

THE ROLE OF DEHUMANIZATION IN
UNDERSTANDING RESPONSES TO SEX
OFFENDERS IN THE COMMUNITY

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ABSTRACT

The successful rehabilitation of sex offenders entails reintegration into the community and desistance from further offending. Although research shows that many treated sex offenders are capable of sustained behaviour change (Hanson, Bourgon, Helmus, & Hodson, 2009), most communities resist the return of these offenders. These reactions are often expressed through the implementation of punitive legislation such as offender registries and community notification schemes (Petrunik, Murphy, & Federoff, 2008), as well as direct community backlash (Brown, Deakin, & Spencer, 2008). Unfortunately, such responses tend to exacerbate the conditions which make recidivism more likely, including unemployment, unstable housing, lack of access to treatment, and social isolation (Willis, Levenson, & Ward, 2010). Addressing these negative responses requires a better understanding of how they are formed and maintained. This study examined participants' responses to offenders in the community through the framework of dehumanization (Haslam, 2006). Participants were randomly assigned to read one of six vignettes describing a hypothetical offender who would shortly be returning to the community. It was predicted that participants who dehumanized offenders more would be less supportive of the offender's rights in the community (hypothesis 1) and less willing to have personal contact with the offender (hypothesis 2). It was also predicted that participants would respond more negatively to high risk than low risk offenders (hypothesis 3), and more negatively to sexual offenders than violent or property offenders (hypothesis 4). Hypotheses 1, 2, and 4 were fully supported. Hypothesis 3 was partly supported as the offender's risk level did not significantly affect participants' willingness for personal contact. Exploratory regression and structural equation modelling analyses found that dehumanization played a particular role in mediating the effect of sex offending on the perceived dangerousness of the offender, which in turn strongly predicted negative reactions to the offender in the community. Dehumanization did not play a similar role in mediating the effect of risk level. Support for the applicability of the dehumanization framework to responses to sex offenders presents a number of possible avenues for future research, including the effects of racism and offender ethnicity (Goff, Eberhardt, Williams, & Jackson, 2008), moral disengagement processes (Bandura, 1999), and the development of a more comprehensive theoretical model which incorporates dehumanization as well as other latent factors which are yet to be identified.

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CHAPTER 1: INTRODUCTION

The attitudes and beliefs of the members of the public regarding offenders are often cited by researchers and politicians alike as playing an integral role in the development of criminal justice policy and legislation, which are believed to reflect the widespread and deeply-held views of the community (Roberts & Hough, 2005). A powerful example of this is the recent proliferation of sex offender legislation in jurisdictions such as Canada, the United States, and the United Kingdom. Policies such as sex offender registries, community notification, and residency restrictions are often implemented or enhanced following community outcry over dramatic and unusually violent crimes, particularly those against children (Brown, S., 2009a), which is reflected in the practice of naming new statutes after the child victims; e.g., Sarah's Law (U.K.), Megan's Law (U.S.), and Christopher's Law (Ontario).

However, it can be difficult to assess the precise degree of influence that these perceived attitudes exert on legislative processes, as their role is often indirect and subject to misrepresentation. Last year, Tim Hudak, the Ontario Conservative Party Leader, was accused of exploiting a recent controversy when outlining his justice platform—which includes a provision for a publically-accessible sex offender registry—by suggesting that several parents in attendance at his speech were members of a local protest movement against the release of a woman convicted of sex offenses against children to a halfway house beside an elementary school. In actuality they were members of another community, but Hudak defended his actions by claiming that the outrage against sex offenders was universal and not limited to the affected community (Ladurantaye, 2011). Yet while attitudes and beliefs about sex offenders are often constructed as uniformly and universally punitive, researchers have found that, when given the opportunity, people often express complex views on these topics, and are willing to consider both emotional and practical issues when formulating their opinions (e.g., Applegate, Cullen Turner, & Sundt, 1996; Brown, S., Deakin, & Spencer, 2008).

Although the public is often considered to be poorly informed and too emotionally reactive with regards to criminal justice issues (Schiafone & Jeglic, 2009), it is important to recognize the enduring role that their attitudes and opinions will play in the future of criminal justice policy (Brown, S., 2009b). Failure to garner community support for restorative and rehabilitative approaches to crime or attempts to supplant public opinion with expert opinion in terms of policy development will only serve to increase the gap between what researchers

recommend and what community members and their political representatives are willing to accept (McAlinden, 2006). In order to address or change the expectations of the public with regard to the treatment of offenders, and of sex offenders in particular, it is essential that their responses to these individuals are understood.

