behavior is a by-product of an affective-cognitive mechanism designed to restore the psychological balance of the violated (e.g., compensation for victims or the vindication of societal norms).

In the United States, the formation and intensification of retributive and anti-rehabilitative attitudes have cultivated social and legal cultures wherein ideas of punitive justice have garnered popularity. Contemporary notions of punishment appear to be corollaries of society's adoption of the crime control model of law, which has rationalized the use of certain statutes, legal programs and policies aimed at reducing criminal offending and reoffending (e.g., electronic monitoring; Levenson, Brannon, Fortney, & Baker, 2007). Within American criminal law, retributive justice attitudes have been found to be associated with highly punitive decision-making (e.g., lengthier imprisonment sentences), especially when adjudicating repeat offenders (Feather & Souter, 2002).

Similar phenomena have been observed within the current JJS. Negative media portrayals of juvenile violence during the last three decades have led lawmakers and public workers to develop a general skepticism toward rehabilitative-based policies and legal paradigms (Goodman-Delahunty et al., 2005; Grisso, 1996; Kappeler et al., 2000). As a result, judges in the JJS must often render decisions that accord

with the public's demand for retribution, including transferring juvenile offenders to the adult criminal courts (Grisso, 1996; Harris, 2007). However, legal decision-makers, including juvenile court judges, are not driven solely by desires for retribution. The complexities associated with deviance, punishment and vindication explain why legal decision-makers routinely grapple with several considerations that fall along the whole of a "crime control–due process" dimensional continuum. In this way, legal decision-making is inherently a social psychological process wherein the needs of both state and individual are weighed, evaluated and executed into legal action.

Crime control and due process orientations: A justice process model. Laws and legal practices are embedded within specific moments in time and space. Jurisprudence is not static. As such, the degrees to which legal institutions account for the needs of the state and the individual are in a continual state of flux. In the context of criminal law, the justice process routinely treads across two legal orientations that map onto differential state- and individual-level interests: *crime control* and *due process*, respectively (Packer, 1968; Wrightsman et al., 2002).[5]

Crime control orientations focus on the concerns of the state as they pertain to the social regulation of behaviors deemed to be deviant (Wrightsman et al., 2002). For the criminal justice process, the utmost priority is the cessation of criminal activity. Assumptions of the crime control model hold that the failure to regulate criminal behaviors facilitates the breakdown of social order, in turn threatening the legitimacy of the state's behavioral control mechanisms and the liberties of the law-abiding citizenry. , the capacity to identify the guilty and establish effective sanctions in an efficient manner is paramount. That is, this model of the justice process is contingent on *speed* and *finality*. Under this model, systems of law must be uniform and swift in the suppression of deviance while simultaneously generating methods by which to minimize any challenges (e.g., mistrials) to the dispensation of criminal justice (cf. Packer, 1968).[6]

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[5] Packer (1968) warns against imbuing the two models of the justice process with any particular moral valence (i.e., crime control and due process orientations are neither good nor bad). The utility of the two models is academic, as the models serve to categorize an array of state- and person-oriented legal values. Further, the two models are not polar opposites. Though located along a continuum, each model does not reflect the actual state of affairs at any given moment because both orientations are differentially active at distinct moments in time and space.

[6] A parallel exists between the principles of crime control (e.g., speed and finality) and the psychological correlates of social information-processing (e.g., heuristics and high need for closure).

In contrast to the crime control model, due process orientations account for the concerns of individuals who come into contact with the jurisdictions of the state. Such individuals include the victims of crime and the perpetrators of deviance (Wrightsman et al., 2002). Assumptions of the due process model argue in favor of criticizing the actions of official powers (e.g., law enforcement). Although due process is not incompatible with deviance suppression motives, the model recommends transparency and the active placement of legal obstacles (e.g., statutes of limitation) at all stages of the justice process. Under a model of due process, deviance regulation and cessation are fundamentally contingent on the ability of the state to identify *reliable* (versus uniform) solutions to the legal plights of individuals (cf. Packer, 1968).[7]

Contemporary punishment attitudes and justice process orientations appear to act as nonstatutory factors that shape legal decision-makers' perceptions, inferences and choices. It is reasonable to expect that comparable nonstatutory forces operate within the context of juvenile law. In this legal context, decision-makers differentially evaluate competing sources of information. However, research has found that the extent to which punitiveness influences the justice process may depend on how much cognitive effort decision-makers expend when evaluating case information. This perspective is briefly discussed below.

Punitiveness and social information-processing: A brief note. Social information-processing refers to the ability to think about and analyze cues from the environment. Contingent on a number of factors, individuals vary in the degree to which they think systematically (i.e., in-depth) or heuristically (i.e., superficially). In the context of law, the available literature suggests that strong associations exist between superficial processing and support for punitive legal recourses. In studies measuring Need for Cognition (NFC), a proxy construct for systematic information-processing, low levels of NFC have been found to be related to pro-capital punishment positions (Butler & Moran, 2007), general punitiveness (Sargent, 2004) and anti-rehabilitative attitudes (Tam, Leung, & Chiu, 2008). Other studies have also found that superficial processing (when measured independently from NFC) is associated with harsh punitive actions (M. K. Miller, Wood, & Chomos, 2014).

In sum, important relationships exist between punishment attitudes, justice process orientations, social information-processing and legal decision-making. Still, an important question remains unanswered:

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[7] A parallel exists between the principles of due process (e.g., skepticism and reliability) and the psychological correlates of social information-processing (e.g., high deliberation and accuracy motivation).

how do juvenile court judges arrive at a transfer decision? The fourth and final section of the literature review addresses this question by discussing how juvenile courts judges contend with various legal considerations (e.g., recidivism; psychological evaluations) and extralegal factors (e.g., emotions, attitudes and information-processing).

IV. Decision-making in the Juvenile Courts: Transfer Decisions, Psychological Assessments and Judicial Research

This section of the chapter focuses on three areas. First, the different legal procedures for transfer are briefly discussed. Second, links are drawn between provisions listed in the *Kent* Guidelines and the use of psychological assessments for juvenile offenders. Finally, the research on judicial waivers and juvenile crime is juxtaposed. This includes a discussion of the statutory and nonstatutory factors related to transfers, as well as a review of cohort analyses regarding observed rates of juvenile offending and reoffending.

The transfer decision. In juvenile law, transfers are a legal procedure used throughout all 50 U.S. states and the District of Columbia. Procedures of this type allow for the diversion of particular juvenile offenders to the adult CJS, where the concept of rehabilitative amenability is given less consideration than other punitive principles. Juveniles tried in the adult CJS are presumed to be adult-minded individuals who would benefit from retributive-based punishment (D'Angelo, 2007). Throughout the nation, the authority to transfer differs by state and falls under select jurisdictions. These jurisdictions include the criminal courts (i.e., *statutory exclusion*), prosecutors (i.e., *direct file*) and state juvenile courts (via judicial waiver provisions; Griffin et al., 2011; Griffin et al., 1998). Presently, 45 states and the District of Columbia grant juvenile court judges the legal authority to waive jurisdiction in juvenile cases (Griffin, 2009).

The option to transfer juvenile offenders from juvenile jurisdictions to adult criminal courts has become the JJS' last resort when dealing with young offenders who seem to have limited rehabilitative prospects (D'Angelo, 2007). Juveniles are perceived to have limited rehabilitative promise for a host of legal-related reasons. For example, views about juveniles' rehabilitative potential are affected by issues concerning recidivism, offense severity and age.[8]

[8] In most cases, younger offenders are believed to benefit from the rehabilitative practices of the JJS. Age becomes a controversial issue when juveniles are approaching legal adulthood and it is unclear if there is sufficient time to properly intervene.

At present, the determination of juveniles' rehabilitative possibilities (e.g., risk of reoffending) by presiding judges is a function of several legal guidelines (e.g., the *Kent criteria*; see Griffin et al., 1998) and psychosocial considerations (e.g., maturity level). However, because of the subjective and complex nature of these guidelines and considerations, many juvenile court judges rely on input gathered from other parties. These parties include probation officers, social workers and trained mental health professionals. In the case of mental health professionals, their skills and knowledge are commonly sought by judges so that diagnostic psychological data can be used to facilitate the decision-making process. In the next section, the use of psychological tests in drawing inferences about juveniles' rehabilitative prospects is discussed in greater detail.

The *Kent* influence, psychological assessments for juvenile offenders and judicial transfer decisions. The typical judicial waiver of jurisdiction is a function of numerous factors rather than the result of a single criterion or rationale. There are no overarching and legally binding rules that dictate how all juvenile court judges ought to decide in particular wavier of jurisdiction hearings. However, at the federal level, the Supreme Court—through *Kent* (1966)—offered guidelines for states to consider. Presently, all states in the nation utilize most or all of the eight *Kent* Guidelines, which include: (a) offense severity and protection of the community, (b) level of aggression/violence and premeditation, (c) type of offense (property vs. person, with greater emphasis given to the latter), (d) prosecutive merit of the complaint, (e) desirability of trial and disposition in one court (in cases involving adult accomplices), (f) sophistication and maturity of the juvenile, (g) prior offense record, and (h) rehabilitative/treatment amenability. Despite these eight guidelines, states vary in the type and number of criteria that must be met in order to transfer a juvenile to an adult criminal jurisdiction (Griffin et al., 1998).

In the majority of cases, juvenile court judges rarely consider the *Kent* Guidelines in their entirety. This may be due to practical matters, as when particular criteria are inapplicable (e.g., in a case involving a single juvenile offender, the guideline requesting judges to consider the role of adult accomplices is legally irrelevant). Yet, research suggests that the plurality of cases reveal what judges perceive to be the most fundamental issues, such as the severity of offenses and juveniles' prior records (Jones & Cauffman, 2008; Salekin et al., 2002).

Further, judges are likely to weigh—either in isolation or in tandem—the perceived dangerousness of young offenders, the maturity/sophistication of offenses and offenders and offenders' amenability to treatment within the jurisdiction of the juvenile courts (Jones & Cauffman, 2008; Salekin et al., 2002). Although the natures of these criteria are inherently subjective, judges rely on these factors in order to generate legal decisions that account for dangerousness and recidivism. It appears that judges perceive inextricable links between legal-based criteria—which share some level of objectivity—and relatively subjective considerations. In the presence of significant subjectivity and ambiguity, it is not surprising to find that some juvenile court judges have favored the use of juvenile-oriented psychological assessments as means for informing the transfer decision-making process.

Even though judges are capable of drawing adequate inferences about juveniles based on objective legal-based criteria (e.g., existing police records), the majority of active judges possess limited requisite knowledge, skills or training to form equally valid deductions based on cultural, social or psychological (i.e., extralegal) information (Kovera & McAuliff, 2000; Redding & Murrie, 2007). Because of these uncertainties in judicial inference, it has become common practice among judges to contract clinical psychologists and other mental health professionals in order to obtain diagnostic evaluations about juvenile dangerousness. Similar evaluations are also performed in order to formulate predictions about whether juvenile offenders will benefit from rehabilitative-based disciplinary interventions (Redding & Murrie, 2007).

Research shows that judges are likely to place substantial weight on matters pertaining to dangerousness and rehabilitation, as these criteria provide information about the likelihood of recidivism (Schwalbe, Fraser, Day, & Cooley, 2006). At times, judges use the results from psychological assessments in order to justify their transfer decisions (Hecker & Steinberg, 2002; Salekin et al., 2002). Still, when assessments emphasize the roles of mental descriptors and clinical diagnostic labels, judges do not appear to place excessive evidentiary weight on psychological evaluations (Hecker & Steinberg, 2002; also, cf. McCoy, Murrie, & Cornell, 2005; Redding & Murrie, 2007). Nonetheless, the extant literature indicates that it is reasonable to suspect that judges could formulate particular transfer decisions based on the perceived consequences that specific psychological diagnoses imply.

Judicial insights and psycholegal research: Crucial perspectives on juvenile law and waivers of jurisdiction. Research reveals that juvenile court judges often grapple with a vast array of factors when rendering legal decisions. This means that most transfer decisions emerge out of a process that imputes differential weight on psychological, social, structural, cultural and legal variables. Though not mutually exclusive, these variables generally fall under one of two types of factors: legal (i.e., statutory) and extralegal/nonstatutory (e.g., sociocultural; psychological). Several inquiries support this notion (see Table T1 for a summary of these inquiries).

Statutory and nonstatutory sources of influence. In an extensive survey involving actual juvenile court judges throughout the United States (D'Angelo, 2007), a series of statutory factors were identified as plausible rationales for judges' transfer decisions. Of these factors, some of the most central were *juvenile age*, *type of current offense*, *type/severity of experienced abuse*, *number of victims*, *number of accomplices*, *offense history*, *severity of prior offenses*, *gang affiliation* and *drug usage*. Other investigations have found similar findings and demonstrated that juvenile court judges are likely to attend to matters involving juvenile dangerousness, sophistication/maturity and treatment amenability (Brannen et al., 2006; Feld, 1983; Lyons, 2011; Means et al., 2012; Salekin, 2002; Salekin et al., 2002).

Though difficult to measure, there is evidence that juvenile court judges also import extralegal processes and considerations when drawing inferences and conclusions about optimal choices of legal recourse. For instance, D'Angelo (2007) observed that, even in the presence of potential social desirability motives, some judges did affirm that their transfer decisions sometimes consider structural and cultural factors. These factors included family structure (e.g., number of caregivers), educational status (i.e., dropout vs. non-dropout), juvenile's residential environment, socioeconomic status (SES), sex and ethnicity/race.

Psycholegal research findings: Cohort analyses of juvenile criminality. The studies discussed above demonstrate that, from the perspective of juvenile court judges, the transfer decision-making process weighs multiple complex factors. Still, waiver laws arose largely out of legislative forces which sought to correct the JJS's inability to curb recidivism (Tracy et al., 1990). A series of cohort analyses on the subject of juvenile criminality shed empirical evidence regarding the degree to which recidivism plagues the

juvenile population. Collectively, these analyses indicate that juvenile crime and recidivism are usually exceptions to the norm.

In one of the first major studies involving a cohort of male juvenile offenders, Wolfgang and colleagues (1972) examined the recidivism and desistance rates of nearly 10,000 juvenile males who had come into contact with the system. Sample data were taken from delinquency records (e.g., police and court records) belonging to a cohort of 10-18 year-old males who were born in Philadelphia in 1945. This analysis found that nearly 46% of those sampled were unlikely to commit a second offense; further, 35% of second-timers were unlikely to commit a third offense. The *desistance rates*—or the probability of abstaining from future crime—of those sampled did not begin to level-off until the third offense. These findings call into question ideas about the failures of the JJS. In fact, in another cohort analysis (this time, with two Wyoming cohorts of male high school sophomores from 1971 and 1976; see Green, 1984), the data extracted from two samples were compared to and mainly confirmed the results found in the 1945 Philadelphia cohort analysis (e.g., comparable desistance rates).

In a third cohort analysis, a full replication of the Wolfgang investigation (1972) was performed (cf. Tracy et al., 1990). Here, the cohort analysts examined the delinquency records of over 13,000 male juvenile offenders who were all born in Philadelphia in 1958. The results of this analysis demonstrated once again that most juveniles were unlikely to recidivate and that desistance rates decreased only among so-called *chronic offenders* (i.e., juveniles with at least five police contacts). Also, based on official records for serious offenses, chronic offenders were usually the perpetrators of such acts. In all, this area of research argues against claims made by legislatures regarding the actual gravity of juvenile recidivism. This is not meant to imply that recidivism among this special population is irrelevant or a nonissue. Rather, these researchers favor identifying alternatives to transfer and incarceration for first- and second-time offenders; as such, incapacitation-related resources ought to be reserved for handling chronic offenders.

Literature Review Conclusion

The literature presented here provides historical, legal, social and psychological context to the empirical study of judicial transfer decision-making. Four broad areas of research were reviewed: (a) the history of and case law on juvenile delinquents and their legal rights, (b) societal perceptions and reactions

to juvenile delinquency, (c) the structure of punishment attitudes and justice process values, and (d) judicial and psycholegal perspectives on the nature and utility of waiver laws. Information extrapolated from these four areas of inquiry gave direction to the current investigation in three important ways. First, by examining critical facts in the extant research, it was possible to begin identifying research questions and potentially relevant social theories (vis-à-vis the study's aims). Second, the literature underscored important variables of interest, which appear to fall under "legal" and "extralegal" categories. Finally, through the process of theory selection and research question development (discussed in Chapters 3 and 6, respectively), the appropriate methods were developed (discussed in Chapter 7). The subsequent chapters probe deeper into these three aspects of this investigation.

Chapter 3: Theoretical Background

Two theories provided different perspectives by which to test alternative predictions regarding judicial transfer decisions. According to the dual-process theory of proximal/distal defenses (DTPDD), implicit death reminders trigger superficial information-processing and distal (unconscious) terror management. To the extent that elements of juvenile offenses automatically elicit personal vulnerability concerns, the likelihood of unbiased legal inference is undermined by allowing extralegal factors to influence judgment. Alternatively, uncertainty avoidance/causal attribution theory (UACA) theory holds that legal contexts are inherently uncertain and prompt decision-makers into applying attributional reasoning strategies designed to manage uncertainty and identify satisfactory decisions. Because juvenile offenses and offenders have the potential to trigger vulnerability concerns, as well as uncertainty anxiety, both theories provide plausible backdrops that explain how juvenile court judges render transfer decisions.

Dual-process Theory of Proximal/Distal Defenses

A large body of social scientific research lends credence to the notion that terror management-related processes have the potential to direct a vast array of human behaviors, thoughts and emotions (Burke et al., 2010; DeWall & Baumeister, 2007; Greenberg et al., 1995; Routledge & Juhl, 2010; Solomon, Greenberg, Schimel, Arndt, & Pyszczynski, 2003). An assertion of *terror management theory* (TMT) maintains that the concurrent existence of two mental processes—self-preservation motivation and mortality awareness—brings about a psychological state in which people experience existential anxieties that can only be assuaged via the application of specialized psychological coping mechanisms known as *buffers* (e.g., self-esteem; social identity). The activation of death-related psychological buffers follows from exposure to environmental stimuli that trigger conscious or unconscious thoughts about death. As such, individuals are prone to enact behaviors aimed to protect functional psychological buffers (also see the term, *worldview defense*).

The tenets of TMT have received empirical support across many experiments (Burke et al., 2010; DeWall & Baumeister, 2007; Greenberg et al., 1990; Greenberg et al., 1995; Greenberg, Pyszczynski, & Solomon, 1986; Rosenblatt et al., 1989; Pyszczynski et al., 1999). Evidence suggests that concerns about death and vulnerability influence behaviors and intrapsychic processes that are completely disassociated

from the actual "problem of death" (e.g., judgments about moral transgressors). In task-oriented contexts (e.g., legal judgment), biases introduced by desires to protect functional anxiety buffers elicit processes and behaviors that affect the execution of task-relevant aims. In effect, mortality salience (MS) is inextricably linked to conscious and unconscious social information-processing mechanisms.

The connections between MS, worldview defense behavior and social information-processing have been articulated by other scholars. This is most explicit in the DTPDD, an extension of TMT (Pyszczynski et al., 1999). The DTPDD posits that the superordinate cognitive apparatus possesses two subordinate "defense systems" that operate in parallel with the two information-processing modes—the experiential and rational modal systems—elaborated in *cognitive–experiential self-theory* (CEST; Epstein & Pacini, 1999; Hogarth, 2005; Klaczynski, 2005).[9] The DTPDD postulates that the management of conscious and unconscious vulnerability concerns is aided by a dual-defensive information-processing apparatus.

At the conscious level, wherein death thoughts are readily accessible, the *proximal terror management system* manages the adverse effects of immediate mortality awareness (Pyszczynski et al., 1999). This system operates in tandem with the rational information-processing route and manages conscious MS by applying rubrics (e.g., germane statutes) that distort conscious personal vulnerability perceptions (e.g., perceiving mortality as a future event). As a consequence of the active suppression of death thoughts, this form of terror management taxes a substantial portion of available cognitive resources (e.g., attention). When sufficient cognitive resources are available, the suppression of vulnerability concerns is likely to decrease the degree to which such concerns contaminate other task-relevant goals.

At the unconscious level, wherein the accessibility of death thoughts is automatic and limited (albeit possible), the *distal terror management system* manages the effects of immediate subliminal mortality priming (Pyszczynski et al., 1999). This system functions in conjunction with the experiential information-processing route and defends individuals against preconscious MS by exploiting "rationales"

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[9] Cognitive–experiential self-theory (CEST) frames social information-processing in terms of two systems. The theory holds that the *preconscious*/*experiential system* operates as the default information-processing mode. The experiential mode is largely heuristic, affective and requires minimal expenditure of available cognitive resources. The theory also holds that the *conscious*/*rational system* is accessible only when sufficient data are present to override the default system. The rational mode is largely systematic, logical and requires some expenditure of available cognitive resources.

that are disassociated from the features of the actual threat at hand (e.g., the use of extralegal factors as justifications for legal decisions). As a result of stimulus priming and automaticity, unconscious terror management expends only a small share of available cognitive resources, thus permitting the superordinate cognitive apparatus to allocate those resources to superfluous psychological demands, such as self-esteem enhancement and worldview defense. In this regard, the inability to suppress experienced vulnerability is likely to increase the degree to which extraneous demands influence other task-relevant pursuits.

Borrowing from CEST, the DTPDD (Pyszczynski et al., 1999) presupposes the existence of a hierarchical relationship between the proximal and distal defense systems, whereby terror-inducing stimuli must be sufficiently and consciously accessible before their presence can affect the rational information-processing system. Figure 1 presents an illustration that organizes terror-inducing stimulus types, management responses and the two defense systems into separate information-processing modes.

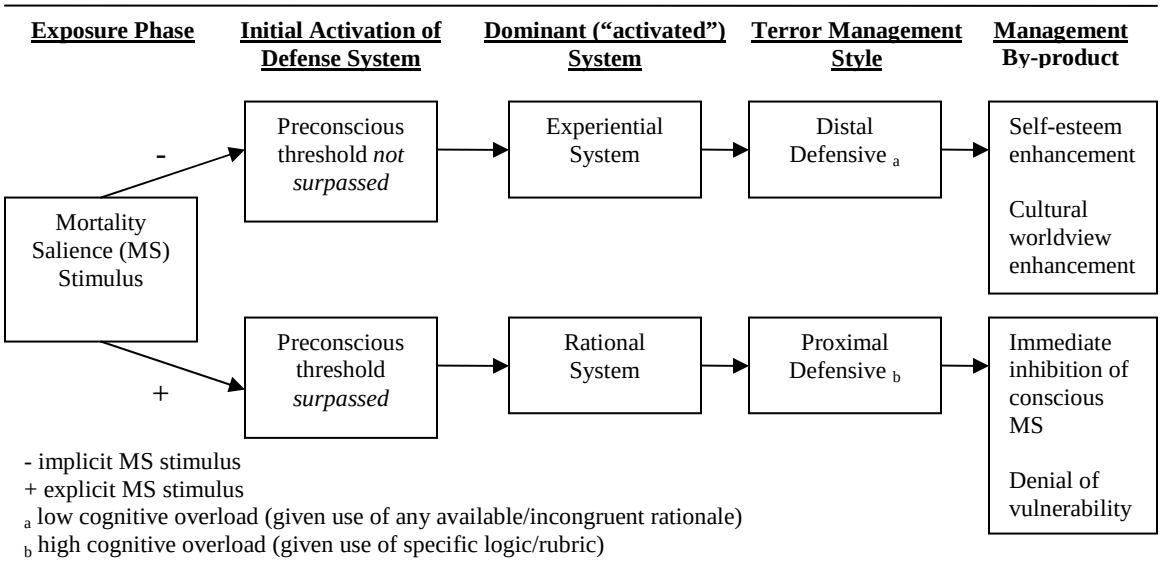

Figure 1. A modified depiction of the *dual-process theory of proximal/distal defenses*. The model illustrates that the activation of the experiential–rational systems is contingent on the nature of the MS stimulus and its ability to activate cognitive structures within the fringes of consciousness (i.e., experiential system) and/or at the explicit level (i.e., rational system). To the extent that a given MS stimulus activates a particular system (experiential or rational), the corresponding terror management styles (distal and proximal, respectively) and by-products will emerge.

In theory, the DTPDD provides an adequate framework for understanding the nature of judges' transfer decisions within the American JJS. At the same time, it is also plausible that alternative frameworks (e.g., UACA theory) exist which may offer more comprehensive explanations for judges'

transfer decision than the DTPDD. In the next section, a second integrative theory developed exclusively for the study of legal decision-making is discussed.

Uncertainty Avoidance/Causal Attribution Theory

Numerous scholars have purported that causal analytic reasoning operates in tandem with uncertainty management (e.g., Albonetti, 1986, 1987, 1991; Albonetti & Hepburn, 1996; Ulmer, Kurlychek, & Kramer, 2007). Accordingly, proponents of structural organizational perspectives (e.g., March & Simon, 1958) argue that legal decision-making is constrained by the level of uncertain knowledge present in a given case. This means that heuristics, habits, satisficing behavior, stereotyping and organizational arrangements (e.g., divisions of labor) play critical roles in the management of uncertainty anxiety, thus allowing decision-makers to generate "desirable" solutions. In similar fashion, some attribution theorists (e.g., Carroll & Payne, 1976; Heider, 1958) have observed that judgments and decisions about the actions of others follow from assessments regarding the internal/stable/dispositional and external/temporary/situational qualities of those actions. Via the examination of a behavior's enduring and transitory elements, decision-makers expect to identify satisfactory decision-making outcomes. This literature forms the foundation of UACA theory, which stresses that the purpose of attributional reasoning is to reduce decision-making uncertainty and identify desirable (though not necessarily accurate) solutions.

In general, UACA theory (cf. Albonetti, 1986) argues that legal decision-makers (e.g., judges; prosecutors; jurors) manage decision-making uncertainty by formulating *patterned responses*. For most legal decision-makers, these patterned responses are based on a "bounded rationality" pertaining to an offender's recidivism likelihood (Albonetti, 1991). The theory assumes that the application of patterned responses is a corollary of three decision-making constrains: (a) legal contexts are inherently uncertain or ambiguous, (b) legal decision-makers are motivated by crime control concerns, and (c) legal decision-makers are inclined to engage in uncertainty management and satisficing behavior.

The tendency to engage in uncertainty management and satisficing behavior may compel decision-makers to apply patterned responses grounded in stereotypic attributional evaluations (Albonetti, 1991). To the extent that this is true within the legal system, the stable/dispositional (i.e., stereotypic) versus

unstable/situational (i.e., non-stereotypic) properties of an offender's behavior, history and social status may carry determinative implications for particular legal decisions (see Figure 2).

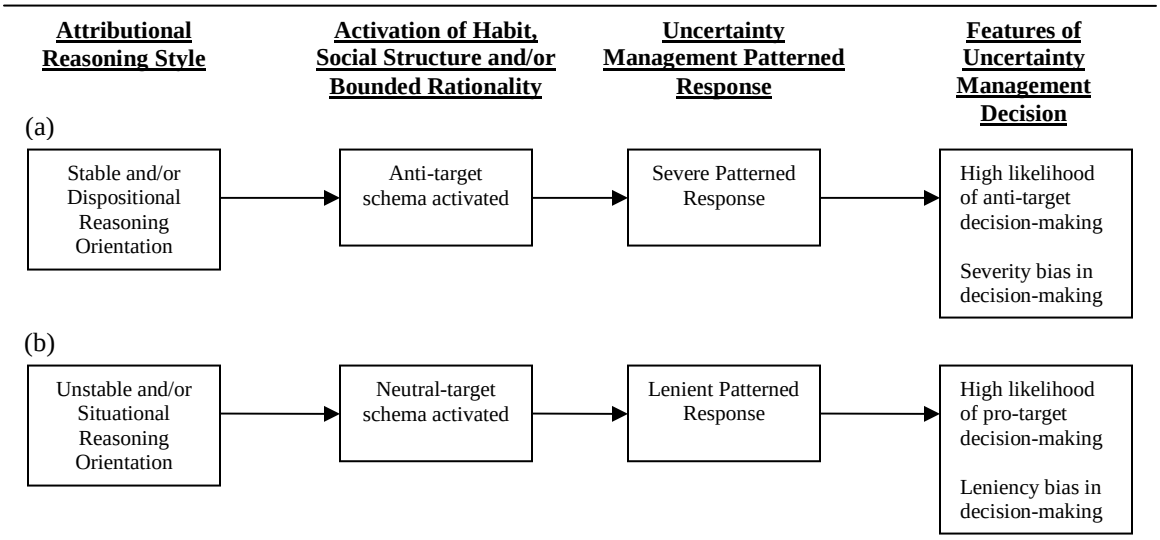

Figure 2. A modified depiction of *uncertainty avoidance/causal attribution theory*. In path (a), dispositional and stable properties encourage decision-makers to apply anti-target schemas that view the origins of deviant behavior in terms of internal, enduring and controllable forces; "aggravating" anti-target schemas activate severe patterned responses. In path (b), situational, temporary and unstable properties encourage decision-makers to apply neutral-target schemas that view the origins of deviant behavior as emerging from external and uncontrollable forces; "mitigating" neutral-target schemas activate lenient patterned responses.

The extant research has identified a leniency bias in legal decision-making when legal decision-makers attribute deviant behavior to unstable/situational factors, resulting in pro-defendant decisions (this can also be conceptualized as a "lenient patterned response"). In contrast, a severity bias in legal decision-making emerges when legal decision-makers attribute deviant behavior to stable/dispositional factors, resulting in anti-defendant decisions (i.e., "severe patterned response"). From the standpoint of UACA theory, the links between uncertainty avoidance, attributional reasoning, crime control and legal decision-making are tightly intertwined.[10]

[10] In this investigation, *leniency* versus *severity* biases are presumed to be equivalent to "no transfer" versus "allow transfer" decisions, respectively. This presumption could be inaccurate and, in theory, judges could elect to waive a juvenile to the adult CJS if they believe juveniles will receive more lenient legal outcomes than those outcomes likely to emerge from the JJS (or, conversely, judges could elect to maintain jurisdiction if they want a juvenile to receive JJS outcomes that are harsher than those of the CJS). However, research (e.g., D'Angelo, 2007) lends support to this presumption and reveals that many judges and justice functionaries within the JJS believe that diversion to the adult CJS is a punitive (i.e., non-rehabilitative) response to juvenile crime.

Mapping Theoretical Principles to Specific Methodological Elements

Presently, the determination of juveniles' rehabilitative possibilities by presiding judges is a function of various legal guidelines (e.g., the *Kent criteria*; see Griffin et al., 1998) and psychosocial considerations. Yet, given the subjective and complex nature of these guidelines and considerations, judges have to reconcile competing legal decision alternatives in order to mete out particular aims. In the next two subsections of this chapter, the DTPDD and UACA theory are discussed as distinct frameworks by which to model the reconciliation of judges' legal choices. These theories predict specific legal outcomes, which are contingent on the roles played by different social psychological parameters.

Dual-process theory of proximal/distal defenses, applied. The extant literature gives reason to suspect that a strong association exists between legal decision-making and terror management (e.g., Arndt et al., 2005). Based on the DTPDD, initiation of proximal and distal defenses depends on the MS-inducing stimulus type (see Figure 3). Stimuli that surpass the preconscious system activate the rational system; otherwise, the processing of informational cues remains at an implicit/heuristic level. Explicit stimuli in the environment are likely to activate the rational system and encourage the use of proximal defenses which are able to manage conscious terror-based anxiety. In contrast, implicit MS stimuli tend to activate the experiential system, encouraging the initiation of distal defenses which manage background mortal anxiety.

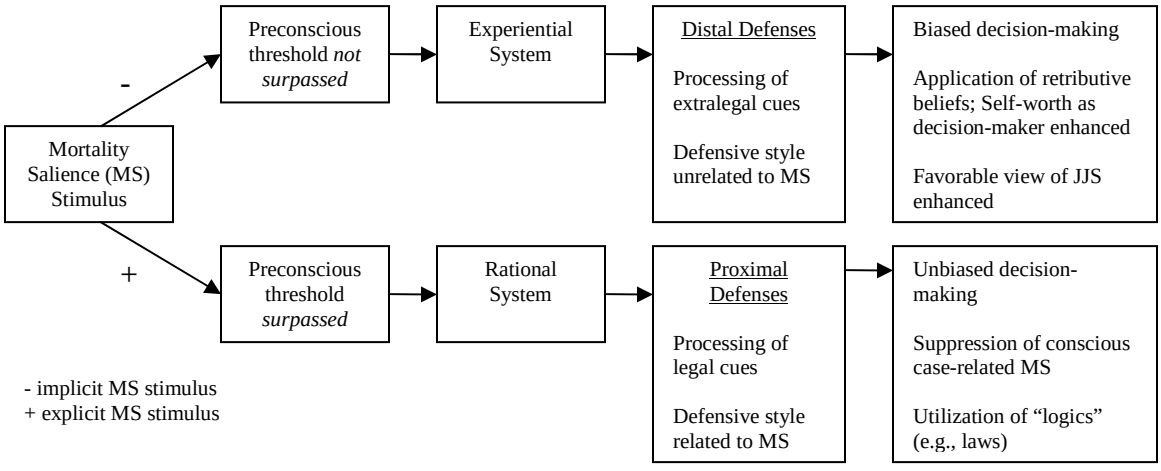

Figure 3. A depiction of the *dual-process theory of proximal/distal defenses*, applied.

Assuming that the DTPDD provides an adequate model for explaining judicial transfer decisions, two general predictions can be derived about how judges simultaneously reconcile experienced terror, legal

prescripts and extralegal influences. First, as illustrated in Figure 3, the activation of distal defenses orients judges' unconscious toward incidental cues (e.g., extralegal factors). The processing of incidental cues suggests that the distal defensive style initiated by those cues may—at times—be partly or wholly unrelated to the actual terror-inducing stimulus. This form of terror management has implications for judges' self-worth as a legal decision-maker (i.e., self-esteem enhancement), as well as their impressions of the JJS (i.e., cultural worldview enhancement). In theory, the processing of incidental cues via the experiential system could undermine legal inference and encourage biased decision-making (e.g., transfer decisions based on extralegal considerations).

Second, Figure 3 shows that the activation of proximal defenses may orient judges' conscious attention toward immediate and explicit (and, perhaps, highly relevant) cues. The processing of explicit cues (e.g., legal factors) implies that the proximal defensive style initiated by those cues will be related to the actual terror-inducing stimulus. Terror management, in this sense, provides judges with opportunities to accomplish multiple aims, including (a) the active suppression of conscious death concerns, (b) the disassociation of death-related anxiety from legal reasoning and decision-making, and (c) the proper application of "logics" and rubrics (e.g., laws and statutes). The processing of explicit cues via the rational system could encourage unbiased decision-making (e.g., transfer decisions based on legal considerations).

Uncertainty avoidance/causal attribution theory, applied. In contrast to the DTPDD, UACA theory begins with the supposition that the social context wherein legal decision-making takes place is inherently uncertain or ambiguous (Albonetti, 1986, 1987, 1991; Albonetti & Hepburn, 1996). The clout of uncertainty, manifesting psychically as an aversive conscious experience, prompts legal decision-makers into applying causal analytic strategies in order to (a) manage uncertainty, (b) attend to crime control motives, and (c) improve the chances of extracting satisfactory decisions. If the causal analytic processes underlying legal decision-making possess attributional properties, it is tenable to expect that particular attributional reasoning styles may trigger a series of predictable patterns and decision-making outcomes (see Figure 4). As such, UACA theory may serve as a more suitable framework (vis-à-vis DTPDD) for modeling juvenile court judges' transfer decisions.

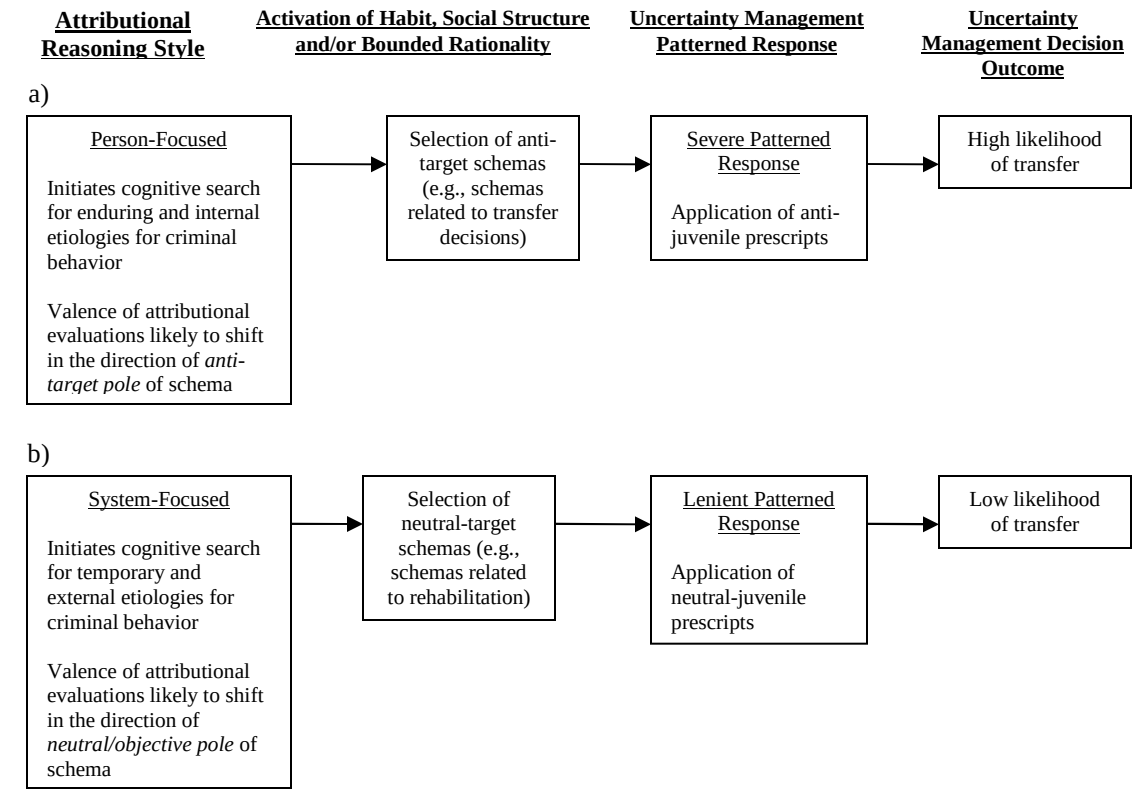

Figure 4. A depiction of *uncertainty avoidance/causal attribution theory*, applied. Paths a and b are both illustrated.

Figure 4 illustrates two general predictions (i.e., path a and path b) derived from the central tenets of UACA theory. Path a in Figure 4 models a person-focused orientation trajectory in which dispositional and stable target features (e.g., dangerousness of juveniles) encourage decision-makers to utilize "anti-target" schemas. Anti-target schemas conceptualize the etiologies of deviant behavior in terms of internal, enduring and controllable qualities possessed by the target. For instance, person-focused judges may attribute juvenile crime to the dispositional characteristics of offenders. The notion that juvenile behavior is inflexible and context-independent may decrease the chances of perceiving young offenders as individuals who are amenable to rehabilitative treatment. In turn, "aggravating" anti-target schemas may activate severe patterned responses (e.g., the decision to adjudicate juveniles within the adult courts).

Path b in Figure 4 depicts a system-focused orientation trajectory in which situational and unstable target features (e.g., environment of juveniles) prompt decision-makers to apply "neutral-target" schemas. Neutral-target schemas conceptualize the etiologies of deviant behavior in terms of external and uncontrollable phenomena temporarily associated with the target. For example, system-focused judges may

attribute juvenile crime to the situational contexts wherein offenses occur. The idea that juvenile behavior is malleable and context-dependent may increase the chances of viewing juvenile offenders as individuals who are amenable to rehabilitative treatment. As a result, “mitigating” neutral-target schemas may activate lenient patterned responses (e.g., the decision to adjudicate offenders within the JJS).

Theoretical Background: Conclusion

The DTPDD and UACA theory present distinctive predictions regarding transfer decisions. The two theories suggest that judicial transfer decisions do not happen in a vacuum. Decisions are embedded within social contexts and involve a host of psychological, social, cultural and structural contingencies. It is impossible to examine all relevant contingencies in a single study. For the sake of parsimony, only a small number of factors were examined in this investigation (see Chapter 5).