The following chapter is a review of the relevant research literature regarding how people respond to sex offenders and their treatment, punishment, and rehabilitation. The review begins with a brief overview of some of the relevant findings from the general research on attitudes toward offenders of all types and related beliefs about treatment and punishment. Following this is a thorough discussion of the literature specific to responses to sex offenders, including beliefs about their characteristics, support for their treatment and punishment, and support for sex offender-specific legislation. The next section describes various factors which have been found to influence participants' responses regarding sex offenders, including offense and offender characteristics and participant characteristics, as well as an overview of the potential significance of the dehumanization of sex offenders in explaining responses to these individuals. The fourth section establishes the particular importance of studying attitudes, beliefs, and intentions regarding sex offenders in the context of community reintegration by reviewing the research on the community's role in the reintegration process and barriers to successful reintegration. This section also highlights the centrality of human rights in theories of and approaches to sex offender reintegration. The final section introduces the present study and its major hypotheses, to be elaborated on in Chapter 2.

1.1 General Findings Regarding Responses to Offenders

The study of how people perceive, evaluate and respond to various social phenomena has long been central to social psychological research, and is commonly discussed in terms of the study of *attitudes*, although there is some ambiguity over how to precisely characterize and define this concept (Fishbein & Ajzen, 1975). Researchers largely agree, however, that attitudes involve an evaluative component, regarding a favourable or unfavourable orientation toward a target. Zanna and Rempel (1988) further define attitudes as, "items of social knowledge, built from experiences, beliefs, and feelings generated by the attitude objects" (p. 315), and in their *Handbook of Attitudes*, Albarracín, Johnson, and Zanna (2005) extensively discuss the reciprocal relationships between attitudes and cognition (beliefs), affect (feelings), and behaviours (intentions and actions), in which attitudes both influence and are influenced by these separate

components. Thus, although the literature on how people respond to sex offenders often refers generally to the study of attitudes, in actuality much of this research involves the study of individuals' beliefs, opinions, values, feelings, actions, and behavioural intentions toward sex offenders, from which the related but conceptually distinct attitudes are inferred. The author of the present study will endeavour to use these terms precisely and accurately in describing the various ways in which people respond to sex offenders.

What members of the public think and feel about offenders as a whole and how these offenders should be treated has been a popular subject of research in recent decades, with much study devoted toward identifying what attitudes and beliefs people hold regarding offenders, primarily through the use of mass surveys and polls supplemented by some qualitative studies (Roberts & Hough, 2005). In their review, Roberts and Hough found that emerging commonalities are that attitudes toward offenders tend to be punitive, specific knowledge of the criminal justice system and the nature of offending is low, and that perceptions of current criminal justice practices are that they are too lenient to deal effectively with offenders. However, it has been suggested that these responses partly reflect the generalized manner in which questions are posed in survey and poll research—broad questions in global contexts which prompt symbolically-oriented responses as people express their moral opposition to criminal behaviour (Freiberg, 2001; Roberts & Hough, 2005).

Several researchers have found that juxtaposing questions which solicit global evaluations about the punishment of offenders with questions contextualized with specific details pertaining to individual offenders produces independent, even inconsistent responses. For example, Applegate and colleagues (1996) found that while 88.4% of their respondents supported the punitive three-strikes sentencing option (a mandatory life sentence for a third conviction) when asked in a single poll question, when given the option to select their preferred sentence in response to specific vignettes describing realistic scenarios in which an offender would be facing a third conviction, fewer than 20% actually chose to apply this option in the given scenario. Cumberland and Zamble (1992) found a similar effect with attitudes toward parole – although more than 80% of respondents felt that the Canadian parole system was too lenient and that the number of offenders released was too high, when given specific situations which varied in terms of the seriousness of the offense, the criminal history of the offender, and their level of participation in rehabilitation programs, participants' level of endorsement for

release ranged from a low of 27.6% for violent, persistent, unrehabilitated offenders to 86% for nonviolent, first-time offenders with strong treatment participation. Moreover, while both global and scenario-specific responses predicted the release scores across scenarios, analyses revealed that these effects were independent, suggesting that respondents' opinions were influenced by multiple competing factors. Although similar experiments have not been conducted in relation to sex offenders specifically, analyses of qualitative research have also provided evidence that even when considering this very serious category of offenders, people will generate complex and thoughtful opinions which take into account various situational and individual factors (Brown, S. et al., 2008; Clarke, Moran-Ellis, & Sloney, 2002).

Although public responses to offenders and their treatment by the criminal justice system continue to demonstrate a persistent punitive orientation, at least in terms of non-specific global opinions, there is also evidence to suggest growing acceptance of the limitations of punishment in addressing criminal behaviour and the value of restorative and rehabilitative approaches to crime (Roberts, Crutcher, & Verbrugge, 2007). However, while these attitudes and beliefs have been surveyed extensively, less is known about what factors contribute to the shaping and maintenance of them, particularly when it comes to sex offenders (Brown, S., 2009a; Roberts & Hough, 2005).