Chapter 4: Dissertation Rationale

The rationale for the current investigation stems from important unanswered questions in the literature and from critical methodological and theoretical shortcomings. Two deficiencies surround certain aspects of the psycholegal research on mock-juror and judicial decision-making. In the domain of mock-juror decision-making, some studies have found that human behavior (including legal behavior) can be affected in predictable ways by triggering thoughts about death and dying (Arndt et al., 2005; Cook, Arndt, & Lieberman, 2004). To elicit death thoughts, most of these experiments have relied on administering the Mortality Attitudes Personality Survey (MAPS; or similar methods), which requires that people write brief essays, statements or words about physical mortality (cf. Burke et al., 2010).

This method lacks strong actual-world realism, as the MAPS questions are highly abstract, open-ended and context-independent (i.e., questions are unrelated to specific social situations or tasks). Yet, to date, there have been virtually no studies that have directly examined if: (a) certain trial-related factors (e.g., the content of prosecutorial closing arguments) have the power to trigger death thoughts in mock-jurors via more realistic means (a process informally termed here as *ecological mortality salience [MS] induction*), and (b) if ecological MS induction mirrors the effects of MAPS-induced death thoughts on behavior as is commonly observed in experimental and laboratory settings. Consequently, the majority of inquiries examining the MS hypothesis claim (prematurely and without direct evidence) that the MS effects observed in the laboratory readily carry over into ecological contexts (e.g., courtrooms) wherein mortality cues exist. In Study 1, a basic four-group experiment was performed to address this limitation in mock-juror terror management research.

In regard to judicial decision-making, questions persist in the waiver of jurisdiction literature. Indeed, this area of psycholegal research is reliable and informative. Nonetheless, much remains unknown with respect to the sociocultural and psychological factors that contextualize and influence specific judicial transfer decisions. Some inquiries have identified important relations between particular types of legal attitudes and transfer choices (e.g. D'Angelo, 2007). Still, less is understood about the actual "attitude–behavior link" or about the roles played by other intrapsychic processes, such as affect and cognition. This is due mainly to an overreliance on methods (e.g., surveys) which are unable to produce data that are

amenable to causal analysis and inference. Further, this area of research has received limited theoretical attention. It is unclear how transfer decisions are shaped by the complex array of extralegal factors and legal considerations present in a particular waiver of jurisdiction hearing.

Based on the current state of judicial transfer decision-making research, a second study was designed to accomplish four goals. First, Study 2 examined the role of judicial punishment attitudes. Second, affective (e.g., uncertainty anxiety) and cognitive (e.g., information-processing) processes were probed. Third, the study employed quantitative experimental methods in order to draw causal inferences via a direct analysis of the attitude–behavior link. The design afforded an opportunity to analyze other intrapsychic processes (e.g., perceptions of the waiver hearing) which may impact decisional behavior. Finally, the study concurrently examined the utility of two social theories and a third model, all of which propose distinct perspectives with respect to the antecedents of legal decision-making.

Chapter 5: Conceptualization of the Variables of Interest

The current investigation is comprised of two studies. The two studies used similar experimental methods but were set up to achieve discrete research aims. Study 1 addressed a methodological limitation in psycholegal applications of terror management theory (TMT). The problem stems from the frequent application of traditional and ecologically invalid mortality salience (MS) cues. In contrast, Study 2 is a substantive inquiry designed to contribute to a body of psycholegal research which has received modest attention. The process of conceptualizing the central variables for Studies 1 and 2 was based on these research aims and the relevant literature. In this chapter, conceptual definitions of the variables of interest for Studies 1 and 2 are reviewed in turn. For a detailed description of parallel operational definitions, including sample items, refer to the two "Materials" subsections located in Chapter 7 ("Method").

Study 1 Variables

Mock-juror decision-making studies inspired by TMT have reported that legal-related behaviors impacted by mortality-related cognitions emerge in theoretically predictable styles (see Arndt et al., 2005; Cook et al., 2004). One implication of this research is a generally accepted claim that terror management processes operate within legal contexts, so that their influence over legal-related behavior mirrors the terror management patterns observed in the published experimental literature. Yet, one critical shortcoming of this body of research is its heavy reliance on externally invalid and ecologically unreal MS stimuli, such as the MAPS paradigm (cf. Burke et al., 2010).

To rectify this limitation in psycholegal research, a four-group experiment was designed to compare emergent behavioral traits when mock-jurors are primed with death thoughts via a traditional method versus an ecologically realistic approach. Variables of interest for Study 1 were grouped into three broad conceptual categories: *psychological parameters*, *trial-related perceptions* and *trial outcome*. A focus on these three conceptual categories within a single experiment assisted in generating the data required to address the problem of ecologically invalid MS cues present in most research regarding terror management and the law.

Conceptual category 1: Psychological parameters. Six psychological parameters were examined. Proponents of TMT have argued that individual perceptions (including trial-related perceptions)

are intertwined with specialized psychological processes, including information-processing mode (Pyszczynski et al., 1999) and punishment attitudes (cf. Arndt et al., 2005; Carroll et al., 1987; Chung & Bagozzi, 1997; Chung & Pardeck, 1994; Goodman-Delahunty et al., 2005; Greenberg et al., 1990; Judges, 1999). As such, Study 1 examined *Need for Cognition* (NFC) and *Faith in Intuition* (FI), which represent two plausible modes of deliberation—rational and experiential, respectively—mock-jurors could adopt when processing information. Further, *legal authoritarianism* (i.e., pro-state values), *legal egalitarianism* (i.e., prodefense values) and *legal anti-authoritarianism* were evaluated and treated as potential punishments attitudes that may add context to mock-jurors' decisional behavior. Lastly, as in prior terror management studies, a key psychological parameter is the *personal vulnerability threat*, or the experience of existential anxiety that results from conscious or unconscious thoughts about death and dying (Greenberg et al., 1990; Greenberg et al., 1995; Greenberg et al., 1986; Rosenblatt et al., 1989). However, it is imperative to highlight here that personal vulnerability is observable only via its indirect effects on select measurable behaviors (e.g., trial evaluations).

Conceptual category 2: Trial-related perceptions. In the majority of investigations that implement a mock-juror paradigm, researchers are interested in understanding and measuring respondents' trial evaluations. In theory, self-reported insights of this sort tap into an assortment of relevant trial-related perceptions that explain, either wholly or in part, jurors' judgmental reasoning and decision-making. As is common practice in psycholegal studies with mock-jurors, Study 1 analyzed eight trial-related perceptions. These perceptions are grounded in evaluations of the *prosecution's case*, the *victim's testimony*, the *police officer's testimony*, the *defense counsel's case*, the *defendant's testimony*, the *defendant's moral character*, *respondents' juror-related abilities* (a proxy for self-esteem) and the *applicable legal statutes* of a case (a proxy for worldview defensiveness).

Conceptual category 3: Trial outcomes. Juror decision-making research is commonly performed in order to gather knowledge about various trial outcomes. Trial outcomes may include verdict, sentencing and the awarding of damages. Study 1 examined one type of outcome: *verdict certainty* as it pertains to a criminal case wherein the standard of proof is reasonable doubt. Two reasons support the selection of this outcome variable. First, verdict certainty is conceptually continuous (rather than nominally dichotomous).

Second, the construct is a property of mock-jurors, not mock-juries. In real trials, it is reasonable to expect that verdict certainty manifests as a psychological experience that varies on a continuum of perceived certainty and uncertainty. It is equally reasonable to infer that features of mock-jurors provide information about how mock-juries may decide on a final (dichotomous) verdict.

Study 2 Variables

The available literature suggests that legal decision-making is prone to the effects of mortality awareness (see Arndt et al., 2005; Burke et al., 2010; Cook et al., 2004) and uncertainty management (see Albonetti, 1986, 1987, 1991). Further evidence exists to suggest that legal reasoning and judgment emerge from appraisals of statutory and nonstatutory factors (D'Angelo, 2007). Still, to date little is known about how (or if) these three social psychological processes operate within the context of juvenile law (and transfer law, in particular).

In order to conceptualize the variables of interest appropriately, pre-dissertation interviews were conducted with actual juvenile court judges. Results from this informal investigation were juxtaposed with the aforementioned literature and variables of interest were selected accordingly. Because Study 2 is a substantive inquiry, a sizable number of factors were assessed simultaneously. All variables of interest for Study 2 were grouped into three broad conceptual categories: *general-level psychological parameters*, *case-specific psychological parameters* and *waiver hearing outcome*. In the subsequent subsections of this chapter, the pre-dissertation interviews are discussed in-depth. The discussion then transitions into a breakdown of the three conceptual categories for Study 2.

The pre-dissertation interviews. In an effort to learn more about the most critical factors cited in the literature and state laws, qualitative interviews were conducted with actual juvenile court judges.[11] In August of 2011, four juvenile court judges from the United States elected to participate in a discussion via telephone interview. Of the four judges, one was male. He was also the only retired judge in the sample; at the time of the interview, he was working as a legal consultant for other juvenile court judges. This judge mentioned that, before his retirement, he had notable experience in matters regarding waivers of jurisdiction. The remaining three juvenile court judges were active at the time of the interviews and all

[11] The four interviews served a vital function in designing the methodological procedures and materials for Study 2.

reported having had experience with transfers. Judges were from the northeastern, southern and southwestern regions of the United States.

With the assistance of the director of the Juvenile and Family Law Department, a division of the National Council of Juvenile and Family Court Judges (NCJFCJ), the contact emails of the four participating judges were obtained. Judges were informed that the interviews would be conducted by telephone and scheduled at a time of their convenience. It was explained that the interview process would take approximately 25 minutes. The interviews were informal and semi-structured. All conversations were documented on a digital voice recorder (DVR). Because the judges' voices and replies were preserved in data storage devices (e.g., DVRs and computers), the confidentiality of the interview process was assured and judges' informed consent was informally acquired.[12]

At interview, judges were told that the conversation would center on three general areas of discussion (when appropriate, judges were also probed with spontaneous questions). In all interviews, the four judges were asked to respond to the following three statements:

> *Statement 1:* As a judge, you are sometimes required to determine whether or not a juvenile offender warrants transfer to the adult penal system. Please tell me about the information you consider in making your decision and how you use that information to render a specific transfer decision.
>
> *Statement 2:* As a member of the justice system, you may be familiar with other juvenile court judges. From your perspective, please describe the process by which your judicial peers render a particular transfer decision.
>
> *Statement 3:* Given the juvenile cases you have adjudicated in the past, please tell me about the feelings you commonly experience when making transfer decisions.

[12] Prior to communicating with judges, the University of Nevada, Reno's institutional review board (IRB) was contacted. It was determined that IRB approval would not be required to conduct the qualitative interviews. This was because the interviews would not subject participants to any harm. Further, IRB approval was not necessary because the interviews did not qualify as a "study," per se; rather, the interviews functioned as means for developing materials for a larger investigation.

Table T2 provides a summary of important findings. Given that transfer provisions are determined largely by state-level policies, the four judges could only disclose information about their respective state statutes and practices. Although transfer decision-making is nested within jurisdictional state, the four judges assisted in identifying important insights with regard to (a) statutory criteria, (b) non-statutory sources of influence, (c) the use of transfer reports, (d) the role of juvenile age/maturity, (e) the weight of offender- and offense-related characteristics, and (f) emotions and feelings.

Insights gathered from the four interviews highlighted three critical points. First, it was evident that juvenile court judges attended to various legal and extralegal factors, a finding which is consistent with previous research (e.g., D'Angelo, 2007). According to the four judges, state statutes often dictate that they consider factors such as the severity of the offense, the age of the offender, the offender's prior record, the offender's rehabilitative prospects and the potential public risk generated by non-transfer. Moreover, these judges cited juvenile demeanor, familial factors and victim reactions as potential extralegal sources of influence. Second, and related to the issue of extralegal sources of influence, interviews revealed that judges may experience common affective responses to particular cases, including frustration, uneasiness, doubt and "excruciating" emotions. Finally, the qualitative interviews provided an insiders' perspective with regard to the conceptual elements of Study 2. All four judges stated that it would be an arduous task to identify a method by which to empirically study judicial transfer decision-making and other related legal concepts. Still, three of the four judges acknowledged that there are important conceptual similarities across state jurisdictions. They also expressed optimism and noted that a quantitative study on transfer decision-making is feasible, with the "right" design. The remaining subsections of this chapter elaborate upon a subset of critical concepts.

Conceptual category 1: General-level psychological parameters. At times, judicial decision-making may be affected by preexisting values and mindsets that are unrelated to the specific details and issues of a given case or hearing (Chung & Bagozzi, 1997; Chung & Pardeck, 1994). Study 2 examined 11 general-level psychological parameters. In the attitudinal domain, researchers have observed that general attitudinal effects on behavior reveal global information (i.e., behavioral aggregate data) about how individuals are most likely to respond, given their valued attitudes (Ajzen & Fishbein, 2005). Similarly,

other scholars have found that legal decisions can be affected by general attitudes about the value of incorporating punishments in the justice process (Chung & Bagozzi, 1997; Chung & Pardeck, 1994). As in Study 1, the second study assessed judges' global (i.e., case-nonspecific) punishment attitudes. The seven general punishment attitudes of interest concerned evaluations about *rehabilitation*, *retribution*, *deterrence*, *incapacitation*, *restoration*, *crime control* and *due process*. In the cognitive research domain, inquiries have determined that decisions are influenced by differential modes of social information-processing. Study 2 was designed to test the applicability of the dual-process theory of proximal/distal defenses (DTPDD) and uncertainty avoidance/causal attribution (UACA) theory. In Study 2, four different forms of general information-processing were considered: NFC (a proxy for rational processing), FI (a proxy for experiential processing), *person-focused attributional reasoning* (i.e., disposition-based reasoning style) and *system-focused attributional reasoning* (i.e., situation-based reasoning style).

Conceptual category 2: Case-specific psychological parameters. Intuitive logic dictates that judicial decision-making is directly impacted by details and concerns associated with specific cases. In fact, attitude researchers note that general attitudinal measures are imprecise predictors of actual behavior. Rather, these scholars propose utilizing "behavior-specific" attitudinal assessments (i.e., *attitudes-toward-a-behavior*; Ajzen & Fishbein, 2005). In addition to attitudinal sources of influence, results extrapolated from the transfer literature and from qualitative judicial interviews, in conjunction with information gathered from a collection of independent cohort analyses (see Green, 1984; Tracy et al., 1990; Wolfgang et al., 1972), suggest that juvenile court judges contend with numerous forces when rendering transfer decisions. These forces, though not always simple to classify into unequivocal categories, generally emerge as "legal" and "extralegal" variables that precede the casting of a legal decision. In Study 2, a pragmatic approach was adopted in which a select subset of pertinent legal and extralegal factors were considered, controlled or measured. The experiment-within-survey (EWS) accounted for 24 case-specific psychological parameters. The 24 parameters were grouped into three conceptual subcategories: (a) legal-related parameters, (b) *Kent* Guidelines, and (c) extralegal-related parameters.

Legal-related parameters of interest. Research conducted with American juvenile court judges (e.g., D'Angelo, 2007; Redding & Murrie, 2007) helped to identify some of the most essential legal factors

that commonly precede the rendering of a transfer verdict. Identification of these factors played a critical role in the design of Study 2. The five legal-related parameters of interest included judges' perceptions about *offender dangerousness*, *offense severity*, *recidivism likelihood*, the *value of disposition-based mental health information* and the *value of situation-based mental health information*.

The Kent *Guidelines.* Following the seminal case, *Kent v. United States* (1966), federal statutes established eight guidelines which juvenile court judges could consider when rendering legal decisions in hearings regarding waivers of jurisdiction. Most state-level transfer laws adopt elements of *Kent*. Thus, these eight guidelines were treated as variables with the potential to impact the transfer decision-making process. As such, Study 2 examined the perceived utility of the *Kent* Guidelines vis-à-vis a mock-waiver hearing. The guidelines concern matters involving *offense severity*, *premeditation*, *offense type* (property vs. person), *prosecutive merit*, the *role of adult accomplices*, *sophistication*/*maturity*, *prior record* and *treatment amenability*.

Extralegal-related parameters of interest. The available research on juvenile court judges treats most intrapsychic processes as factors that are inherently extralegal (see Albonetti, 1986, 1987, 1991; Albonetti & Hepburn, 1996; Arndt et al., 2005; Cook et al., 2004; D'Angelo, 2007; Goodman-Delahunty et al., 2005). In this sense, "extralegal" refers to any non-normative social or psychological process that is virtually unrelated to the statutory and case-relevant facts that ought to enter the decision-making calculus. Extralegal intrapsychic processes are usually attitudinal, cognitive and emotional in form and, as a whole, increase the likelihood of biased decision-making. Study 2 inspected 11 extralegal-related parameters, which included an ecological-based *vulnerability threat* similar to the one implemented in Study 1. Other case-specific extralegal parameters of interest pertained to judges' *affect toward the offense*, *affect toward the offender*, *treatment amenability perceptions*, *need for retribution*, *need for deterrence*, *need for incapacitation*, *need for restoration*, *need for crime control*, *need for due process* and reported *uncertainty toward the case*.

Conceptual category 3: Waiver hearing outcome. As with most mock-juror and jury studies, judicial decision-making research is conducted to obtain valuable information about hearing and trial outcomes. However, unlike Study 1, wherein decision-makers were told to reach a verdict based on a

reasonable doubt standard, decision-makers in Study 2 were not required to determine guilt or innocence. Rather, participating judges were asked to determine the appropriateness of waiving jurisdiction in a mock-case where a juvenile offender had already waived his right to a probable cause hearing (i.e., guilt was already established). One type of hearing outcome was of major interest: *transfer decision certainty*. This construct is conceptually similar to the trial outcome construct mentioned above.

Chapter 6: Research Questions and Hypotheses

Two studies made up this investigation. The first experiment was a methodological study designed to add context to the second study. This was accomplished by comparing the effects of traditional and ecological mortality salience (MS) stimuli on legal decision-making. The second experiment was a substantive inquiry. This study examined the effects of various intrapsychic and sociocognitive processes on judicial waivers. Although the two studies evaluated legal behavior, each inquiry focused on a different population (mock-jurors vs. juvenile court judges) and proposed variant questions and corresponding hypotheses in order to address distinct limitations in the relevant literature.

Study 1: Research Questions and Hypotheses

In the domain of terror management, aspects of the literature give reason to suspect that relations exist between legal decision-making, vulnerability concerns and "psychoexistential" coping (Arndt et al., 2005; Cook et al., 2004; Goodman-Delahunty et al., 2005). Psycholegal studies have determined that exposure to death-related stimuli has the potential to trigger thoughts about personal vulnerability and inevitable mortality, in turn leading decision-makers to execute biased legal choices. However, a major shortcoming of this body of research is the predominant use of traditional MS induction methodologies (e.g., death-related essays) in lieu of ecologically and externally valid MS triggers. Consequently, most studies examining the MS hypothesis claim (prematurely and without direct evidence) that the MS effects observed in the laboratory also occur in ecological contexts wherein death reminders emerge (e.g., courtrooms). If legal contexts actually provide opportunities for MS priming, then it is expected that the effects of traditional and ecological MS cues on behavior would be similar.

In Study 1, using a four-group mock-juror paradigm, three general hypotheses were examined to address one general research question: namely, do ecologically valid MS cues yield effects on legal behavior and perceptions that are comparable to effects caused by traditional MS induction methods? Based on the implications of TMT, it is expected that if ecological MS induction functions in ways akin to traditional MS priming, and if these two processes are distinguishable from parallel control conditions with no MS primes, then:

Hypothesis 1a-1i (comparability of experimental groups): Mock-jurors randomly assigned to the ecological MS induction group (i.e., exposure to death-laden prosecutorial information) and to the traditional MS induction group (i.e., exposure to a death-related essay task) are expected to respond similarly on all critical dependent measures (i.e., trial evaluations). The dependent measures are evaluations about the prosecution's case, the victim's testimony and moral character, the police officer's testimony, the defense's case, the defendant's testimony, the defendant's moral character, the strength of one's juror abilities, the case-relevant legal statutes and trial verdict certainty.

Hypothesis 2a-2i (comparability of control groups): Mock-jurors randomly assigned to the ecological neutrality induction group (i.e., exposure to pain-laden prosecutorial information) and to the traditional neutrality induction group (i.e., exposure to a dental pain-related essay task) are expected to respond similarly on all critical dependent measures. The dependent measures are the same as those listed under Hypothesis 1a-1i.

Hypothesis 3a-3i (convergent evidence of terror management): Mock-jurors randomly assigned to the experimental groups (ecological and traditional) and control groups (ecological and traditional) are expected to respond differently from each other on all critical dependent measures, and in ways consistent with TMT (e.g., increased punitiveness toward norm violators among jurors in the experimental conditions). The dependent measures are the same as those listed under Hypothesis 1a-1i.

For a listing of specific hypotheses, including their corresponding variables and statistical tests, refer to Table T3.

Study 2: Research Questions and Hypotheses

Despite research on the relationship between terror management processes and legal decision-making (e.g., Arndt et al., 2005; Cook et al., 2004; Goodman-Delahunty et al., 2005), alternative theoretical

models and studies have identified meaningful associations connecting law-related decisional behavior with other social and cognitive mechanisms, including uncertainty management (see Albonetti, 1986, 1987, 1991; Albonetti & Hepburn, 1996) and attitudinal contingencies (e.g., punishment attitudes; D'Angelo, 2007). Yet, to date, there have been no inquiries that have examined all these variables within a single experimental study. As such, it remains unclear what social psychological forces are operative when juvenile court judges render particular transfer decisions.

In Study 2, three general research questions were proposed. Research questions and corresponding hypotheses are listed below and categorized into three different areas of social research. That is, alternative hypothesis families were examined in order to determine the extent to which judicial decision-making behaviors conformed to predictions espoused by the dual-process theory of proximal/distal defenses (DTPDD), uncertainty avoidance/causal attribution (UACA) theory and a "statutory–nonstatutory factors" perspective. For a list of specific hypotheses, including their corresponding variables and statistical tests, refer to Table T4.

Terror management and social information-processing: The DTPDD. The DTPDD predicts that implicit MS effects follow from a preconscious, experiential process which is elicited by subtle death reminders (rather than overt reminders). The theory further holds that overt MS stimuli often activate rational, systematic and deliberate thinking styles (Pyszczynski et al., 1999). In Study 2, an assumption was made that exposure to one MS cue (single-MS condition) would be more subtle than exposure to two MS cues (double-MS condition).

Research question 1: Given the aforementioned assumption and the tenets of the DTPDD, do death-related stimuli have a predictable impact on legal outputs?

> *Hypothesis 1a:* In general, judges high in need for cognition (compared to those low in NFC) are less likely to favor the motion for transfer (i.e., low transfer decision certainty); also, judges high in Faith in Intuition (compared to those low in FI) are more likely to favor the motion for transfer (i.e., high transfer decision certainty).

Hypothesis 1b: Compared to a control condition, judges in the two single-MS conditions (i.e., exposure to one death-laden prosecutorial argument or one death-laden defense argument) are expected to favor the motion for transfer (i.e., high transfer decision certainty).

Hypothesis 1c: Compared to the single-MS conditions, judges in the double-MS condition (i.e., exposure to both death-laden attorney arguments) are expected to view the motion for transfer less favorably (i.e., low transfer decision certainty).

Uncertainty management and attributional reasoning style: UACA theory. UACA theory predicts that legal decision-making stems from a causal-based analysis wherein decision-makers apply particular attributions in an effort to reduce experienced uncertainty (Albonetti, 1991). Applied to the topic of judicial decision-making, the theory further holds that decision-makers in legal contexts are motivated by crime control motives and desires to identify satisfactory (as opposed to optimal) choices. In Study 2, it was presumed that variations in experienced uncertainty would compel decision-makers to differentially endorse particular patterned responses (i.e., attributions grounded in stereotypic and non-stereotypic information) and legal/extralegal outputs. The stable/dispositional (i.e., stereotypic) versus unstable/situational (i.e., non-stereotypic) properties of an offender's behavior, history and social status were expected to yield distinct effects on decision-making.

Research question 2: What are the relationships among uncertainty management, crime control motives, active attributional reasoning modes and transfer decision-making?

Hypothesis 2: Person-focused judges are expected to favor case-specific crime control values, as well as the motion for transfer (i.e., high transfer decision certainty); conversely, system-focused judges are less likely to favor case-specific crime control values, as well as the motion for transfer (i.e., low transfer decision certainty).

Attitudes, affect and perceptions: A "statutory–nonstatutory factors" perspective. In contrast to predictions purported by the DTPDD and UACA theory, other scholars have proposed that judicial transfer decisions are a function of an amalgam of legal (statutory) and extralegal (nonstatutory) factors

(D'Angelo, 2007). It was expected that transfer decision-making and trial evaluations would be differentially correlated with legal considerations and extralegal sources of influence.

Research question 3: Do punishment attitudes, legal experience, evaluations of the *Kent* Guidelines, assessments of attorney evidence and perceptions of the juvenile interact in ways that explain variations in judicial transfer decision certainty?

> *Hypothesis 3:* Positive predictive links are expected between favorable evaluations of the prosecution, case-specific deterrence motives and the favorability of transfer (i.e., high transfer decision certainty). Prosecution-related evaluations are expected to be a function of perceived juvenile dangerousness, extensive judicial experience (i.e., number of waiver hearings) and the low utility of the *Kent* Guidelines. Case-specific deterrence motives are expected to be a function of perceived juvenile dangerousness, global deterrence-based attitudes and retributive attitudes.

Chapter 7: Method

This investigation is comprised of two separate, but loosely related, experiments. Study 1, a methodological inquiry designed to provide context to the second experiment, assessed if ecologically valid mortality salience (MS) induction effects mirror the effects of traditional MS induction methods on legal reasoning and behavior. Study 2, a substantive inquiry, examined if ecological MS induction mechanisms, among other intrapsychic and sociocognitive processes (e.g., uncertainty management and punishment attitudes), are active in judicial waiver jurisprudence.

This chapter is divided into three parts. In the first two parts, the specific methodological elements of Studies 1 and 2 are reviewed in turn. The two sections contain detailed information about sampling, statistical power, study design, materials and study procedures. The final section is devoted to describing the central quantitative analytic technique chosen for both studies. An explanation (and rationale for the use) of a path modeling technique known as *partial least-squares structural equation modeling* (PLS-SEM) is provided. This section concludes with a discussion of the type I error inflation problem that is pervasive in path modeling; also presented is a newly-developed solution which balances the need to control for familywise type I error inflation and the desire to minimize loss of statistical power.

Study 1: Mock-juror Decision-making—the Methodological Project

The extant terror management and social psycholegal literatures indicate that mock-juror evaluations and decisions are informed by both extralegal and legal factors, such as MS and evidentiary testimony, respectively. Notably, most psycholegal-oriented terror management experiments have relied on ecologically and externally invalid methodologies (e.g., the Mortality Attitudes Personality Survey [MAPS] paradigm; cf. Burke et al., 2010). From this standpoint, the actual role that vulnerability concerns play in legal environments is dubious and open to speculation and skepticism. It remains equivocal if the terror management effects reported in the psycholegal research highlight evidence of real psychoexistential coping, methodological myopia or other unexamined sociocognitive phenomena. Study 1 scrutinizes the effects of traditional MS stimuli versus ecologically valid MS stimuli on mock-juror decision-making in an effort to address this methodological ambiguity.

Sampling procedures and sample description. A sample of N_{total} = 192 participants provided the data for Study 1 in exchange for course credit. All participants were adult students who were recruited from communications, human development and family studies, and sociology courses offered at a mid-sized state university located in the western United States. During class hours, the lead investigator collected all the data in-person using a paper-and-pencil reporting format. Participants reported critical demographic data, including information about gender, age and ethnicity/race. The gender composition of the sample, based on *valid totals* (i.e., the total sample size minus the number of missing data points), is 80.2%$_{valid}$ female (n_{valid} = 154) and 19.8%$_{valid}$ male (n_{valid} = 38). In terms of age-related features, the sample contained some hints of diversity (range = 18 yrs to 54 yrs), though it is evident from the data that most participants were young adults (M = 21.83 yrs, SD = 5.20) at the time of the study. With respect to *sample totals* (i.e., the total sample size, including the number of missing data points), approximately 1.6%$_{total}$ of participants (n_{total} = 3) did not offer their age. The ethnic/racial breakdown of the sample is as follows: 67.2%$_{valid}$ European American (n_{valid} = 127); 9.0%$_{valid}$ Latina/o or Latina/o American (n_{valid} = 17); 8.5%$_{valid}$ Asian/Asian American (n_{valid} = 16); 3.7%$_{valid}$ African American (n_{valid} = 7); 1.1%$_{valid}$ Native American (n_{valid} = 2); and 0.5%$_{valid}$ Middle Eastern (n_{valid} = 1). The remaining 10.1%$_{valid}$ of the sample (n_{valid} = 19) was classified as some other ethnicity/race or as multiethnic/multiracial. Approximately 1.6%$_{total}$ of participants (n_{total} = 3) opted to leave this demographic item unanswered, meaning that their ethnicity/race remains undetermined.

Participants were also asked to provide information about their *relationship status*, *parental status*, *collegiate status* (in years) and *religion*. The relationship statuses of sample participants are as follows: 61.8%$_{valid}$ were single/never married (n_{valid} = 118); 30.4%$_{valid}$ were in a committed relationship (n_{valid} = 58); 5.8%$_{valid}$ were married (n_{valid} = 11); and 2.1%$_{valid}$ were in a non-marital domestic relationship (n_{valid} = 4). Only one respondent (0.5%$_{total}$) did not provide information regarding this category. Most participants were non-parents (85.9%$_{valid}$; n_{valid} = 164) and they largely outnumbered parents (14.1%$_{valid}$; n_{valid} = 27). One respondent (0.5%$_{total}$) did not offer information about parental status. With respect to collegiate status, most participants had nearly three years of college schooling (M = 2.95 yrs, SD = 1.08) during the time the study was conducted. Approximately 1.6%$_{total}$ of participants (n_{total} = 3) did not offer collegiate status data.

Finally, although most participants reported having no religious affiliation or specific faith (54.2%$_{valid}$; n_{valid} = 103), a substantial minority of those sampled (45.8%$_{valid}$; n_{valid} = 87) expressed affiliation with some form of major religion or minor faith-based belief system; the religious statuses of two participants (1.0%$_{total}$) remain unknown. Among the 87 participants who affirmed a religion or faith, most were self-identified Christians (54.0%$_{valid}$; n_{valid} = 47) and Catholics (33.3%$_{valid}$; n_{valid} = 29); still, 12.6%$_{valid}$ of the "religious" sample (n_{valid} = 11) was comprised of individuals who self-identified as Mormon, Lutheran, Moslem, Buddhist, Jewish or unaffiliated. All demographic data for Study 1 are summarized in Table T5.

Power analysis. In a quantitative synthesis involving 277 independent experiments, a set of worldview- and self-esteem-related indicators provided modest support (e.g., r = .35) for the MS hypothesis (Burke et al., 2010). Accordingly, in Study 1, a power analysis for a four-group between-subjects research design indicated that a sample size of approximately n = 44 per experimental condition—for a total of N = 176—was required to detect medium-sized effects (e.g., ω^2 = .06, in accordance with Cohen's criteria; Cohen, 1988; Keppel & Wickens, 2004) when power and $\alpha_{type\ I\ error}$ are set at .80 and .05, respectively. With a total sample size of N_{total} = 192 participants, the per-group ns for all four experimental conditions exceeded the requisite sample size criterion for establishing adequate statistical power (these n values are reported in the subsequent subsection).

Study design. A simple independent-samples four-group experiment, with one manipulation, was adopted. To evaluate the impact of the independent variable on mock-juror verdicts, sentencing and evaluations, college student participants were randomly assigned to one of four conditions: (a) *traditional MS induction* (n = 51), (b) *traditional neutrality induction* (n = 48), (c) *ecological MS induction* (n = 47), and (d) *ecological neutrality induction* (n = 46). Participants at each research site were randomly given one of four packets containing all the materials for the study. Packets were randomized before distribution.

Materials. Via a mock-juror paradigm, Study 1 was designed to assess the relationship between one independent variable and a general dependent variable class (i.e., trial evaluations). Descriptions of the requisite materials are reviewed below.

Mock-trial vignette. In a cover page, participants were instructed to perform the duties of a juror who had been called to render a verdict in a burglary trial. A two-page narrative was used to present a

fictitious scenario in which a male defendant was accused of forcibly entering a female victim's apartment and illegally removing some of her property (see Appendix A). To improve validity, the narrative included elements taken from numerous real-world legal cases. Participants were presented with prosecutorial and defense information. In particular, all participants read a summary of the prosecution's case, which included eyewitness testimony from the victim, evidentiary testimony from the arresting police officer and closing arguments from the state prosecutor (for an important addendum regarding the prosecutor's closing argument, see the next subsection on manipulations). All participants also read a summary of the defense's case, which included expert testimony from a legal psychologist, testimony from the defendant and closing arguments from the defense counsel.

The vast majority of the vignette presents constant and ambiguous trial information. With respect to constancy, save for some of the wording incorporated into the prosecutorial closing arguments, all participants read the same trial scenario in which both the prosecution and defense bars were evenly matched (e.g., the narratives for both attorneys were similar in word-length, number of witnesses called to the bench and number of arguments presented). Further, in an attempt to construct a "balanced" ambiguous trial scenario (i.e., a case where it is relatively difficult to determine guilt or innocence), both the state and defense presented pieces of evidence that were simultaneously convincing and unconvincing. For example, although the state was able to show that the defendant matched the general description of a suspect as recounted by the victim, it was also revealed that the victim never provided a specific facial description. Likewise, although the defense's expert was able to testify that eyewitness testimony is generally prone to fallibility, it was also reported that the defendant was in possession of "unmarked" property that points to circumstantial guilt.

Primary manipulation. Study 1 examined the role of one independent variable with four levels. In this design, levels of the independent variable were represented by two control conditions and two experimental conditions. In the traditional MS induction condition, participants were asked to complete the 2-item MAPS (Rosenblatt et al., 1989; see Appendix B) prior to reviewing the mock-trial vignette. The MAPS has been employed throughout many terror management studies (cf. Burke et al., 2010) and has become a generally accepted methodology whereby two open-ended statements are used to activate death-

related thoughts that reside at the fringes of consciousness. These statements require that respondents write brief essays in which they discuss emotions and thoughts associated with death and dying.

In the traditional neutrality induction condition, participants were asked to complete the 2-Item Dental Pain Salience Prime (DPSP; cf. Arndt & Solomon, 2003) prior to reviewing the mock-trial vignette (see Appendix C). The DPSP and MAPS are parallel instruments. Akin to the MAPS, the DPSP and similar methods have been applied in numerous terror management investigations (cf. Burke et al., 2010) and have become commonly used strategies in which open-ended statements are used to activate pain-related thoughts that exist at the preconscious level of awareness. The two DPSP statements require that respondents write brief essays in which they outline emotions and thoughts related to dental pain.

In the ecological MS induction condition, in lieu of the MAPS approach, explicit death-related cue words were embedded in prosecutorial closing arguments in order to trigger preconscious death cognitions (for a similar methodology, refer to Pickel & Brown, 2002, as cited in Arndt et al., 2005). That is, five additional sentences were added to the prosecutor's closing statement, each containing a single death-related cue word (see Appendix D). Although most of the closing statements made by the prosecutor were constant across all four experimental conditions, the ecological MS induction included five extra sentences containing the words *dead*, *killed*, *murder*, *alive* and *death* (in that order).

Lastly, in the ecological neutrality induction condition, in lieu of the DPSP approach, pain-related cue words were embedded in prosecutorial closing arguments in order to trigger preconscious thoughts about physical pain (for a similar methodology, refer to Pickel & Brown, 2002, as cited in Arndt et al., 2005). The ecological mortality- and pain-related statements are parallel prosecutorial closing arguments (see Appendix D). That is, the additional five sentences in the ecological neutrality induction condition simply replace the five death-related cue words mentioned above with the following pain-related cue words (in the following order): *maimed*, *injured*, *assault*, *okay* and *mugging*.

Primary measures. Study 1 focused on assessing four classes of measures. An instrument was distributed to measure participants' general mode of information-processing. A similar scale was given to participants in an attempt to tap into their general legal attitudes. Another collection of questionnaire items were constructed as a means of gauging mock-jurors' decisions and perceptions toward the mock-trial

vignette. Finally, a demographic questionnaire was utilized for the purposes of sample classification and post-hoc data analysis. All measures are discussed in detail below.

Prior to reading the trial narrative, participants were asked to complete the Rational–Experiential Inventory (REI; Epstein, Pacini, Denes-Raj, & Heier, 1996; see Appendix E) and the Revised Legal Attitudes Questionnaire (RLAQ23; Kravitz, Cutler & Brock, 1993; see Appendix F). In line with methodological rigor and feasibility, the REI and RLAQ23 were counterbalanced when distributed to participants. Although there was no reason to suspect that the order in which participants received the two instruments would trigger variant behaviors, counterbalancing was used to examine potential order effects. Both the REI and RLAQ23 employed 6-point Likert scales, ranging from 1 (REI: *completely disagree*; RLAQ23: *strongly disagree*) to 6 (REI: *completely agree*; RLAQ23: *strongly agree*). A 6-point metric was purposely chosen to avoid having a numerical midpoint. The 6-point metric does not pose any more constraints during statistical analysis than if data were collected using a different Likert metric (for more on metrics, see Visser, Krosnick, & Lavrakas, 2000). However, by not allowing for a midpoint, the 6-point metric is conceptually analogous to the dichotomous structure of many sociocognitive constructs (e.g., dual-process models) and legal concepts (e.g., guilty vs. not guilty).

The rationale for administering the REI and RLAQ23 is two-fold. First, in line with prior terror management studies, the two scales provided a simple means by which to disguise the true purpose of the experiment. Second, research has shown that terror management effects share important relationships with other sociocognitive mechanisms, including rational–experiential processing (Pyszczynski et al., 1999) and legal authoritarian values (cf. Arndt et al., 2005; Greenberg et al., 1990; Judges, 1999). In this manner, the REI and RLAQ23 served both methodological and substantive functions in this study.

The 10-item REI measures two information-processing modes as independent constructs. The REI combines the 5-item Faith in Intuition (FI) scale with a shortened 5-item version of the Need for Cognition (NFC) scale (cf. Cacioppo & Petty, 1982).In samples of college students, internal consistency rates have suggested that the FI and NFC subscales are moderately reliable (α = .72 and .73, respectively; Epstein et al., 1996). For the FI and NFC subscales, greater scores are indicative of *experiential* (heuristic/peripheral) and *rational* (systematic/central) information-processing, respectively. Arithmetic means were calculated

for all subscales in order to produce measures of central tendency. The FI includes items such as, “I believe in trusting my hunches” and “I trust my initial feelings about people.” The shortened NFC includes items such as, “I prefer complex to simple problems” and “I don’t like to have to do a lot of thinking.”

The 23-item RLAQ assesses the degree to which mock-jurors harbor *authoritarian* (via 8 items), *anti-authoritarian* (via 6 items) and *egalitarian* (via 9 items) attitudes toward particular points of the law. Studies that have administered the RLAQ23 have reported Cronbach alphas averaging at around .70 (see Kravitz et al., 1993). Further, these studies have indicated that high levels of legal authoritarianism are associated with proprosecution-like attitudes. In this study, arithmetic means were calculated for all three RLAQ subscales in order to produce measures of central tendency. As with prior legal authoritarianism scales (e.g., Juror Bias Scale; cf. Kassin & Wrightsman, 1983), items were selected based of their ability to measure low legal authoritarianism (e.g., “Search warrants should clearly specify the person or things to be seized.”; “No one should be convicted of a crime on the basis of circumstantial evidence, no matter how strong the evidence is.”) and high legal authoritarianism (e.g., “Police should be allowed to arrest and question suspicious looking persons to determine whether they have been up to something illegal.”; “Accused persons should be required to take lie-detector tests.”).

Data for the third dependent measure class were obtained by administering a trial-related questionnaire. The instrument was comprised of 11 separate questions, with some questions containing multiple items (see Appendix G). Multi-item questions tapped unique constructs (akin to subscales). To evaluate mock-juror *decision-making*, two questions requested that participants provide the following three answers: (a) a dichotomous verdict (i.e., guilty or not guilty), (b) a continuous verdict rated along a 7-point Likert metric, ranging from 1 (*certainly innocent*) to 7 (*certainly guilty*), and (c) in instances of guilt, a sentencing judgment, limited to a range of 1 to 10 years. The nine remaining questions inquired about mock-jurors’ *perceptions* toward the attorneys’ cases, the witnesses, the victim, the defendant, the relevant law (a proxy for cultural worldview defensiveness), one’s own verdict and one’s own juror abilities (proxies for self-esteem enhancement). All items related to these nine questions were rated along an 11-point Likert metric, ranging from 0 to 10 (note that for these items, scale anchor labels were specified so as

to tap into certain perceptions, such as *believability*, *reliability*, *moral desert* and the like). For all multi-item questions, arithmetic means were calculated in order to produce measures of central tendency.