1.2 Findings Regarding Responses to Sex Offenders

Sex offenders represent one of the most reviled and poorly understood offender groups. Attitudes toward them are generally the most punitive, especially toward those convicted of sex crimes against children (Roberts & Hough, 2005), but even these responses are not without some variation based on intervening factors (Willis, G. M., Levenson, & Ward, 2010). However, accurate knowledge about these offenders is quite low and fraught with persistent misperceptions and stereotypes (Griffin & West, 2006).

The majority of research in this area has focused on professionals working with sex offenders, such as correctional and parole officers, psychologists, social workers, and nurses, although surveys of student and community samples have also been conducted (Brown, S., 2009a). While the responses of professionals are clearly important due to their close contact with offenders and direct involvement in treatment and rehabilitation, it is important not to overlook the role of community members. Their opinions and evaluations of sex offenders may have an indirect influence, for example, by shaping policy development, as discussed above. They may

also have a direct impact, such as when community members interact with sex offenders in the community (Willis, G. M. et al., 2010), as demonstrated by the community protest against the release of a convicted sex offender to a halfway house next to an elementary school, which resulted in her being moved to another town (Ladurantaye, 2011).

As with research on responses to offenders more generally, research in this area has relied on mass surveys as well as some qualitative research. The literature broadly addresses issues of beliefs about the characteristics of sex offenders, attitudes and opinions regarding the appropriate treatment and punishment of sex offenders, and degrees of support for and beliefs about the importance and effectiveness of sex offender legislation.

1.2.1 Beliefs about Sex Offender Characteristics

Sex offenders are a heterogeneous category of offenders. Despite prevalent misconceptions that this group is highly uniform in terms of the nature of their crimes and their risk to continue offending (Brown, S. et al., 2008; Griffin & West, 2006), there in fact exists considerable variation within this population, and they rarely fulfill the popular mythology of a depraved sexual psychopath. Sanghara and Wilson (2006) identified six facets of sex offender stereotypes: (1) the low intellectual functioning sex offender who does not know any better, (2) the 'dirty old man' desperate for sex, (3) the sexually frustrated man who cannot cope with being intimate with sexual partners his own age, (4) the sexually-obsessed and indiscriminate offender, (5) the lurking stranger, and (6) the psychotic sex offender who cannot control himself. They found that these stereotypes were more strongly endorsed among participants who were inexperienced in working with sex offenders compared to those who were (Sanghara & Wilson, 2006).

Elements of these stereotypes, particularly the latter two, are also readily apparent in qualitative research on attitudes toward sex offenders. In Madriz' (1997) early research with women in New York, typical sex offenders were characterized as being insane, out-of-control, and animalistic, as well as immoral, evil, and lacking in compassion. Clarke and colleagues' (2002) U.K.-based study on perceptions of date rape as compared to stranger rape found that while participants struggled to define rape in the context of a relationship, they were fairly confident in describing the features of a more 'typical' sexual assault, that of a violent and mentally unbalanced stranger ambushing a woman in a dark and secluded place late at night. In actuality, the majority of sex offenses are committed by people known to their victims—

acquaintances, friends, or family members (Brennan & Taylor-Butts, 2008). As well, while the more serious and persistent offenders may be distinguished by higher levels of sexual deviancy and antisocial orientation (including psychopathy), this characterizes only the high risk offenders, and not the majority of the population (Hanson & Morton-Bourgon, 2005; Harris, G. T. et al., 2003). Salerno and colleagues (2002) also found that respondents spontaneously imagined more severe sex offender prototypes when asked to describe the typical offender, even though the majority of sex offenses, reported and unreported, are not physically violent (Brennan & Taylor-Butts, 2008; Statistics Canada, 1999). In general, lay people tend to imagine that the prototypical sex offender is highly dangerous, violent, sexually deviant, and not in control of his actions. While a select population of sex offenders do fit this characterization, they are extreme cases and as such are far from the norm.

Most lay people also overestimate the rate at which sex offenders commit new crimes, known as the *recidivism* rate. In a large U.K.-based survey, two-thirds of the respondents estimated that at least 26% released sex offenders commit a new sexual offense within the year, and nearly one-third believed that 51% of offenders would recidivate in a year (Brown, S. et al., 2008). Qualitative findings from the same study indicated a prevalent belief that sex offenders present an imminent and incorrigible risk to their communities. Similar results were also found in a sample of Canadian undergraduates, who estimated on average that 59.2% of sex offenders go on to commit new offenses, although this dropped to 42.3% for treated offenders (Olver & Barlow, 2010). In a U.S.-based community sample, the average estimate was 74%, dropping to 50% for those offenders receiving specialized psychological treatment, and two-thirds of participants believed that sex offenders were more likely than non-sex offenders to commit further crimes (Levenson, Brannon, Fortney & Baker, 2007). Although actual recidivism rates are unknowable because of the high rate of under-reporting sexual crimes, a recent meta-analysis of recidivism studies nonetheless found that even with an average follow-up period of 5-6 years, the sexual recidivism rate across studies was 13.7% and that most detected recidivism was non-sexual in nature (Hanson & Morton-Bourgon, 2005). It is generally found that sex offenders do not recidivate at a higher rate than other offenders (Willis, G. M. et al., 2010).

Levenson, Brannon et al. (2007) also found that 77% of their respondents believed that the rate of new sex offenses is rising. However, in both Canada and the U.S., rates of sexual offending have been found to be stable or decreasing (Brennan & Taylor-Butts, 2008; Griffin &

West, 2006; Statistics Canada, 1999). Respondents in this survey also believed on average that 46% of sex offenders are detected by police, although official estimates suggest that as many as 90% of sex crimes go unreported (Brennan & Taylor-Butts, 2008), underscoring just how little accurate knowledge may be present in the population (Levenson, Brannon et al., 2007). This raises concerns about attitudes and opinions regarding sex offenders being based on faulty assumptions about the nature of sex offenders and sexual offending patterns, and also suggests that community members are relatively poorly equipped to effectively manage the risk of being sexually victimized (Salerno et al., 2002).

1.2.2 Support for Treatment and Punishment of Sex Offenders

Researchers have also explored the issue of what people believe is the appropriate response of the criminal justice system to the actions of sex offenders, particularly in terms of whether and how they should receive rehabilitation treatment and how they should be punished. It is not uncommon for there to be tension between the goals of punishment and rehabilitation, especially in the case of sex offenders, toward whom people are even more strongly predisposed toward punitiveness (Sahlstrom & Jeglic, 2008), even in comparison to violent but non-sexual offenders (Rogers & Ferguson, 2010).

Several studies' results reflect participants' desire for both punishment and treatment of sex offenders. In a study in Wales, Brown, S. (1999) found that while the majority of their respondents saw treatment as a 'soft' option which only worked some of the time, over half still felt that sex offender treatment was a good idea, so long as it was paired with some kind of punishment. Even among those who supported sex offender treatment, they were split on whether this treatment should be available only in institutions (45%) or in the communities as well (51%). Only a third of participants were willing to have a treatment centre in their communities, but half of these supportive respondents also stated that they would sign a petition against having a treatment centre anyway, indicating that while community members may recognize the potential value of sex offender treatment, they are nonetheless sceptical about its effectiveness and hesitant to become personally involved. Levenson, Brannon et al., (2007) found in their Florida survey that prison-based treatment was perceived as being the second most effective strategy for reducing sexual offending, after community notification and followed by prison itself and then community-based treatment. A similar survey of Virginian residents found that over half the sample did not believe that rehabilitation of sex offenders was even possible

(Payne, Tewksbury, & Mustaine, 2010). Olver and Barlow's (2010) study of Canadian undergraduates found that the majority of participants felt that at least some sex offenders could be managed in the community, that intensive treatment and community supervision would reduce sexual offending, and that effective treatment would be preferable to lengthy sentences. They also estimated that offenders who received treatment would have a 17% lower recidivism rate. However, the same sample of respondents also strongly felt that current sentences are too lenient and longer sentences are needed to reduce crimes, and had little confidence in the effectiveness of the criminal justice system to rehabilitate offenders. An earlier study of Canadian undergraduates also found that students were strongly supportive of both incarceration and treatment, with half espousing indefinite treatment because of the serious nature of the crime (Valliant, Furac, & Antonowicz, 1994), and the extreme length of treatment may actually indicate that participants doubted the offenders' amenability to change or the effectiveness of the treatment options in anything less than indefinite dosage.

It is difficult to synthesize these findings given differences in samples and research methods, but it appears that many people strongly desire that *something* be done regarding the future behaviour of sex offenders, in terms of punishment, treatment, or both, but there is a persistent element of pessimism that any approach can be successful in preventing future sex crimes. This may be because they mistrust the capacity of our existing criminal justice system to administer treatment that might otherwise be effective, or because they see people convicted of sex crimes as incorrigible offenders who cannot be rehabilitated regardless (e.g., Brown, S. et al., 2008; Payne et al., 2010). Wnuk, Chapman, and Jeglic (2006) found that beliefs about the effectiveness of treatment for and desire for incapacitation of sex offenders were independent of participants' support for mandatory treatment of sex offenders. If support for treatment is unrelated to beliefs about its effectiveness, perhaps some individuals support treatment solely on principle or because they feel that even minimal, unlikely successes warrant the effort. Contrary to pessimistic views of treatment effectiveness, however, a number of recent meta-analyses of sex offender treatment have concluded that interventions can produce 30% to 40% reductions in rates of re-offending in comparisons between treated offenders and untreated offenders, particularly when these interventions adhere to best practices (Hanson & Morton-Bourgon, 2004; Hanson, Bourgon, Helmus, & Hodgson, 2009; Lösel & Schmucker, 2005). It must be noted that each of these meta-analyses raised the issue of the dearth of high quality outcome evaluation