The fourth and final dependent measure class was obtained by distributing a standard demographic form to all participants. The form included a total of 17 items (see Appendix H). The items inquired about important descriptive, though non-identifiable, information, such as gender, age, ethnicity/race and education. Demographic data of this sort are essential if a goal is to classify the participants that comprise particular research samples or if the purpose is to determine the representativeness of the sample relative to the target population. Access to this corpus of descriptive information is also critical at the post-hoc phase of data analysis, as some observed systematic relations involving the variables of interest may be further understood when select demographic factors are controlled (e.g., gender; Burke et al., 2010).

Procedure. In-person recruitment took place in five separate research sites (i.e., classrooms). Prior to distributing the final materials to participants, an information sheet was provided to all potential recruits. Per guidelines of the University of Nevada's institutional review board (IRB), an information sheet was used in lieu of obtaining formal informed consent. The sheet detailed information about participant rights and informed interested parties that the study exploited a mock-juror paradigm in an effort to investigate the links between attitudes, opinions and legal behavior.

After obtaining informal informed consent, participants were handed a paper-and-pencil survey packet containing an instructional cover sheet and the study's primary materials. All participants were asked to complete the questionnaires in the order in which they were organized. The cover sheet explained to participants that their duty was to take on the role of a juror who had been called to render a verdict in a fictitious burglary trial. All participants had a maximum of 30 minutes to complete the study on their own. Before reading the mock-trial narrative, all participants responded to the REI and RLAQ23 (instruments were counterbalanced).

After all participants responded to the REI and RLAQ23, participants in the traditional MS and traditional neutrality induction groups were asked to complete the MAPS and DPSP, respectively. In contrast, participants in the two ecological induction groups moved ahead to the trial phase immediately following the REI and RLAQ23. It was during the prosecutor's closing arguments that participants in the

ecological induction groups encountered either death-related cue words or pain-related cue words. The logic underlying basic terror management patterns centers on the notion that, following a death reminder, conscious death thoughts gradually dissipate, but not without leaving transitory residues of experiential terror at the level of pre-consciousness. In order to assure that individual's death thoughts are preconscious (i.e., experiential) rather than cognitively salient (i.e., rational) prior to the assessment of dependent variables, temporal delay tasks are often implemented. Generally, research indicates that longer delays yield terror management effects which are greater in effect size magnitude vis-à-vis shorter delays (Burke et al., 2010). In this experiment, the mock-trial vignette functioned as a naturally occurring delay task.[13]

Following the mock-trial vignette, all participants were given the same trial-related questionnaire. Lastly, prior to the conclusion of the study, a demographic form was distributed. At the end of the study, all participants were formally debriefed, thanked and awarded research participation credit.

Study 2: Judicial Transfer Decision-making—the Substantive Project

Research and active statutes reveal that juvenile court judges' transfer decisions are informed by various extralegal and legal factors. An ideal approach by which to examine the links between these factors should provide: (a) an assessment of the attitude–behavior link, (b) statistical data amenable to causal inference, (c) a degree of control over certain variables, and (d) a strategy that targets a large sample of juvenile court judges. This means that an experiment-within-survey (EWS) approach was appropriate for this investigation.

In Study 2, the dual-process theory of proximal/distal defenses (DTPDD; Pyszczynski et al., 1999) and uncertainty avoidance/causal attribution (UACA) theory (Albonetti, 1991) were considered as guides by which to explore the nature of juvenile court judges' transfer decisions. That is, two alternative and formal theoretical frameworks were utilized to empirically test differing predictions with respect to judicial

[13] It is important to note that the traditional induction groups yield longer temporal delays between MS induction and dependent variable assessment than the ecological induction groups. This is due to the inherent procedural structure of Study 1. That is, traditional induction participants are primed before reading the mock-trial vignette (i.e., the entire two-page mock-trial vignette serves as a delay task). In contrast, ecological induction participants are primed during prosecutorial closing statements (i.e., only the one-page defense summary serves as a delay task). As such, differences in delay-time across the induction group-types (traditional vs. ecological) may function as potential confounds. Future experiments could address this limitation by crossing induction group-type with controlled delay-times (short vs. long) in a factorial design.

decision-making. For instance, if delinquent behavior is perceived as a type of vulnerability threat, it is possible that judges may become highly punitive toward juveniles who transgress against valued social norms (*a la* the DTPDD). In contrast, because the etiologies of most crimes are rarely known in their entirety, the potential for uncertainty concerns to enter into the legal decision-making process is equally possible (*a la* UACA theory). An EWS design was selected to examine the veracity of these predictions.

Sampling procedures and sample description. In Study 2, the target population was all juvenile court judges from the 45 eligible American states and the District of Columbia. Eligibility for participation was based on state law, as the aforementioned regions have legal avenues in place that allow for judicial waivers.[14] In these states, judges possess the power to waive jurisdiction through judicial discretion, presumptive waivers, mandatory waivers or some combination of the three methods. Five states do not grant judges jurisdiction over transfers (Griffin et al., 2011). Thus, judges from Massachusetts, Montana, Nebraska, New Mexico and New York were ineligible and excluded from this study.

A sampling frame of target judges was acquired by placing a request to the National Council of Juvenile and Family Court Judges (NCJFCJ).[15] Because of professional associations with members of the NCJFCJ, constructing the relevant sampling frame was readily feasible. In March of 2013, a complete list of just over 1,800 NCJFCJ members became accessible for this experiment. Following approval from the host university's IRB, a random sample of juvenile court judges was drawn from this list.

The random sampling procedure involved a series of simple steps. Initially, NCJFCJ members from the complete list were removed if they were associate members (e.g., psychologists; physicians), international members (n = 7), members without email addresses or members from the five ineligible states. This screening strategy isolated the eligible target population, resulting in a finalized sampling frame which contained 1,400 NCJFCJ members who were also juvenile court judges with jurisdiction over transfers. From this sampling frame, 1,400 email addresses were randomly assigned to different research conditions.

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[14] In some of the eligible states, their laws contain provisions that establish more than one transfer strategy (this means that some of these states also make use of statutory exclusion laws and/or direct file).

[15] Located in Reno, NV, the NCJFCJ is a nonprofit 501(c)(3) organization. Since 1937, the mission of the NCJFCJ has been to ensure justice is provided to all families and pre-adults who come into contact with the legal system. The mission is accomplished through research, training and education. The membership includes judges, referees, court masters and administrators, police and probation officers, commissioners and social/mental health professionals.

Recruitment invitations were sent to these email addresses by the director of the Juvenile and Family Law Department. All emails were used in order to maximize the overall survey response rate. All recruitment invitations contained one of four SurveyMonkey™ web links (i.e., one web link for each of the four research conditions). For each condition, 350 juvenile court judges were randomly selected and sent the appropriate survey web address. The overall response rate for this study was $6.5\%_{response}$ ($N_{response} = 91$). Unfortunately, surveys from 27 judges were incomplete and their respective data were dropped from most statistical analyses. In all, the response rate was relatively inadequate. Still, as will be discussed later in this chapter, given the chosen statistical technique, low sample size was not detrimental to the study's aims.

A final total of $N_{total} = 64$ juvenile court judges completed the entire study in exchange for an opportunity to take part in a raffle wherein winners would be given gift cards. Respondents were either active ($85.5\%_{valid}$; $n_{valid} = 53$) or retired ($14.5\%_{valid}$; $n_{valid} = 9$) judges at the time of the study. The sample was $60.7\%_{valid}$ male ($n_{valid} = 37$) and $39.3\%_{valid}$ female ($n_{valid} = 24$). Regarding the age of the sample, there was evidence of diversity (range = 40 yrs to 76 yrs), though it is apparent that most respondents were in their mid-fifties at the time of the study ($M = 56.22$ yrs, $SD = 7.07$). The ethnic/racial breakdown of the sample is as follows: $90.0\%_{valid}$ European American ($n_{valid} = 54$); $5.0\%_{valid}$ African American ($n_{valid} = 3$); $3.3\%_{valid}$ Asian/Asian American ($n_{valid} = 2$); and $1.7\%_{valid}$ Latina/o or Latina/o American ($n_{valid} = 1$).

Juvenile court judges were also asked a series of questions about their *relationship status*, *parental status*, *education* (i.e., number of degrees earned), *religion* and *judicial history* (i.e., the number of waiver hearings overseen in one's career). The relationship status of the sample is as follows: $83.9\%_{valid}$ were married ($n_{valid} = 52$); $9.7\%_{valid}$ were divorced ($n_{valid} = 6$); $3.2\%_{valid}$ were in a committed relationship ($n_{valid} = 2$); and $3.2\%_{valid}$ were widowed ($n_{valid} = 2$). Most sampled judges were parents ($93.5\%_{valid}$; $n_{valid} = 58$); only $6.5\%_{valid}$ ($n_{valid} = 4$) of respondents were non-parents. In terms of education status, most respondents had two educational degrees ($M = 1.79$ degrees, $SD = .60$) during the time of the study. Regarding the religious status of the sample, the data indicate that the majority of judges reported practicing some form of religion or faith ($70.2\%_{valid}$; $n_{valid} = 40$); a notable minority of those sampled ($29.8\%_{valid}$; $n_{valid} = 17$) reported that they did not practice any form of religion or faith-based belief system. Among the 40 judges who practice a religion or faith, many are Christians ($57.5\%_{valid}$; $n_{valid} = 23$); a smaller subset is either Catholic ($15.0\%_{valid}$;

n_{valid} = 6), Jewish (10.0%$_{valid}$; n_{valid} = 4) or Mormon (10.0%$_{valid}$; n_{valid} = 4). Further, 7.5%$_{valid}$ of the "religious" sample (n_{valid} = 3) is comprised of respondents who reported following Islam, Lutheranism or an unspecified faith. Finally, with respect to judicial history, there was great range in the number of waiver hearings overseen by the sampled judges (range = 1 hearing to 300 hearings), though most judges seem to have reviewed an average of more than 20 hearings throughout their careers (M = 22.44, SD = 45.49). However, due to the presence of outlier cases and their impact on the sample mean, the sample median value was selected as a more reliable estimator of the actual number of cases reviewed by judges; accordingly, this statistic (Mdn = 10.00) proposes an estimate that is nearly half the average value. All demographic data for Study 2 are summarized in Table T6.

Power analysis. In Study 2, a power analysis for a four-group factorial research design indicated that a sample size of approximately n = 33 per group—for a total of N = 132—was required to detect medium sized effects (e.g., ω^2 = .08; Cohen, 1988; Keppel & Wickens, 2004) when power and $\alpha_{type\ I\ error}$ are set at .80 and .05, respectively. However, with a final sample size of N_{total} = 64 juvenile court judges, the per-group ns for all four conditions did not surpass the desired sample size requirements needed for establishing adequate statistical power (these n values are reported in the subsequent subsection).

Study design. A fully-crossed four-group experiment, with two manipulations, was performed. In order to examine the effects of the independent variables on transfer choices and waiver hearing-related evaluations, respondents were randomly assigned to one of four research conditions: (a) *ecological double-MS induction* (MS cues embedded within prosecutorial and defense counsel arguments; n = 21), (b) *ecological single-MS induction 1* (MS cues embedded within prosecutorial arguments only; n = 20), (c) *ecological single-MS induction 2* (MS cues embedded within defense counsel arguments only; n = 13), and (d) *ecological double-neutrality induction* (pain-related cues embedded within prosecutorial and defense counsel arguments; n = 10).

Materials. Using a fictitious waiver of jurisdiction hearing narrative, Study 2 was designed to assess the relationship between two independent variables, several predictor variables and different classes of dependent measures (e.g., waiver hearing-related evaluations). The requisite materials are discussed below.

Mock-waiver hearing vignette. Prior to developing the mock-waiver hearing vignette, actual juvenile court judges were contacted to assist in the construction of the study's materials. This process helped identify germane background information that was integrated in the vignette to enhance realism. The background information of interest was kept constant (see Table T7).

Following a series of meetings with the director of the Juvenile and Family Law Department, the final version of the mock-waiver hearing vignette was selected. The vignette was comprised of five parts (see Appendix I). The first part of the vignette provided introductory judicial instructions. The instructions discussed the narrative format of the mock-hearing, explained the objective of the study and listed the *Kent* Guidelines (it was explained to judges that they may consult these guidelines when rendering their transfer decisions). All participants were instructed to perform the duties of a juvenile court judge who had been called to render a waiver of jurisdiction decision in a criminal case involving a minor. The instructions also informed judges that all background and case information pertaining to the juvenile were not in dispute and could be assumed to be true.

The second part of the vignette introduced the juvenile's background information. This information included several elements, such as juvenile age, familial environment, psychological factors, educational history, prior offense record, rehabilitation status, gang affiliation and risk to public. The third part of the mock-waiver hearing provided judges with a narrative summary of the facts of the case in question. This section detailed a story about a juvenile who was arrested by two officers for possessing and distributing methamphetamine and for possessing materials known to be used in the manufacturing of the illicit substance. This section also informed judges that the juvenile's defense attorney opted to waive a probable cause hearing; this provided a segue to the fourth component of the vignette.

The fourth section introduced the actual waiver of jurisdiction hearing. In the mock-hearing, judges read testimonies from a mental health expert, the prosecutor and the juvenile's defense attorney. The mental health expert submitted a psychological evaluation regarding the juvenile's *psychological state* (a proxy for dispositional factors) and *social functioning* (a proxy for situational factors). Following the psychological evaluation, judges heard from the state attorney. The state proffered three broad arguments, focusing on matters involving recidivism, escalation, public risk, impulsive behavior and unstable

rehabilitative prospects. After the state rested their case, judges heard from the defense counsel. Akin to the state, the defense submitted three general arguments, focusing on issues such as rehabilitative promise, acceptance of responsibility, long-term consequences of transfer and stigmatization. After the defense rested her case, judges heard *attorney closing arguments* (note that the two primary manipulations were integrated into these arguments). The fifth and final component of the mock-waiver hearing vignette provided judges with closing judicial instructions. The instructions reminded judges about the *Kent* Guidelines and explained that a series of survey questions would be administered before a transfer decision could be rendered.

Primary manipulations. After several meetings with the director of the Juvenile and Family Law Department, two independent variables were selected and manipulated. Both varied along two levels and were fully crossed (see Table T8). The first manipulation was the type of prosecutorial statement. For the ecological mortality-based statement ($IV_{1,\ level\ 1}$), overt death-related cue words were placed in prosecutorial closing arguments in order to activate death thoughts (for a similar methodology, refer to Pickel & Brown, 2002, as cited in Arndt et al., 2005). That is, seven sentences of the closing argument contained the following seven words (in this order): *murdered*, *death*, *kill*, *mortal*, *morgue*, *lives* and *deceased*. For the ecological neutrality-based statement ($IV_{1,\ level\ 2}$), neutral cue words were placed in parallel prosecutorial closing arguments so as to avoid triggering thoughts about death and dying. The seven death-related cue words were replaced with the following seven words (in this order): *injured*, *problems*, *harm*, *physical*, *hospital*, *livelihoods* and *addicts.*

The second independent variable was the type of defense counsel statement. This variable was manipulated in the exact manner as the first manipulation. Specifically, in the ecological mortality-based statement ($IV_{2,\ level\ 1}$), blatant death-focused cue words were incorporated into the defense attorney's closing arguments. Seven statements of the closing argument contained the following seven words (in this order): *deadly*, *deaths*, *kill*, *fatal*, *mortal*, *lives* and *dead*. In the ecological neutrality-based statement ($IV_{2,\ level\ 2}$), non-death-related words were added to parallel defense counsel closing arguments. Here, the seven death-related cue words were replaced with the following seven words (in this order): *serious*, *problems*, *hurt*, *physical*, *legal*, *safety* and *incarcerated*.

Primary measures. The variables of interest for Study 2 included six classes of primary measures. All measures listed in this subsection were evaluated along 6-point Likert metrics, ranging from 1 (*completely disagree*) to 6 (*completely agree*). The only four exceptions to this were a ranking scale, two subscales of a "legal factors" instrument (details are provided below) and the demographic questionnaire. As in Study 1, a 6-point metric was chosen to avoid having a numerical midpoint. Instruments were administered in order to measure respondents' general and specific punishment attitudes, general mode of information-processing, general attributional reasoning style and affect. Items were also constructed as a way of assessing judges' decisions and perceptions toward the mock-waiver hearing. Lastly, a standard demographic form was distributed so as to accurately describe the sample of respondents. Where appropriate, the demographic data were also used to conduct post-hoc statistical analyses. For all multi-item scales, arithmetic means were calculated in order to produce measures of central tendency.

Before respondents read the mock-waiver hearing narrative, six instruments were dispensed. The first instrument was a 6-item tripartite scale of punishment attitudes, a scale comprised of items selected from a construct validated punitive attitudes scale (cf. Chung & Bagozzi, 1997; Chung & Pardeck, 1994). The 6-item scale (see Appendix J) measures three distinct dimensions of punishment: *deterrence*, *rehabilitation* and *retribution*. Evaluations favoring deterrence are rooted in a generalized belief that punishment serves pragmatic functions, such as crime reduction and prevention (e.g., "Institutions are effective as deterrents to the offender."). Rehabilitative attitudes are characterized by favorable evaluations toward offender rights, social contract and social well-being (e.g., "Rehabilitation should be a prime goal in sanctioning juveniles."). Evaluations in support of retribution are indicative of strong associations between notions of deviance, personal accountability and moral desert (e.g., "Society should be willing to avenge crime."). In this scale, greater scores indicate the presence of a given attitudinal dimension. It is important to note that the words of some scale items were slightly modified in order to reframe item-content, in turn making them applicable to juvenile justice issues (e.g., the word "criminal" was changed to "juvenile").

A second instrument measured attitudes pertaining to incapacitation and restorative justice. Legal scholars have contended that matters involving incarceration and the restoration of victims also make up the structure of punitive attitudes (Carroll et al., 1987; Goodman-Delahunty et al., 2005). A 4-item

"incapacitation–restoration attitudes" scale (see Appendix K) was developed for this study to tap into juvenile court judges' views regarding the roles of incarceration and restorative justice within the JJS. Evaluations in favor of incapacitation suggest that critical links exist between imprisonment, isolation and perceived public risk (e.g., "The public welfare is assured when young offenders are incapacitated."). Evaluations in favor of restorative justice reveal that the consequences of deviance can, under certain circumstances, be ameliorated via a process that aims to place victims and communities in a "psychological state" that existed prior to the norm violation in question (e.g., "Whenever possible, juvenile offenders should be required to pay economic fines for their crimes.").

The third instrument assessed participants' general legal "philosophy," or justice process orientation. According to social and legal researchers, many attitudes, beliefs, values and actions related to the justice process fall under two broad, non-opposing categories (Packer, 1968; Wrightsman et al., 2002). As such, a 4-item "crime control–due process values" scale (see Appendix L) was created in an effort to measure these two complementary justice process orientations. The endorsement of crime control values is characterized by a general appreciation of social order, speed (i.e., efficiency of the justice process), finality (i.e., minimization of challenges to the justice process) and behavioral control (e.g., "An ideal legal system should treat behavioral control as one of its highest priorities."). In contrast, due process values foster a general need to draw attention to the transparency of the justice process, the critical analysis of legal procedures, the limits of official powers and the primacy of the individual relative to the state (e.g., "An ideal legal system should treat individual rights as one of its highest priorities.").

A fourth instrument was utilized to determine how participants rank-order five general legal concepts. The instrument used ranking-based measures rather than Likert-based measures. The 5-item "ranking" scale (see Appendix M) instructed judges to grade the importance of *deterrence*, *incapacitation*, *rehabilitation*, *restoration* and *retribution* to the justice process, from one (most important) to five (least important).

The fifth instrument was a slightly modified version of the 10-item REI (Epstein et al., 1996; see Appendix N) used in Study 1. For Study 2, the words of most scale items were altered. Alterations were

made so as to reframe item-content, in turn making them applicable to juvenile justice issues (e.g., the word "thinking" was changed to "deliberating").

The sixth and final pre-manipulation instrument was constructed in order to assess variant modes of attributional reasoning. A measure of judges' attributional reasoning style was needed to evaluate the degree to which UACA theory adequately models judges' legal reasoning and behavior. Here, a 4-item "attributional reasoning style" scale was given to all participants (see Appendix O). With this scale, greater scores reveal the presence of a given reasoning style. Items were constructed to probe judges' *person-focused* attributional reasoning (e.g., "Most young offenders lack the ability to control their bad behavior."). Similar items were generated to rate judges' *system-focused* attributional reasoning (e.g., "Juveniles commit crimes because they lack positive social support in their lives.").

The first post-manipulation instrument—the seventh instrument, in all—evaluated waiver hearing-related perceptions. Transfer decisions routinely factor in various legal-based considerations. These may include the evidence and arguments presented by attorneys, the applicability of relevant statutes, the severity of the offense, offender dangerousness, the juvenile's prior record and the testimony of mental health professionals (D'Angelo, 2007; Jones & Cauffman, 2008; Salekin et al., 2002). To account for these legal considerations, the 21-item "legal factors" scale (see Appendix P) was created with three separate subscales. The first subscale uses three items to measure the strength of the information provided by the prosecution, the defense and the mental health expert. This subscale ranges from 1 (*extremely weak*) to 6 (*extremely strong*). The second subscale uses eight items to measure the utility of the eight *Kent* Guidelines. The second subscale ranges from 1 (*extremely not useful*) to 6 (*extremely useful*). The 10 remaining items use the "completely disagree/completely agree" anchor-labels and, like most instruments in Study 2, used a 6-point Likert metric. These items were constructed to tap into perceptions regarding *offender dangerousness* (e.g., "Given the details of the case, the juvenile does not appear to be highly dangerous."), *offense severity* (e.g., "In the case file you examined, the severity of the crime was substantially high.") and *recidivism likelihood* (e.g., "The likelihood of future crime is high, given the juvenile's history."). Other items were incorporated to rate perceptions of the expert witness testimony; these perceptions were both *person-focused* (e.g., "The mental health expert's opinion about the juvenile's

personality is compelling.") and *system-focused* (e.g., "The mental health expert's opinion about the juvenile's social environment is compelling."). Because this instrument was developed specifically for this study, Cronbach alpha scores were calculated to determine its reliability (see Chapter 8 for all results).

An eighth instrument was given to all participants to determine the extent to which certain extralegal factors influenced the judicial decision-making process. The 20-item "extralegal factors" scale (see Appendix Q) integrates various statements that measure punitive attitudes toward the juvenile offender, uncertainty about the case and affect pertaining to the juvenile and the offense. For instance, with respect to punitive attitudes, scale items assess the extent to which judges agree that the juvenile is undeserving of leniency (e.g., "In this case, the juvenile offender deserves to be punished severely."). With respect to affect, scale items rate judges' feelings of anger, frustration and pity (e.g., "In this case, I feel pity for the juvenile in question."). The scale also includes items designed to tap into uncertainty management processes (e.g., "In this case, I experienced some uncertainty with respect to my judgments."). Because this scale was constructed for this study, Cronbach alpha scores were calculated to determine its reliability.

The final instrument distributed to all participating juvenile court judges regarded the actual waiver decision and respective justification (see Appendix R). The 3-item "judicial verdict" scale measures transfer decisions via two formats. Initially, to preserve ecological realism, all judges are asked to render categorically-based choices of either "transfer" or "no transfer." Subsequently, to enhance statistical power during data analysis, judges also responded to a single 6-point Likert item, which ranged from 1 (*certainly do not transfer*) to 6 (*certainly transfer*). The final item was an open-ended question that required judges to provide a brief defense, justification or explanation for their specific transfer selection. Before concluding the study, a standard demographic form similar to the one used in Study 1 was given to all respondents. However, additional items were included so as to capture information about judicial experience, such as the number of waiver hearings where respondents were the acting judge (see Appendix S).

Procedure. Study 2 combined elements of both survey and experimental methodologies. In line with the logic of the EWS design (cf. Visser et al., 2000), respondents were exposed to different versions of a survey. Before participants were given the study materials, an information statement was provided instead

of obtaining formal informed consent. As in Study 1, the statement detailed information about participant rights. The Study 2 information statement also explained to potential judicial recruits that the survey adopted the format of a mock-waiver hearing designed to explore the relationships between feelings, thoughts and waivers of jurisdiction.

Subsequent to the obtainment of informal informed consent, respondents were provided with a web link in order to access an online version of the survey. The survey displayed an instructional cover page, which stated to respondents that their task was to adopt the role of a juvenile court judge who had been called to render a decision in a fictitious waiver of jurisdiction hearing. Although judges were told that participation in the study would take 35-45 minutes, all respondents were given as much time as they needed to complete the survey.

Prior to reading the mock-waiver hearing narrative, judges responded to the six pre-manipulation instruments (due to feasibility constraints, the order in which instruments were introduced was kept constant). After responding to the pre-manipulation measures, judges were randomly assigned to one of four conditions. In the double-MS condition, judges were given a mock-waiver hearing narrative containing prosecutorial and defense counsel closing arguments that were both death-laden. Exposure to two death-related cues was expected to activate judges' rational mode of information-processing, as the presence of multiple cues may create a scenario wherein vulnerability concerns become explicit (i.e., conscious). In single-MS induction condition 1, judges were given a mock-waiver hearing narrative in which only the prosecutorial closing arguments were death-laden (the defense counsel's argument was neutral). In single-MS induction condition 2, judges were administered a mock-waiver hearing vignette in which only the defense counsel's closing arguments were death-laden (the prosecutorial argument was neutral). In both single-MS conditions, exposure to one death-related cue was expected to activate judges' experiential mode of information-processing, as the presence of a single cue may allow vulnerability concerns to remain at an implicit (i.e., preconscious) level of awareness. Also incorporated into the design was a double-neutrality condition, wherein the prosecutorial and defense counsel closing arguments were both neutral (i.e., non-death-laden). The fourth condition was the only control group for this experiment.

After exposure to the mock-waiver hearing narratives, participants responded to post-manipulation instruments. All post-manipulation items dealt with the specifics of the narratives. Items were included to determine the extent to which abstracted intrapsychic processes (e.g., generalized punitive attitudes) yield similar effects over human behavior as specialized processes (e.g., specified punitive attitudes).[16]

Finally, a standard demographic form was given to all judges. As in Study 1, the form was disseminated immediately before the end of the study. At the study's conclusion, all participating judges were formally debriefed, thanked and entered into a raffle as compensation.

Preliminary Statistical Analyses

In Study 1, preliminary data analyses began with tests of the independent variable. The analysis of variance (ANOVA) approach was the selected technique. The technique provided a parsimonious way to match experimental design elements with a statistical model. One-way ANOVAs—with Tukey Honestly Significant Difference (HSD) tests—were used to examine differences in the primary measures due to exposure to traditional and ecological MS cues versus traditional and ecological neutral cues. In Study 2 (in particular, Hypothesis 3), preliminary analyses involved an inspection of an intercorrelational matrix.

Central Statistical Analyses

This section of the chapter is divided into two parts. The first part begins with a brief and general discussion of *structural equation modeling* (SEM) in social research. Following this, a specific modeling technique, known as partial least-squares (PLS) SEM, is reviewed. The review includes a listing of PLS-SEM assumptions, a rationale for its application in this investigation, a description of the PLS-SEM algorithm and a brief tutorial in how to construct PLS-based structural and measurement models using a

[16] Cognitive phenomenologists hold that the links between emotions, cognitions and social context cast doubt on the notion that moral evaluation and judgment are entirely "offline" (i.e., context-independent) experiences. That is, cognitive phenomenology rejects traditional theories that describe moral judgment in terms of priming, spreading activation, cognitively-stored information (i.e., association nodes) and rational cost-benefit analyses (see Clore, 1992). In line with this perspective, Clore's *feelings-and-cognitive-experience-as-information model* views human judgment in contextual terms. That is, when confronted with a moral-based judgmental task, decision-makers consciously think about immediately experienced thoughts and feelings that have been generated by a task's context. This means that judgment is less dependent on the storage, retrieval and application of cognitive- and affective-based nodes. That is, judgment is primarily an "online" process contingent on appraisals of immediate affective-cognitive experiences. Because of the context-dependent nature of judicial transfer decision-making, participants were given post-manipulation measures that were specialized (rather than generalized).

reliable and freely accessible statistical software package known as SmartPLS (Ringle, Wende, & Will, 2005), version 2.0M3.

The final part of this section elaborates on the occurrence of familywise type I error (α_{FW}) inflation in most path modeling techniques. Specifically, the inflation problem is briefly defined and subsequently articulated within the context of SEM, in particular. The section concludes with a mention of a newly-developed α_{FW} error correction designed for the specific purpose of giving researchers the ability to draw reliable conclusions about multiple hypothesis tests included in a path model, or family of paths. In practice, the correction should provide the opportunity to abide by acceptable statistical power criteria while simultaneously controlling the FW error inflation rate which results from examining multiple and concurrent hypothesis tests.

On structural equation modeling and its applications. The term SEM refers to a broad class of linear and nonlinear statistical modeling techniques. In this way, SEM is not a singular methodology given that numerous SEM estimators exist, each with their own unique statistical assumptions and applications. However, all SEM approaches share a set of common features. In general, SEM is any statistical approach in which the purpose is to examine and test multiple causal hypotheses by measuring the degrees of interrelatedness among a collection of observed (measured) and unobserved (estimated) variables (Jung, 2013; Kaplan, 2009; Mertler & Vannatta, 2005; Ullman, 2007).

Applications of SEM in social research. In social research, SEM has garnered strong popularity and has become a generally accepted strategy by which to test the validity of theories or draw predictions about social psychological processes. Owing to the approach's reputation and attractiveness, the field of SEM has developed its own jargon and symbology (Aiken, Stein, & Bentler, 1994; Hoyle, 2012; Kaplan, 2009; McIntosh & Protzner, 2012; Mertler & Vannatta, 2005; Russell, Kahn, Altmaier, & Spoth, 1998; Skrondal & Rabe-Hesketh, 2005; Ullman, 2007). To enhance clarity, some terms require elaboration at this moment. In applications of SEM, social researchers are interested in predicting unknowns about a variable (called the *endogenous* variable, or *criterion* in regression) from known information about another variable (called the *exogenous* variable, or *predictor* in regression).[17] Known information is obtained by drawing

[17] In SEM, any variable which has a path pointing toward it is considered to be endogenous.

empirical measurements (e.g., scale items), or *observed indicators*. In turn, observed indicators can be used to make estimations about other observations or about constructs that are not directly measurable (immeasurable constructs are referred to as *latent* factors or variables).

Based on a combination of observations and statistical assumptions, SEM produces two types of statistical models. The *structural model* evaluates the degrees of interrelatedness among a set of latent variables and is often illustrated as a path diagram.[18] In contrast, the *measurement model* evaluates the degrees of interrelatedness between a latent factor and its respective observed indicators. Researchers utilize the statistical output of both models in order to draw conclusions about the validity and predictive power of a theory. This is often performed by determining the extent to which a dataset quantitatively fits (or supports) the features of the theory in question.

On partial least-squares SEM: Assumptions and rationale for its application. Calculation of the structural and measurement models depends largely on the type of SEM estimator being implemented. The most widely used estimator in the social sciences is *covariance-based* (CB) SEM and it is offered in most path modeling software packages, including IBM-AMOS, EQS, LISREL and MPlus (Haenlein & Kaplan, 2004; Hair, Ringle, & Sarstedt, 2011; Jung, 2013; Wong, 2013). Yet, appropriate applications of CB-SEM require that datasets adhere to particular assumptions and research aims.

In particular, CB-SEM yields unreliable results when data are non-normally distributed, when data are based on small samples and when data are characterized by high model complexity (Haenlein & Kaplan, 2004; Hair et al., 2011; Jung, 2013; Wong, 2013). Further, the use of CB-SEM is inappropriate when there is limited theoretical direction or when the research goal is to assess the predictive validity of theories. This is because CB-SEM exploits full-information maximum likelihood (ML) estimates in order to generate hypothetical covariance matrices. This means that the aim of the CB-SEM technique is not to maximize the explained variance of endogenous latent constructs but rather to confirm the degree of fit between data and theory.

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[18] In SEM path diagrams, latent factors are depicted as ovals while observed indicators are depicted as rectangles. Also, single-headed arrows represent unidirectional (causal) relationships between exogenous and endogenous latent factors (or between latent factors and their corresponding observed indicators) while double-headed arrows represent bidirectional (correlational) relationships.

Limitations found in Studies 1 and 2 suggest that CB-SEM may not be an appropriate technique in this context. For instance, there are slight violations of normality in some aspects of the data (see Chapter 8). Also, in Study 2 in particular, the low sample size presents a problem with respect to ML estimates, which tend to be more reliable when samples sizes are large relative to the number of variables in a model (Haenlein & Kaplan, 2004; Hair et al., 2011). Further, given the dearth of research in the area of judicial transfer law, there is limited theoretical direction and, as such, the purpose of model confirmation (or *specification*) should be jettisoned in exchange for the purpose of analyzing a model's predictive power (i.e., variance explained).

Fortunately, statisticians and social scholars have developed non-CB-SEM estimators which do not require meeting the conservative assumptions of traditional CB-SEM. Non-CB-SEM estimators include techniques such as the *two-stage ridge least-squares estimation* (Jung, 2013), the *Satorra-Bentler scaled and adjusted statistic* (Nevitt & Hancock, 2004; Satorra & Bentler, 1994) and the *Bayesian approach* (Lee & Song, 2004). Given the objectives and constraints of the current investigation, there is an argument favoring the use of the *variance-based* PLS-SEM approach. A benefit of this method is that limited assumptions about the nature of the data are required. Scholars contend that PLS-SEM is able to generate reliable results despite the use of small samples (e.g., samples of 10 to 50 cases; cf. Haenlein & Kaplan, 2004). It is recommended that the PLS-SEM estimator be used when the minimum sample size is equal to the larger of two standards: (a) 10 times the number of formative indicators used to estimate a given latent construct, or (b) 10 times the largest number of paths pointing toward a given latent construct (cf. Hair et al., 2011). Further, the PLS-SEM estimator is appropriate when there are gross violations of normality or high model complexity and when predictive accuracy (rather than model specification) is relevant or when there is limited theoretical direction to "confirm" a theory. The iterative-based estimator is also able to generate latent constructs from single- and multi-item measures (Haenlein & Kaplan, 2004; Hair et al., 2011; Wong, 2013). In effect, PLS-SEM exploits an explanatory-based approach in order to address exploratory-based research objectives. In this investigation, this variant of causal path modeling served as a useful tool for extracting reliable inferences from the available data.

The two-stage PLS-SEM algorithm. The PLS-SEM estimator has a long history in the field of marketing and business research, in part because of the discipline's push toward exploration, theory development and prediction (Hair et al., 2011; Henseler, Ringle, & Sinkovics, 2009). The estimator is also well-known among social scientific circles (McIntosh & Protzner, 2012). This variant of path modeling accomplishes the dual-task of maximizing the explained variance of endogenous variables and evaluating the quality of a dataset in terms of measurement model elements (e.g., factor loadings; regression weights). Given that non-CB-SEM approaches are unconcerned about the shared variance across a latent variable's unique observed indicators, the PLS-SEM factor loadings of indicators for an exogenous construct are generated by determining the magnitude to which that exogenous variable's indicators predict a particular endogenous construct.[19] In effect, path coefficients present in the structural model (in PLS-SEM, this is termed the *inner model*) are based on specific outer loadings (or outer weights) present in the measurement model (in PLS-SEM, this is termed the *outer model*).

The PLS-SEM algorithm exploits a two-stage iterative process in order to identify final inner and outer model coefficients (cf. Haenlein & Kaplan, 2004; Hair et al., 2011). The algorithm is divided into two corresponding phases: *iterative estimation* and *final estimation*. The iterative estimation phase contains four steps which are repeated for a preset maximum number of iterations (usually, a maximum of 300 iterations; also, cf. Wong, 2013). Thus, each iteration of Stage 1 provides updated statistics which are used to inform the next Stage 1 repetition. In the first step, observed indicator scores and step-four outer coefficients are used to estimate inner model latent variables scores (this step is known as *outer approximation*).[20] The second step involves the estimation of path coefficients present in the inner (structural) model; this is often achieved by using a *path weighting scheme*, in which regression analyses and bivariate correlations are applied so as to maximize an endogenous construct's *coefficient of determination*, or variance explained (i.e., final R^2). In the third step, latent construct scores are estimated by accounting for step-one latent

[19] The PLS-SEM estimator can only be used to examine unidirectional relationships and cannot examine covariances. Thus, PLS-SEM inner and outer models never depict double-headed arrows.

[20] The linear contributions of all observed indicators and their corresponding latent variables (i.e., paths between observations and latent factors) are used to estimate tentative (or "proxy") latent variable scores. In order to initiate the first iteration, pseudo "step-four" outer loadings (or weights) are initially set to a value of 1. Subsequent iterations use estimated linear contributions (i.e., proxy path coefficients between observations and latent factors) in order to determine the final estimates of all latent variable scores and path coefficients.

construct scores and step-two path coefficients (this step is known as *inner approximation*). The final step involves finding estimates for the outer (measurement) model. Outer model estimates differ depending on whether constructs are measured *formatively* or *reflectively*.[21] That is, the former yields outer (regression) weights and the latter produces outer (factor) loadings. In general, outer weights are a function of ordinary least-squares (OLS) regressions of all tentative (proxy) latent variable scores as they are regressed on their respective indicator scores. In contrast, outer loadings are based on correlations between proxy latent variables scores and their respective indicators.

The iterative estimation phase is repeated until the algorithm converges the data or until the maximum number of iterations is reached (which may be indicative of data abnormalities). Although there are no established standards, one rule suggests that there be as few Stage 1 iterations as possible (Wong, 2013). Data convergence occurs when the PLS-SEM algorithm meets an *abort criterion*. This criterion is a pre-specified numerical value and is the sum of changes in outer loading (weight) coefficients across two iteration pairs.[22] Although there is no standard, it is suggested that the sum of changes be low in order to ensure convergence accuracy; a value of 10^{-5} or .00001 is common (Hair et al., 2011; Wong, 2013). Upon reaching the abort criterion, the final estimation phase (Stage 2) is instigated. Here, OLS regressions for each partial regression in the PLS-SEM model are used to identify the final estimates for both the inner and outer models. Also, the statistical significance values of all final inner and outer path coefficients are determined through a *bootstrapping* technique. Bootstrapping involves resampling (with replacement) a specific number of samples of size *N* so as to construct an empirical (i.e., testable) sampling distribution (Newton & Rudestam, 1999).

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[21] Formative and reflective measurement scales make different assumptions about the relations between indicators and latent factors (Hair et al., 2011; Wong, 2013). In the former case, indicators are non-interchangeable and, thus, are assumed *to cause* latent constructs (e.g., if happiness is caused by marital status and employment status, those two indicators are formative in nature, as marital status and employment status are conceptually unique). In the latter case, indicators are interchangeable and, thus, are assumed to be *outcomes* of latent constructs (e.g., levels of happiness will differentially cause respondents to "reflect" their current emotional state on a happiness scale).

[22] The abort criterion (AC) can be conceptualized as such: $AC = \Delta_{1,2} + \Delta_{2,3}$; then $\Delta_{3,4,} + \Delta_{4,5}$; then $\Delta_{x,y} + \Delta_{y,z}$, where $\Delta_{1,2}$ is the *change* (i.e., the difference in model coefficients) between iteration 1 and 2, $\Delta_{2,3}$ is the change between iteration 2 and 3 (and so forth), $\Delta_{x,y}$ is the second to last change score and $\Delta_{y,z}$ is the last change score. In the presence of measurement error, the PLS algorithm must run a minimum of three iterations before achieving data convergence. In an error-free dataset, the PLS algorithm only requires two iterations when the initial weights equal 1.

PLS-SEM with the SmartPLS statistical package.[i] In comparison to other SEM estimators, there is only a small minority of statistical software packages capable of utilizing the PLS-SEM algorithm. Some examples are PLS-Graph, VisualPLS and WarpPLS (Wong, 2013). Yet, many of these packages are not readily available for public use or are relatively expensive because of additional analytic features. One exception is SmartPLS 2.0M3, a software program designed solely for performing PLS-SEM involving formative and reflective measurement scales (Ringle et al., 2005).[23] In both Studies 1 and 2, PLS-SEM was implemented in order to examine reflective measurement scales. SmartPLS was the statistical package used for all analyses.

SmartPLS makes use of a user-friendly graphical computer interface quite similar to those found in other well-known statistical packages (e.g., IBM-AMOS). It is important to note that SmartPLS only reads comma-separate value (.csv) and .txt file formats.[24] When performing PLS-SEM to examine reflective measurement scales, the outer and inner models must be evaluated in a specific manner. Also, the algorithm and bootstrapping criteria must be configured in SmartPLS (for a detailed tutorial on SmartPLS 2.0M3 and its applications, see Wong, 2013). Using icons located on the interface, the inner model is created by using ovals to represent latent constructs and single-headed arrows to display causal links between those constructs.[25] The outer model is constructed in much the same manner, although rectangles are used to represent the observed indicators of latent constructs. Also, in a reflective measurement scale model, single-headed arrows lead away from latent variables toward their respective indicators. Finally, with respect to statistical configuration, SmartPLS contains "PLS Algorithm" and "Bootstrapping" commands located in the "Calculate" menu. The PLS Algorithm command produces a dialogue box which

[23] To access a downloadable 90-day copy of SmartPLS 2.0M3, go to http://www.smartpls.de and register with the online forum. Activation codes for the statistical package can be updated every 90 days.
[24] SPSS allows users to save datasets using various file formats. To obtain .csv and .txt file versions of an SPSS dataset, simply use the "Save As…" command and save a new file using the appropriate file format.
[25] There are no standards for determining the appropriate "sample size-to-paths ratio" for a given model. However, Marcoulides and Saunders (2006) and Wong (2013) argue that the maximum number of arrows pointing toward a latent variable is dependent on a specific minimum sample size. For instance, in order to examine 4 paths pointing toward a latent factor, at least 65 cases should exist in the dataset (this is important to note, given the small sample size in Study 2). As the number of arrows increases, the requisite minimum sample size also increases. Thus, in order to examine 10 paths pointing toward a single latent variable, at least 91 cases should be present.

requests specific criteria. Based on scholarly recommendations (e.g., Hair et al., 2011; Wong, 2013), the following PLS criteria were inputted:

Weighting Scheme: Path Weighting Scheme

Data Metric: Mean = 0, Variance = 1

Maximum Iterations: 300

Abort Criterion: 1.0E-5

Initial Weights: 1.0

In PLS-SEM, bootstrapping is used in order to evaluate the statistical significance of path coefficients (via *t*-tests). After producing the bootstrapping dialogue box, the following criteria were inputted:

Sign Changes: No Sign Changes

Cases (i.e., cases per sample): *must be the valid number of observed cases*

Samples (i.e., number of independent samples of size *N* drawn): 5000

After running the PLS algorithm, a reflective-based analysis produces specific results that ought to be reported in order to assess the predictive power of the model (for a full list of statistics that should be reported from formative-based analyses, see Wong, 2013). In this study, eight aspects of all models were examined and reported (see Chapter 8). These aspects include (a) the explained variance of all endogenous latent variables, (b) the magnitude of inner model path coefficients, (c) the loadings of the outer model, (d) the reliability of observed indicators, (e) the internal consistency of all multi-item latent factors (composite reliability), (f) convergent validity, (g) discriminant validity, and (h) bootstrapped significance values.[26]

On familywise type I error inflation and multiplicity control. A common concern in quantitative research is the potential inflation of the α_{FW} error rate, which can result from the simultaneous analysis of multiple hypotheses. This is referred to as the *multiplicity problem* (Cribbie, 2000, 2007; Keppel & Wickens, 2004; Smith & Cribbie, 2013). More accurately, in null hypothesis significance testing,

[26] Indicator reliability is a function of the square of each outer loading; coefficients of .70 or higher are substantial, although values of .40 are satisfactory in exploratory analyses (cf. Hulland, 1999). Internal consistency is a function of the composite reliability coefficient; coefficients of .70 or higher are substantial, although values of .60 are satisfactory in exploratory analyses. Convergent validity scores are a function of the average variance extracted (AVE) value and should equal or exceed .50 (cf. Bagozzi & Yi, 1988). Discriminant validity scores are a function of the square root of the AVE and should exceed the values of all latent correlations (cf. Fornell & Larcker, 1981).

multiplicity is present when many empirical hypotheses belonging to a family are evaluated using an uncorrected nominal type I error criterion (usually $\alpha_{\text{type I error}} = .05$) rather than a corrected per test (α_{PT}) standard. Uncorrected $\alpha_{\text{type I error}}$ criteria run the risk of augmenting the likelihood of false positives whenever there is a plurality in the number of tests performed (Benjamini & Hochberg, 1995; Simmons, Nelson, & Simonsohn, 2011). The problem is best illustrated through example. The inflation rate is based on the function, $\alpha_{FW} = 1 - (1 - \alpha)^k$, where *k* represents the number of hypothesis tests within a family. With a nominal α of .05 and a *k* of 5 hypothesis tests, the real (familywise) error rate is $\alpha_{FW} = 1 - (1 - .05)^5$, or .22. As a result, there is actually a 22% probability of committing a type I error (i.e., identifying a false positive) with respect to any hypothesis within this family.[27]

Various statistical solutions have been proposed to address the multiplicity problem. These a priori solutions include the *Hochberg sequentially acceptive step-up correction* (Hochberg, 1988) and the *false discovery rate* approach (Benjamini & Hochberg, 1995). Despite the number of statistical adjustments available to researchers, routine implementation of multiplicity control is virtually nonexistent in most investigations, especially those making use of SEM (Cribbie, 2000, 2007). There may be one reason for this practice in social research. A well-known a priori α_{FW} correction is the Bonferroni adjustment (see Keppel & Wickens, 2004). The adjustment calculates a α_{PT} by partitioning the nominal α by *k*, such that $\alpha_{PT} = \alpha/k$. The consequence of this adjustment is a highly conservative control over the α_{FW} error rate. In other words, the traditional Bonferroni adjustment lacks adequate statistical power and, in turn, increases the probability of committing type II errors (i.e., identifying false negatives). In SEM, scholars are interested in uncovering numerous causal relations among variables, many of which tend to be highly correlated; in this context, the traditional Bonferroni adjustment is viewed as too strict (i.e., demanding large effect sizes).

Despite a general absence of multiplicity control in SEM, Cribbie (2007) contends that several reasons exist to justify its integration in path modeling techniques. For instance, the issues with multiplicity in correlational research are exactly the same in SEM. Related to this, SEM is primarily a confirmatory

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[27] There is little consensus as to what set of parameters ought to define a "family" of hypothesis tests. Cribbie (2007) offers three general recommendations. First, a family of tests should not be so large that it becomes impossible to reject any hypothesis. Second, a family of tests should not be so small that it becomes impossible to provide reasonable type I error control. Finally, tests belonging to the same family should be conceptually related or related in terms of their intended purpose.

analysis, which is more determinative than simple correlational analyses and demands stricter judgment on the part of researchers. Further, intercorrelations between latent factors are capable of affecting the strictness of the $\alpha_{\text{type I error}}$ rate. Finally, research has shown that substantial threats to statistical validity remain if the α_{FW} is not controlled in SEM (see Cribbie, 2000).

Fortunately, Smith and Cribbie (2013) recently developed, evaluated and introduced a new Bonferroni correction which provides a balance between statistical power and multiplicity control. The Smith-Cribbie correction (henceforth, the *SC-Bonferroni*) differs from the traditional Bonferroni correction in that the former accounts for the degree of interrelatedness among SEM coefficients. This is achieved by incorporating a covariance-type index in the denominator term, which weakens the strictness of the adjustment as the value of the index increases. The SC-Bonferroni adjustment is based on the function, $\alpha_{PT} = \alpha_{FW}/k^{1-\sqrt{|r\text{-}avg|}}$, where α_{FW} is equal to the nominal α, k represents the number of paths in an inner model and $|r\text{-}avg|$ is the average absolute correlation coefficient derived from the arithmetic mean of all latent correlations corresponding to the model's paths (i.e., the number of bivariate latent correlations is also equal to k). The $|r\text{-}avg|$ in the Bonferroni denominator term introduces two meaningful mathematical properties. First, in the case where latent constructs are completely independent (i.e., $|r\text{-}avg| = 0$), the issue of statistical power is moot and the adjustment is equivalent to a traditional Bonferroni correction ($\alpha_{PT} = \alpha_{FW}/k$, where there is strict α_{FW} control). Second, in the instance where constructs are fully interrelated (i.e., $|r\text{-}avg| = 1$), all variances are perfectly explained and the issue of multiplicity control is negligible; thus, the adjustment is equivalent to making no correction for multiplicity ($\alpha_{PT} = \alpha_{FW}$, where there is maximum statistical power). Hence, the underlying logic of the SC-Bonferroni adjustment is evident: to the degree that variances within a model are unexplained, it is best to risk some level of type I error in exchange for improved statistical power.

Chapter 8: Results

Study 1: Data Screening and Results

Pre-analytic data screening. Pre-analytic data screening techniques are implemented primarily for the purpose of enhancing statistical conclusion validity. These techniques help determine the extent to which variables entered into a statistical analysis (e.g., ANOVA) abide by criteria set forth by parametric-related assumptions (e.g., normality; Mertler & Vannatta, 2005). Specifically, for 14 dependent measures, attention was allocated to the interpretation of normality and skewness statistics (see Table T9). These two statistics were evaluated mainly because they assist in identifying quantitative limitations that are amenable to statistical adjustments, such as power transformations (for more on statistical adjustments, cf. Newton & Rudestam, 1999). Further, internal consistency coefficients (i.e., Cronbach's α) were generated to determine if the final dependent measures yield inter-item reliability rates that exceed the generally accepted threshold of $\alpha_{Cron} = .70$, which is indicative of moderate reliability (John & Benet-Martínez, 2000; Nunnally, 1978). These reliability coefficients are reported in Table T10, along with standard descriptive and correlational statistics.

The Shapiro-Wilk statistic (W) was utilized to assess the degree to which the dependent measures were normally distributed. A Shapiro-Wilk normality analysis is a parametric-based procedure that tests the null hypothesis that a sample was extracted from a population whose parameters mirror a Gaussian function (i.e., bell-shaped probability density curve). A rejection of the null hypothesis, at $p < .05$, is indicative of non-normally distributed population parameters, which may pose threats to statistical conclusion validity (Mertler & Vannatta, 2005; Shapiro & Wilk, 1965). For Study 1, the findings obtained from the Shapiro-Wilk tests are listed in Table T9 and show that only 4 of the 14 dependent measures—the legal authoritarianism factor and trial evaluations for the prosecution, defense and defendant's testimony—are normally distributed. The presence of potentially problematic non-normality led to an examination of skewness measures.

For each of the 14 dependent measures, a standard skewness statistic (g) was evaluated in order to assess the degree of asymmetry in a given variable's probability distribution (see Table T9). Because the skewness test is a parametric-based analysis, skewness values may range between -1 and +1; a g-value that

approaches zero is said to support the conclusion that a probability distribution is symmetrical and, hence, normally distributed (Mertler & Vannatta, 2005). Although there is no generally accepted cutoff-point whereby a probability distribution becomes "significantly asymmetrical," some scholars have proposed that distributions may be notably skewed when *g*-statistics reach or exceed two-times the value of their corresponding standard errors (*SE*s; Brown, 1997; for more on skewness, cf. Tabachnick & Fidell, 1996). Based on this guideline, and despite the results of the Shapiro-Wilk tests, it appears that only one variable—the Need for Cognition (NFC) factor—is skewed in the negative direction.

Although the NFC factor did show signs of non-normality, the choice was made to leave the variable untransformed. A major limitation of power transformations is the potential to distort the underlying meaning of original metrics. Further, slight distributional asymmetries resulting from outliers may be acceptable when extreme cases represent legitimate responses that belong in the sampled dataset. Accordingly, power transformations should only be implemented when there are substantial violations of critical statistical assumptions (Newton & Rudestam, 1999). With respect to the NFC factor, where lower scores indicated a disinclination to engage in deliberate/systematic information-processing, it may not be surprising to find that most participants in the sample scored high on the NFC scale, as the tendency to adopt an in-depth mode of thinking may be stronger among college students vis-à-vis the general jury-eligible population (for an in-depth discussion regarding the differences between college students and representative mock-jurors, see McCabe, Krauss, & Lieberman, 2010).

Internal consistency (Cronbach alpha) coefficients were calculated for 13 of the 14 dependent variables (see Table T10). An inter-item reliability score could not be produced for the trial verdict factor, as this variable was assessed via a single item. Of the 13 multi-item dependent measures, 10 factors displayed moderately high internal consistency rates, with α_{Cron} values ranging between .79 and .94. However, caution should be observed with regard to the three subscale factors that comprise the Revised Legal Attitudes Questionnaire (RLAQ23). Inter-item reliability scores for the legal authoritarianism, legal anti-authoritarianism and legal egalitarianism factors were .48, .55 and .45, respectively; all three scores fall short of the moderate-reliability threshold of $\alpha_{Cron} = .70$.

Overall, given the pre-analytic data screening results, it was evident that the distributions for all dependent measures were conducive to parametric statistical analysis. Several tests were performed to quantify the links between the independent and dependent variables. The findings from these parametric tests are reported in the next subsection.

Results. The results section for Study 1 is divided into three parts. First, a series of one-way ANOVAs were performed on some of the dependent measures to identify potential effects associated with differences in instrument-order and recruitment site. Second, another series of comparable one-way ANOVA tests were conducted and their results used to confirm (or reject) the three general hypotheses. The reason for these tests was to carry out a preliminary assessment of the extent to which the effects of ecological mortality salience (MS) cues mirror those caused by traditional MS induction methodologies. Finally, for the final test, the SC-Bonferroni corrected PLS-SEM estimator was implemented. The rationale for these analyses was two-fold. First, the dataset for this study provided an excellent opportunity to illustrate the use of the SC-Bonferroni corrected PLS-SEM approach. Second, and more importantly, PLS-SEM (compared to ANOVA) allowed for a more powerful examination of the impact of MS cues on mock-juror trial verdict certainty; as discussed further down, this was accomplished by running separate path models for each of the four research conditions.

Order- and site-related effects. To examine potential ordering effects related to the administration of the Rational–Experiential Inventory (REI) and RLAQ23, the two scales were counterbalanced. Approximately 51.0%$_{valid}$ of participants (n_{valid} = 98) were randomly assigned to the RLAQ23-REI condition; the remaining 49.0%$_{valid}$ of sample participants (n_{valid} = 94) were randomly assigned to the REI-RLAQ23 condition. Findings from the one-way ANOVAs demonstrate that the order in which participants received the two instruments had virtually no impact on how they responded to subsequent dependent measures (*ps* > .05). Still, there was one exception.[28] With respect to evaluations of the police officer's testimony, participants were more likely to report favorable ratings when they were assigned to the

[28] One plausible explanation for this order effect may be that the RLAQ23 primed respondents into adopting a "legal mode" of thought, leading to favorable police impressions. However, this interpretation is highly improbable. The scale-metric difference between the two conditions is less than one metric point and the effect size is extremely small, suggesting the presence of a random statistically significant pattern, or false positive.

RLAQ23-REI group (M = 6.83, SD = 1.83) than the REI-RLAQ23 group (M = 6.21, SD = 2.14), $F(1, 189) = 4.60$, $p = .03$, $\eta^2_{partial} = .02$, $CI_{95\%} = 6.23/6.80$.

A similar series of one-way ANOVAs were performed to determine if participants from the five recruitment sites (two from communications, two from sociology and one from human development and family studies) differed from each other on the study's dependent measures. The data from these tests reveal that there were no statistically significant group-level differences associated with recruitment site (ps > .05). In sum, any statistically significant patterns that emerge among the independent and dependent variables cannot be reasonably attributed to variations in instrument-order, nor can they be linked to differences in recruitment site.

Preliminary statistical tests: the ANOVA approach. One-way ANOVAs were used to evaluate the extent to which the independent variable had an impact on participants' trial-related evaluations and decisions. Results from these statistical tests were scrutinized so as to gain initial insights regarding the status of three general hypotheses: (a) the two MS induction conditions (ecological and traditional) are comparable, (b) the two control/neutrality induction conditions (ecological and traditional) are comparable, and (c) all experimental conditions differ from all control conditions. Results confirmed (a) and (b). Still, findings derived from the one-way ANOVAs failed to support (c), as no major differences were observed across the dependent measures (ps > .05).[29]

It is imperative to note here that the ANOVA test is a special case of a broader class of inferential parametric techniques known collectively as multiple regression/correlation (MRC) analysis (Keppel & Zedeck, 1989; Mitchell & Jolley, 2013). The ANOVA and MRC approaches share various parallels, including an underlying general linear model, an analysis of deviations and sums of squares and comparable error term properties. However, MRC has an advantage over the ANOVA test in that the former is statistically more powerful. This is because, unlike ANOVA (which assigns the same mean to all participants placed in the same artificially constructed group), the MRC approach exploits individual participants' actual scores on a given variable. MRC-related techniques (including PLS-SEM) preserve

[29] Two-way factorial ANOVAs were conducted in order to examine interaction effects between research condition and gender. The tests did not produce any statistically significant differences. Due to limited cell sizes, comparable factorial analyses could not be performed with other demographic variables (e.g., ethnicity/race).

statistical power by avoiding the use of group-specified aggregated data points. For this reason, the SC-Bonferroni corrected PLS-SEM estimator was selected as the central analytic tool for assessing links between the independent and dependent variables.[ii]

Results from the final analysis: the PLS-SEM approach. Analysis of the independent variable and dependent measures began with an inspection of an intercorrelational matrix (see Table T10). Results from the correlational analyses were subsequently used to guide an exploration of potential causal patterns. Because this analysis was exploratory in form, all tests were post-hoc and were not based on any specified theory or hypothesis. Fortunately, the PLS-SEM estimator is appropriate when the purpose of an analysis is exploratory rather than explanatory (Hair et al., 2011).

The intercorrelational matrix highlights significant relations between three classes of dependent variables: (a) psychological parameters (i.e., RLAQ23 subscale factors), (b) trial-related perceptions (i.e., defendant testimony strength; police testimony strength; prosecution case strength; victim testimony strength) and (c) trial outcome (i.e., verdict certainty). Although perceived verdict certainty was unrelated to the three psychological parameters, these three factors were associated with four trial-related perceptions. Moreover, all four trial-related perception measures were meaningfully associated with trial outcome. Accordingly, PLS-SEM was used to examine how the psychological parameters shape trial-related perceptions and, in turn, how the latter factors impact mock-jurors' verdict certainty. The arrangement of latent variables was determined primarily by temporal order.

A few points need to be elaborated at this moment. The umbrella term *path modeling*, which includes PLS-SEM, refers to specialized applications of MRC analysis. Path models utilize statistical techniques in an effort to extrapolate linear patterns from multiple correlated variables (McIntosh & Protzner, 2012; Mertler & Vannatta, 2005; Ullman, 2007).[30] As such, researchers usually construct their models based on existing theories, temporal order, prior findings, personal experiences or well-founded notions about the supposed causal links among the observed phenomena. The logic of path modeling centers on the assumption that several linear regressions, when arranged in a particular manner, have the

[30] Mertler and Vannatta note that researchers must be cautious about the level of reliability (and validity) assigned to causal inferences that have been extracted from correlational patterns, primarily because causality is better inferred from data derived from experimental-based designs.

potential to uncover tenable explanations about how a set of correlated variables may be causally connected. Put differently, with all path modeling methodologies, the predictive power of multiple regression analysis is exploited in order to draw explanatory-based inferences from correlational data that are inherently non-causal and descriptive.

A PLS-SEM path model (Model 1) was developed to explore how the observed psychological parameters and trial-related perceptions influenced verdict certainty.[iii] This model was based on the full sample of 192 participants. The inner model and its path coefficients, *t*-values, standard deviations (*SD*s) and explained variances for endogenous variables (i.e., R^2 values) are illustrated in Figure U5. For all figures in this section, only the inner models are depicted. Outer models were omitted in order to improve the clarity of the figures. Outer model coefficients (i.e., loadings, *t*-values and *SD*s), indicator reliability scores (i.e., the square of each loading), internal consistency rates (i.e., composite reliability), average variance extracted (AVE) values, discriminant validity scores (i.e., the square root of the AVE) and latent correlations are presented in Table T11. Although the arrangement of variables and paths can be constructed in numerous forms, two rationales justify an exploration of the path diagram depicted in Figure U5. First, the intercorrelational matrix suggests that, although the associations between the psychological processes and decision-making are nonexistent, these processes are correlated with trial perception factors; these factors, in turn, differentially influence actual mock-juror verdict certainty. Second, the selected model preserves the temporal order of events. That is, all three psychological parameters were assessed before participants were exposed to any trial-related information, and these two events preceded mock-juror decision-making.

The model included numerous predictors. The use of multiple predictors always calls for an assessment of potential *multicollinearity*, which is a problematic and serious reduction in the orthogonality (i.e., independence) of regression predictor variables (Mertler & Vannatta, 2005). In the context of PLS-SEM, problems with collinearity and multicollinearity emerge when there is non-orthogonality among the predictors of endogenous variables belonging to a model. The SmartPLS package does not include a feature which allows for an analysis of collinearity and multicollinearity. One solution is to use more advanced statistical packages (e.g., SAS; SPSS), where the latent variable scores extracted from SmartPLS can be

imported and analyzed via linear regression (see Wong, 2013). This technique was employed for all PLS-SEM tests in this investigation.

With respect to Model 1, an inspection of the tolerance and variance inflation factor (VIF) statistics indicated that there were no serious problems associated with multicollinearity.[31] For the endogenous prosecution case strength variable, the legal authoritarianism and egalitarianism predictors displayed identical tolerance and VIF coefficients (1.00 and 1.00, respectively). For the endogenous police testimony strength variable, the legal authoritarianism and anti-authoritarianism predictors also displayed identical (and excellent) tolerance and VIF coefficients (1.00 and 1.00, respectively). For the endogenous defendant testimony variable, tolerance and VIF scores associated with the legal anti-authoritarianism predictor were 1.00 and 1.00, respectively. Lastly, for the endogenous trial verdict certainty variable, three predictors displayed good tolerance and VIF scores: prosecution case strength (.27 and 3.67, respectively); police testimony strength (.38 and 2.66, respectively); and defendant testimony strength (.50 and 1.99, respectively). Only one predictor (victim testimony strength) displayed inadequate tolerance and VIF statistics (7.62E-6 and 131233.94, respectively).

The PLS algorithm succeeded in converging the data in 12 stage-one iterations, indicating that the dataset did not contain statistical abnormalities which would prevent the algorithm from generating a valid model. Unfortunately, the model did not uncover any meaningful patterns. This is evident in both the inner and outer models. In the inner model, although the variance in trial verdict certainty was fully explained by the impact of all four trial-related perceptions, $R^2 = 1.00$, it is likely that the reported R^2 is artificial given that the predictors had no significant effect on trial verdict certainty. The explained variances of the other endogenous variables were limited. Exogenous variables (i.e., the RLAQ23 subscales) were only able to explain 6.7% of the variance in the prosecution case strength variable, 2.3% of the variance in the victim testimony strength variable and 10.7% of the variance in the defendant testimony strength variable. Also, issues were present with respect to the path coefficients. A SC-Bonferroni adjusted per test $\alpha_{\text{type I error}}$ was calculated using the equation, $\alpha_{PT} = \alpha_{FW}/k^{1-\sqrt{|r\text{-}avg|}}$. Based on the relevant latent correlations and number of

[31] SPSS 22.0 was used to examine potential collinearity and multicollinearity. Multicollinearity and collinearity are problematic when a tolerance statistic (which ranges between 0 and 1) for a given predictor falls below .10, and when a predictor's VIF statistic (which is the inverse of tolerance and has no range) exceeds the value of 10 (see Mertler & Vannatta, 2005).

paths, the average absolute correlation coefficient was, $|r\text{-}avg|$ = (-.216 – .144 + .054 + .327 – .139 – .005 – .005 + .609 – .007)/9 = .053, meaning that the α_{PT} for Model 1 is, $.05/9^{1-\sqrt{|.053|}} = .01$. Given an α_{PT} of .01, the *t*-values for all path coefficients must equal or exceed a $t_{critical}(191)$ of 2.60 in order to reach significance. None of the paths in Model 1 met this criterion.

Regarding indicator reliability, most coefficients for the three RLAQ23 subscales did not exceed a value of .40, which is the minimum standard for demonstrating item-level reliability in an exploratory study. These three factors also had limited internal consistency for an exploratory analysis, as none of the composite reliability scores exceeded a value of .60. Likewise, the three factors produced weak AVE scores and did not surpass a value of .50, which is indicative of poor convergent validity.[32] Finally, regarding discriminant validity, it is obvious that some coefficients located along the diagonal of the latent intercorrelational matrix (Table T11) are less than the value of some correlation coefficients. As such, the model has insufficient discriminant validity. In sum, Model 1 has virtually no predictive power.

Model 1 presented in Figure U5 only accounted for the relationships among the dependent measures. A remaining unknown was the degree to which the model differed as a function of variations in levels of the independent variable (i.e., MS condition). On occasion, null effects disappear once a moderator variable is introduced. This leads to statistically significant patterns for specific levels of that variable. To explore this possibility, four separate PLS models like the one depicted in Figure U5 were constructed for each of the four conditions. However, these four models were unable to identify any meaningful patterns in the dependent measures as a function of the independent variable. In total, the five models hint to the idea that terror management effects (whether in the lab or in the social ecology) play an insubstantial role in legal decision-making.

Study 2: Data Screening and Results

Pre-analytic data screening. As in Study 1, pre-analytic data screening techniques were implemented to enhance statistical conclusion validity. Once again, data screening required interpreting the

[32] The average variance extracted (AVE) is a statistical index which measures the degree to which items tap into a particular construct. The AVE for a construct accounts for the explained variance of all items and is based on the average percent-of-variation explained (cf. Fornell & Larcker, 1981).

normality and skewness statistics for all 38 dependent measures. For Study 2, normality and skewness statistics are reported in Table T12.

Findings obtained from the Shapiro-Wilk tests suggest that only 4 of the 38 dependent variables are normally distributed. That is, the measures tapping into case-specific need for deterrence, perceived offender dangerousness, Need for Cognition (NFC) and Faith in Intuition (FI) yield no evidence of non-normality. However, due to the substantial presence of potentially problematic non-normality, an assessment of skewness statistics was undertaken.

For each of the 38 dependent measures, the skewness statistic was utilized to determine the extent of asymmetry in the measure's probability distribution (see Table T12). Based on the *g*-to-*SE* ratios, it is evident that 13 of the 38 variables are asymmetrical. Still, in terms of a "ratios" standard, most dependent measures (≈66%) do not present extensive violations of normality. As in Study 1, the choice was made to avoid the use of power transformations in order to preserve psychometric properties and account for legitimate item-responding. In sum, all 38 dependent variables were left untransformed. Descriptive statistics for each dependent variable are provided in Table T13.

In order to assess measurement reliability, Cronbach α scores were calculated for 26 of the 38 dependent measures. Coefficients are reported in Table T14 along the diagonal of the intercorrelational matrix. Reliability assessments could not be performed on 12 measures, as these variables were measured with a single item. Among the 26 dependent variables measured with multiple indicators, 10 factors exhibited moderately high reliability rates, with α_{Cron} values ranging between .74 and .83. Nonetheless, it should be noted that the internal consistency rates of 13 factors were inadequate-to-nearly reliable, with α_{Cron} scores ranging between .09 and .67. Moreover, due to statistical constraints in the data, α_{Cron} coefficients could not be calculated for three factors (i.e., person-focused attributional reasoning style, affect toward the juvenile and case-specific deterrence attitudes). Overall, based on the pre-analytic data screening results, it was concluded that most of the dependent measures were conducive to parametric statistical analysis. Results from these analyses are elaborated in the next subsection.

Results. The results for Study 2 are partitioned into three subsections. Each subsection focuses on examining a unique family of hypotheses in order to assess which theories and variables are applicable in

terms of explaining judicial transfer decision certainty. All hypothesis families were analyzed using SC-Bonferroni adjusted PLS-SEM.

The first subsection reviews the statuses of Hypotheses 1a-1c ("Terror Management and Social Information-Processing"). Here, a series of PLS-SEM path models were constructed to examine the impact of NFC and FI on transfer decision certainty. As in Study 1, the impact of the independent variable was assessed by creating models for the full sample and for each of the four research conditions. The second subsection reviews Hypothesis 2 ("Uncertainty Avoidance and Attributional Reasoning"). According to UACA theory, legal decisions emerge from a complex relationship between attributions and crime control motives. Thus, these variables were included in another path model. Lastly, in the third subsection, an exploratory path model was used to evaluate the standing of Hypothesis 3 ("Statutory–Nonstatutory Factors Perspective"). This test involved an examination of punishment attitudes, juvenile-related perceptions, legal experience, legal considerations and transfer decision certainty.

Subsection 1: Terror management and social information-processing (hypotheses 1a-1c). A path model (Model 2) was constructed to analyze the relations between social information-processing (i.e., NFC and FI) and judicial transfer decision certainty. The model was derived from the full sample of 64 juvenile court judges. The inner model coefficients are presented in Figure U6. Outer model values, latent correlations, reliability rates and validity coefficients are listed in Table T15. Based on the degree of statistical nonsignificance, there was no evidence to support Hypotheses 1a-1c. The following results support this conclusion.

In regard to Model 2, tolerance and VIF scores indicated that there was no evidence of collinearity and multicollinearity. For the endogenous transfer decision certainty variable, the NFC and FI predictors had identical tolerance and VIF coefficients (.96 and 1.04, respectively). The PLS algorithm converged the data in three stage-one iterations. This suggests that the dataset did not contain serious abnormalities which would threaten statistical validity. However, Model 2 was rejected given weaknesses in the inner and outer models. With respect to the inner model, the latent variables were inadequate predictors of transfer decision certainty. The data show that FI and NFC only explained 3% ($R^2 = .03$) of the variance in the outcome variable. The main problems were present in the path coefficients. The SC-Bonferroni adjusted per test α_{type}

$_{\text{I error}}$ was calculated based on the germane latent correlations. Given that the |*r-avg*| = (-.149 – .054)/2 = -.102, the α_{PT} for Model 2 is, $.05/2^{1-\sqrt{|-.102|}} = .03$. If the α_{PT} is .03, then the *t*-values for all path coefficients must equal or surpass a $t_{critical}(63)$ of 2.22 in order to achieve statistical significance. The two paths in Model 2 were unable to exceed this critical value.

In terms of convergent and discriminant validity, only certain aspects of the analysis were consistent with a valid predictive model. For the FI subscale, the indicator reliability score for one item (Item 9) did not exceed a value of .40, which is indicative of limited reliability. Also, two indicators for the NFC subscale (Items 3 and 4) displayed poor item-level reliability. Despite these limitations, the internal consistency rates for both variables, based on composite reliabilities, were moderately high and exceeded the value of .60. Still, only the FI factor displayed sufficient convergent validity, given an AVE of .52 (although this is only slightly above the .50 criterion). Notably, the degree to which FI and NFC possess unique properties is fairly high. As indicated by the discriminant validity scores placed along the diagonal of the latent intercorrelational matrix (Table T15), all scores surpass the values of all correlation coefficients. Regardless of the adequacy of certain portions of the inner and outer models, the totality of evidence favors a rejection of the entire model. In other words, Model 2 has no predictive power.

The model in Figure U6 does not account for the impact of the independent variable (i.e., MS condition). To explore the extent to which the inner and outer models differed because of MS stimulus type, separate models like the one illustrated in Figure U6 were created for each of the four research conditions.[33] Akin to Study 1, the four models did not uncover any statistically significant differences in the dependent variables as a function of MS stimulus type. The five PLS-SEM path models once again supported the argument that terror management does not operate within legal ecologies with any substantial degree of influence.[34]

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[33] Due to the small size of the sample, it was not possible to determine if the demographic variables acted as covariates of the relationship involving the independent and dependent variables.

[34] For all groups and the entire sample, the model illustrated in Figure U6 was reanalyzed after removing Items 3, 4 and 9. The modifications did not improve the predictive power of the models and the results were closely similar to those obtained from Model 2. Based on the full sample, the explained variance of the endogenous variable decreased to $R^2 = .02$. The additional tests support the conclusion that terror management is unlikely to influence the justice process.

Subsection 2: Uncertainty avoidance and attributional reasoning (hypothesis 2). Another path model (Model 3) was constructed to explore hypotheses about uncertainty, attributional reasoning, crime control motives and transfer decision-making. Model 3 was based on the complete sample. Inner model values are displayed in Figure U7. Outer model values, latent correlations, reliability rates and validity coefficients are presented in Table T16. The SC-Bonferroni corrected PLS-SEM estimator did not uncover evidence to support Hypothesis 2. This means that the available data do not favor UACA theory as an explanatory model of judicial transfer decision certainty. Results consistent with this conclusion are discussed below.

With respect to Model 3, tolerance and VIF statistics indicated that there were no problems with multicollinearity. For the endogenous case-specific crime control variable, the dispositional and situational attribution predictors displayed identical tolerance and VIF coefficients (.96 and 1.04, respectively). For the endogenous transfer decision certainty variable, its three predictors displayed good tolerance and VIF scores: dispositional orientation (.95 and 1.05, respectively); situational orientation (.92 and 1.08, respectively); and case-specific crime control orientation (.94 and 1.06, respectively).

The PLS algorithm converged the data in seven stage-one iterations. Thus, the dataset did not contain abnormalities which would preclude the generation of a valid model. However, Model 3 was rejected due to limitations in the inner and outer models. Regarding the inner model, the latent variables were unable to adequately predict the degree of transfer decision certainty. Data indicate that dispositional and situational reasoning styles only accounted for 6% (R^2 = .06) of the variance in the case-specific crime control motive variable. Moreover, crime control motives and attributional reasoning only accounted for 19% (R^2 = .19) of the variance in the transfer decision certainty factor. Issues associated with the path coefficients were also present. The SC-Bonferroni adjusted per test $\alpha_{\text{type I error}}$ was determined using the appropriate latent correlations. Given that the $|r\text{-}avg|$ = (.137 + .223 + .400 + .221 + .006)/5 = .197, the α_{PT} for Model 3 is, $.05/5^{1-\sqrt{|.197|}} = .02$. If the α_{PT} is .02, then the *t*-values for all path coefficients must equal or exceed a $t_{\text{critical}}(63)$ of 2.39 in order to meet statistical significance. The five paths in Model 3 did not surpass this threshold.

Analyses were also performed in order to assess the degree of convergent and discriminant validity. Only particular portions of the analyses were consistent with a valid predictive model. The indicator reliabilities for all factors were satisfactory and greater than .40, which is indicative of good reliability. Despite this result, the internal consistency rate for the dispositional reasoning factor was poor (composite reliability = .04). All factors displayed good convergent validity, as all AVE scores were well above the .50 threshold. Also, based on the discriminant validity scores located along the diagonal of the latent intercorrelational matrix (Table T16), it is clear that all scores are greater than all correlation coefficients. Thus, the degree to which the attributional reasoning and crime control factors possess different psychometric properties is rather high. Although portions of the inner and outer models were adequate (e.g., moderate to high indicator reliabilities), most of the available evidence favors a rejection of the complete model. That is, Model 3 lacks predictive power and supports the contention that attributional and crime control-based attitudinal processes do not influence judicial transfer decision-making in scenarios where waiver hearing information is ambiguous.[35]

Subsection 3: Statutory–nonstatutory factors perspective (hypothesis 3). A final path model (Model 4) was constructed to explore hypotheses about specific legal considerations, extralegal factors and transfer decision-making. The fourth model was derived from the entire sample of juvenile court judges. The inner model values are depicted in Figure U8. Outer model values, latent correlations, reliability rates and validity coefficients are listed in Table T17. The SC-Bonferroni corrected PLS-SEM estimator uncovered substantial support for Hypothesis 3, meaning that there exists tentative evidence congruent with a "statutory–nonstatutory factors" perspective.

In regard to Model 4, tolerance and VIF scores revealed that there were no problems pertaining to multicollinearity. For the endogenous prosecution case strength variable, its three predictors had excellent tolerance and VIF coefficients: number of waiver hearings (1.00 and 1.00, respectively); utility of the *Kent*

[35] The model illustrated in Figure U7 was reanalyzed after removing items with indicator reliability scores below .70, the threshold for demonstrating substantial reliability (cf. Hulland, 1999). This led to the removal of Items 1 and 3 of the Attributional Reasoning Style scale. The modifications did not improve the predictive power of the model and the results were closely similar to those obtained from Model 3. The explained variance of the endogenous transfer decision certainty variable decreased to $R^2 = .18$. In contrast, the explained variance of the endogenous crime control variable increased to $R^2 = .07$. Overall, the additional test supports the conclusion that uncertainty concerns and attributions are unable to predict the valence of judicial transfer decisions.

Guidelines (1.00 and 1.00, respectively); and the perceived dangerousness of the juvenile (1.00 and 1.00, respectively). For the endogenous case-specific deterrence variable, its three predictors also displayed good tolerance and VIF statistics: case-specific retribution (.86 and 1.16, respectively); global deterrence (.90 and 1.11, respectively); and perceived juvenile dangerousness (.87 and 1.15, respectively). For the endogenous transfer decision certainty variable, the prosecution case strength and case-specific deterrence predictors displayed identical tolerance and VIF scores (.91 and 1.10, respectively).

The PLS algorithm successfully converged the data in seven stage-one iterations. Thus, it is reasonable to assume that the dataset did not contain severe statistical abnormalities. Based on the inner and outer models, Model 4 was tentatively confirmed. In terms of the inner model, the latent variables were able to adequately predict transfer decision certainty and its precursors. In particular, the findings reveal that prosecution case strength and case-specific need for deterrence explained a substantial portion of the variance in the transfer decision certainty factor; nearly 60% ($R^2 = .59$). Given the degree of explained variance, other sets of latent variables were analyzed to evaluate their effects on prosecution case strength and case-specific need for deterrence. These findings show that the explained variance in the prosecution case strength variable ($R^2 = .33$) is due to the effects of perceived juvenile dangerousness, the low utility of the *Kent* Guidelines and the high degree of reported legal experience (i.e., number of waiver hearings). The data also reveal that juvenile dangerousness, case-specific need for retribution and global deterrence values accounted for 42% ($R^2 = .42$) of the variance in the case-specific deterrence factor.

As a whole, the path coefficients were compelling. The SC-Bonferroni adjusted $\alpha_{\text{type I error}}$ was calculated by incorporating the appropriate latent correlations. If the $|r\text{-}avg| = (.309 – .294 + .379 + .458 + .479 + .465 + .593 + .646)/8 = .379$, then the α_{PT} for Model 4 is, $.05/8^{1 - \sqrt{|.379|}} = .02$. Based on an α_{PT} of .02, the *t*-values for all path coefficients must equal or exceed a $t_{\text{critical}}(63)$ of 2.39 in order to achieve statistical significance. All eight paths present in Model 4 succeeded in surpassing this threshold.

Another series of tests were performed to determine convergent and discriminant validity. All analyses were consistent with a valid predictive PLS model (see Table T17). The indicator reliabilities for all factors were satisfactory and well above a value of .40, which is indicative of good reliability. In terms of internal consistency, all factors displayed high levels of reliability (composite reliability range = .75 to

.90). Moreover, all factors displayed good convergent validity. That is, all AVE scores were above the .50 threshold. Lastly, based on the discriminant validity scores located along the diagonal of the latent intercorrelational matrix (Table T17), it is evident that all scores are greater than all correlation coefficients. The assertion that all eight factors possess different psychometric properties is tenable.

In sum, the dataset yields findings which favor a tentative confirmation of the entire model. Model 4 possesses meaningful predictive power. The implication of this conclusion is that judicial transfers appear to emerge out of complex associations between particular legal considerations and global and specified extralegal factors. This is consistent with a “statutory–nonstatutory factors” perspective.

Chapter 9: Discussion

Study 1 Discussion

Findings derived from Study 1 underscore several important arguments about the nature of the relationship between terror management and the legal-related behaviors of mock-jurors. Claims grounded in empirical data and reasonable theoretical conjectures have favored a view of the courtroom as an arena replete with opportunities for mortality salience (MS) priming and terror management (Arndt et al., 2005; Cook et al., 2004; Goodman-Delahunty et al., 2005). However, data presented here lend limited credence to this perspective. Rather, the available evidence hints to the possibility that some terror management effects observed in trial simulation experiments could be the result of unintended methodological artifacts.

An initial assessment of the three Study 1 hypotheses involved ANOVA tests which directly examined the impact of MS on mock-jurors' trial-related evaluations and decisions. Mock-juror behaviors were not contingent on the type of MS prime implemented during the experiment. Two implications arise from these null patterns. First, the inability of the experiment (with student participants) to replicate previously reported behavioral differences (mostly among college samples) across the traditional MS and control conditions casts doubt on the ubiquity and magnitude of courtroom-related terror management effects. Null results may not be surprising given that, despite hundreds of independent inquiries, MS effects are moderate and highly conditional (Burke et al., 2010). Second, the failure to replicate evidence favoring the MS hypothesis using an ecologically realistic method (i.e., MS-laden attorney statements) gives rise to concerns about the degree to which the criminal justice system and its courtrooms operate as social ecologies wherein vulnerability concerns are likely to undermine the justice process.