studies, which must temper, but not extinguish, hopes for successful methods of sex offender rehabilitation.

Opinions regarding appropriate sentence length are predominantly related to punitive goals rather than rehabilitative ones (e.g., releasing offenders based on successful treatment progress or as part of a treatment plan), but responses vary on what the most appropriately punitive sentence length would be. Participants in Clarke et al.'s (2002) U.K.-based qualitative study believed that sentence length should be commensurate with the degree of harm experienced by the victim, although they recognized the difficulty inherent in quantifying harm. They generally felt that five years was the absolute minimum sentence length appropriate for a person convicted of rape, but that even this would be too short if this sentence length included parole, which the participants considered to be inappropriate. In contrast, participants in Olver and Barlow's (2010) study believed that 5 years was the average sentence length sex offenders received in Canada (which was fairly close to official estimates of 4.25 years for federal custody), and felt that an appropriate sentence length would be in excess of 10 years. Levenson, Brannon et al.'s (2007) Florida-based sample expressed even more extreme views, suggesting that approximately 40 years of incarceration was an acceptable sentence, with 50 months of treatment during incarceration and then again post-release. It should also be noted that the modal response in this study was 99 years—the highest value that participants could enter within the survey's formatting constraints.

Variation in beliefs about sentence length for sex offenders may reflect individuals' unfamiliarity with actual sentencing standards in their respective countries, differences between countries' sentencing practices, and the fact that researchers have generally posed these questions without specifying any particular characteristics about the offender or the offense which might mitigate or exacerbate the punitiveness of participants' responses. In addition to the more conventional punishments, some participants in Clarke et al.'s (2002) focus groups also indicated support for surgical castration, anti-androgen therapy (chemical castration), life imprisonment, and execution. McGhee's (2008) study of U.S. residents' opinions regarding capital punishment for child sex offenders also found that between 16% and 35% of their sample endorsed the death penalty for these offenders, depending on the specific nature of the offense. Over 50% of the participants also endorsed life sentences, with or without the possibility of parole, regardless of the details of the offense. Chemical castration was the least endorsed strategy for reducing sexual

offending in Levenson, Brannon and colleagues' (2007) research, and Olver and Barlow (2010) reported that their Canadian undergraduate participants were unlikely to agree that surgical castration is an appropriate intervention, suggesting that these views represent an extreme, but not inconceivable, degree of punitiveness. These extreme views may also be more prevalent in U.S. jurisdictions, although cross-national research has yet to be conducted.

In the available literature, the exact nature of the tension between rehabilitative and punitive aims regarding sex offenders is not clear. In some respects, it resembles the issue of responses to globally-situated concerns focusing on more symbolic, emotional expressions (i.e., punishing offenders to assert a moral stance against the wrongness of their actions and to metaphorically redress the harm to their victims) and opinions toward specific situations taking into account more instrumental concerns, such as recognizing that treatment, while it may be symbolically 'soft', is a valuable means to an end in terms of preventing future crimes (Freiberg, 2001). Ostensibly punitive responses such as social exclusion and desire for prolonged incarceration may also be explained by the community's fear of sex offenders and the perceived risk they pose (Brown, S., 1999).

Finally, the contradictory and complex attitudes may also reflect the gap between lay and academic interpretations of meaning of rehabilitation. It is unclear what conceptualization of rehabilitation is commonly held among community members—they may see it as a vague ideological term with politically leftist connotations or they may understand it in terms of specific deterrence, where a given individual no longer commits offenses (Payne et al., 2010), the latter being more consistent with the recidivism indicator used in research. In Clarke et al.'s (2002) research, participants described their understanding of rehabilitation as something which should occur in prison as a prerequisite to release, and which involves some indication that the offender is a 'changed' person, who understands the gravity of his or her actions, and feels remorse. In contrast, from an academic perspective the post-release community setting plays an essential role in the on-going process of offender rehabilitation (Willis, G. M. et al., 2010; Wormith et al., 2007), and victim empathy and denial of the crime have not been found to be meaningful predictors of recidivism rates for sex offenders (Hanson & Morton-Bourgon, 2005). This lack of clarity around basic terminology and concepts may explain variations in community confidence and support for offender treatment. Even strong, empirically-validated programs may

not meet the expectations of the public, lacking face validity as convincing solutions, and thus fail to garner support (Petersilia, 2004).