The data from Study 1 call attention to two controversial possibilities. One possibility is that most legal-related terror management effects reported in the literature resulted from unintended methodological artifacts. Virtually all research on terror management and the law has relied heavily on externally invalid methodologies and has reported substantively modest effects at best. Methodological issues are compounded when it is realized that these behavioral patterns cannot be readily replicated via methods that more closely mirror the legal proceedings of the real world. That is, the fact that experiments appear to be

better equipped to uncover MS effects when traditional (versus ecological) methods are employed gives cause to argue against the notion that real courtrooms invite existential biases into the justice process.

A second possibility pertains to the structure of the fictitious narrative utilized in Study 1. In theory, the narrative could have been perceived by mock-jurors as overly complex and excessive in terms of information volume. As such, any influence that may have arisen from the MS primes could have been drowned out by effects associated with various competing informational sources (e.g., knowledge of similar cases; media effects; naïve theories about crime). Further, even if genuine MS effects were obscured by the impact of numerous informational sources, it is important to note that jurors are likely to encounter this level of trial complexity in real-world contexts. If terror-related biases are truly problematic in the courtroom, then it would be reasonable to expect observing MS effects above and beyond the influence of other factors. However, this is not the case. In all, the ANOVA results do not support the hypothesis that mock-juror behaviors are a function of MS priming, contrary to prior research.

Following the ANOVA tests, the PLS-SEM estimator was used as an alternative statistical technique to reexamine all three hypotheses. The PLS-SEM estimator has an advantage over the ANOVA approach in that the former technique possesses a high degree of statistical power. The construction of a path model began with an assessment of bivariate correlation coefficients. An intercorrelational matrix of the pertinent variables revealed that meaningful associations exist between legal attitudes, trial-related perceptions and mock-juror decision-making. However, results from the PLS path models did not uncover evidence to support the three hypotheses.

In all, these data provide reasons to remain skeptical about the pernicious function of terror management within domains of law. Additional psycholegal studies are ultimately needed in order to partial out any potential methodological artifacts associated with traditional MS priming. This course of action should offer scholars the opportunity to adequately measure the impact that ecological variants of terror management may have on the perceptions and behaviors of legal decision-makers.

Study 2 Discussion

The results obtained in Study 2 contribute essential knowledge about a unique population of individuals whose experiences and occupational practices have received modest scholarly attention. At

present, the available psycholegal literature does not provide a parsimonious and comprehensive account of judicial decision-making as it unfolds in a waiver of jurisdiction hearing. The lack of a valid theoretical framework brings forth an epistemological constraint in which it is challenging to extract reliable empirical assertions about how juvenile court judges reconcile a host of legal considerations and extralegal factors during the transfer decision-making process.

The absence of a tenable social theory in this domain of jurisprudential research inspired several features of Study 2. In particular, three areas of social psychological and sociological inquiry were considered in order to identify critical conceptual and theoretical elements. From this, Study 2 incorporated parallel methodological properties designed to evaluate if judges' decisions to transfer juveniles to the adult CJS are influenced by mortality salience (see Arndt et al., 2005; Cook et al., 2004; Goodman-Delahunty et al., 2005), uncertainty avoidance (see Albonetti, 1986, 1987, 1991; Albonetti & Hepburn, 1996) or a reconciliatory-type process involving specific statutory and nonstatutory factors (see Brannen et al., 2006; D'Angelo, 2007; Feld, 1983; Lyons, 2011; Means et al., 2012; Salekin, 2002; Salekin et al., 2002). The application of statistical models assisted in drawing preliminary inferences about which factors may be active (or inactive) in real-world waiver of jurisdiction hearings.

Applicability of the DTPDD: Hypotheses 1a-1c. Analyses of all hypotheses pertaining to terror management and social information-processing were unable to yield empirical evidence to support the DTPDD as a reliable social theory of judicial transfer decision-making. The data show that participating juvenile court judges were largely unaffected by both implicit ecological MS cues (i.e., single-MS conditions) and explicit ecological MS cues (i.e., double-MS condition). Also, there is no evidence to demonstrate that variations in NFC and FI differentially predict the degree of transfer decision certainty. From a methodological standpoint, this is inconsistent with research which has reported eliciting MS effects with the use of ecologically valid techniques (e.g., Pickel & Brown, 2002, as cited in Arndt et al., 2005). More generally, the null findings are incompatible with most experimental and psycholegal studies on TMT, which proffer that reminders of death selectively influence how decision-makers process social cues about norm violators (Arndt et al.; Burke et al., 2010; Cook et al., 2004; DeWall & Baumeister, 2007; Goodman-Delahunty et al., 2005; Greenberg et al., 1990; Greenberg et al., 1995; Pyszczynski et al., 1999;

Rosenblatt et al., 1989). At present, these results favor the conclusion that the DTPDD may have limited power as a parsimonious theory of judicial transfer decision-making.

Applicability of UACA theory: Hypothesis 2. Tests of the relations between uncertainty avoidance, attributional reasoning orientation, case-specific crime control motives and transfer decision-making suggest that UACA theory may not offer a realistic and valid representation of the judicial transfer decision-making process. All analyses uncovered statistically nonsignificant effects. Although these statistical findings should be treated as preliminary insights (given the small dataset), the incidence of several null results justifies a tentative skepticism toward the theory's applicability. At present, there is insufficient evidence to assert that judges' decisional rationales flow from a legal calculus that attempts to acknowledge causal ambiguity, manage uncertainty and control crime (cf. Albonetti, 1986, 1987, 1991; Albonetti & Hepburn, 1996).

A "statutory–nonstatutory factors" perspective: Hypothesis 3. Findings from Study 2 indicate that a statutory–nonstatutory factors model offers a tenable description of juvenile court judges' transfer decision certainty. That is, judicial waivers appear to be contingent on a unique combination of legal considerations and extralegal factors. This is in accordance with numerous formal studies involving actual judges (Brannen et al., 2006; D'Angelo, 2007; Feld, 1983; Lyons, 2011; Means et al., 2012; Salekin, 2002; Salekin et al., 2002) and other inquiries on judicial transfers (e.g., pre-dissertation study). It is worth noting that discretion should be exercised when interpreting the data in this manner, as there were a few instances in which relationships did not conform to a statutory–nonstatutory factors model. Still, there were patterns in judgment and decision-making certainty which warrant further elaboration in this section.

A common practice in most psycholegal studies is the measurement of decision-maker perceptions toward information and evidence submitted by the state and defense bars. In Study 2, judges rated the strength or weakness of the state and defense's arguments and evidence. It was expected that favorable evaluations of the state would positively predict certitude in the rightness of a transfer. Conversely, favorable evaluations of the defense would negatively predict this form of behavior. This hypothesis was supported by the data, in part. Results from Model 4 indicate that transfer decision certainty was partially

explained by the degree to which judges favored the prosecution's case. However, the predictive power of the model would diminish after introducing evaluations about the defense bar.[36]

One implication of these findings is that evidence may exist to suggest that potential asymmetries in judicial evaluations of attorneys operate in some waiver of jurisdiction hearings. According to the data, asymmetries in the impressions of the attorneys appear to favor the prosecution's case for transfer. That is, judges' certainty in their decision to allow a transfer is determined primarily by positive evaluations toward the prosecution's case, evidence and arguments. Further, despite the extremely limited sample size, the likelihood of this asymmetrical pattern occurring by chance alone is 1 in 100,000 (p = .00001 when t[63] = 4.78). This is true even after controlling for potential familywise error inflation. If the validity of this pattern is provisionally assumed true, questions arise as to why juvenile court judges would harbor a meaningful prosecutorial bias.[37]

The available data point to two possible explanations. The model suggests that the amount of legal experience with regard to transfers significantly predicts favorable views of the prosecution. The more experienced judges are in waiver of jurisdiction hearings, the greater the degree of prosecutorial bias. Though speculative, this relationship may be indicative of a general disillusionment which subtly augments over the course of juvenile court judges' careers. That is, continual interactions with delinquent youths within the context of a transfer hearing (where, in theory, the most dangerous offenders are assumed to be present) may unconsciously or explicitly compel judges into applying a model of legal decision-making which orients more attention to matters regarding behavioral control and public risk (a prosecutorial consideration) rather than rehabilitation (a defense counsel consideration). Alternatively, it is plausible that highly experienced judges may have witnessed the benefits of transfers, in relation to the best interests of juveniles, over the course of their careers. For instance, judges may have observed that the adult criminal

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[36] PLS-SEM is inherently an exploratory technique, not a confirmatory approach. This permits for the analysis of various possible path structures. Several variables were examined before settling on the final structure of Model 4, which provides the best explanation of the endogenous variables of interest given the available data.

[37] It has been proposed that this prosecutorial bias may relate to the prior occupations held by juvenile court judges. That is, judges may have held positions as prosecutors in the past, thus fostering a pro-state orientation. Yet, an examination of the demographic data did not support this contention. In the Study 2 sample, nearly 60% reported prior defense counsel experience and just over 42% reported prior prosecutorial experience (however, it is also possible that judges with defense counsel experience were more inclined to volunteer in this study than those without such experience).

justice system is better equipped to provide social, economic and individualized resources to certain offenders than the juvenile justice system. In Study 2, when asked to justify their transfer decisions, one judge stated that, "[The juvenile offender's] environment and lack of parental support may well contribute to his problem but he knows right from wrong and some punishment has to be levied with rehabilitation…"; likewise, another judge wrote that, "Adult supervision beyond [the juvenile offender's] 18th birthday will have a better opportunity for success in adjusting his criminal behavior and better protect the public." However, another judge mentioned that, "[The c]hances for rehabilitation [are] better in the juvenile system." Similarly, one judge argued that, "[The juvenile offender is] a kid. There are still resources in the juvenile court to help [the juvenile offender] change his behavior." Given the mixed views about the benefits and detriments of transfer, future research should examine these differences in greater detail with a larger sample of juvenile court judges. Future studies should also look into the veracity of the "disillusionment" hypothesis alluded to above.

The PLS path model also reveals that favorable evaluations of the prosecution result from variations in the utility of the *Kent* Guidelines. To the extent that the guidelines are perceived as legally irrelevant and inapplicable, judges are inclined to positively assess the case presented by the state.[38] At present, the data cannot provide an empirical explanation for the relationships between low guideline utility and a prosecutorial bias. Still, one possible explanation may be that judges equate the defense (and not the state) with particular legal standards. The waiver of jurisdiction hearing is, by design, a scenario where presumptions of innocence and the burden to prove guilt are not legally relevant. Instead, juvenile court judges are tasked with determining if the state and defense's cases possess sufficient sway to legally and justly permit a transfer. Research has shown that many transfers take into account factors such as juvenile dangerousness, sophistication/maturity, prior record, treatment amenability and public risk (Brannen et al., 2006; D'Angelo, 2007; Feld, 1983; Lyons, 2011; Means et al., 2012; Salekin, 2002; Salekin et al., 2002). Interestingly, many of these factors are enumerated in the six *Kent* Guidelines which predicted unfavorable

[38] In some instances, it was expected that participating judges would perceive some guidelines as legally irrelevant. For example, *Kent* Guidelines 5 (role of adult accomplices in the crime in question) was judged to be the least useful of the eight criteria. This is reasonable given that the mock-waiver hearing did not mention information about adult accessories. To improve predictive power, the final structure of Model 4 did not include this item in the outer model.

evaluations of the state. Further, this may explain why *Kent* Guideline 4 (prosecutive merit) was unrelated to prosecution case strength judgments. The inclusion of this item in the outer model reduced the power of Model 4. However, this effect does not explain why perceived juvenile dangerousness positively predicted the valence of prosecution evaluations. There is also no empirical explanation for what seems to be a tendency among judges to shift the burden of proof (in the form of *Kent* Guidelines) away from the state. Further research is needed in order to develop a theory which is able to disentangle the complex relations between the language of the *Kent* Guidelines and evaluations of the prosecution's case.

The certitude associated with a particular transfer decision is not solely a function of legal considerations pertaining to the prosecution. Data also highlight that transfer decisions are shaped by case-specific deterrence motives. Regardless of constraints in the dataset, the SC-Bonferroni adjusted PLS-SEM estimator indicates that the likelihood of this relationship occurring by chance alone is 1 in 1 million (p = .000001 when $t[63] = 5.35$). Results of this sort fall in line with claims proposed by D'Angelo (2007) which hold that procedural structures designed to obviate judicial bias do not guarantee that extralegal inputs will remain outside the decision-making process. Further, research indicates that to the extent that individuals disassociate their attitudes from a behavioral task (e.g., attitudes and decision-making, respectively), a significant likelihood exists that the implicitness (i.e., unconsciousness) of the attitude will influence the behavioral task (see Prislin, 1987). This is potentially problematic if, in the quest to achieve impartiality, juvenile court judges become unaware of the degree to which their attitudes (implicit or explicit) relate to their actions.

The observed effect is also consistent with research which reveals that beliefs about general and specific deterrence influence the mindsets of the general public and criminal justice functionaries (e.g., police, judges, attorneys). These beliefs ultimately encourage punitive attitudes, decisions and sentences. In effect, people implicitly buy into the veracity of *deterrence theory* and believe potential offenders are able to weigh the costs and benefits of criminal actions accordingly and, hence, be "deterred" (Carlsmith, 2008; Corrado et al., 2003; Landau, 1978; McFatter, 1978; Meernik, 2011; Paternoster, 1989; Payne et al., 2004).

There are many reasons to be skeptical about the idea that juvenile offenders are deterred from criminal offending because of rational-based cost-benefit analyses (Miner-Romanoff, 2012). Investigations

in neural-cognitive science and developmental psychology favor this skeptical orientation. Most scientists accept the notion that the adolescent brain and its cognitive processes differ markedly from those of children and adults (cf. Steinberg, 2009; Steinberg & Scott, 2003). Adolescence encompasses a critical moment in cognitive neurodevelopment. In essence, the brains of teenagers are in a continual state of maturation. This period is characterized by significant changes in the functions and structures of the brain and may explain the impetuses behind juvenile offending. In early adolescence, the dopamine reward centers of the brain are often heightened in their sensitivity to rewarding stimuli. This sensitivity may explain why particular youths engage in behaviors characterized by impulsivity, sensation-seeking and overt delinquency. The function of dopamine reward centers may also explain why some adolescents asymmetrically attend to rewards rather than costs. If this notion of adolescent development is tenable, it ultimately undercuts the inherent logic of deterrence. This is problematic given that legal decision-making appears to be predicated on this particular legal theory.

The results from Model 4 suggest that case-specific deterrence motives may be based on case-specific retributive attitudes, global deterrence values and perceived juvenile dangerousness. These effects are consistent with several aspects of the germane literature. Research has shown that judicial decision-making often accounts for deterrence and retributive goals (Meernik, 2011). As such, judges seem to accept the doctrine that the vindication of violated norms mandates just deserts in conjunction with individual- and societal-level crime prevention (i.e., specific and general deterrence, respectively). In line with this doctrine, other inquiries have found strong positive associations between retributive and deterrent-related punishment attitudes (Chung & Bagozzi, 1997; Chung & Pardeck, 1994). Given the active role of these two philosophies in this area of jurisprudence, subsequent studies should make attempts to determine the extent to which retributive and deterrence-related values are independent or interdependent socio-legal constructs. These studies should also seek to assess how perceptions of juvenile dangerousness relate to retributive motives and how these two factors influence decision-makers' naïve theories about specific deterrence. A better and in-depth understanding of the two legal theories may provide clues about the origins of the patterns observed in Model 4.

Other evidence emerged to support a statutory–nonstatutory factors model of judicial transfer decision-making. A noteworthy pattern was detected when comparing global punishment attitudes and parallel case-specific attitudes. Researchers have long argued that general attitudes about a given behavior reveal global information about how individuals are most likely to react when confronted with a specific instance of the same act (see Ajzen & Fishbein, 2005). Similar claims have been put forward with regard to general punishment attitudes and the justice process (Chung & Bagozzi, 1997; Chung & Pardeck, 1994). Thus, a significant degree of correspondence was expected between global punishment attitudes and parallel case-specific attitudes. Although this expectation was not met for some global–specific punishment attitude pairs (in particular, rehabilitation and retribution), global deterrence values were predictive of parallel case-specific attitudes. The observed pattern further indicates that deterrence-based attitudes were active during the decision-making process and that they may have had effects on how judges perceived the waiver hearing as a whole. At the moment, there are no known reasons to explain why certain global punishment attitudes (e.g., rehabilitation) seemed to be unrelated to their case-specific counterparts. The relationships between these global and specified attitudinal extralegal factors warrant further study.

In sum, the current dataset provisionally supports a statutory–nonstatutory factors model of judicial transfer decision-making. This conclusion is expressed with some caution. It cannot be argued with certainty that the exact parameters and relationships between legal considerations, extralegal factors and decisional behavior have been unequivocally defined. Subsequent studies, larger datasets and theoretical developments will be required to test the plausibility of the decision-making model illustrated in Model 4.

General Discussion

Study limitations. Taking into account the variables of interest, theoretical frameworks, questions, hypotheses and methods for Studies 1 and 2, it is imperative to review the constraints and disadvantages of the investigation as a whole. Both studies had unique weaknesses. Most limitations pertained to problems with recruitment, missing data, measurement, ecological realism and the use of the PLS-SEM estimator.

Recruitment-related limitations and issues with missingness. Recruitment limitations surfaced in two forms: self-selection bias and low sample size. Constraints associated with self-selection biases were

unavoidable in Studies 1 and 2. Self-selection is a phenomenon common in experiments and surveys. The central problem is that characteristic information on nonparticipants is unavailable. Limitations associated with this form of unit-level nonresponse behavior are impossible to remedy with the use of generally accepted *principled missing data methods*, such as multiple imputation, full information maximum-likelihood (FIML) techniques and the iterative expectation–maximization algorithm (for more information on missing data issues, see Dong & Peng, 2013). Consequently, after the data are analyzed and interpreted, it remains unclear if the results are applicable to mock-jurors and juvenile court judges who opted not to participate in the studies. This fact limits the external validity of both Studies 1 and 2. At best, the generalizability of all causal inferences extrapolated from the two samples is limited to individuals who share attributes akin to sampled participants.

Another significant recruitment-related problem was the low sample size in Study 2. Two points are important to note at this moment. First, the sample size fell well below the requisite number initially chosen in order to detect medium-sized effects. As such, statistical power for all central analyses was unsatisfactory. However, issues with low power and small samples did not threaten the integrity of the PLS-SEM results. This variation of SEM is specifically designed to be robust in situations where data do not abide by the usual assumptions underlying most parametric tests (Hair et al., 2011; Wong, 2013). It is imperative to reiterate that statistically significant and substantially-sized effects were observed in the data, despite insufficiencies in power. Plus, in a few instances, the probabilities of observed patterns occurring by chance alone were minute. Still, because of the use of bootstrapping, it is reasonable to limit the generalizability of Model 4 to judges who share characteristics similar to those sampled in Study 2.[39]

Second, the low sample size in Study 2 is indicative of difficulties associated with the recruitment of juvenile court judges in social psycholegal research.[40] This is unfortunate given the dearth of knowledge about judicial transfer decision-making and the number of young offenders who are affected by waivers

[39] Bootstrapping is based on the process of resampling with replacement. As a result, the "first law" of applied statistics is ignored. This "law" dictates that different statisticians who analyze identical datasets using identical tests ought to yield identical statistical results. Fortunately, in most situations, bootstrapping produces consistent results (for more on the applications and limitations of bootstrapping, refer to Gleser, 1996).

[40] The use of rewards (i.e., gift cards) was ineffective as a recruitment tool. Rather, participating judges opted not to accept the incentive and were simply willing to volunteer their time and effort.

annually (see D'Angelo, 2007; Griffin et al., 2011). With the assistance of an administrator of the NCJFCJ who served as the contact person for this study, information was made available to explain some instances of nonparticipation. Two constraints may explain the low recruitment rate. The available information highlighted limitations related to methodology. Specifically, some nonparticipants reported that it would be inappropriate to make legal decisions based on hypothetical scenarios. In effect, these judges rejected the notion that a mock-waiver hearing paradigm is able to extract valuable knowledge about judicial decision-making. Other nonparticipants elected not to complete the study because the length of the survey was too time-consuming. In other instances, nonparticipants were displeased with the survey's forced-choice format. Nonetheless, the forced-choice format was utilized in order to mimic the waiver hearing setting, wherein legal dichotomies are commonplace (e.g., transfer vs. no transfer).

Although nonparticipants' comments regarding the methodological aspects of Study 2 are reasonable, these constraints did not threaten the analysis and interpretation of the dataset. Many psycholegal studies exploit the mock-trial paradigm and succeed in uncovering valuable insights about legal decision-making (Bieneck, 2009; Bornstein, 1999; Kramer & Kerr, 1989; Levine et al., 2007; Wrightsman et al., 2002). Also, an argument could be made that the length and response format of the survey preserved elements of the waiver hearing ecology. In this social ecology, judges must take adequate time and expend cognitive resources in order to select solutions to problems from a set of dichotomous options. Still, research has found that individuals respond more emotionally and punitively to visual trial stimuli versus written stimuli (see Bright & Goodman-Delahunty, 2006). As such, it may be advantageous to employ audiovisual trial stimuli in future studies pertaining to judicial waivers of jurisdiction.

The rate of recruitment may have also been low because of specific structural (as opposed to methodological) constraints that prevented some judges from participating in the study. In some instances, judges in the sampling frame served in the family courts and would never encounter a juvenile delinquency case. In other jurisdictions, as in the state of Florida, transfers are handled primarily by prosecutors (i.e., direct file) and judges rarely have the opportunity to influence the legal process. Further, some judges expressed a desire to participate in the study but were unable to do so because regulations prevented them from taking part in social research while holding a public office. As such, future research with this unique

population must account for these critical methodological and structural issues when researchers are conceptualizing the sampling phase of a new psycholegal inquiry involving juvenile court judges.

Along with constraints pertaining to unit-level nonresponse, item-level nonresponse was also an issue in Study 2. Item-level nonresponse is a common phenomenon in social research. As participants decide to skip particular survey items, item-level nonresponse culminates in an incomplete dataset. Incomplete datasets have the potential to threaten statistical validity when quantitative analyses of the observed data lead to biased parameter estimates, diminished statistical power and inflated standard error coefficients (Dong & Peng, 2013).

Statistical adjustments exist to improve incomplete datasets. Recently, social researchers have viewed the implementation of principled missing data methods as best-practice strategies for addressing item-level nonresponse, or *missingness* (Dong & Peng, 2013). Many of these strategies presume that data points are either *missing at random* (MAR) or *missing completely at random* (MCAR). Stated another way, the probability of missingness is nonsystematic and is either contingent only on the observed scores of a data matrix (which would allow for multiple imputation based on known information) or is unrelated to both the observed and unobserved scores of a data matrix, respectively. Principled missing data techniques seem to produce valid parameter estimates whenever the reason (or "mechanism") for missingness can be said to be *ignorable* (i.e., when data are MAR or MCAR). As such, these statistical strategies possess certain advantages over traditional ad hoc missing data methods (e.g., listwise and pairwise deletion; Dong & Peng).[41]

The dataset for Study 2 lacks certain data points and this missing information is patterned or *missing not at random* (MNAR). Data are said to be MNAR whenever the missingness mechanism can only be attributed to the hypothetical unobserved scores of a data matrix, which are epistemologically and mathematically inaccessible. For example, there are systematic reasons that explain the occurrence of item-level nonresponse in Study 2 (e.g., length of study; fatigue). Unfortunately, principled missing data methods are not suited to the task of accounting for data that are MNAR (Dong & Peng, 2013). This is because critical information is unavailable to accurately model the unobserved aspect of the data matrix.

[41] Listwise and pairwise deletion have fallen out of favor in recent years, as the methods are known to produce biased or inadequate parameter estimates across various social contexts (see Dong & Peng, 2013).

Thus, the “incomplete” dataset containing full and partial responses from 91 juvenile court judges was neither manipulated (e.g., imputation) nor analyzed. Instead, all central analyses were conducted with a “complete” dataset containing the full responses of only 64 juvenile court judges. Although this strategy resulted in a noticeable reduction in sample size, this course of action was consistent with important statistical assumptions which underlie principled missing data methods. Moreover, all central analyses took the form of PLS-SEM, which is a suitable linear modeling technique for research involving small samples (Hair et al., 2011; Wong, 2013).

Measurement-related limitations. A second limitation of the current investigation pertains to statistical conclusion validity. Statistical conclusion validity is concerned with the degree to which a dataset is properly screened, coded, analyzed and interpreted (Neuman, 2011). In both Studies 1 and 2, some variables were skewed, violating the assumption of normality underlying most parametric tests. However, the decision was made to leave skewed variables untransformed. Two rationales support this decision. First, PLS-SEM is robust and capable of dealing with slight violations of linearity, normality and model complexity (Hair et al., 2011; Wong, 2013). Second, power transformations introduce an interpretative constraint in that they distort the conceptual meaning of Likert scale anchor labels. The power transformation should always be a strategy of last resort when there are substantial violations of critical statistical assumptions (Newton & Rudestam, 1999). In this case, forcing the dataset into meeting statistical assumptions did not outweigh the value of preserving the conceptual meaning of survey response options, especially in light of the advantages inherent in PLS-SEM.

Another potential threat to statistical conclusion validity is the low internal consistency rates of certain variables. In both Studies 1 and 2, there is evidence—in the form of Cronbach α coefficients—to indicate that some measurements were inadequate estimates of the latent variables of interest. The presence of low inter-item reliability is not surprising, given that many of the measures were newly developed and administered for the first time in this investigation. Moreover, in Study 2 in particular, all measurements were extrapolated from a narrow sample of juvenile court judges. In this instance, it remains unclear if the inadequate Cronbach alpha scores can be attributed to limitations in scale construction, sampling or a combination of both issues. Further research, with a larger sample of judges and an emphasis on scale

construction methods (e.g., multitrait multimethod analysis, confirmatory factor analysis; cf. John & Benet-Martínez, 2000), will be necessary in order to address this problem directly. Still, it is necessary to reiterate that Cronbach's alpha is an inappropriate index of internal consistency in PLS-SEM (Bagozzi & Yi, 1988; Wong, 2013). Rather, the composite reliability coefficient is utilized. In Model 4, all composite reliability scores were moderate to high, resulting in reliable measures and analyses.

Overall, it is important to note that the content of all scale items was easily understood by most participants. Throughout the entire investigation, there were no indications that participants struggled to comprehend the denotative meaning of the item statements and response options. Based on these quantitative and qualitative judgments of the instruments, the decision was made to use these variables during the data analysis phase.

Limitations related to ecological realism. A third limitation of the current study relates to matters of ecological validity and realism. Even though fervent attempts were made to preserve elements of ecological realism, laboratory experiments and the experiment-within-survey (EWS) design limit the studies in two ways. Because the designs exploit experimental control, Studies 1 and 2 possess adequate internal validity. However, the obtainment of high internal validity was not without its costs, as these designs sacrificed many features of the social ecologies wherein jurors and judges render legal decisions. That is, because the designs required the use of vignettes, and because jurors and judges work out of a multitude of state- and local-level jurisdictions, it was impossible to construct a single "vignette format" that perfectly mirrored how trials and waiver of jurisdiction hearings take place across all courts in the United States. Still, this constraint does not necessarily imply that the mock-trial (mock-waiver hearing) paradigm should be abandoned (Bieneck, 2009; Bornstein, 1999; Kramer & Kerr, 1989). In fact, the literature on judicial waivers would benefit tremendously from studies that exploit an audiovisual format when judges are placed in a mock-waiver hearing scenario (for similar arguments, see Bright & Goodman-Delahunty, 2006). The audiovisual-cued approach has the potential to elevate ecological validity and realism because such cues trigger psychological processes (e.g., emotions) that are neurologically grounded in auditory-visual sensory modalities.

In Study 2, a second limitation pertaining to ecological realism was unavoidable. As the extant literature reveals, juvenile court judges contend with a vast array of factors when rendering transfer decisions. Unfortunately, the logistics of social research do not permit for a simultaneous investigation of all factors deemed critical. This is problematic, as judges differ in how much weight they assign a particular factor and in what factors they deem to be "critical" in a given waiver of jurisdiction hearing. In Study 2, pragmatic decisions were made on the part of the investigator in order to isolate and examine a manageable set of central factors. Although it was never guaranteed that the study would account for all critical variables commonly found in the real world, prior studies—in conjunction with knowledge about existing statutes and the pre-dissertation interviews—suggest that the variables of interest for Study 2 served well in mirroring various aspects of the social ecology wherein many judicial transfers take place. Still, it is important to note that juvenile courts are stressful environments. The normal operations of the typical workday are sufficient enough to temporarily augment psychological arousal and cognitive load beyond levels considered to be homeostatic. Though speculative, deviations from experienced homeostasis may explain why transfers result from certain factors (e.g., prosecutorial biases) and not others (e.g., MS priming). Accordingly, future research should account for court-elicited arousal and cognitive load when designing new judicial transfer research methodologies.

Limitations of the PLS-SEM estimator and SmartPLS. The final limitation of the current study pertains to the use of the PLS-SEM estimator and the SmartPLS software package. The use of PLS-SEM is uncommon in the basic and applied social sciences (with the exception of business and marketing research; Haenlein & Kaplan, 2004; Hair et al., 2011; Henseler et al., 2009; Jung, 2013; Wong, 2013). As a result, this version of variance-based SEM has not been given opportunities to fairly assess its utility in social psychological and psycholegal research. For this reason, in this investigation, all results and conclusions extracted using the PLS-SEM estimator should be interpreted with due caution.

Another issue pertains to the algorithm programmed in SmartPLS. The algorithm is not readily accessible to researchers and questions may arise as to the accuracy of the statistical software package. However, as discussed in the Endnotes section, two simulation studies comparing the results of a simple path model using SPSS and SmartPLS produced identical findings. The two simulations improve the

validity of the PLS-SEM package. Still, if PLS-SEM techniques (and SmartPLS) are to become generally accepted among the social psychological community, scholars should perform Monte Carlo simulations (i.e., algorithm-driven repeated samples-based estimations). With Monte Carlo approaches, methodologists can examine a single dataset and compare the results obtained from the SmartPLS algorithm against results derived from other comparable algorithms (e.g., the Least Absolute Shrinkage and Selection Operator [LASSO] regression estimator) offered in statistical packages such as SPSS.

Implications and future research. Prior to the current investigation, knowledge about judicial waivers was sparse and primarily descriptive (Brannen et al., 2006; D'Angelo, 2007; Feld, 1983; Lyons, 2011; Means et al., 2012; Salekin, 2002; Salekin et al., 2002). Here, two experiments draw attention to numerous social and psychological mechanisms that provide preliminary explanations for the choices made by legal decision-makers, such as jurors and judges. More importantly, the data are indications that further methodological and theoretical developments are needed if social scientists are to construct a comprehensive and parsimonious social theory regarding juvenile court judges' reasoning and choice-selection. In this manner, the two studies of this project call attention to important implications for the future of judicial transfer decision-making research.

On terror management and social information-processing. Regarding TMT, proponents of the theory and its variants hold that MS cues differentially shape the manner in which decision-makers process information about norm violators (Arndt et al., 2005; Burke et al., 2010; Cook et al., 2004; DeWall & Baumeister, 2007; Goodman-Delahunty et al., 2005; Greenberg et al., 1990; Greenberg et al., 1995; Pyszczynski et al., 1999; Rosenblatt et al., 1989). Results from Studies 1 and 2 do not support this view. Experiment 1 was unable to reproduce terror management effects utilizing a traditional MS priming paradigm (i.e., MAPS). Likewise, the two independent experiments were unable to replicate terror management patterns using an ecological priming paradigm, in contrast to prior observations (Pickel & Brown, 2002, as cited in Arndt et al.). It is possible that the MS manipulations were not powerful enough to influence verdicts and transfer outcomes because the burdens of proof held more weight during these phases of the decision-making process. In theory, MS effects could emerge in other legal phases. For instance, in the case of jury trials, MS cues could impact subsequent decisions once a defendant is found

guilty (i.e., once a norm violation has been established). The moment guilt is assured and the defendant is deemed to be a norm violator, decision-makers may become vulnerable to the effects of MS, in turn influencing later decision-making phases (e.g., sentencing). In future psycholegal applications of TMT and its variants, researchers should empirically examine if different decision-making phases (e.g., probable cause, verdicts, sentencing and appeals) are more or less prone to MS effects.

On the surface, there is the appearance that terror management plays a limited role, if any, in the justice process. This observation is not meant to claim that the courtroom is a legal arena devoid of opportunities for the elicitation of genuine personal vulnerability concerns. Rather, it is uncertain why personal vulnerability threats—if they exist—seem to be drowned out by case-specific considerations (e.g., perceptions of the prosecution). In their current states, TMT and the DTPDD do not offer adequate explanations for legal decision-makers' reasoning and choices. Arguably, two solutions are required in order to address this theoretical shortcoming. First, more experiments are needed that directly compare legal reasoning and behavior when decision-makers are exposed to traditional versus ecological MS primes. To date, few investigations have sought to unequivocally determine the degree to which terror management effects observed in laboratory settings transpire within actual social ecologies, including the courtroom. In other words, it is reasonable to hold a tentative skepticism toward the external validity of TMT and its variants. An examination of traditional and ecological MS primes within numerous and diverse social contexts (e.g., law, health, religion, culture, economics, etc.) may be the next necessary step in order to tease apart possible methodological artifacts from genuine terror management effects (if those effects do indeed exist).

Arguably, it would be premature to conclude that the theory lacks applicability solely on the basis of the collected data. As stated above, more research is required to adequately examine the threshold at which ecological MS cues enter into the unconscious and consciousness, if those social cues actually exist in social environments. It is important to reiterate that various investigations have found robust links between social information-processing modes and legal decision-making (cf. Butler & Moran, 2007; M. K. Miller et al., 2014; Sargent, 2004; Tam et al., 2008). Yet, the two studies presented here were unable to replicate this pattern. One possible reason that explains the inability to observe previously reported effects

may have to do with how social information-processing modes were evaluated. Because these modes of processing were measured using the NFC and FI subscales, all data pertaining to social information-processing were trait-level rather than state-level. The two subscales assume that item responses tap into context-independent modes of social information-processing (i.e., the NFC and FI subscales measure characteristics about thinking styles and do not measure thinking styles embedded in a social situation). There are cognitive phenomenologists who contend that judgment and decision-making are processes that are active in real time (i.e., "online" processing) and, as such, are context-dependent (e.g., Clore, 1992). In contrast, a recent study reported the typical links between social information-processing and punitiveness regardless of whether thinking styles were treated as states or traits (cf. M. K. Miller et al.). Subsequent research should be performed in order to determine if the links between information-processing and legal decision-making are differentially moderated by trait- and state-based forms of cognitive analysis.

It is also reasonable to suspect that the design of Study 2 may not have utilized ecological MS cues which would readily activate perceivers' distal and proximal defense mechanisms. Alternatively, it is possible that other mechanisms (aside from distal and proximal defenses) may have been involved in the decision-making process. For instance, it is plausible that juvenile court judges face various explicit vulnerability reminders throughout the course of their careers. Over time, judges may develop specialized coping strategies (e.g., compartmentalization; dark humor) which deliberately mitigate the effects of perceived vulnerability threats but which have nothing to do with a motive to attenuate thoughts about death for the sake of unbiased decision-making. In other words, even if judges recognize an explicit MS cue, proximal distal defenses may not be necessary to reduce experienced vulnerability if other coping mechanisms already accomplish the same outcome. Yet, due to the absence of sufficient empirical studies which closely examine the ecological facets of MS, these conjectures remain speculative. Research of this kind is needed to better understand the nature of the link between social information-processing and the application of statutory-based decision-making standards. It is unknown if and how information-processing modes interact with defense mechanisms to encourage impartial (or partial) transfer decision-making.

On uncertainty avoidance and attributional reasoning. In the area of sociology and the law, UACA theory posits that decisional rationales are functions of strategies that simultaneously recognize

causal ambiguity, manage uncertainty and uphold control crime motives. Decision-makers meet these separate aims by attributing deviant behavior to dispositional and situational forces (Albonetti, 1986, 1987, 1991; Albonetti & Hepburn, 1996). Engagement in severe or lenient patterned responding (i.e., legal decision-making) is contingent on whether person-focused (dispositional) or system-focused (situational) attributional reasoning orientations, respectively, are active during the decision-making process. The extent to which perceivers localize the etiologies of deviant behavior in the dispositional traits of offenders influences the probability that anti-offender schemas (rather than situational etiologies) will encourage legal decisions that disfavor those who violate social prescripts and proscripts. Yet, at this moment, data extrapolated from Study 2 do not support the major tenets of UACA theory.

Despite the inability of the data to conform to expectations established in UACA theory, it would be beneficial to reexamine the applicability of the theory in other inquiries. Unlike Study 2, future studies will need to directly manipulate the level of experienced uncertainty, as well as attributional reasoning styles and crime control motives, via the use of experiments and priming techniques. Without this body of research, it may not be possible to fairly evaluate the status of UACA theory as a parsimonious social theory of judicial transfer decision-making.

On legal considerations and extralegal factors. Despite the potential relevance of the DTPDD and UACA theory as explanations for judges' transfer decisions, the data are more consistent with "statutory–nonstatutory factors" perspectives advocated by some scholars (Brannen et al., 2006; D'Angelo, 2007; Feld, 1983; Lyons, 2011; Means et al., 2012; Salekin, 2002; Salekin et al., 2002). These perspectives argue that transfer decisions are related to particular legal factors (e.g., attorney evaluations, the *Kent* Guidelines) and sociocultural and intrapsychic extralegal forces (e.g., attitudes, affect) rather than concerns about personal vulnerability and uncertainty.[42]

In Study 2, the data reveal that juvenile court judges' certitude in the rightness of a transfer is affected by favorable evaluations of the prosecution. From a statutory–nonstatutory factors perspective, this

[42] Another consideration is the role of gender as a potential extralegal factor. In the Study 2 narrative, the defense attorney was female. From the current design, it is impossible to determine if the gender of the defense attorney had an impact on transfer decision-making (or if it explains the observed prosecutorial bias). In future research on the "statutory–nonstatutory factors" perspective, this issue should be explicitly addressed.

finding is not surprising. However, what this perspective is unable to explain are the observed asymmetries in attorney evaluations which seem to favor the state. A prosecutorial bias of this sort is problematic if it is a legitimate phenomenon in the social ecology because it would highlight a major shortcoming of the waiver of jurisdiction hearing. Notably, the current data are not amenable to an in-depth analysis of this bias. At most, it can be speculated that judges equate the defense with specific legal standards, many of which align with the content of the *Kent* Guidelines. It is also plausible that judges internalize a subjective threshold in which the certitude of transfer is not acknowledged until prosecutors submit the "right kind" of evidence to justify a waiver of jurisdiction. If prosecutorial evidence is sufficient to meet judges' subjective threshold criterion, transfers are likely to occur regardless of the strength of the defense counsel's evidence and arguments. Subsequent research should be conducted to clarify the nature of this subjective threshold and definitively ascertain if there are asymmetries in juvenile court judges' evaluations of the prosecution and defense. Arguably, this body of research is desperately needed if a goal among psycholegal researchers is to apply social science in the service of preserving the integrity of the justice process.

A statutory–nonstatutory factors perspective also adds context to the observed relations between transfer decision certainty, attitudes about juvenile dangerousness and global and case-specific punishment attitudes. Scholars have argued that certain extralegal factors carry the weight to influence the transfer decision-making process (Brannen et al., 2006; D'Angelo, 2007; Feld, 1983; Jones & Cauffman, 2008; Lyons, 2011; Means et al., 2012; Salekin, 2002; Salekin et al., 2002). Results from Model 4 suggest that other subjective and nonlegal factors (i.e., global deterrence motives; case-specific need for retribution; legal experience) appear to influence the precursors which determine transfer decision certainty. The data from Study 2 demonstrate that global attitudes about the role of deterrence in the justice process predict parallel attitudes about the value of deterring specific juvenile offenders. Also, a strong association was found between case-specific retributive and deterrence-based attitudes; a finding that is consistent with prior investigations (Chung & Bagozzi, 1997; Chung & Pardeck, 1994).

Although the findings from Study 2 are fascinating in their own right, a major drawback of the statutory–nonstatutory factors perspective is the absence of a well-defined underlying social theory. Still missing from the knowledge base of judicial transfer research are sensible theoretical frameworks that help

tie together relevant extralegal and legal factors which have been shown to directly and indirectly influence the transfer decision-making process. If this perspective is to be given reasonable consideration as a potential explanation for judicial transfer decisions, future research must focus on developing a social theory that clearly demarcates the statutory from the nonstatutory and that provides exhaustive definitions of the parameters comprising these two sources of influence.