1.2.3 Support for Sex Offender Legislation

A unique element in the societal response to sex offenders has been the development of specialized legislation to monitor and control the actions of these offenders in their communities, beyond that which is expected of most other offender groups. This trend has become apparent across several countries, including Canada, the U.S., and various European nations (Petrunik & Deustchmann, 2008; Petrunik et al., 2008). These policies include sex offender registries, community notification, residence restrictions and other limits on movement, electronic monitoring, DNA banks, mandatory sentencing requirements, civil commitments and indefinite sentencing (Cohen & Jeglic, 2007; McAlinden, 2006; Petrunik, 2002). Most of these policies are enforced at a federal level, although individual states or provinces have created their own legislation, and in the U.S. some municipalities have created local ordinances to control and monitor sex offenders (Mercado et al., 2008).

Nations differ in the nature and extent of their sex offender laws, due to a number of structural and philosophical differences (Ruddell & Winfree, 2006). European approaches tend to have stronger medical orientations, seeing offenders as more pathological than evil, unlike the perspective in the U.S. (Petrunik & Deustchmann, 2008). Thus, surgical castration and psychopharmacological sex drive treatments have a longer history and stronger acceptance in many European countries compared to their relative unpopularity in Canada and the U.S. (Petrunik & Deustchmann, 2008; Petrunik et al., 2008). Countries also vary in how directly citizens can participate in the legislative process through referendums, which can affect the reactionary nature of their policies (Petrunik & Deustchmann, 2008). They also differ in the organization of power between the federal and regional levels of government, which can have implications for the types of legislation which are developed (Petrunik et al., 2008). For example, in the U.S., civil commitment involves indefinite detainment in treatment facilities on the grounds of the unmanageable risk some offenders are deemed to pose. Such legislation is not feasible in Canada because this class of offenders is managed at the federal level and healthcare is under provincial jurisdiction. Instead, the Canadian government has created a provision for designating very high risk offenders with a Dangerous Offender (DO) status, which involves indefinite incarceration to a federal correctional institution and lifetime supervision if the

offender is released. The majority of offenders with this designation, or the Long Term Offender (LTO) designation (in which the sentence is not indefinite, but the probation period is extended to up to 10 years), are sex offenders (Petrunik et al., 2008) and the criteria for the designations were in fact specifically designed to apply to violent sex offenders (Motiuk, 2001).

Other Canadian approaches to managing sex offenders in the community are restrictions on parole and temporary absences, sex offender registries at both provincial and federal levels (the federal registry is not accessible to the public), police-mediated community notification, and peace bonds, which are often applied to restrict the movements of both released sex offenders and people who are suspected by police of posing an enhanced risk to children, whether or not they have been convicted (Petrunik, 2002; Petrunik et al., 2008). While the Canadian approach has typically been more moderate and cautious compared to American legislative trends, the recently passed Bill C-10, the Safe Streets and Communities Act (2011), includes several new 'tough on crime' provisions targeting sex offenders specifically. These include mandatory minimum sentences for several existing sex offenses and the elimination of conditional sentencing options for child-luring and sexual assault, two new child-related sex offense categories (making sexually-explicit materials available to a child and agreeing to commit a sexual offense against a child), and no longer allowing people convicted of sexually abusing children to be eligible for pardons (Chase, 2011).

Such legislation is not typically enacted based on research evidence, but rather as a means of responding to high-profile sex crimes, or the spectre of such, especially those in which the victim is a child, regardless of the representativeness of these incidents in relation to the majority of sex crimes (Brown, S., 2009a; Petrunik et al., 2008). For example, on the issue of preventing sex offenders with child victims from obtaining pardons, between 1970 and 2003, just over 3% of people granted a pardon in Canada had that pardon revoked due to a new offense (Ruddell & Winfree, 2006), indicating a very high success rate and no empirical basis for this change. Pardons are also a valuable means of removing stigma and enhancing the reintegration of released offenders, consonant with Canada's previously less punitive stance toward offenders. No research on the failure rates of child sex offenders have been published, although in general sex offenders are not known to have particularly high recidivism rates compared to other serious offenders (Hanson & Morton-Bourgon, 2005; Willis, G. M. et al., 2010).