Conclusion

The present inquiry contributes knowledge about the nature of judicial transfer decision-making in the American juvenile justice system. To date, the majority of the judicial transfer literature has been extrapolated from data gathered though qualitative and correlational methodologies. Consequently, studies on judicial transfers have primarily been descriptive in form (Brannen et al., 2006; D'Angelo, 2007; Feld, 1983; Lyons, 2011; Means et al., 2012; Salekin, 2002; Salekin et al., 2002). This is somewhat problematic because empirical studies on judicial waivers have received modest attention among psycholegal scholars. As a result, judicial transfer studies have thus far neglected to emphasize the value of formulating a social theory which is capable of connecting judges' transfer decisions to real-world legal, psychological and sociocultural sources of influence. In this form, the literature is unable to offer defensible reasons to explain the types of decisions made by juvenile court judges.

The two studies reported in this dissertation offer preliminary solutions to the aforementioned problems associated with the judicial transfer literature. The implementation of experimental methods and the direct examination of distinct theoretical frameworks served well in producing data of an explanatory kind. Prior to this inquiry, only suppositions existed to explain how terror management, social information-processing, uncertainty avoidance, attributional reasoning, legal considerations and extralegal factors may selectively influence the transfer decision-making process. The data collected here proffer tentative insights into the psychological and social underpinnings that explain judges' rationales for allowing, or foregoing, a waiver. Moreover, these insights were obtained through a two-part statistical procedure (i.e., the SC-Bonferroni adjusted PLS-SEM estimator) not commonly implemented by social psycholegal scholars. The dataset suggests that transfers have less to do with terror management and uncertainty avoidance processes and, in actuality, may be more associated with a reconciliatory-type calculus that differentially accounts for

various legal considerations and extralegal factors. The data further show, at least tentatively, that this reconciliatory process may drive judges to hold a judgmental bias that favors the state's cause for transfer, regardless of the types of evidence and arguments submitted by the defense.

In conclusion, the following investigation unveils aspects of the judicial transfer decision-making process which were previously unknown or not well-understood. Arguably, psycholegal research of this type is an important and necessary first step in the construction of a valid and comprehensive body of literature. Developing this body of research is imperative for a number of reasons. It is known that waiver proceedings affect the lives of various juveniles every year. It is also apparent that, despite a potential prosecutorial bias, many juvenile court judges continue to view the adult CJS as an arena where young offenders are more likely to encounter severe (rather than lenient) treatment. Expansion of the knowledge base underlying the transfer literature will introduce vital advantages across various academic and practical domains. This is true for basic researchers who are interested in developing and testing global- and case-level legal decision-making theories. In like fashion, there are benefits for critical social scientists, legal practitioners and juvenile court judges who are motivated to apply transfer research in ways which will assist them in assuring that systems of juvenile law continually uphold the best interests of juveniles as well as a standard of procedural integrity.

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Appendix A

Dissertation Study 1: Mock-trial Summary

IN LAS VEGAS SUPERIOR COURT
FOR THE STATE OF NEVADA

State of Nevada	)	
v.	)	
Gregory Wilkinson,	)	SUMMARY OF
Defendant	)	TRIAL PROCEEDINGS

Note: The case of *Nevada v. Wilkinson* will come to trial in November of 2012. Please review the evidence that the prosecution and defense intend to deliver on the day of the trial.

THE PROSECUTION'S CASE

Summary of Case: Two witnesses will testify for the State. First, the **victim**, Martha Stinson, will testify that on the night of the alleged crime, she was returning to her downstairs apartment from a local bar following a night of drinking with friends. Ms. Stinson will then state that upon reaching her apartment, she noticed the front door was broken and ajar. Upon entering her dwelling, she discovered that $400 in cash was missing and that a portable mp3 player had also been taken. The victim will also testify that before reaching her apartment, she remembered seeing a tall, thin male leaving in the direction opposite her home. She will then testify that, having realized her home had been burglarized, she decided to call the police. Ms. Stinson will also state that she gave a description of the unknown male, as well as a description of the stolen property, to the reporting police officer.

Finally, the **reporting police officer** will testify that upon receiving a dispatch of an alleged burglary, he made his way over to the residence of Ms. Martha Stinson. Upon arriving to the victim's residence, the officer was able to determine that 1) the victim had been at a local bar while the alleged crime occurred, 2) the victim was certain that a portable mp3 player and $400 cash were missing from her dwelling, and 3) the victim observed a suspicious male leaving the area near her home. The police officer will state that the victim described the suspect as a tall, thin male who was wearing work boots, jeans and a dirty light-colored shirt. The officer will also note that Ms. Stinson appeared certain of her eyewitness description, despite the fact that she had consumed some alcohol earlier that evening or that she was unable to give a facial description. The officer will then testify that approximately 90 minutes after the dispatch call, he observed an unknown male meeting the victim's description in a location 1½ miles away from Ms. Stinson's apartment. Because of the man's odd behavior, the officer decided to question him. The officer will then state that after some initial questioning, the unknown male consented to a body search. It was during this search that $432 in cash was found in the man's possession, along with a portable mp3 player and a titanium screwdriver. The officer will note he deduced that the man could have used the metal tool to break into the apartment. Because of the nature of these items, there was probable cause for an arrest. The officer will then testify that the unknown male in question is the defendant, Mr. Gregory Wilkinson.

Prosecutor's Closing Argument: The State of Nevada has charged the defendant, Gregory Wilkinson, with the crime of burglary, which was perpetrated against the victim, Martha Stinson. I ask you to imagine yourself in Ms. Stinson's situation. After a night of fun with friends, Martha's evening came to a shocking close when she found herself the victim of burglary. Think about it; she had her personal sense of security shattered. Worse; imagine if she'd been home and attacked. [ECOLOGICAL MANIPULATIONS HERE]. More importantly, Martha is sure about what was stolen and who may have done the crime. The evidence we presented proves beyond a reasonable doubt that Mr. Wilkinson entered the victim's residence without authorization and stole property when inside, in violation of state law.

Summary of the Prosecution's Evidence:

- The victim's home was burglarized and forcible entry was used to open the door
- The victim reported that $400 cash and a portable mp3 player were stolen
- The victim described the alleged suspect as a tall, thin male who was wearing work boots, jeans and a dirty light-colored shirt (however, the victim could not describe the man's face)
- The police officer found a suspect meeting the victim's eyewitness description approximately 90 minutes after the victim's call to the police, nearly 1½ miles from the scene of the crime
- The defendant was found to be in possession of $432 cash, a portable mp3 player and a metal screwdriver

THE DEFENSE'S CASE

Summary of Case: Two witnesses will testify for the Defense. First, an **expert legal psychologist** will testify on several important points with respect to the nature of eyewitness evidence. The expert psychologist will first testify that the vast majority of scientific research shows that eyewitness descriptions and testimony are unreliable and inaccurate. She will then state that most eyewitnesses rarely have the ability to remember the details of most crimes and, as such, are prone to making generalizations and guesses. She will then go on to testify that some police officers may be prone to "tunnel-vision" and, as a result, will unconsciously try to find evidence that confirms the unreliable descriptions of eyewitnesses. The expert psychologist will also note that, even though it is not possible to know for certain in this particular case, one could argue that the victim's prior consumption of alcohol could have impaired her eyewitness capabilities even further.

Finally, the defendant will testify in his own defense. The **defendant**, Gregory Wilkinson, will testify that he was walking to his residence when he was confronted by the police officer. Gregory will state that, on the night of the crime, he had been at an auto parts store in search of items for his vehicle. The defendant will testify that he had been fixing his car since that afternoon. The defendant will also admit to the fact that he had been wearing work boots, jeans and a light grey shirt. Gregory will then note that his shirt was dirty because of the auto repairs he had been doing on his own car earlier that day. Gregory will also confirm that he is 6 feet 2 inches tall and weighs around 170 pounds. When questioned about the money, mp3 player and screwdriver, the defendant will state that he is the owner of those items. Gregory will testify that the $432 was earmarked for auto parts and that the auto store he frequents is "low-class" and only accepts cash. The defendant will also state that he is the owner of the mp3 player in question but that he has no way to prove the device is his, mainly because the player is a common brand and it did not have any unique markings nor any songs on file. When questioned about the screwdriver, Gregory will testify that he forgot he left the tool in his pocket when he was fixing his vehicle.

Defense Attorney's Closing Argument: Gregory Wilkinson is innocent of the crime of burglary; that is, of the crime perpetrated against the victim, Ms. Stinson. The charges brought before the court, by the State of Nevada, are the result of unsubstantiated police suspicions, circumstantial evidence and questionable eyewitness testimony. Please put yourself in Gregory's shoes. He was innocently walking down a street only to become a target of mistaken identity. He cooperated with the police and explained what he was doing without hesitation. As a juror, keep in mind that it is not illegal to be in possession of cash, a music device and a legitimate auto tool. He lacks any prior records. Plus, no one can place my client at the scene of the crime. The evidence we have here shows that Mr. Wilkinson is innocent of all charges brought forth by the State.

Summary of the Defense's Evidence:

- The expert psychologist noted that eyewitness testimony is largely untrustworthy and prone to inaccuracies
- The expert psychologist testified that police officers could be prone to "tunnel-vision" and, as a result, officers may focus on circumstantial evidence and make errors
- The defendant testified that he owned the money, mp3 player and screwdriver found in his possession

- The defendant claimed that he was in possession of the money and screwdriver because of auto repair work he had been doing on the day the alleged burglary took place
- The defendant testified that the stolen mp3 player was a common brand without unique markings and without song files; as a result, he could not prove with certainty that he was the owner of the device

Appendix B

Independent Variable Level 1 (Group 1: Traditional Mortality Salience Induction)

2-Item Mortality Attitudes Personality Survey (MAPS; Rosenblatt, Greenberg, Solomon, Pyszczynski, & Lyon, 1989)

Instructions: The following is a projective personality assessment. This means that the items do not measure right or wrong answers. By looking at the content of your statements about [death and dying], we hope to learn more about you. **Please write a few sentences in the space provided below each item.**

Item 1: Please write about what you think will happen to you when you [physically die].

_____
_____
_____
_____
_____
_____
_____
_____
_____

Item 2: Please write about the emotions you feel as you think about [your own death].

_____
_____
_____
_____
_____
_____
_____
_____
_____

*Brackets contain the experimental manipulation.

Appendix C

Independent Variable Level 2 (Group 2: Traditional Neutral Stimulus)

2-Item Dental Pain Salience Prime (DPSP; Arndt & Solomon, 2003)

Instructions: The following is a projective personality assessment. This means that the items do not measure right or wrong answers. By looking at the content of your statements about [dental pain], we hope to learn more about you. **Please write a few sentences in the space provided below each item.**

Item 1: Please write about what you think will happen to you when you [feel dental pain].

_____
_____
_____
_____
_____
_____
_____
_____
_____

Item 2: Please write about the emotions you feel as you think about [having dental pain].

_____
_____
_____
_____
_____
_____
_____
_____
_____

* Brackets contain the experimental manipulation.

Appendix D

Independent Variable Level 3 (Group 3: Ecological Mortality Induction Stimulus)

Prosecutor's Closing Argument: The State of Nevada has charged the defendant, Gregory Wilkinson, with the crime of burglary, which was perpetrated against the victim, Martha Stinson. I ask you to imagine yourself in Ms. Stinson's situation. After a night of fun with friends, Martha's evening came to a shocking close when she found herself the victim of burglary. Think about it; she had her personal sense of security shattered. Worse; imagine if she'd been home and attacked. [She could be **dead** right now. Yes, she could've been **killed**. Instead of a burglary case we could've had a **murder** case on our hands. It's fortunate she's **alive** to tell the tale. But it's clear that the fact she wasn't home prevented her **death**]. More importantly, Martha is sure about what was stolen and who may have done the crime. The evidence we presented proves beyond a reasonable doubt that Mr. Wilkinson entered the victim's residence without authorization and stole property when inside, in violation of state law.

Independent Variable Level 4 (Group 4: Ecological Neutrality Induction Stimulus)

Prosecutor's Closing Argument: The State of Nevada has charged the defendant, Gregory Wilkinson, with the crime of burglary, which was perpetrated against the victim, Martha Stinson. I ask you to imagine yourself in Ms. Stinson's situation. After a night of fun with friends, Martha's evening came to a shocking close when she found herself the victim of burglary. Think about it; she had her personal sense of security shattered. Worse; imagine if she'd been home and attacked. [She could be **maimed** right now. Yes, she could've been **injured**. Instead of a burglary case we could've had an **assault** case on our hands. It's fortunate she's **okay** to tell the tale. But it's clear that the fact she wasn't home prevented her **mugging**]. More importantly, Martha is sure about what was stolen and who may have done the crime. The evidence we presented proves beyond a reasonable doubt that Mr. Wilkinson entered the victim's residence without authorization and stole property when inside, in violation of state law.

* Brackets contain the experimental manipulations.

Appendix E

10-Item Rational–Experiential Inventory (Epstein, Pacini, Denes-Raj, & Heier, 1996)

Instructions: We would like to know the degree to which you agree or disagree with the statements provided. Using the scale below, please write the NUMBER that best reflects your opinion with each of the statements. **Place answers in the space provided by each statement.**

1	2	3	4	5	6
Completely Disagree	**Disagree**	**Somewhat Disagree**	**Somewhat Agree**	**Agree**	**Completely Agree**

_____ I don't like to have to do a lot of thinking $_r$ ^
_____ I try to avoid situations that require thinking in depth about something $_r$ ^
_____ I prefer to do something that challenges my thinking abilities rather than something that requires little thought ^
_____ I prefer complex to simple problems ^
_____ Thinking hard and for a long time about something gives me little satisfaction $_r$ ^

_____ I trust my initial feelings about people +
_____ I believe in trusting my hunches +
_____ My initial impressions of people are almost always right +
_____ When it comes to trusting people, I can usually rely on my "gut feelings" +
_____ I can usually feel when a person is right or wrong, even if I can't explain how I know +

^ = Need for Cognition subscale; + = Faith in Intuition subscale; $_r$ = reverse-scored item

Appendix F

Revised Legal Attitudes Questionnaire (RLAQ23) (Kravitz, Cutler & Brock, 1993)

Instructions: We'd like to ask you a few general background questions about yourself. Using the scale below, please write the NUMBER that best reflects your level of agreement with each of the following statements. **Place answers in the space provided by each statement.**

1	2	3	4	5	6
Strongly Disagree					**Strongly Agree**

Unfair treatment of underprivileged groups and classes is the chief cause of crime. (AA, R)

Too many obviously guilty persons escape punishment because of legal technicalities. (A)

Evidence illegally obtained should be admissible in court if such evidence is the only way of obtaining a conviction. (A)

Search warrants should clearly specify the person or things to be seized. (E, R)

No one should be convicted of a crime on the basis of circumstantial evidence, no matter how strong the evidence is. (AA, R)

There is no need in a criminal case for the accused to prove his innocence beyond a reasonable doubt. (E, R)

Any person who resists arrest commits a crime. (A)

When determining a person's guilt or innocence, the existence of a prior arrest record should not be considered. (E, R)

Wiretapping by anyone and for any reason should be completely illegal. (AA, R)

Defendants in a criminal case should be required to take the witness stand. (A)

All too often, minority group members do not get fair trials. (E, R)

Because of the oppression and persecution minority group members suffer, they deserve leniency and special treatment in the courts. (AA, R)

Citizens need to be protected against excess police power as well as against criminals. (E, R)

It is better for society that several guilty men be freed than one innocent one wrongly imprisoned. (E, R)

Accused persons should be required to take lie-detector tests. (A)

When there is a "hung" jury in a criminal case, the defendant should always be freed and the indictment dismissed. (AA, R)

A society with true freedom and equality for *all* would have very little crime. (AA, R)

It is moral and ethical for a lawyer to represent a defendant in a criminal case even when he believes his client is guilty. (E, R)

Police should be allowed to arrest and question suspicious looking persons to determine whether they have been up to something illegal. (A)

The law coddles criminals to the detriment of society. (A)

The freedom of a society is endangered as much by overzealous law enforcement as by the acts of individual criminals. (E, R)

In the long run, liberty is more important than order. (E, R)

Upstanding citizens have nothing to fear from the police. (A)

* A = Authoritarianism; AA = Anti-Authoritarianism; E = Egalitarianism; R = reverse-scored item

Appendix G

Dissertation Study 1: Mock-trial Questionnaire

TRIAL QUESTIONNAIRE

Instructions: We would like you to describe your impressions of the trial summary that you read. Please imagine you are a real juror for this **criminal** case, review the relevant law and answer accordingly. Thus, **guilt must be proven beyond a reasonable doubt**. Please do NOT speculate on or apply any other information EXCEPT for the evidence presented in this specific case.

Relevant Law in this Criminal Case:

Pursuant to NRS 205.060, in the state of Nevada, "a person who, by day or night, enters any house, room, apartment, tenement, shop, warehouse, store, mill, barn, stable, outhouse or other building, tent, vessel, vehicle, vehicle trailer, semitrailer or house trailer, airplane, glider, boat or railroad car, with the intent to commit grand or petit larceny, assault or battery on any person or any felony, or to obtain money or property by false pretenses, is guilty of burglary."

1. In your opinion, did the prosecution prove beyond a reasonable doubt that the defendant, Gregory Wilkinson, is guilty of burglary? **SELECT ONE ONLY**.

_____ NO (that is, the defendant is **not** guilty)
_____ YES (that is, the defendant **is** guilty)

2a. What is the likelihood that the defendant is guilty of burglary? **Please place an "X" under the number that best represents your judgment.**

Certainly Innocent	1	2	3	4	5	6	7	Certainly Guilty

If you said the defendant is NOT GUILTY, skip Question 2a, turn to the NEXT PAGE and CONTINUE. If not, read the next question.

If you said the defendant IS GUILTY, answer Question 2a below, then turn to the NEXT PAGE and CONTINUE.

2b. If you found the defendant GUILTY, how many **years** would you recommend that the defendant be sentenced to prison? Note: according to NRS 205.060, this is a Category B Felony; thus, sentencing must be NO LESS than 1 year and NO MORE than 10 years.

1 yr	2 yrs	3 yrs	4 yrs	5 yrs	6 yrs	7 yrs	8 yrs	9 yrs	10 yrs

3. Based on the testimony that you read, carefully rate your impressions of the **prosecutor's case** as best you can on each of the following dimensions:

0	1	2	3	4	5	6	7	8	9	10
Very Weak										Very Strong

0	1	2	3	4	5	6	7	8	9	10
Very Unreliable										Very Reliable

0	1	2	3	4	5	6	7	8	9	10
Very Unbelievable										Very Believable

4. Based on the testimony that you read, carefully rate your impressions of the **victim's (Martha Stinson) statements and character** as best you can on each of the following dimensions:

0	1	2	3	4	5	6	7	8	9	10
Very Weak										Very Strong

0	1	2	3	4	5	6	7	8	9	10
Very Unreliable										Very Reliable

0	1	2	3	4	5	6	7	8	9	10
Very Unbelievable										Very Believable

0	1	2	3	4	5	6	7	8	9	10
Very Dishonest										Very Honest

0	1	2	3	4	5	6	7	8	9	10
Very Untrustworthy										Very Trustworthy

5. Based on the testimony that you read, carefully rate your impressions of the **reporting police officer's statements** as best you can on each of the following dimensions:

0	1	2	3	4	5	6	7	8	9	10
Very Weak										Very Strong

0	1	2	3	4	5	6	7	8	9	10
Very Unreliable										Very Reliable

0	1	2	3	4	5	6	7	8	9	10
Very Unbelievable										Very Believable

0	1	2	3	4	5	6	7	8	9	10
Very Unconvincing										Very Convincing

6. Based on the testimony that you read, carefully rate your impressions of the **defense's case** as best you can on each of the following dimensions:

0	1	2	3	4	5	6	7	8	9	10
Very Weak										Very Strong

0	1	2	3	4	5	6	7	8	9	10
Very Unreliable										Very Reliable

0	1	2	3	4	5	6	7	8	9	10
Very Unbelievable										Very Believable

7. Based on the testimony that you read, carefully rate your impressions of the **defendant's (Gregory Wilkinson) testimony** as best you can on each of the following dimensions:

0	1	2	3	4	5	6	7	8	9	10
Very Weak										Very Strong

0	1	2	3	4	5	6	7	8	9	10
Very Unreliable										Very Reliable

0	1	2	3	4	5	6	7	8	9	10
Very Unbelievable										Very Believable

8. Based on the testimony that you read, carefully rate your impressions of the **defendant's (Gregory Wilkinson) character** as best you can on each of the following dimensions:

0	1	2	3	4	5	6	7	8	9	10
Very Dishonest										Very Honest

0	1	2	3	4	5	6	7	8	9	10
Very Untrustworthy										Very Trustworthy

0	1	2	3	4	5	6	7	8	9	10
Very Immoral										Very Moral

0	1	2	3	4	5	6	7	8	9	10
Very Deserving of Punishment										Not At All Deserving of Punishment

0	1	2	3	4	5	6	7	8	9	10
Very Bad										Very Good

9. Carefully rate your confidence in **your own verdict**:

0	1	2	3	4	5	6	7	8	9	10
Extremely Unconfident										Extremely Confident

10. Carefully rate your own abilities as a **trial juror** in this criminal case:

0	1	2	3	4	5	6	7	8	9	10
Very Weak										Very Strong

0	1	2	3	4	5	6	7	8	9	10
Very Unreliable										Very Reliable

11. Carefully rate your impressions of the **relevant law in this case (NRS 205.060: Category B Felony Burglary)**:

0	1	2	3	4	5	6	7	8	9	10
Very Difficult to Understand										Very Easy to Understand

0	1	2	3	4	5	6	7	8	9	10
Did not Apply in this Case										Did Apply in this Case

0	1	2	3	4	5	6	7	8	9	10
Very Weak										Very Strong

Appendix H

Dissertation Study 1: Demographic Questionnaire (Student Participants)

DEMOGRAPHIC QUESTIONNAIRE

Instructions: We ask for the following information so we can accurately describe the sample of respondents when we report the results of this research. Please note that you may skip any question you wish not to answer. Under NO circumstances will responses of individual participants be reported. Any information you provide will be anonymous and confidential.

Gender:
_____ Male
_____ Female

Age (in years): _____

Are you a U.S. citizen?
_____ Yes, I am a U.S. citizen
_____ No, I am not a U.S. citizen

Are you a Nevada resident?
_____ Yes, I am a Nevada resident
_____ No, I am not a Nevada resident

Race/Ethnicity (check any that apply):
_____ White, Non-Hispanic/Caucasian/European American
_____ Black, Non-Hispanic/African American
_____ Asian/Pacific Islander (specify): _____
_____ Hispanic/Latino (specify): _____
_____ Middle Eastern (specify): _____
_____ Native American (specify): _____
_____ Other (specify): _____

Relationship Status:
_____ Single, never married
_____ In committed relationship
_____ Domestic partnership
_____ Married
_____ Divorced
_____ Separated
_____ Widowed

Parental Status:
_____ Non-parent
_____ Parent (i.e., you have biological, step and/or adopted children)

What degrees have you earned? (select all that apply)
_____ High School Diploma/GED
_____ Associate degree
_____ Bachelor's degree

_____ Master's degree
_____ Professional degree (MD, JD, DDS, etc.)
_____ Other (specify): _____

Do you have any college **majors**?
_____ No, I am "undeclared"
_____ Yes (specify): _____

Do you have any college **minors**?
_____ No, I do not have any college minors
_____ Yes (specify): _____

What year are you in college?
_____ 1st year (freshman)
_____ 2nd year (sophomore)
_____ 3rd year (junior)
_____ 4th year (senior)
_____ Other (specify): _____

Do you speak another language other than English?
_____ No, I only speak English
_____ Yes (specify): _____

Do you practice a specific faith/religion?
_____ No, I do not practice a specific faith/religion
_____ Yes (specify): _____

Have you ever served on a jury for a **civil** (or non-criminal) case before?
_____ No
_____ Yes

Have you ever served on a jury for a **criminal** case before?
_____ No
_____ Yes

Have you ever been involved in **civil** proceedings before?
_____ No
_____ Yes. If **yes**, were you the:
_____ Plaintiff (the person who filed the lawsuit)
_____ Defendant (the person who the lawsuit was filed against)

Have you ever been involved in **criminal** proceedings before?
_____ No
_____ Yes. If **yes**, were you the:
_____ Plaintiff (the person who filed the charges)
_____ Defendant (the person who the charges were filed against)

Appendix I

Dissertation Study 2: Mock-Waiver of Jurisdiction Hearing (Judicial Participants)

Introductory Judicial Instructions

The trial proceedings will follow a narrative format. We understand that this format does not mirror how trial proceedings occur in the real world. However, this method is known for its capacity to extract reliable information about legal behavior. Remember, there are no right or wrong answers.

In this study, the objective is to determine the appropriateness of waiving jurisdiction in a criminal case involving a minor. Depending on your state or jurisdiction, this proceeding may be referred to as a "certification," "bind-over," or "remand" for criminal prosecution. This proceeding may also be referred to as a "decline" or "transfer." By **waiving jurisdiction**, the juvenile courts allow for certain minors to be processed in adult criminal justice systems. **In this hearing, it is your task to determine if the transfer of Ethan Harris to an adult criminal court is warranted.**

Please note that you are not permitted to speculate on or apply any other information aside from the evidence presented in this specific case. To assist you in this task, the *Kent* Guidelines (383 U.S. 541, 566-67 (1966)) are provided below:

> In determining the appropriateness of waiving jurisdiction, you may consider some or all of the following factors:
>
> (1) The seriousness of the alleged offense to the community and whether the protection of the community requires a waiver.
>
> (2) Whether the alleged offense was committed in an aggressive, violent, premeditated or willful manner.
>
> (3) Whether the alleged offense was against persons or against property, with greater weight being given to offenses against persons, especially if physical injury was sustained.
>
> (4) The prosecutive merit of the complaint, i.e., if there is evidence upon which a Grand Jury may be expected to return an indictment.
>
> (5) The desirability of trial and disposition of the entire offense in one court when the juvenile's associates in the alleged offense are adults who will be charged with a crime in the U.S. District Court for the District of Colombia.
>
> (6) The sophistication and maturity of the juvenile as determined by consideration of his home, environmental situation, emotional attitude and pattern of living.
>
> (7) The record and previous history of the juvenile, including previous contacts with the Youth Aid Division, other law enforcement agencies, juvenile courts and other jurisdictions.
>
> (8) The prospects for adequate protection of the public and the likelihood of reasonable rehabilitation of the juvenile by the use of procedures, services and facilities currently available by the Juvenile Court.

The background information of the juvenile defendant, **Ethan Harris**, will be outlined first. This is followed by a summary of the facts of the **current** case. The background information and the current case facts **are not in dispute and can be assumed to be true**. Next, you will be presented with testimony given by a mental health expert, the state and the defense. Lastly, a final set of instructions will be provided in order to guide you through the remainder of this study.

I. JUVENILE'S BACKGROUND INFORMATION

Juvenile's Current Age: 17 years (will be turning 18 years old in ten months).
Current Family Situation: **Ethan Harris** resides with his paternal grandmother, Marion Harris. Grandmother is currently employed and able to provide economic support; however, she has been unable to mitigate **Harris'** delinquent behavior. Whereabouts of juvenile's mother is unknown; juvenile's father is incarcerated.
Emotional Stability and Mental Health Issues: **Ethan Harris** has known anger management deficits and poor decision-making skills.
Educational Background: **Ethan Harris** has a pattern of chronic truancy and disobedience. The juvenile is enrolled in grade-appropriate classes (i.e., **Harris** is not in need of special educational instruction). The juvenile does not display signs of significant learning disabilities. **Harris'** academic performance is poor but can improve if the youth dedicates himself to his studies.
Prior Offenses: **Ethan Harris** has 2 prior offenses. For the 1st offense, he was found guilty of possession and public use of marijuana and alcohol. For this complaint, **Harris** was ordered to enter a substance abuse treatment program with mandatory drug testing. The youth also completed 15 hours of community restitution work. For the 2nd offense, **Harris** was found guilty of possessing and distributing methamphetamine to other minors. The youth was ordered to enter another substance abuse treatment program. The youth was assigned a probation officer and completed 40 hours of community restitution work.
Rehabilitation History: **Ethan Harris** has completed three prior youth rehabilitation programs. Currently, he has completed half of a 4th program.
Current Treatment Timeframe: **Ethan Harris** has 10 months available for juvenile court-mandated treatment programs before he turns 18 years old.
Gang Affiliations: **Ethan Harris** has no known gang affiliations, but he is affiliated with friends and family who are known or alleged gang members.
Current Risk to Public: **Ethan Harris** poses a moderately high risk to the public (i.e., **Harris** likely to distribute methamphetamine to people in the community).

II. FACTS OF THE CURRENT CASE

The case currently before this court involves a drug-related offense committed by a minor, **Ethan Harris**. **Harris** is accused of possessing methamphetamine, with the intent to distribute. **Harris** is also accused of possessing materials intended for the purpose of manufacturing methamphetamine. According to police report #PR-7112870, two police officers on vehicle patrol observed a group of 6 or 7 youths congregating near a local high school. Upon approaching the youths, the group immediately disbanded, raising the suspicions of the two officers.

Officers reported that some of the youths appeared to be holding small plastic sealable bags, all containing a whitish substance. After a pursuit, officers were only able to locate one of the young males. In their attempt to apprehend and detain the suspect, the youth made a serious attempt to strike one of the officers with his fist. Neither of the two officers was harmed and the adolescent's attempt to resist arrest was immediately terminated. The young male was found to be in possession of nearly 5 grams of pure methamphetamine. Also in the youth's possession were three grocery bags. A search of the grocery bags turned up eight 3-quart bottles of drain cleaner (a substance commonly used in the production of methamphetamine).

The 17 year-old adolescent, **Ethan Harris**, had admitted to officers that the drugs and drain cleaner bottles were his. **Harris** was also uncooperative and would not provide the arresting officers with the names of the other individuals. Because the youth was acting disorderly, verbally abusive and appeared disoriented, officers suspected **Harris** was under the influence of a substance. Officers performed a breathalyzer test and discovered the youth had consumed a moderate amount of alcohol. As a precaution, the youth was taken to a local hospital, where he also tested positive for marijuana.

A probable cause hearing in regard to this matter was to be scheduled. In lieu of a hearing, the juvenile's defense attorney, Ellen Scherbatsky, has waived probable cause.

III. WAIVER OF JURISDICTION HEARING

Mental Health Expert's Evaluation

Summary of the Evaluation: The evaluation presents diagnostic information about **Harris'** psychological state and social functioning. The evaluation only makes claims about psychosocial/mental health and does not proffer any legal recommendations.

The evaluation reveals important findings with respect to **Ethan Harris'** mental health, psychological state and personal proclivities. The evaluation failed to identify any major mental health problems, whether emotional (e.g., no depression), cognitive (e.g., no learning deficits or mental retardation) or biological (e.g., no brain damage). **Harris** has a chronic problem with anger and aggression. **Harris** also has a substance abuse problem (primarily with alcohol). The juveniles' emotionally immature state makes it difficult to ameliorate his problems with anger and aggression. The combination of an emotionally immature state, an aggressive personality and a substance abuse problem undoubtedly contributes to **Harris'** general disregard for authority and the law.

The evaluation also reveals important findings with respect to **Ethan Harris'** social functioning. There are no serious deficits with respect to social learning and social skills (e.g., no autism). Although **Harris'** home environment is led by a responsible adult (his grandmother), he continues to be problematic. **Harris'** grandmother has been unable to curb his deviant behavior despite her best efforts and good intentions. The juvenile is often truant or congregates with known problem-students. This is disconcerting, as it is worth noting that **Harris** has performed well in past rehabilitation programs and demonstrates promising intellectual and rehabilitative potential. Nonetheless, the juvenile continues to repeat criminal offenses months after program completion. At present, the juvenile is partway through his 4th rehabilitation program and is performing satisfactorily.

State's Arguments Demonstrating Prosecutive Merit

Summary of the Prosecution's Arguments: Your Honor, the state intends to request that the court pursue the legal procedures necessary to allow for the transfer of **Ethan Harris** to an adult criminal jurisdiction. A waiver in this case would not only have an impactful deterrent effect, but it would also buttress the aim of maintaining the safety of the public at large. To demonstrate prosecutive merit, the state will submit these arguments for your consideration:

1) **Ethan Harris** has had two prior offenses. Evidence reveals that the nature and severity of subsequent offenses have escalated. The facts of the current case establish that **Harris'** problems with the law have escalated to the point of violence. Again, the defendant made an unsuccessful attempt to physically assault an officer. **Harris'** mental evaluation reveals problems with impulsive anger and aggression, made worse by a substance abuse problem he refuses to address.
2) The current case calls attention to a disquieting reality; namely, that the nature of the defendant's offense poses a significant threat to public safety and order. **Harris** routinely engages in an illegal enterprise known to degrade families and communities via substance abuse and drug-related violence.
3) **Harris'** rehabilitative history is unstable and unpredictable. He is less than one year away from turning 18 years old and it is unlikely that these interventions will address his issues within the allotted timeframe.

In this hearing, these arguments, in their totality, provide ample evidence of prosecutive merit. The state rests its case.

Defense's Challenge to Prosecutive Merit

Summary of the Defense's Challenge: Your Honor, it is the goal of the defense to demonstrate that the state's request for a waiver of jurisdiction is without prosecutive merit. Such a request would not accord with the better interests of **Ethan Harris**. Rather, adjudication within the legal purview of the juvenile court, along with an emphasis on rehabilitative goals, would be more appropriate. To challenge the state's attempt at establishing prosecutive merit, the defense will proffer these lines of reasoning:

1) There is no denying that **Ethan's** prior juvenile record is somewhat discouraging, on its surface. Yet, the implicit assertion that the juvenile is prone to career criminality is baseless. **Ethan's** mental evaluation notes indicators of potential intellectual and rehabilitative promise.
2) **Ethan's** history illustrates his capacity to participate in and complete rehabilitation programs recommend by the juvenile court. In recent rehabilitation sessions, **Ethan** has accepted that he has a serious problem with alcohol and drug dealing. He expresses a strong desire to "change and be better."
3) A waiver of jurisdiction could carry adverse consequences for my client. If **Ethan** were to be transferred and ultimately convicted in an adult court for a crime committed during his adolescence, this action will likely make it difficult to seal from the public any records pertaining to this case. A conviction in an adult court is a serious social stigma—for example, to future potential employers.

This line of reasoning highlights the lack of prosecutive merit in this waiver hearing. The defense rests its case.

Attorney Closing Statements

Prosecution's Closing Statement: The facts and evidence presented here demand an alternative legal approach consistent with the underlying philosophy of the waiver of jurisdiction. The defendant, **Ethan Harris**, is a chronic offender who has had a long history of disrespect for authority, law and order. The defendant's rehabilitative record is that of instability and volatility. Further, the defendant's behavior has escalated to real physical violence and a total disregard for the safety of the public.

Your Honor, the state asks that you consider the following: if the defendant had gotten the upper hand on the arresting officer, the officer could have been ***injured*** **[*murdered*]**; the defendant engages in illicit drug activities that readily invite ***problems*** **[*death*]** and destruction into communities and families; the defendant manufactures and peddles a drug known to ***harm*** **[*kill*]** its users; the defendant essentially runs a drug ring with other people, in turn putting their lives in ***physical*** **[*mortal*]** jeopardy; given the defendant's past behavior, it is only a matter of time before those around him end up in prison or in a ***hospital*** **[*morgue*]**; the next people to use the defendant's drugs may lose their ***livelihoods*** **[*lives*]**; and, so long as he makes money, the defendant does not seem to care if his clients risk becoming ***addicts*** **[*deceased*]**. Again, given the nature of **Harris'** offense history, the state requests that you approve a waiver of jurisdiction.

Defense's Closing Statement: The case brought by the state failed to establish any prosecutive merit and does not justify **Ethan Harris'** transfer to an adult criminal court. The juvenile is not a lost cause and any insinuation as to career criminality is unfounded. The defendant's rehabilitative record, though imperfect, is that of someone who expresses a genuine desire to change for the better. With proper legal intervention, the defendant's deviant behavior can eventually be remedied.

Your Honor, the defense points to these realities: the juvenile does not have a violent history and it is unlikely that he posed a ***serious*** **[*deadly*]** threat to the officers; the juvenile admits his past offenses have involved illegal behaviors that contribute to other's ***problems*** **[*deaths*]**; rehabilitation has allowed him to acknowledge that meth has the potential to ***hurt*** **[*kill*]** addicts; the juvenile wants to change and has expressed no intentions to place others in ***physical*** **[*fatal*]** danger; there is no evidence that the juvenile heads a drug gang, so there is no chance he will put others in ***legal*** **[*mortal*]** peril; the juvenile is developing

a respect for others' ***safety*** **[*lives*]**; moreover, the juvenile has stated that he must change because he does not want his grandmother to see him ***incarcerated*** **[*dead*]**. These realities draw attention to **Harris'** capacity to change. The defense implores that you reject the state's request for a waiver of jurisdiction.

IV. FINAL JUDICIAL INSTRUCTIONS

Instructions: You have just heard the juvenile's background information, the facts of the current case and the arguments for and against a waiver of jurisdiction, or "transfer." The court's decision could consider some or all of the criteria established in *Kent* (383 U.S. 541, 566-67 (1966)). It is now your duty to compile this information and decide the case as best as you see fit. As the highest representative of the court, you are the sole arbiter of the weight to be given to the arguments and relevant legal statutes. Right now, you will be asked questions about this case. After you respond to these questions, you will be asked to make a transfer decision and provide a brief explanation for your choice.

Appendix J

6-Item Tripartite Scale of Punishment Attitudes, modified (cf. Chung & Bagozzi, 1997; Chung & Pardeck, 1994)

Instructions: We would like to know the degree to which you agree or disagree with the statements provided. Using the scale below, please write the NUMBER that best reflects your opinion with each of the statements. **Type answers in the box provided by each statement.**

1	2	3	4	5	6
Completely Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Completely Agree

Institutions (jails and prisons) are effective as deterrents to the offender *

Most people are not deterred by the threat of heavy penalties * $_r$

Humane treatment cannot rid society of crime ^ $_r$

Rehabilitation should be a prime goal in sanctioning juveniles ^

Society should be willing to avenge crime +

Juveniles are responsible for their actions and should pay the penalties for those actions +

*Deterrence item; ^Rehabilitation item; +Retribution item; $_r$ = reverse-scored item

Appendix K

4-Item Incapacitation–Restoration Attitudes Scale (Vargas, unpublished)

Instructions: We would like to know the degree to which you agree or disagree with the statements provided. Using the scale below, please write the NUMBER that best reflects your opinion with each of the statements. **Place answers in the space provided by each statement.**

1	2	3	4	5	6
Completely Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Completely Agree

An efficient way to stop juvenile crime is to isolate young offenders from the public at large *

The public welfare is assured when young offenders are incapacitated *

When juveniles commit crimes that result in losses to victims, it is essential that offenders restore those losses to the best of their ability ^

Whenever possible, juvenile offenders should be required to perform community service work ^

*Incapacitation item; ^Restoration item

Appendix L

4-Item Crime Control–Due Process Values Scale (Vargas, unpublished)

Instructions: We would like to know the degree to which you agree or disagree with the statements provided. Using the scale below, please write the NUMBER that best reflects your opinion with each of the statements. **Place answers in the space provided by each statement.**

1	2	3	4	5	6
Completely Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Completely Agree

An ideal legal system should treat behavioral control as one of its highest priorities *

It is not the job of the courts to "guarantee" that all cases be resolved quickly and uniformly *

An ideal legal system should treat individual rights as one of its highest priorities ^

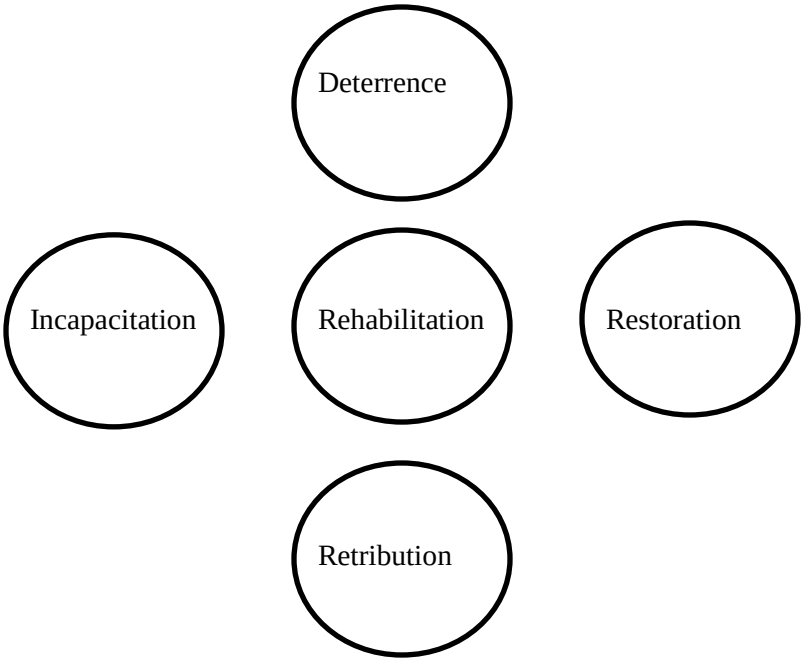
Above most things, an essential element of any legal proceeding is "transparency" ^

*Crime Control item; ^Due Process item

Appendix M

5-Item Punishment Attitudes Ranking Scale (Vargas, unpublished)

Instructions: In the circles below are five legal concepts. We would like to know how you rank the five concepts, from **first** (most important to you) to **last** (least important to you). **Type answers in the box provided by each statement.**



1. (most important to you) ☐
2. (2nd most important) ☐
3. (3rd most important) ☐
4. (4th most important) ☐
5. (least important to you) ☐

Appendix N

10-Item Rational–Experiential Inventory, modified (Epstein, Pacini, Denes-Raj, & Heier, 1996)

Instructions: We would like to know the degree to which you agree or disagree with the statements provided. Using the scale below, please write the NUMBER that best reflects your opinion with each of the statements. **Type answers in the box provided by each statement.**

1	2	3	4	5	6
Completely Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Completely Agree

I don't prefer to do a lot of heavy deliberating in a case ^ $_r$

I don’t find pleasure in cases that require deliberating in depth about the details ^ $_r$

I prefer to adjudicate cases that challenge my judicial abilities rather than cases that require less deliberation ^

I prefer complex to simple cases ^

Thinking deeply and for a long time about a particular case gives me much satisfaction ^

I trust my initial feelings about juveniles +

I believe in trusting my judicial hunches +

My initial impressions of juveniles are almost always right +

When it comes to trusting the attorneys and probations officers, I can usually rely on my “gut feelings” +

I can usually feel when a person is right or wrong, even if I can't explain how I know +

^ = Need for Cognition subscale; + = Faith in Intuition subscale; $_r$ = reverse-scored item

Appendix O

4-Item Attributional Reasoning Style Scale (Vargas, unpublished)

Instructions: We would like to know the degree to which you agree or disagree with the statements provided. Using the scale below, please write the NUMBER that best reflects your opinion with each of the statements. **Type answers in the box provided by each statement.**

1	2	3	4	5	6
Completely Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Completely Agree

Most young offenders lack the ability to control their bad behavior ^

With better self-control, juveniles should be able to avoid engaging in illegal behavior ^

Juveniles commit crimes because they lack positive social support in their lives +

Juveniles tend to commit crime when they fall victim to the pressures of unhealthy home and school environments +

^ = Person-focused orientation subscale; + = System-focused orientation subscale

Appendix P

21-Item Legal Factors Scale (Vargas, unpublished)

Instructions: We would like to know about your feelings toward particular aspects of the case you just reviewed. Using the scale below, please write the NUMBER that best reflects your opinion with each of the statements. **Type answers in the box provided by each statement.**

1	2	3	4	5	6
Extremely Weak	Weak	Somewhat Weak	Somewhat Strong	Strong	Extremely Strong

Please rate the information provided by the prosecution

Please rate the information provided by the defense attorney

Please rate the information provided by the mental health evaluation

Instructions: Using the scale below, please write the NUMBER that best reflects your opinion with each of the statements.

1	2	3	4	5	6
Extremely Not Useful	Not Useful	Somewhat Not Useful	Somewhat Useful	Useful	Extremely Useful

Please rate the usefulness of *Kent* criteria 1 in this case (The seriousness of the alleged offense to the community and whether the protection of the community requires a waiver)

Please rate the usefulness of *Kent* criteria 2 in this case (Whether the alleged offense was committed in an aggressive, violent, premeditated or willful manner)

Please rate the usefulness of *Kent* criteria 3 in this case (Whether the alleged offense was against persons or against property, with greater weight being given to offenses against persons, especially if physical injury was sustained)

Please rate the usefulness of *Kent* criteria 4 in this case (The prosecutive merit of the complaint, i.e., if there is evidence upon which a Grand Jury may be expected to return an indictment)

Please rate the usefulness of *Kent* criteria 5 in this case (The desirability of trial and disposition of the entire offense in one court when the juvenile's associates in the alleged offense are adults who will be charged with a crime in the U.S. District Court for the District of Colombia)

Please rate the usefulness of *Kent* criteria 6 in this case (The sophistication and maturity of the juvenile as determined by consideration of his home, environmental situation, emotional attitude and pattern of living)

Please rate the usefulness of *Kent* criteria 7 in this case (The record and previous history of the juvenile, including previous contacts with the Youth Aid Division, other law enforcement agencies, juvenile courts and other jurisdictions)

Please rate the usefulness of *Kent* criteria 8 in this case (The prospects for adequate protection of the public and the likelihood of reasonable rehabilitation of the juvenile by the use of procedures, services and facilities currently available by the Juvenile Court)

Instructions: Using the scale below, please write the NUMBER that best reflects your opinion with each of the statements.

1	2	3	4	5	6
Completely Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Completely Agree

In the case file you examined, the juvenile in question is likely to pose a major threat to public welfare

Given the details of the case, the juvenile does not appear to be highly dangerous

In the case file you examined, the severity of the crime was substantially high

The crime in question is unlikely to require extensive remediation

The likelihood of future crime is high, given the juvenile's history

Based on the information in the case file, it is a good guess that the juvenile will not engage future crimes

The mental health expert's opinion about the juvenile's personality is compelling

I trust the mental health expert's opinion about the juvenile's long-term personal tendencies

The mental health expert's opinion about the juvenile's social environment is compelling

I trust the mental health expert's opinion about the juvenile's capacity to change once placed in a proper environment

Appendix Q

20-Item Extralegal Factors Scale (Vargas, unpublished)

Instructions: Using the scale below, please write the NUMBER that best reflects your opinion with each of the statements. **Type answers in the box provided by each statement.**

1	2	3	4	5	6
Completely Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Completely Agree

In this case, the juvenile's crime is upsetting enough to cause a reasonable amount of frustration on my part

In this case, the juvenile's deviant actions generate some anger on my part

In this case, I feel pity for the juvenile in question

In this case, I feel some frustration toward the juvenile in question

In this case, it is quite likely that the juvenile in question is treatable

In this case, rehabilitation should be a top priority

In this case, the juvenile's crime warrants the harshest punishments legally possible

In this case, the juvenile offender deserves to be punished *severely*

In this case, detention in an adult system will be effective in stopping future crime

In this case, the failure to punish the young offender will encourage future crime

In this case, assuring the public welfare requires incapacitating the juvenile

In this case, stopping future crime requires isolating the juvenile from the public

In this case, the juvenile should perform community service work

In this case, the juvenile can do little to vindicate himself in the eyes of society

In this case, regulating the juvenile's behavior is needed to maintain social order

In this case, behavioral control should be a top priority

In this case, the actions of state officials are a bit questionable

In this case, it is paramount that I be transparent about any legal decisions I render

In this case, I experienced some uncertainty with respect to my judgments

In this case, there was a lot of incomplete or ambiguous information about the juvenile

Appendix R

3-Item Judicial Verdict Scale (Vargas, unpublished)

Instructions: In your opinion, did the state prove that the juvenile defendant, **Ethan Harris**, should be transferred to the adult criminal court? **SELECT ONE OPTION**.

NO	YES
(Do NOT Transfer Offender)	(Transfer Offender)

What is the likelihood that the juvenile defendant should most certainly be transferred? **Please type an "X" under the number that best represents your judgment**.

Certainly Do NOT Transfer	1	2	3	4	5	6	Certainly Transfer

In a few sentences, briefly provide an explanation for your transfer decision. (Note: type in the box below):

Appendix S

Dissertation Study 2: Demographic Questionnaire (Judicial Participants)

Instructions: We ask for the following information so we can describe the sample of respondents when we report the results of this research. Please note that you may skip any question you wish not to answer. **Under no circumstances will responses of individual participants be reported**. Any information you provide will be anonymous and confidential.

1. Gender:

- ☐ FEMALE
- ☐ MALE

2. Age (in years): ☐

3. Race/Ethnicity (check one):

- ☐ White, Non-Hispanic/Caucasian/European American
- ☐ Black, Non-Hispanic/African American
- ☐ Asian/Pacific Islander (specify here:)
- ☐ Hispanic/Latino (specify here:)
- ☐ Middle Eastern (specify here:)
- ☐ Native American (specify here:)
- ☐ Other (specify here:)

4. Relationship Status:

- ☐ Single, never married
- ☐ In committed relationship
- ☐ Domestic partnership
- ☐ Married

- ☐ Divorced
- ☐ Separated
- ☐ Widowed

5. Parental Status:

- ☐ Non-parent
- ☐ Parent (i.e., you have biological, step and/or adopted children)

6. What legal experience(s) have you had in the past? (select all that apply)

- ☐ Law-enforcement official
- ☐ Public/private defender
- ☐ Prosecutor/District Attorney
- ☐ General Jurisdiction Court
- ☐ Family Court
- ☐ Juvenile Court
- ☐ Probate Court
- ☐ Other (specify here:)

7. Are you currently a presiding judge in the juvenile court system?

- ☐ NO
- ☐ YES

8. How long have you been (or were) a presiding judge in the juvenile court system? ☐ YEARS

9. In what state do you hold your current occupation? ☐

10. In what year (e.g., 1982) did you first join the NCJFCJ? ☐

11. Have you ever been a presiding judge in a waiver of jurisdiction hearing?

- ☐ NO
- ☐ YES. **Approximately how many hearings?** ☐

12. What degrees have you earned? (select all that apply)

- ☐ Master degree
- ☐ Professional degree (e.g., MD, JD, DDS, etc.)
- ☐ Doctorate degree (e.g., PhD, EdD, etc.)
- ☐ Other (**specify here**:)

13. Do you speak another language other than English?

- ☐ No, I only speak English
- ☐ YES (**specify here**:)

14. Do you practice a specific faith/religion?

- ☐ No, I do not practice a specific faith/religion
- ☐ YES (**specify here**:)

15. If there is something about you that we did not ask and that you want us to know, please respond below:

16. If you have any comments regarding this study/survey, please respond below:

Appendix T

Table T1

List of Critical Variables and Sources of Judicial Data

Source of Information	Critical Variables
D'Angelo (2007) Survey Study	Legal Factors
	Juvenile Age Severity of Experienced Abuse Type of Experienced Abuse Prior Record Severity of Priors Type of Offense Gang Affiliation Number of Victims Number of Accomplices Drug Use
	Extra-legal Factors
	Family Structure Education Status Geographic Location of Juvenile Residence Socioeconomic Status (SES) Sex Race/Ethnicity
Pre-dissertation Interviews	Legal Factors
	Juvenile Age (very young OR close to 18th birthday) Severity of Offense Prior Record Treatment Amenability/Rehabilitation Public Safety Familial Factors Educational Factors
	Emotional Factors
	Uncertainty Frustration "Excruciating" Affect Doubts and "Lingering Thoughts"
Specific methodology-related suggestions†	Ambiguous Factors (recommendations)
	Juvenile Age (17 yrs., 2 mo.) Rehabilitation History (finished 3 prior programs; currently in a 4th program) Crime/Charge (possession/distribution/manufacturing of methamphetamine) Rehabilitation Likelihood (success likelihood vis-à-vis available time frame)

Note. † Suggestions were extracted from Interviews 2, 3 and 4.

Table T2

Qualitative Judicial Interviews: Summary Table of Important Facts and Opinions

Session	State Statutes	Other Sources of Influence	Transfer Reports	Age & Maturity	Weight of Offense vs. Offender	Emotions & Feelings
Interview 1	Approx. 19 factors (mental compet.; offense sever.; Tx amenab.; prior record)	Family factors; Age	Yes. Prepared by Juvenile PO. Do NOT provide 'recommend.'	Uncertainty arises when offender is very young	Generally, nature of *offender* given more weight than nature of *offense*	Uncertainty; "Difficulty"
Interview 2	Past record; History of dependency; Home environ.; Education fac.; Offense sever.	Juvenile demeanor; Family demeanor; Victim testimony; Public interest; Juvenile attorney; Prosecutors	Yes. Prepared by Juvenile PO. Provide 'recommend.'	Concerns about mental capacity; emotional status	NA	Frustration; Uncertainty; "Lingering thoughts"; Impression management concerns
Interview 3	Social backgr.; Educa. backgr.; Tx amenabil.; Offense type; Public safety; Competency; Prior transfer history	NA	Yes. Prepared by Juvenile PO. Do NOT provide 'recommend.' Aim is to assess if transfer criteria met	In theory, more negative emotions when cases involve *young* or *immature* juveniles	Both nature of *offense* and *offender* are equally important	"Gut-wrenching"; "Emotional"; Difficult; "Excruciating" ; Doubts about punitive approach; Doubts about Tx amenability
Interview 4	Public safety; Maturity; Prior record; Tx history; Offense sever.; Tx amenability	NA	No transfer reports used.	NA	NA	Emotions do not affect legal process

Table T3

A Priori Questions, Hypotheses, Variables, Statistical Tests and Hypothesis Statuses (Study 1)

Question Number	Hypothesis Number	Hypothesis Description	Input Variables	Output Variables	Statistical Test	Hypothesis Status
		Comparability of Experimental Groups (Ecological and Traditional MS Induction)				
1.	1a.	Participants randomly assigned to the two MS induction groups will not differ in their responses regarding the strength of the prosecution's case	CON_d	PRO_c	Tukey Honestly Significant Difference (HSD) test	Supported
	1b.	Participants randomly assigned to the two MS induction groups will not differ in their responses regarding the victim's testimony and moral character	CON_d	VIC_c	Tukey HSD	Supported
	1c.	Participants randomly assigned to the two MS induction groups will not differ in their responses regarding the police officer's testimony	CON_d	POL_c	Tukey HSD	Supported
	1d.	Participants randomly assigned to the two MS induction groups will not differ in their responses regarding the strength of the defense's case	CON_d	DEF_c	Tukey HSD	Supported
	1e.	Participants randomly assigned to the two MS induction groups will not differ in their responses regarding the defendant's testimony	CON_d	DTS_c	Tukey HSD	Supported
	1f.	Participants randomly assigned to the two MS induction groups will not differ in their responses regarding the defendant's moral character	CON_d	DCH_c	Tukey HSD	Supported
	1g.	Participants randomly assigned to the two MS induction groups will not differ in their self-assessments about their own abilities as jurors	CON_d	SLF_c	Tukey HSD	Supported
	1h.	Participants randomly assigned to the two MS induction groups will not differ in their responses regarding the case-relevant legal statutes (a proxy for worldview defense)	CON_d	WV_c	Tukey HSD	Supported
	1i.	Participants randomly assigned to the two MS induction groups will not differ in their responses regarding trial verdict certainty	CON_d	TRL_c	Tukey HSD	Supported
		Comparability of Control Groups (Ecological and Traditional Neutrality Induction)				
	2a.	Participants randomly assigned to the two control groups will not differ in their responses regarding the strength of the prosecution's case	CON_d	PRO_c	Tukey HSD	Supported

2b.	Participants randomly assigned to the two control groups will not differ in their responses regarding the victim's testimony and moral character	CON_d	VIC_c	Tukey HSD	Supported
2c.	Participants randomly assigned to the two control groups will not differ in their responses regarding the police officer's testimony	CON_d	POL_c	Tukey HSD	Supported
2d.	Participants randomly assigned to the two control groups will not differ in their responses regarding the strength of the defense's case	CON_d	DEF_c	Tukey HSD	Supported
2e.	Participants randomly assigned to the two control groups will not differ in their responses regarding the defendant's testimony	CON_d	DTS_c	Tukey HSD	Supported
2f.	Participants randomly assigned to the two control groups will not differ in their responses regarding the defendant's moral character	CON_d	DCH_c	Tukey HSD	Supported
2g.	Participants randomly assigned to the two control groups will not differ in their self-assessments about their own abilities as jurors	CON_d	SLF_c	Tukey HSD	Supported
2h.	Participants randomly assigned to the two control groups will not differ in their responses regarding the case-relevant legal statutes	CON_d	WV_c	Tukey HSD	Supported
2i.	Participants randomly assigned to the two control groups will not differ in their responses regarding trial verdict certainty	CON_d	TRL_c	Tukey HSD	Supported
	Convergent Evidence of Terror Management (Experimental Groups vs. Control Groups)				
3a.	Participants randomly assigned to the two MS induction groups will provide more favorable evaluations of the strength of the prosecution's case compared to control conditions	CON_d	PRO_c	1-way ANOVA w/ Tukey HSD	Not Supported
3b.	Participants randomly assigned to the two MS induction groups will provide more favorable evaluations of the victim's testimony and moral character compared to control conditions	CON_d	VIC_c	1-way ANOVA w/ Tukey HSD	Not Supported
3c.	Participants randomly assigned to the two MS induction groups will provide more favorable evaluations of the police officer's testimony compared to control conditions	CON_d	POL_c	1-way ANOVA w/ Tukey HSD	Not Supported

3d.	Participants randomly assigned to the two MS induction groups will provide less favorable evaluations of the strength of the defense's case compared to control conditions	CON_d	DEF_c	1-way ANOVA w/ Tukey HSD	Not Supported
3e.	Participants randomly assigned to the two MS induction groups will provide less favorable evaluations of the defendant's testimony compared to control conditions	CON_d	DTS_c	1-way ANOVA w/ Tukey HSD	Not Supported
3f.	Participants randomly assigned to the two MS induction groups will provide less favorable evaluations of the defendant's moral character compared to control conditions	CON_d	DCH_c	1-way ANOVA w/ Tukey HSD	Not Supported
3g.	Participants randomly assigned to the two MS induction groups will provide more favorable evaluations of their own abilities as jurors compared to control conditions	CON_d	SLF_c	1-way ANOVA w/ Tukey HSD	Not Supported
3h.	Participants randomly assigned to the two MS induction groups will provide more favorable evaluations of the case-relevant legal statutes compared to control conditions	CON_d	WV_c	1-way ANOVA w/ Tukey HSD	Not Supported
3i.	Participants randomly assigned to the two MS induction groups will report greater certainty in a guilty verdict compared to control conditions	CON_d	TRL_c	1-way ANOVA w/ Tukey HSD	Not Supported

Note. CON = Research Condition; DCH = evaluation of defendant character; DEF = Defense Case Strength; DTS = evaluation of defendant testimony; POL = evaluation of police testimony; PRO = Prosecution Case Strength; SLF = self-rating of juror abilities; TRL = Trial Verdict Certainty; VIC = evaluation of victim character/testimony; WV = proxy measure of worldview defensiveness. $_c$ = continuous (ordinal-interval, interval or ratio) variable; $_d$ = discrete (nominal or categorical) variable.

Table T4

A Priori Questions, Hypotheses, Variables, Statistical Tests and Hypothesis Statuses (Study 2)

Question Number	Hypothesis Number	Hypothesis Description	Exogenous Variables	Endogenous Variables	Statistical Test	Hypothesis Status
		Terror Management and Social Information-Processing				
1.	1a.	For the entire sample of judges, it is expected that judges high (vs. low) in need for cognition will be least likely to transfer; judges high (vs. low) in Faith in Intuition will be more likely to transfer	NFC_c FI_c	TRA_c	Smith-Cribbie-Bonferroni corrected Partial Least-squares Structural Equation Modeling (PLS-SEM)	Not Supported
	1b.	Judges in single-MS induction condition 1 will favor the transfer of the juvenile offender	NFC_c FI_c	TRA_c	SC-Bonferroni corrected PLS-SEM	Not Supported
		Judges in single-MS induction condition 2 will favor the transfer of the juvenile offender	NFC_c FI_c	TRA_c	SC-Bonferroni corrected PLS-SEM	
	1c.	Judges in the double-MS condition will not favor the transfer of the juvenile offender	NFC_c FI_c	TRA_c	SC-Bonferroni corrected PLS-SEM	Not Supported
		Judges in the control condition will not favor the transfer of the juvenile offender	NFC_c FI_c	TRA_c	SC-Bonferroni corrected PLS-SEM	
		Uncertainty and Attributional Reasoning				
2.	2.	Person-focused judges are expected to favor case-specific crime control values, as well as the transfer of the juvenile offender; also, system-focused judges are less likely to favor case-specific crime control values, as well as the transfer of the juvenile offender	$ARS1_c$ $ARS2_c$ $ELF7_c$	$ELF7_c$ TRA_c	SC-Bonferroni corrected PLS-SEM	Not Supported

Statutory and Nonstatutory Factors

3.	3.	Positive predictive links are expected between favorable evaluations of the prosecution, case-specific deterrence motives and the favorability of transfer. Prosecution-related evaluations are expected to be a function of perceived juvenile dangerousness, high judicial experience (i.e., number of waiver hearings) and low utility of the *Kent* Guidelines. Positive predictive links are expected between perceived juvenile dangerousness, global deterrence-based attitudes, retributive-based attitudes and case-specific deterrence motives	$ELF4_c$ $ELF5_c$ $KNT1_c$ $KNT2_c$ $KNT3_c$ $KNT6_c$ $KNT7_c$ $KNT8_c$ $LFS1_c$ PRO_c $TRI3_c$ WAV_c	$ELF5_c$ PRO_c TRA_c	SC-Bonferroni corrected PLS-SEM	Supported

Note. ARS1 = Attributional Reasoning Style Scale 1 (person-focused); ARS2 = Attributional Reasoning Style Scale 2 (system-focused); ELF4 = Extralegal Factors Scale 4 (need for retribution); ELF5 = Extralegal Factors Scale 5 (need for deterrence); ELF7 = Extralegal Factors Scale 7 (need for crime control); FI = Faith in Intuition; KNT1 = Kent Guideline 1 (offense severity); KNT2 = Kent Guideline 2 (premeditation); KNT3 = Kent Guideline 3 (offense type); KNT6 = Kent Guideline 6 (sophistication and maturity); KNT7 = Kent Guideline 7 (prior record); KNT8 = Kent Guideline 8 (treatment amenability); LFS1 = Legal Factors Scale 1 (offender dangerousness); NFC = Need for Cognition; PRO = Prosecution Case Strength; TRA = Transfer Decision Certainty; TRI3 = Tripartite Scale 3 (global deterrence); WAV = Judicial Experience (number of waiver hearings). $_c$ = continuous (ordinal-interval, interval or ratio).

Table T5

Demographic Information for Sample 1 (Study 1)

Variables	n_{valid}	$\%_{total}$	*M*	*SD*	*Minimum*	*Maximum*
Age (known)	189	98.4%	21.83 yrs.	5.20 yrs.	18 yrs.	54 yrs.
*Missing:	3	1.6%				
Ethnicity/Race (known)	189	98.4%	--	--	--	--
Asian:	16	8.3%				
Black:	7	3.6%				
Latino/a:	17	8.9%				
Middle Eastern:	1	.5%				
Native American:	2	1.0%				
White:	127	66.2%				
Other/Multiethnic:	19	9.9%				
*Missing:	3	1.6%				
Gender (known)	192	100.0%	--	--	--	--
Female:	154	80.2%				
Male:	38	19.8%				
Parental Status (known)	191	99.5%	--	--	--	--
Non-parent:	164	85.4%				
Parent:	27	14.1%				
*Missing:	1	.5%				
Relationship Status (known)	191	99.5%	--	--	--	--
Single/unmarried:	118	61.5%				
Committed:	58	30.2%				
Domestic:	4	2.1%				
Married:	11	5.7%				
*Missing:	1	.5%				
Religious Status (known)	192	100.0%	--	--	--	--
Unaffiliated:	105	54.7%				
Catholicism:	29	15.1%				
Christianity:	47	24.5%				
Other:	11	5.7%				
Years in College (known)	189	98.4%	2.95 yrs.	1.08 yrs.	1 yr.	6 yrs.
*Missing:	3	1.6%				

Note. N_{total} = 192. The n_{valid} is the difference between the N_{total} and the number of missing data points. The $\%_{total}$ refers to the N_{total}. Dashes (--) highlight areas where continuous measures are nonexistent because the variables are categorical in nature.

Table T6

Demographic Information for Sample 2 (Study 2)

Variables	n_{valid}	$\%_{total}$	*M*	*SD*	*Minimum*	*Maximum*
Age (known)	60	65.9%	56.22 yrs.	7.07 yrs.	40 yrs.	76 yrs.
*Missing:	31	34.1%				
Educational Degrees Earned (known)	62	68.1%	1.79 dgs.	.604 dgs.	1 dg.	3 dgs.
One:	19	20.9%				
Two:	37	40.6%				
Three:	6	6.6%				
*Missing:	29	31.9%				
Ethnicity/Race (known)	60	65.9%	--	--	--	--
Asian:	2	2.2%				
Black:	3	3.3%				
Latino/a:	1	1.1%				
White:	54	59.3%				
*Missing:	31	34.1%				
Gender (known)	61	67.0%	--	--	--	--
Female:	24	26.4%				
Male:	37	40.6%				
*Missing:	30	33.0%				
Parental Status (known)	62	68.1%	--	--	--	--
Non-parent:	4	4.4%				
Parent:	58	63.7%				
*Missing:	29	31.9%				
Relationship Status (known)	62	68.1%	--	--	--	--
Committed:	2	2.2%				
Divorced:	6	6.6%				
Married:	52	57.1%				
Widowed:	2	2.2%				
*Missing:	29	31.9%				
Religious Status (known)	57	62.6%	--	--	--	--
Unaffiliated:	17	18.6%				
Affiliated:	40	44.0%				
*Missing:	34	37.4%				
Waiver Hearings Reviewed (known)	50	54.9%	22.44 hrgs.	45.49 hrgs.	1 hrg.	300 hrgs.
*Missing:	41	45.1%				

Note. N_{total} = 91. The n_{valid} is the difference between the N_{total} and the number of missing data points. The $\%_{total}$ refers to the N_{total}. Dashes (--) highlight areas where continuous measures are nonexistent because the variables are categorical in nature.

Table T7

List of Constant Factors Present in the Mock-Waiver Hearing Narrative (Study 2)

Waiver of Jurisdiction Hearing Constants
Age (17 yrs., 10 mo.)
Type of Crime (possession/distribution of methamphetamine)
Family Stressors (present)
Family Structure (resides with responsible grandmother only)
Emotional Stability and Mental Health Issues (anger problems; poor decision-making skills)
Educational Background (still in school; often truant/disobedient)
Prior Record (2 prior drug-related offenses)
Rehabilitation History (3 past programs; current program is half-completed)
Treatment Time-Frame (10 months available for Tx before juvenile turns 18)
Gang Affiliation (none; has family/friends in, or contact with, gangs)
Risk to Public (moderately high; juvenile likely to sell drugs to public at large)
Psychological Evaluation (contains information about juvenile's disposition and social environment)

Note. The purpose of the constants is to create a fictitious waiver of jurisdiction hearing narrative that is ambiguous (i.e., difficult to determine the appropriateness of transfer).

Table T8

Experimental Conditions: Defense Statement-Type and Prosecutor Statement-Type (Study 2)

Prosecutor Statement-Type	Defense Statement-Type: *Ecological MS Induction*	Defense Statement-Type: *Ecological Neutrality Induction*
Ecological MS Induction	Ecological Double-MS Induction Prosecutorial statement contains death-related cue words Defense counsel statement contains death-related cue words *Double-MS condition serves as proxy for *explicit* MS induction	Ecological Single-MS Induction 1 Prosecutorial statement contains death-related cue words Defense counsel statement contains pain-related cue words *Single-MS condition serves as proxy for *implicit* MS induction
Ecological Neutrality Induction	Ecological Single-MS Induction 2 Prosecutorial statement contains pain-related cue words Defense counsel statement contains death-related cue words *Single-MS condition serves as proxy for *implicit* MS induction	Ecological Double-Neutrality Induction Prosecutorial statement contains pain-related cue words Defense counsel statement contains pain-related cue words *Double-neutrality condition serves as the control group

Note. The four experimental conditions were statistically examined via a two-way factorial analysis of variance.

Table T9

Normality and Skewness Statistics for all Primary Measures (Study 1)

Variables	Shapiro-Wilk Statistics		Skewness Statistics		*g*-to-*SE* Ratio [a]
	$W_{(df)}$	*p*	*g*	*SE*	
1. TRL	$0.94_{(191)}$	<.01	-0.25	.18	No Skew
2. NFC	$0.98_{(192)}$	.01	-0.41	.18	Neg. Skew
3. FI	$0.98_{(192)}$	.01	-0.36	.18	No Skew
4. LA†	$0.99_{(192)}$	.40	-0.05	.18	No Skew
5. LAA	$0.98_{(192)}$	<.01	-0.36	.18	No Skew
6. LE	$0.98_{(192)}$	.03	-0.32	.18	No Skew
7. PRO†	$0.99_{(191)}$	.06	-0.26	.18	No Skew
8. VIC	$0.98_{(191)}$	.01	0.31	.18	No Skew
9. POL	$0.98_{(191)}$	.01	-0.31	.18	No Skew
10. DEF†	$0.99_{(191)}$	.07	-0.14	.18	No Skew
11. DTS†	$0.99_{(190)}$	.20	-0.08	.18	No Skew
12. DCH	$0.96_{(189)}$	<.01	0.31	.18	No Skew
13. SLF	$0.97_{(191)}$	<.01	-0.09	.18	No Skew
14. WV	$0.96_{(190)}$	<.01	0.02	.18	No Skew

Note. Daggers (†) indicate variables with statistically nonsignificant Shapiro-Wilk values. DCH = evaluation of defendant character; DEF = Defense Case Strength; DTS = evaluation of defendant testimony; FI = Faith in Intuition; LA = Legal Authoritarianism; LAA = Legal Anti-Authoritarianism; LE = Legal Egalitarianism; NFC = Need for Cognition; POL = evaluation of police testimony; PRO = Prosecution Case Strength; SLF = self-rating of juror abilities; TRL = Trial Verdict Certainty; VIC = evaluation of victim character/testimony; WV = proxy measure of worldview defensiveness. [a] = skewness is problematic when the absolute value of a skewness statistic exceeds two times the value of its corresponding standard error.

Table T10

Descriptive Statistics, Intercorrelations and Cronbach Alphas for all Primary Measures (Study 1)

Variables	*N*	*M*	*SD*	*Minimum*	*Maximum*
1. TRL_a	191	4.57	1.29	1.00	7.00
2. NFC_b	192	4.33	.85	1.40	6.00
3. FI_b	192	4.34	.79	2.00	6.00
4. LA_b	192	3.34	.66	1.29	5.50
5. LAA_b	192	4.12	.74	1.33	6.00
6. LE_b	192	3.50	.57	1.56	5.11
7. PRO_c	191	5.79	2.01	.00	10.00
8. VIC_c	191	5.61	1.91	1.00	10.00
9. POL_c	191	6.53	2.01	.00	10.00
10. DEF_c	191	5.29	1.89	.00	10.00
11. DTS_c	190	4.78	2.05	.00	10.00
12. DCH_c	189	5.04	1.68	.00	10.00
13. SLF_c	191	6.35	1.94	.00	10.00
14. WV_c	190	6.92	1.88	3.00	10.00

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. TRL	--													
2. NFC	-.120	**.79**$_5$												
3. FI	-.015	.007	**.83**$_5$											
4. LA	.068	-.115	.082	**.48**$_8$										
5. LAA	.123	.056	-.041	.108	**.55**$_6$									
6. LE	.103	-.069	-.162*	.116	.554*	**.45**$_9$								
7. PRO	.409*	-.048	.050	.145*	.110	.153*	**.86**$_3$							
8. VIC	.644*	-.052	.099	.112	.018	.049	.477*	**.90**$_5$						
9. POL	.543*	-.045	.085	.248*	.153*	.135	.433*	.667*	**.94**$_4$					
10. DEF	-.463*	.016	.061	.140	-.138	-.189*	-.158*	-.326*	-.062	**.90**$_3$				
11. DTS	-.606*	.029	.063	.035	-.192*	-.164*	-.176*	-.338*	-.232	.711*	**.93**$_3$			
12. DCH	-.531*	.218*	.117	.058	-.162*	-.227*	-.127	-.341*	-.224*	.612*	.728*	**.92**$_5$		
13. SLF	.167*	.163*	.192*	.036	-.015	-.163*	.101	.311*	.310*	-.038	-.098	-.027	**.91**$_2$	
14. WV	.302*	.116	-.012	.105	.003	-.150*	.168*	.424*	.409*	.024	-.128	-.122	.492*	**.82**$_3$

Note. Cronbach alpha scores are listed in boldface along the diagonal (for all alphas, accompanying numerical subscripts indicate the number of scale items). Dashes (--) highlight single-item measures, wherein Cronbach alpha scores are nonexistent. DCH = evaluation of defendant character; DEF = Defense Case Strength; DTS = evaluation of defendant testimony; FI = Faith in Intuition; LA = Legal Authoritarianism; LAA = Legal Anti-Authoritarianism; LE = Legal Egalitarianism; NFC = Need for Cognition; POL = evaluation of police testimony; PRO = Prosecution Case Strength; SLF = self-rating of juror abilities; TRL = Trial Verdict Certainty; VIC = evaluation of victim character/testimony; WV = proxy measure of worldview defensiveness. $_a$ = 7-point Likert scale; $_b$ = 6-point Likert scale; $_c$ = 11-point Likert scale.
*$p < .05$.

Table T11

Indicator Loadings and Significance, Indicator and Composite Reliabilities, Average Variance Extracted (AVE) Scores, Latent Correlations and Discriminant Validity Scores for PLS Path Model 1 (Study 1)

Latent Variable	Indicator	Loading	*t*-value	*SD*	Indicator Reliability	Composite Reliability	AVE
1. DTS	TrialQ7a	1.00	31.06	.03	1.00	1.00	.99
	TrialQ7b	1.00	52.94	.02	1.00		
	TrialQ7c	1.00	50.17	.02	1.00		
2. LA	RLAQ2	.42	3.37	.12	.18	.47	.17
	RLAQ3	.32	1.52	.21	.10		
	RLAQ7	.55	1.55	.36	.30		
	RLAQ10	-.01	0.08	.14	.00		
	RLAQ15	.63	5.58	.11	.40		
	RLAQ19	-.13	0.54	.24	.02		
	RLAQ20	.08	0.46	.18	.01		
	RLAQ23	.57	3.92	.15	.32		
3. LAA	RLAQ1	-.23	0.66	.35	.05	.00	.17
	RLAQ5	-.39	0.87	.45	.15		
	RLAQ9	.09	0.38	.24	.01		
	RLAQ12	-.10	0.54	.18	.01		
	RLAQ16	.89	1.52	.58	.79		
	RLAQ17	-.09	0.30	.30	.01		
4. LE	RLAQ4	.82	1.67	.49	.67	.13	.12
	RLAQ6	.14	0.54	.26	.02		
	RLAQ8	.04	0.10	.42	.00		
	RLAQ11	.03	0.20	.18	.00		
	RLAQ13	.41	1.58	.26	.17		
	RLAQ14	-.01	0.03	.30	.00		
	RLAQ18	-.43	1.30	.33	.18		
	RLAQ21	.00	0.00	.24	.00		
	RLAQ22	.06	0.23	.28	.00		
5. POL	TrialQ5a	.79	2.33	.34	.62	.91	.71
	TrialQ5b	.99	26.08	.04	.98		
	TrialQ5c	.79	2.14	.37	.62		
	TrialQ5d	.79	2.23	.35	.62		
6. PRO	TrialQ3a	1.00	19.58	.05	1.00	.99	.99
	TrialQ3b	1.00	16.60	.06	1.00		
	TrialQ3c	1.00	15.75	.06	1.00		
7. TRL	TrialQ2a	--	--	--	--	--	--
8. VIC	TrialQ4a	1.00	6.87	.15	1.00	.99	.99
	TrialQ4b	1.00	17.53	.06	1.00		
	TrialQ4c	1.00	18.53	.05	1.00		
	TrialQ4d	1.00	9.34	.11	1.00		
	TrialQ4e	1.00	11.56	.09	1.00		

Latent *r*:	1	2	3	4	5	6	7	8
1. DTS	**.995**							
2. LA	-.091	**.412**						
3. LAA	.327	-.010	**.412**					
4. LE	-.103	-.018	-.018	**.346**				

5. POL	.555	-.144	.054	-.105	**.843**			
6. PRO	.705	-.216	.069	-.139	.790	**.995**		
7. TRL	-.007	.043	-.001	.009	.609	-.005	--	
8. VIC	.705	-.215	.068	-.139	.790	.999	-.005	**.995**

Note. The outer model is derived from 12 PLS algorithm iterations. Indicator reliability scores are used to estimate the reliability of items and are based on the square of corresponding loadings. Composite reliability scores are used to estimate the degree of internal consistency in lieu of Cronbach's alpha. The AVE index is used to estimate the degree of convergent validity. Discriminant validity scores are located along the diagonal, in boldface, and are based on the square root of the AVE. Dashes (--) highlight single-item measures, wherein the corresponding coefficients are nonexistent. DTS = evaluation of defendant testimony; LA = Legal Authoritarianism; LAA = Legal Anti-Authoritarianism; LE = Legal Egalitarianism; POL = evaluation of police testimony; PRO = Prosecution Case Strength; RLAQ(#) = Revised Legal Attitudes Questionnaire (item number); TrialQ(#) = Trial Questionnaire (item number and letter); TRL = Trial Verdict Certainty; VIC = evaluation of victim character/testimony.