Nonetheless, statutes such as these are generally predicated on the assumption that sex offenders as a class are especially dangerous individuals who are either deeply ill or incontrovertibly evil and therefore pose considerable risk to vulnerable and valuable members of society, such as women and children (Petrunik et al., 2008). The politicians who create sex offender legislation often cite the safety needs of the community as the driving force behind their policies, even when research findings do not support these views (Brown, S., 2009a). When criticized after introducing the aforementioned omnibus crime bill at a time when crime rates were at a three-decade low, Conservative Justice Minister Rob Nicholson argued, "We're not governing on the basis of the latest statistics; we're governing on the basis of what's right to better protect victims and law-abiding Canadians" (Chase, 2011). A more pessimistic interpretation of these measures is what Roberts and Hough (2005) refer to as *penal populism*, "the pursuit of a set of penal policies to win votes rather than to reduce crime rates or to promote justice" (p. 16).

If the goal of these measures is to improve community safety, then their limitations are evident in research on their effectiveness. A large-scale review of community-based sex offender programs in the U.K., U.S., Canada, and Australia found no evidence to support the effectiveness of control-and-risk-oriented intensive supervision and surveillance programs compared to evidence-based treatment and skill development programs (Griffiths, Dandurand, & Murdoch, 2007). Letourneau et al. (2011) did find some evidence of a general deterrent effect, with an 11% reduction in first-time sex crimes in South Carolina following the implementation of their sex offender registry and notification system and no similar decrease in the rates of other types of crimes over the same time period. However, similar results were not found for specific deterrence as there was no decrement in the offending rates of registered sex offenders compared to unregistered offenders. A study of adult sex offenders in Wisconsin found no effect of notification on re-offending rates for either high or low levels of notification intensity in comparison to a matched sample of offenders not subject to notification (Zevitz, 2006).

Residential restrictions in the U.S. have also been found to lack strong empirical justification. Zandbergen and colleagues (2010) found that proximity to schools and daycares was unrelated to likelihood to recidivate. In fact, they found that non-recidivist sex offenders were actually significantly more likely to live closer to schools or daycares than the sex offenders who committed new sexual crimes. A prospective study in New Jersey found that sex

offenders did not live significantly closer to schools, daycares, churches, and parks than non-offenders, and that sex offenders with adult victims lived significantly closer to schools than did child-victim sex offenders (Zgoba et al., 2009). These researchers also noted that because 80% of the available housing in the area was within the likely zone of a restricted area, the implementation of such a policy would greatly limit the ability of sex offenders to find suitable housing. This is an especially problematic outcome because homeless and transient sex offenders are substantially more difficult to supervise in the community, and several studies have linked housing instability to enhanced risk to re-offend (see Levenson, Zgoba et al., 2007 for a review). As well, most sex offenders, including child sex offenders, gain access to victims through other relationships, such as a girlfriend with children. If they do target children in public areas, they tend to do so at some distance from their residences. Thus, the most common offending patterns are not addressed by residence restriction policies as they are currently conceptualized (Minnesota Department of Corrections, 2007).

Overall, the various policies for protecting communities from released sex offenders are greatly under-researched, fare poorly when they are evaluated, and carry with them both substantial financial cost and the potential to paradoxically increase offenders' risk to reoffend by contributing to the instability and isolation of their lifestyles (Cohen & Jeglic, 2007; Petrunik, 2002; Willis, G. M. et al., 2010). Nonetheless, they enjoy considerable community support, at least according to several surveys conducted on primarily U.S.-based samples. One study conducted in the U.K. found that respondents strongly favoured receiving information about sex offenders residing in their neighbourhoods, particularly if they lived in less affluent neighbourhoods, though only half the sample believed that registration was an effective means of preventing sexual re-offending (Brown, S. et al., 2008). Community members across several U.S. states have reported strongly endorsing the need for sex offender registries, notification, and residence restrictions in particular (Caputo & Brodsky, 2004; Craun, Kernsmith, & Butler, 2011; Kernsmith et al., 2009; Levenson, Brannon et al., 2007; Schiavone & Jeglic, 2009), although confidence in the effectiveness of these measures was not necessarily equally high in all samples (Schiavone & Jeglic, 2009), reflecting once again a general pessimism that any measures, punitive or rehabilitative, can effectively mitigate the risk that sex offenders are perceived to pose.

Despite this general lack of confidence, however, one survey of Michigan residents found that over half of their sample supported extending sex offender registries to other crimes, although a substantial minority were also opposed to this practice (Craun et al., 2011). Levenson, Brannon et al. (2007) reported that almost half of their sample would support the use of these punitive policies even in the absence of scientific evidence of their effectiveness. Respondents in one study also minimized or denied the negative impact that such policies have on sex offenders and their ability to successfully reintegrate, though most did not also endorse harassment or violence against sex offenders (Schiavone & Jeglic, 2009). Often participants are unfamiliar or inexperienced with the actual practices they are endorsing (Levenson, Brannon et al., 2007; Schiavone & Jeglic, 2009), and some research has shown that sex offender notification does not contribute to constructive coping or risk management strategies among community members (Caputo & Brodsky, 2004; Chopin, 2011; Sample, Evans, & Anderson, 2011), raising the issue that these measures may provide a false sense of security for some with very little practical benefit to anyone.