Table T12

Normality and Skewness Statistics for all Primary Measures (Study 2)

Variables	Shapiro-Wilk Statistics		Skewness Statistics		*g*-to-*SE* Ratio [a]
	$W_{(df)}$	*p*	*g*	*SE*	
1. TRA	$0.87_{(64)}$	<.01	0.64	.30	Pos. Skew
2. TRI1	$0.94_{(77)}$	<.01	-0.40	.27	No Skew
3. TRI2	$0.96_{(77)}$	.02	0.13	.27	No Skew
4. TRI3	$0.96_{(77)}$	.03	-0.34	.27	No Skew
5. IRA1	$0.94_{(77)}$	<.01	0.51	.27	No Skew
6. IRA2	$0.94_{(77)}$	<.01	-0.32	.27	No Skew
7. GCC	$0.97_{(77)}$	.04	0.09	.27	No Skew
8. GDP	$0.93_{(77)}$	<.01	-0.30	.27	No Skew
9. NFC†	$0.99_{(75)}$	.53	-0.14	.28	No Skew
10. FI†	$0.98_{(75)}$	.20	-0.24	.28	No Skew
11. ARS1	$0.91_{(75)}$	<.01	-0.06	.28	No Skew
12. ARS2	$0.93_{(75)}$	<.01	-0.19	.28	No Skew
13. LFS1†	$0.97_{(64)}$	.07	0.18	.30	No Skew
14. LFS2	$0.94_{(64)}$	<.01	-0.68	.30	Neg. Skew
15. LFS3	$0.95_{(64)}$	.01	-0.01	.30	No Skew
16. LFS4	$0.94_{(64)}$	<.01	-0.37	.30	No Skew
17. LFS5	$0.93_{(64)}$	<.01	-0.63	.30	Neg. Skew
18. ELF1	$0.94_{(64)}$	<.01	0.13	.30	No Skew
19. ELF2	$0.93_{(64)}$	<.01	-0.49	.30	No Skew
20. ELF3	$0.91_{(64)}$	<.01	0.68	.30	Pos. Skew
21. ELF4	$0.92_{(64)}$	<.01	0.34	.30	No Skew
22. ELF5†	$0.96_{(64)}$	.06	0.24	.30	No Skew
23. ELF6	$0.96_{(64)}$	.02	0.18	.30	No Skew
24. ELF7	$0.93_{(64)}$	<.01	-0.78	.30	Neg. Skew
25. ELF8	$0.94_{(64)}$	<.01	0.41	.30	No Skew
26. ELF9	$0.91_{(64)}$	<.01	0.27	.30	No Skew
27. UNC	$0.96_{(64)}$	.04	0.07	.30	No Skew
28. KNT1	$0.82_{(64)}$	<.01	-0.99	.30	Neg. Skew
29. KNT2	$0.82_{(64)}$	<.01	-0.97	.30	Neg. Skew
30. KNT3	$0.79_{(64)}$	<.01	-1.17	.30	Neg. Skew
31. KNT4	$0.88_{(64)}$	<.01	-0.65	.30	Neg. Skew
32. KNT5	$0.87_{(64)}$	<.01	0.77	.30	Pos. Skew
33. KNT6	$0.72_{(64)}$	<.01	-1.53	.30	Neg. Skew
34. KNT7	$0.75_{(64)}$	<.01	-1.47	.30	Neg. Skew
35. KNT8	$0.83_{(64)}$	<.01	-0.93	.30	Neg. Skew
36. PRO	$0.87_{(64)}$	<.01	-0.46	.30	No Skew
37. DEF	$0.85_{(64)}$	<.01	-0.51	.30	No Skew
38. MNT	$0.83_{(64)}$	<.01	-0.41	.30	No Skew

Note. Daggers (†) indicate variables with statistically nonsignificant Shapiro-Wilk values. ARS1 = Attributional Reasoning Style Scale 1 (person-focused); ARS2 = Attributional Reasoning Style Scale 2 (system-focused); DEF = Defense Case Strength; ELF1 = Extralegal Factors Scale 1 (affect toward offense); ELF2 = Extralegal Factors Scale 2 (affect toward juvenile); ELF3 = Extralegal Factors Scale 3 (treatment amenability); ELF4 = Extralegal Factors Scale 4 (need for retribution); ELF5 = Extralegal Factors Scale 5 (need for deterrence); ELF6 = Extralegal Factors Scale 6 (need for incapacitation); ELF7 = Extralegal Factors Scale 7 (need for crime control); ELF8 = Extralegal Factors Scale 8 (need for restoration); ELF9 = Extralegal Factors Scale 9 (need for due process); FI = Faith in Intuition; GCC = Global Crime Control; GDP = Global Due Process; IRA1 = Incapacitation–Restoration Attitudes Scale 1 (global incapacitation); IRA2 = Incapacitation–Restoration Attitudes Scale 2 (global restoration); KNT1 = Kent Guideline 1 (offense severity); KNT2 = Kent Guideline 2 (premeditation);

KNT3 = Kent Guideline 3 (offense type); KNT4 = Kent Guideline 4 (prosecutive merit); KNT5 = Kent Guideline 5 (adult accomplices); KNT6 = Kent Guideline 6 (sophistication/maturity); KNT7 = Kent Guideline 7 (prior record); KNT8 = Kent Guideline 8 (treatment amenability); LFS1 = Legal Factors Scale 1 (offender dangerousness); LFS2 = Legal Factors Scale 2 (offense severity); LFS3 = Legal Factors Scale 3 (recidivism likelihood); LFS4 = Legal Factors Scale 4 (dispositional mental health data); LFS5 = Legal Factors Scale 5 (situational mental health data); MNT = Strength of Mental Health Evaluation; NFC = Need for Cognition; PRO = Prosecution Case Strength; TRA = Transfer Decision Certainty; TRI1 = Tripartite Scale 1 (global rehabilitation); TRI2 = Tripartite Scale 2 (global retribution); TRI3 = Tripartite Scale 3 (global deterrence); UNC = Uncertainty toward Hearing. $_{a}$ = skewness is problematic when the absolute value of a skewness statistic exceeds two times the value of its corresponding standard error.

Table T13

Descriptive Statistics for all Primary Measures (Study 2)

Variables [a]	*N*	*M*	*SD*	*Minimum*	*Maximum*
1. TRA	64	2.64	1.41	1.00	6.00
2. TRI1	77	4.62	.79	2.50	6.00
3. TRI2	77	3.46	.83	1.50	5.50
4. TRI3	77	3.49	1.04	1.00	5.50
5. IRA1	77	2.22	.81	1.00	4.50
6. IRA2	77	4.90	.68	3.00	6.00
7. GCC	77	4.05	.86	2.00	6.00
8. GDP	77	4.79	.64	3.00	6.00
9. NFC	75	4.13	.74	1.80	5.80
10. FI	75	3.52	.73	1.60	5.20
11. ARS1	75	3.41	.59	2.00	5.00
12. ARS2	75	4.29	.76	2.00	6.00
13. LFS1	64	3.35	.93	1.00	5.50
14. LFS2	64	3.86	.88	1.00	5.50
15. LFS3	64	4.66	.67	3.00	6.00
16. LFS4	64	3.68	.73	2.00	5.00
17. LFS5	64	3.96	.79	2.00	5.50
18. ELF1	64	2.96	1.12	1.00	5.00
19. ELF2	64	3.70	.71	1.50	5.50
20. ELF3	64	2.60	.78	1.00	4.50
21. ELF4	64	2.16	.78	1.00	4.00
22. ELF5	64	2.73	.93	1.00	5.00
23. ELF6	64	2.88	1.09	1.00	6.00
24. ELF7	64	4.34	.86	1.00	6.00
25. ELF8	64	2.46	.83	1.00	4.50
26. ELF9	64	3.80	.59	2.00	5.50
27. UNC	64	3.30	.91	1.50	5.50
28. KNT1	64	4.44	.87	2.00	6.00
29. KNT2	64	4.44	1.04	2.00	6.00
30. KNT3	64	4.47	.99	2.00	6.00
31. KNT4	64	4.09	1.19	1.00	6.00
32. KNT5	64	2.83	1.18	1.00	6.00
33. KNT6	64	4.69	.79	2.00	6.00
34. KNT7	64	4.98	.81	2.00	6.00
35. KNT8	64	4.92	.86	2.00	6.00
36. PRO	64	3.86	.87	1.00	6.00
37. DEF	64	3.70	.81	1.00	5.00
38. MNT	64	3.86	.83	1.00	5.00

Note. ARS1 = Attributional Reasoning Style Scale 1; ARS2 = Attributional Reasoning Style Scale 2; DEF = Defense Case Strength; ELF1 = Extralegal Factors Scale 1; ELF2 = Extralegal Factors Scale 2; ELF3 = Extralegal Factors Scale 3; ELF4 = Extralegal Factors Scale 4; ELF5 = Extralegal Factors Scale 5; ELF6 = Extralegal Factors Scale 6; ELF7 = Extralegal Factors Scale 7; ELF8 = Extralegal Factors Scale 8; ELF9 = Extralegal Factors Scale 9; FI = Faith in Intuition; GCC = Global Crime Control; GDP = Global Due Process; IRA1 = Incapacitation–Restoration Attitudes Scale 1; IRA2 = Incapacitation–Restoration Attitudes Scale 2; KNT1 = Kent Guideline 1; KNT2 = Kent Guideline 2; KNT3 = Kent Guideline 3; KNT4 = Kent Guideline 4; KNT5 = Kent Guideline 5; KNT6 = Kent Guideline 6; KNT7 = Kent Guideline 7; KNT8 = Kent Guideline 8; LFS1 = Legal Factors Scale 1; LFS2 = Legal Factors Scale 2; LFS3 = Legal Factors Scale 3; LFS4 = Legal Factors Scale 4; LFS5 = Legal Factors Scale 5; MNT = Strength of Mental Health Evaluation; NFC = Need for Cognition; PRO = Prosecution Case Strength; TRA = Transfer Decision Certainty; TRI1 = Tripartite Scale 1; TRI2 = Tripartite Scale 2; TRI3 = Tripartite Scale 3; UNC = Uncertainty toward Hearing. [a] = all variables were measured using a 6-point Likert-scale metric.

Table T14

Intercorrelations and Cronbach Alphas for all Primary Measures (Study 2)

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. TRA	--												
2. TRI1	.033	**.09**$_2$											
3. TRI2	-.037	-.273*	**.36**$_2$										
4. TRI3	.279*	-.038	.420*	**.54**$_2$									
5. IRA1	.134	-.114	.257*	.265*	**.74**$_2$								
6. IRA2	.066	.097	.039	-.011	.131	**.38**$_2$							
7. GCC	.100	-.096	.035	.052	.082	.295*	**.13**$_2$						
8. GDP	-.196	.066	-.133	-.074	.004	.099	.216	**.13**$_2$					
9. NFC	-.102	.121	-.070	-.175	-.200	.183	.234*	.161	**.75**$_5$				
10. FI	.035	-.234*	.246*	.268*	.152	.058	.109	.054	-.236*	**.82**$_5$			
11. ARS1	.169	-.078	.079	.029	-.173	-.108	-.001	-.032	-.224	.218	†		
12. ARS2	.220	.013	-.044	.019	.064	.409*	.190	.054	.112	.201	.126	**.75**$_2$	
13. LFS1	.557*	.058	-.091	.233	.157	.169	.032	-.022	-.097	.074	.026	.070	**.76**$_2$
14. LFS2	.221	.116	-.128	.126	-.072	.142	.007	.158	.064	-.051	-.048	.071	.550*
15. LFS3	.301*	-.106	.051	.211	.162	.122	-.085	-.193	-.167	-.004	.120	.100	.269*
16. LFS4	-.130	-.011	.010	-.043	.195	.197	-.058	.020	.014	.116	-.117	-.109	.187
17. LFS5	-.041	<.001	.168	.002	.113	.320*	.003	.027	.130	.131	-.146	.117	.153
18. ELF1	.334*	-.035	-.032	.012	-.087	.027	.040	-.033	-.078	-.037	.041	.172	.306*
19. ELF2	-.203	-.273*	-.014	-.031	-.103	-.057	-.223	.126	-.106	.114	.058	-.175	-.026
20. ELF3	.300*	-.042	-.153	.298*	.276*	.047	.195	-.034	-.178	.066	.121	-.035	.391*
21. ELF4	.319*	.012	.007	.268*	.019	.028	-.019	.005	.029	.032	.118	.157	.321*
22. ELF5	.579*	.011	.188	.482*	.249*	.117	.126	-.109	-.051	.011	-.038	.017	.447*
23. ELF6	.465*	.073	-.003	.340*	.452*	.253*	.050	-.042	-.127	.087	-.059	.069	.597*
24. ELF7	.012	-.114	.303*	.176	.178	.360*	.143	.040	.108	.157	-.068	.188	.212
25. ELF8	.225	-.142	-.099	.214	.068	-.432*	-.145	-.232	-.342*	.133	.128	-.091	.125
26. ELF9	-.182	.236	-.165	-.223	-.084	.023	.029	.118	.039	-.097	-.204	-.071	-.263*
27. UNC	-.235	.147	-.220	-.317*	-.149	-.136	-.220	.134	.081	.004	-.080	-.199	-.053
28. KNT1	.040	.208	-.204	.066	-.026	.048	.007	.103	.170	.099	-.177	-.008	.218
29. KNT2	-.141	.203	.028	.063	.016	.151	-.031	.237	.196	.171	-.304*	.150	.060
30. KNT3	-.082	.218	-.083	.045	.054	.200	.046	.274*	.303*	-.040	-.448*	.073	.111
31. KNT4	.323*	.106	-.105	.140	.103	.107	.227	-.096	.170	-.020	-.052	.053	.341*
32. KNT5	.183	-.032	-.097	.004	.335*	.090	.008	.079	.134	.178	-.041	.154	.201
33. KNT6	-.088	-.024	-.179	.053	-.001	.103	.037	.006	.234	-.030	-.266*	-.031	.076
34. KNT7	.037	-.132	-.106	.075	.138	.038	.058	.024	.210	.075	-.238	.037	.039
35. KNT8	-.207	-.023	.005	-.113	-.148	-.010	-.049	.141	.289*	.058	-.253*	-.082	-.104
36. PRO	.593*	-.081	-.054	.078	.010	.170	.067	-.071	-.184	.034	.199	.325*	.365*
37. DEF	.081	-.160	.080	-.117	.183	.120	.143	.079	.031	-.048	.076	.191	-.122
38. MNT	-.111	-.085	.270*	-.093	.218	.095	.047	.128	-.028	.122	-.018	-.149	.167

	14	15	16	17	18	19	20	21	22	23	24	25	26
14. LFS2	**.37**$_2$												
15. LFS3	.108	**.67**$_2$											
16. LFS4	.165	-.029	**.74**$_2$										
17. LFS5	.350*	-.175	.708*	**.78**$_2$									
18. ELF1	.164	-.098	.151	.195	**.82**$_2$								
19. ELF2	-.011	.079	.120	.106	.095	†							
20. ELF3	.113	.332*	-.061	-.275*	-.163	.034	**.53**$_2$						
21. ELF4	.136	-.012	.125	.209	.485*	.071	.220	**.49**$_2$					
22. ELF5	.175	.201	.103	.184	.219	-.005	.355*	.470*	**.33**$_2$				
23. ELF6	.236	.328*	.228	.096	.212	-.051	.495*	.424*	.561*	**.83**$_2$			
24. ELF7	.206	.349*	.305*	.327*	.121	.292*	-.058	.113	.228	.281*	**.74**$_2$		
25. ELF8	-.094	.062	-.087	-.273*	.024	-.080	.299*	.187	.114	.109	-.417*	**.25**$_2$	
26. ELF9	-.161	.144	-.195	-.127	-.018	-.017	-.172	-.097	-.092	-.080	-.006	-.283*	†
27. UNC	.020	-.292*	.090	.121	.300*	.215	-.345*	.149	-.097	-.015	-.034	-.099	.313*
28. KNT1	.123	.025	.200	.186	.132	.200	.097	.201	.327*	.089	.261*	-.020	-.032
29. KNT2	.077	-.209	.210	.301*	-.019	.147	-.163	.022	.143	-.059	.149	-.026	-.053
30. KNT3	.222	-.118	.135	.306*	.031	.099	-.134	-.045	.115	-.110	.133	-.093	-.017
31. KNT4	.278*	.020	.008	.239	.152	.108	.168	.129	.367*	.021	.022	.108	-.030
32. KNT5	.045	.026	.018	.112	-.078	-.090	.071	.168	.065	.264*	-.035	-.023	.054
33. KNT6	.050	.038	.278*	.371*	.129	.283*	-.050	.169	.173	-.025	.182	-.127	.173
34. KNT7	-.026	.226	.127	.222	.017	.227	.015	.042	.216	.007	.202	-.048	.144
35. KNT8	.027	.037	.214	.251*	-.003	.286*	-.247*	-.088	-.047	-.290*	.261*	-.237	.111
36. PRO	.233	.204	-.035	.072	.386*	-.030	.056	.185	.285*	.175	-.061	.179	-.008
37. DEF	-.115	-.158	.065	.105	.206	-.031	-.189	.087	-.225	.014	.001	-.218	-.057
38. MNT	.200	-.186	.541*	.376*	.088	.103	-.051	.059	.073	-.001	.134	-.100	-.332*

	27	28	29	30	31	32	33	34	35	36	37	38
27. UNC	**.59**$_2$											
28. KNT1	-.021	--										
29. KNT2	.075	.629*	--									
30. KNT3	.094	.586*	.847*	--								
31. KNT4	-.012	.419*	.236	.352*	--							
32. KNT5	-.180	.230	.115	.002	.318*	--						
33. KNT6	.090	.568*	.361*	.431*	.417*	.163	--					
34. KNT7	.007	.575*	.426*	.506*	.315*	.131	.736*	--				
35. KNT8	.213	.492*	.466*	.528*	.271*	.034	.568*	.524*	--			
36. PRO	-.195	-.148	-.212	-.217	.288*	.209	-.088	-.184	-.354*	--		
37. DEF	-.112	-.105	-.183	-.239	-.086	.229	-.048	-.177	-.125	.165	--	
38. MNT	-.047	-.023	-.020	-.034	.013	-.041	-.067	-.098	.029	.038	.219	--

Note. Cronbach alpha scores are listed in boldface along the diagonal (for all alphas, accompanying numerical subscripts indicate the number of scale items). Dashes (--) highlight single-item measures, wherein Cronbach alpha scores are nonexistent. Daggers (†) indicate reliability coefficients that could not be calculated due to limited sample variance or other statistical constraints. ARS1 = Attributional Reasoning Style Scale 1; ARS2 = Attributional Reasoning Style Scale 2; DEF = Defense Case Strength; ELF1 = Extralegal Factors Scale 1; ELF2 = Extralegal Factors Scale 2; ELF3 = Extralegal Factors Scale 3; ELF4 = Extralegal Factors Scale 4; ELF5 = Extralegal Factors Scale 5; ELF6 = Extralegal Factors Scale 6; ELF7 = Extralegal Factors Scale 7; ELF8 = Extralegal Factors Scale 8; ELF9 = Extralegal Factors Scale 9; FI = Faith in Intuition; GCC = Global Crime Control; GDP = Global Due Process; IRA1 = Incapacitation–Restoration Attitudes Scale 1; IRA2 = Incapacitation–Restoration Attitudes Scale 2; KNT1 = Kent Guideline 1; KNT2 = Kent Guideline 2; KNT3 = Kent Guideline 3; KNT4 = Kent Guideline 4; KNT5 = Kent Guideline 5; KNT6 = Kent Guideline 6; KNT7 = Kent Guideline 7; KNT8 = Kent Guideline 8; LFS1 = Legal Factors Scale 1; LFS2 = Legal Factors Scale 2; LFS3 = Legal Factors Scale 3; LFS4 = Legal Factors Scale 4; LFS5 = Legal Factors Scale 5; MNT = Strength of Mental Health Evaluation; NFC = Need for Cognition; PRO = Prosecution Case Strength; TRA = Transfer Decision Certainty; TRI1 = Tripartite Scale 1; TRI2 = Tripartite Scale 2; TRI3 = Tripartite Scale 3; UNC = Uncertainty toward Hearing.
*$p < .05$.

Table T15

Indicator Loadings and Significance, Indicator and Composite Reliabilities, Average Variance Extracted (AVE) Scores, Latent Correlations and Discriminant Validity Scores for PLS Path Model 2 (Study 2)

Latent Variable	Indicator	Loading	*t*-value	*SD*	Indicator Reliability	Composite Reliability	AVE
1. FI	REI6	.83	2.65	.31	.69	.84	.52
	REI7	.73	2.44	.30	.53		
	REI8	.86	2.86	.30	.74		
	REI9	.50	1.70	.29	.25		
	REI10	.65	2.35	.28	.42		
2. NFC	REI1	.85	2.24	.38	.72	.80	.46
	REI2	.78	2.55	.30	.61		
	REI3	.36	0.92	.39	.13		
	REI4	.60	1.68	.36	.36		
	REI5	.70	2.43	.29	.49		
3. TRA	JVS2	--	--	--	--	--	--

Latent *r*:	1	2	3
1. FI	**.721**		
2. NFC	-.193	**.678**	
3. TRA	-.054	-.149	--

Note. The outer model is derived from 3 PLS algorithm iterations. Indicator reliability scores are used to estimate the reliability of items and are based on the square of corresponding loadings. Composite reliability scores are used to estimate the degree of internal consistency in lieu of Cronbach's alpha. The AVE index is used to estimate the degree of convergent validity. Discriminant validity scores are located along the diagonal, in boldface, and are based on the square root of the AVE. Dashes (--) highlight single-item measures, wherein the corresponding coefficients are nonexistent. FI = Faith in Intuition; JVS(#) = Judicial Verdict Scale (item number); NFC = Need for Cognition; REI(#) = Rational–Experiential Inventory (item number); TRA = Transfer Decision Certainty.

Table T16

Indicator Loadings and Significance, Indicator and Composite Reliabilities, Average Variance Extracted (AVE) Scores, Latent Correlations and Discriminant Validity Scores for PLS Path Model 3 (Study 2)

Latent Variable	Indicator	Loading	*t*-value	*SD*	Indicator Reliability	Composite Reliability	AVE
1. ARS1	ARS1	-.70	1.13	.62	.49	.04	.63
	ARS2	.88	1.34	.65	.77		
2. ARS2	ARS3	.82	4.64	.18	.67	.88	.79
	ARS4	.96	6.96	.14	.92		
3. ELF7	ELF15	.87	3.87	.22	.76	.88	.79
	ELF16	.91	5.60	.16	.83		
4. TRA	JVS2	--	--	--	--	--	--

Latent *r*:	1	2	3	4
1. ARS1	**.794**			
2. ARS2	.191	**.889**		
3. ELF7	.137	.223	**.889**	
4. TRA	.400	.221	.006	--

Note. The outer model is derived from 7 PLS algorithm iterations. Indicator reliability scores are used to estimate the reliability of items and are based on the square of corresponding loadings. Composite reliability scores are used to estimate the degree of internal consistency in lieu of Cronbach's alpha. The AVE index is used to estimate the degree of convergent validity. Discriminant validity scores are located along the diagonal, in boldface, and are based on the square root of the AVE. Dashes (--) highlight single-item measures, wherein the corresponding coefficients are nonexistent. ARS(#) = Attributional Reasoning Style Scale (item number; "Indicator" column only); ARS1 = Attributional Reasoning Style Scale 1 (person-focused); ARS2 = Attributional Reasoning Style Scale 2 (system-focused); ELF7 = Extralegal Factors Scale 7 (need for crime control); JVS(#) = Judicial Verdict Scale (item number); TRA = Transfer Decision Certainty.

Table T17

Indicator Loadings and Significance, Indicator and Composite Reliabilities, Average Variance Extracted (AVE) Scores, Latent Correlations and Discriminant Validity Scores for PLS Path Model 4 (Study 2)

Latent Variable	Indicator	Loading	*t*-value	*SD*	Indicator Reliability	Composite Reliability	AVE
1. ELF4	ELF7	.78	6.66	.12	.61	.80	.66
	ELF8	.85	8.09	.10	.72		
2. ELF5	ELF9	.86	14.08	.06	.74	.75	.60
	ELF10	.68	4.62	.15	.46		
3. KNT	LFS4	.77	4.20	.18	.59	.90	.61
	LFS5	.80	4.49	.18	.64		
	LFS6	.84	5.48	.15	.71		
	LFS9	.71	3.24	.22	.50		
	LFS10	.75	3.63	.21	.56		
	LFS11	.82	5.83	.14	.67		
4. LFS1	LFS12	.94	37.34	.03	.88	.89	.80
	LFS13	.85	9.49	.09	.72		
5. PRO	LFS1	--	--	--	--	--	--
6. TRA	JVS2	--	--	--	--	--	--
7. TRI3	TRI1	.77	5.97	.13	.59	.81	.68
	TRI2	.88	12.21	.07	.77		
8. WAV	DEM11	--	--	--	--	--	--

Latent *r*:	1	2	3	4	5	6	7	8
1. ELF4	**.812**							
2. ELF5	.479	**.775**						
3. KNT	.036	.128	**.781**					
4. LFS1	.319	.458	.062	**.894**				
5. PRO	.161	.300	-.294	.379	--			
6. TRA	.308	.646	-.121	.566	.593	--		
7. TRI3	.260	.465	.012	.242	.075	.272	**.825**	
8. WAV	.128	.259	-.018	.047	.309	.298	.157	--

Note. The outer model is derived from 7 PLS algorithm iterations. Indicator reliability scores are used to estimate the reliability of items and are based on the square of corresponding loadings. Composite reliability scores are used to estimate the degree of internal consistency in lieu of Cronbach's alpha. The AVE index is used to estimate the degree of convergent validity. Discriminant validity scores are located along the diagonal, in boldface, and are based on the square root of the AVE. Dashes (--) highlight single-item measures, wherein the corresponding coefficients are nonexistent. DEM(#) = Demographic Questionnaire (item number); ELF4 = Extralegal Factors Scale 4 (need for retribution); ELF5 = Extralegal Factors Scale 5 (need for deterrence); JVS(#) = Judicial Verdict Scale (item number); KNT = Utility of Kent Guidelines; LFS(#) = Legal Factors Scale (item number; "Indicator" column only); LFS1 = Legal Factors Scale 1 (offender dangerousness); PRO = Prosecution Case Strength; TRA = Transfer Decision Certainty; TRI(#) = Tripartite Scale (item number; "Indicator" column only); TRI3 = Tripartite Scale 3 (global deterrence); WAV = Judicial Experience (number of waiver hearings).

Appendix U

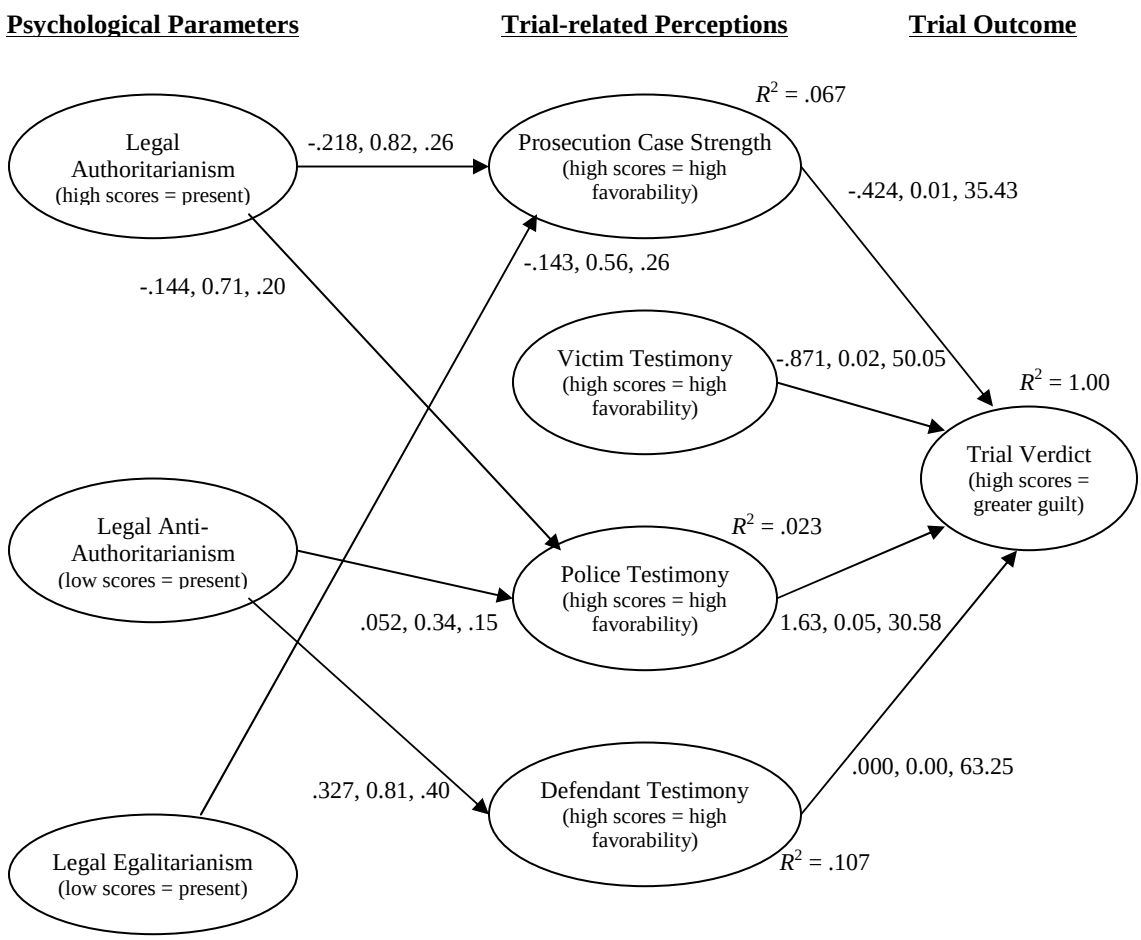


Figure U5. A PLS-SEM inner model based on associated latent variables and the temporal order of variables (Study 1). Model 1 (extracted from the overall sample) depicts the causal relations between pertinent psychological parameters, specified perceptions of the trial and mock-juror decision-making. Coefficients are grouped in the following order (path coefficient, *t*-value, standard deviation).
*If $p \leq .01$, then $t(191) \geq 2.60$.

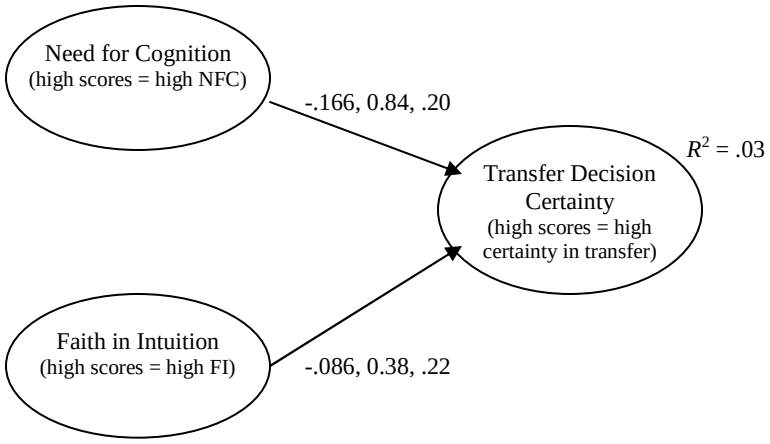


Figure U6. A PLS-SEM inner model based on predictions set forth by the *dual-process theory of proximal/distal defenses* (Study 2). Model 2 (extracted from the overall sample) depicts the causal relations between Need for Cognition, Faith in Intuition and judicial decision-making. The path between NFC and transfer illustrates the first component of Hypothesis 1a; the path between FI and transfer illustrates the second component of Hypothesis 1a. Coefficients are grouped in the following order (path coefficient, *t*-value, standard deviation).
*If $p \leq .03$, then $t(63) \geq 2.22$.

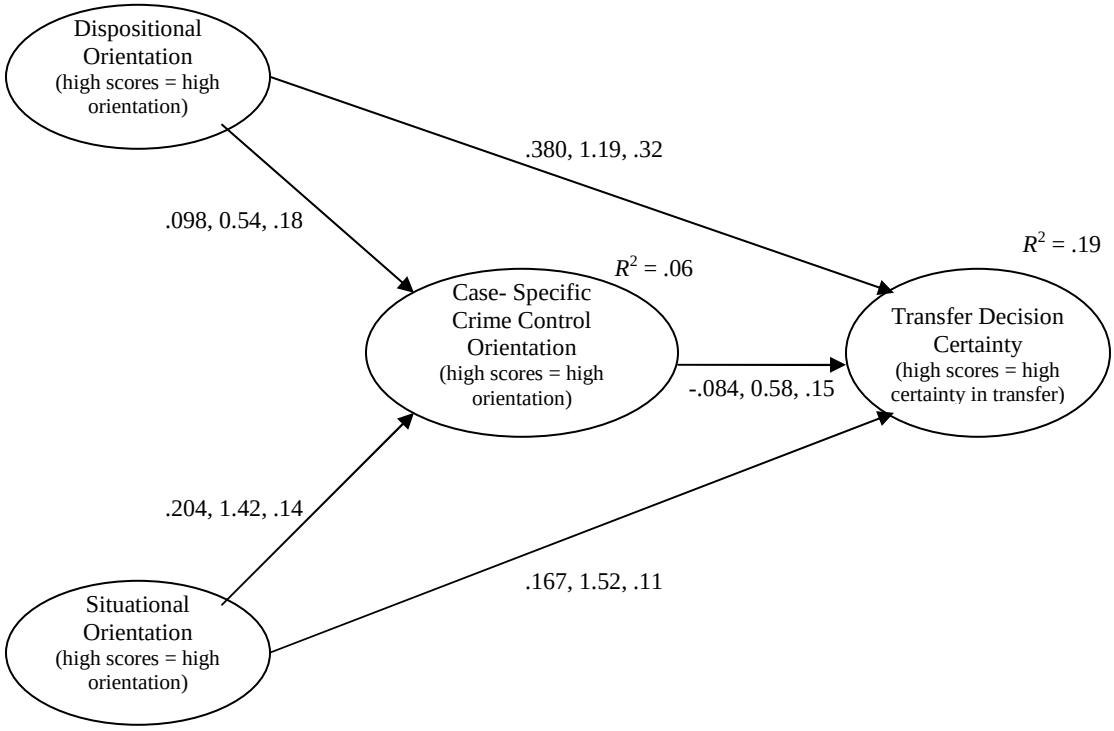


Figure U7. A PLS-SEM inner model based on predictions set forth by *uncertainty avoidance–causal attribution theory* (Study 2). Model 3 (extracted from the overall sample) depicts the causal relations between crime control motives, dispositional attributions, situational attributions and judicial decision-making. The paths between dispositional orientation, crime control and transfer illustrate the first component of Hypothesis 2; the paths between situational orientation, crime control and transfer illustrate the second component of Hypothesis 2. Coefficients are grouped in the following order (path coefficient, *t*-value, standard deviation).
*If $p \leq .02$, then $t(63) \geq 2.39$.

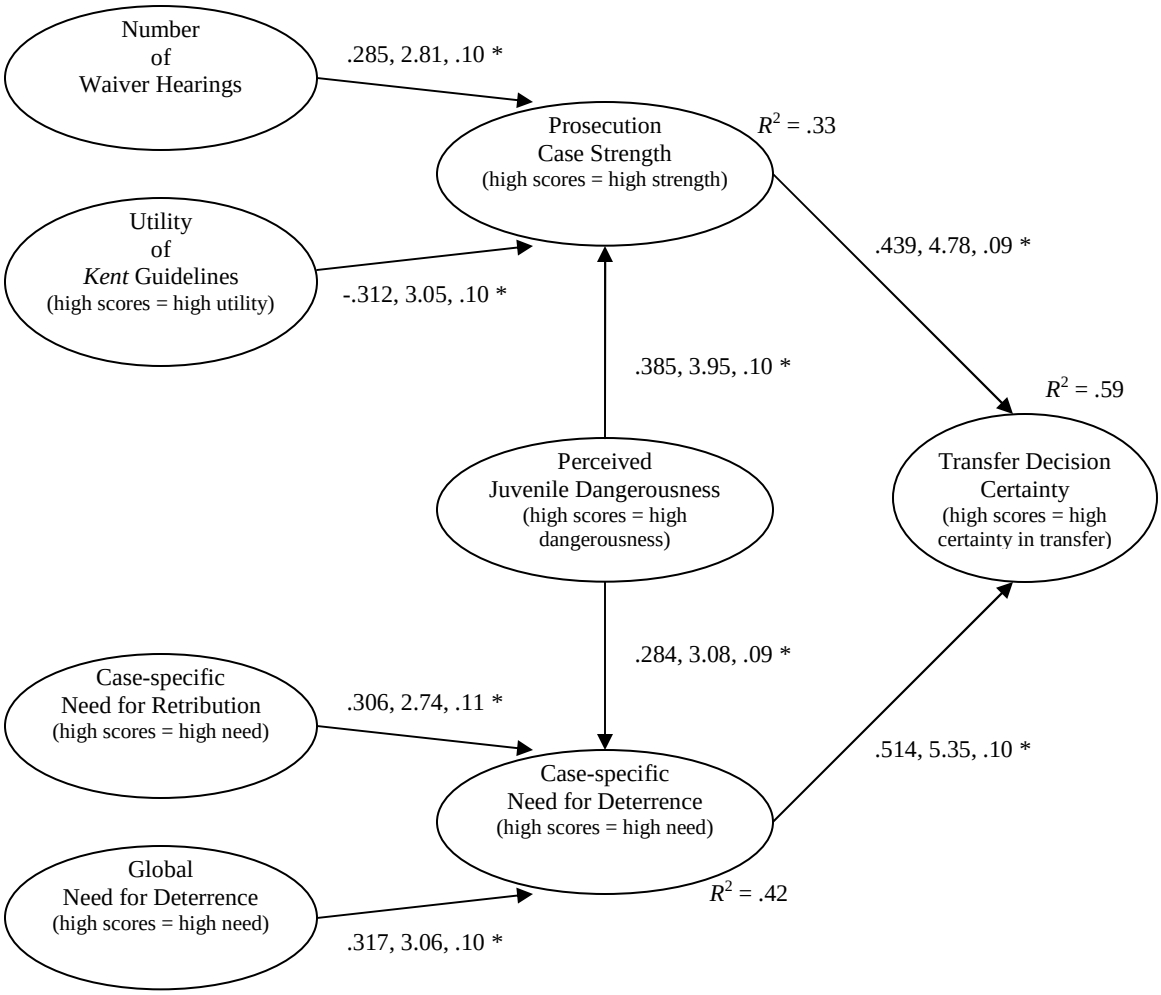


Figure U8. A PLS-SEM inner model based on predictions set forth by a "statutory–nonstatutory factors" perspective (Study 2). Model 4 (extracted from the overall sample) depicts the causal relations between specific extralegal factors, legal considerations, legal experience and judicial decision-making. The paths between prosecutor case strength, case-specific deterrence and transfer illustrate the first component of Hypothesis 3; the paths between prosecutor case strength, juvenile dangerousness, *Kent* Guideline utility and waiver hearings illustrate the second component of Hypothesis 3; the paths between case-specific deterrence, juvenile dangerousness, global deterrence and retribution illustrate the final component of Hypothesis 3. Coefficients are grouped in the following order (path coefficient, *t*-value, standard deviation).
*If $p \leq .02$, then $t(63) \geq 2.39$.

[i] The developers of SmartPLS (Ringle, Wende, & Will, 2005) noted that the recent release of the statistical package (version 2.0M3) corrected for several glitches (or "bugs") in the software, which included fixes for the bootstrapped *t*-value calculator and the random number generator (among other fixes). To determine if the fixes were accurate, two simple simulation path models were tested. In Simulation 1, SPSS 22.0 was used to construct a perfectly distributed dataset containing two variables (X_1 and Y_1). Scores for X_1 were based on the sequence, (1_1, 2_2, 3_3, 4_4, 5_5, 6_6, 7_7, 8_6, 9_5, 10_4, 11_3, 12_2, 13_1), where subscripts represent the frequency of the corresponding score. Also, $X_1 = Y_1$, which is indicative of a perfect (error-free) linear relationship. Regression results extracted from SPSS indicated that the R^2 was 1.00 and the standardized path coefficient (β) was 1.00 (*t*-values are not available when variances are fully explained). Results extracted from SmartPLS confirmed the SPSS results. In Simulation 2, SPSS was used to construct a "jittered" (error-laden) dataset containing two variables (X_2 and Y_2). Scores for X_2 were based on the same sequence used for X_1. Scores for Y_2 were based on the sequence, (1_1, 2_2, 3_3, 4_4, 5_5, 6_6, 7_7, 8_6, 9_5, 10_4, 11_3, 12_2, 15_1), where the value of 15_1 was used to introduce prediction error in the linear model. Regression results extracted from SPSS indicated that the R^2 was .992 and the β was .996 (because SmartPLS calculates *t*-values via bootstrapping, these scores cannot be compared with those calculated using SPSS). Results extracted from SmartPLS confirmed the SPSS results. Based on the two simulations, the accuracy of the PLS algorithm used by SmartPLS was valid.

[ii] Prior to the central analysis, moderated multiple regression analysis was implemented using dummy coding in order to examine simple effects related to the independent variable (i.e., MS stimulus type). Preparing the moderated regression tests involved a series of basic steps (see Keppel & Zedeck, 1989; Mertler & Vannatta, 2005; West, Aiken, & Krull, 1996; Whisman & McClelland, 2005). First, the number of levels of the moderator variable of interest, *c*, was identified. Second, in order to create interaction terms for the regression tests, the number of requisite *vectors* (i.e., variables that use dummy codes in a specific arrangement) was determined. The required number of vectors (v_{req}) is always one less than the number of moderator levels, or $v_{req} = c - 1$. Third, the vector variables were generated. In statistics, procedures for constructing requisite vectors simply require recoding original moderator variables as follows: (a) for all requisite vectors, the reference group is *always* given the numerical code of 0, (b) for each vector, the non-reference group *to be compared* (i.e., simple effect of interest) is always given the numerical code of 1 and *all other* remaining non-reference groups (if there are any) are coded as 0, and (c) the second step is repeated for every non-reference group, so that all requisite vectors collectively account for the simple effects between the reference group and every non-reference group. Fourth, the vector variables were each multiplied by a predictor of interest, in turn producing separate interaction terms that collectively captured the differences between the reference group and non-reference groups. Finally, to determine moderation, a series of regression equations, $y = a + bx$, were examined. Equations were set up to explain a given criterion variable from the predictor of interest and the predictor's three corresponding interaction terms. In this manner, statistically significant interaction terms highlight significant paired comparisons captured by those terms (consequently, a = the mean of the reference group; further, the means of non-reference groups can be determined by summing their corresponding interaction term's b coefficients with a). There was no evidence of moderation with respect to MS stimulus type.

[iii] Regression analyses were also implemented in order to examine interaction effects between the observed psychological parameters. Specifically, an overall RLAQ23 mean composite score was calculated so as to evaluate interactions between legal authoritarianism and the two subscales of the REI. All regression analyses exploited *centering*, a mathematical procedure that sets the means of predictors to zero without affecting their standard deviations. Centering was accomplished by subtracting predictor averages from corresponding predictor raw scores. Centered predictors were subsequently multiplied to generate interaction terms. Findings from these regression tests failed to identify any interactions between legal-related authoritarian attitudes and information-processing mode.