Sex offenders themselves expressed somewhat ambivalent opinions toward registries. Tewksbury (2005) found that a substantial number of registered sex offenders in their survey felt they understood the motivations behind sex offender registries, but also felt ashamed and unfairly punished by it (Tewksbury, 2005). One third of the participants in Levenson, D'Amora et al.'s (2007) study felt that it was fair for the public to be informed about them, although many also felt that the registry requirement should be applied more selectively to only high-risk offenders. Similarly, the female sex offenders in Vandiver et al.'s (2008) research strongly supported the use of registries, but felt that they personally should not have been required to register. Thus these offenders' views appeared to be consistent with those of the general public—that sex offenders are dangerous and warrant special measures for the protection of public safety—except that they viewed themselves as important exceptions. Opinions were often split on the effects of registries and notification in terms of motivation to desist, with many offenders reporting they were motivated to prove to their communities that they were not bad people, and a similar number reporting that these policies either did not affect their likelihood to reoffend or made it harder not to (Levenson, D'Amora et al., 2007; Tewksbury, 2005; Zevitz & Farkas, 2000).

Overall, responses regarding sex offender legislation reflect a mix of assumptions about why people commit sexual offenses and how society is justified in managing this potential for harm. That these views are largely inconsistent with the published research on sex offender characteristics and the relative effectiveness of treatment and of punitive sanctions underscores the need to better understand how these views are developed and maintained.

1.3 Factors Influencing Responses to Sex Offenders

1.3.1 Offender and Offense Characteristics

Although sex offenders can generally be conceptualized as anyone who commits a sex crime, both legally and in research it is recognized that these offenders vary in the nature and seriousness of their actions and their likelihood for future transgressions (Griffin & West, 2006). However, few researchers have distinguished between different types of offender or offense characteristics when evaluating community attitudes, despite the fact that awareness of the heterogeneity among sex offenders could challenge lay stereotypes of the high-risk, treatment-resistant violent sex offender (Brown, S., 1999; Willis, G. M. et al., 2010). A recent study by Kernsmith et al. (2009) explored differences in responses to a range of sex offender "types", including pedophiles, incest offenders, juvenile offenders, date rapists, spousal rapists, statutory rapists, and people who have not offended for over 10 years. They found that participants reported the greatest fear of pedophiles, followed by incest offenders, and were the least fearful of statutory rapists. Unfortunately, this study did not examine responses to stranger rapists, despite the prevalence of this stereotype (Sanghara & Wilson, 2006).

In general, severity and deliberateness of the offense tends to predict more negative attitudes. Salerno and colleagues (2010) found that participants generally envisaged more severe sex offender prototypes when reporting their attitudes toward juvenile sex offenders. The severity of the participants' prototype, whether spontaneously generated or manipulated through the presentation of vignettes, positively predicted the punitiveness of their responses. McGhee (2008) found that offenses described as aggravated assaults against a minor, compared to molestation of a minor, elicited greater support for the death penalty for sex offenders, and support was the highest for repeat offenders. Clarke et al. (2002) also found that while participants disliked comparing the seriousness of sex offenses, they considered additional elements of premeditation, violence, degradation, or exploitation of a vulnerable victim to be aggravating factors. A study of correctional professionals found that high levels of intentionality

and low levels of remorse in offenders for their actions predicted more negative evaluations of sex offenders, and intentionality also predicted ratings of the offender's deservingness of punishment and the likelihood that participants would recommend incarceration over probation (Hogue & Peebles, 1997).

Some studies have found that different differences in the demographic characteristics of either the offender or victim, including age, gender, and ethnicity, elicit negative responses of differing magnitude. Age of the victim or the offender has been found to be particularly relevant. Viki and colleagues (2012) and Ferguson and Ireland (2006) compared participants' responses to vignettes featuring either rapists or child molesters and found that people who assault children tend to be viewed even more negatively than those whose victims are adults. Rogers and Ferguson (2010) found that adolescent and adult sex offenders evoked more punitive attitudes and less support for rehabilitation than did children who committed sexually abusive acts. In another study, however, participants did not differentiate between vignettes in which victims were described as children or adults (Higgins & Ireland, 2009), and Viki and colleagues (2012) also found that participants did not differentiate between child and adolescent victims.

Gender and ethnicity of the offender and the victim have also been explored in some studies. Sahlstrom and Jeglic (2008) found that adolescent female offenders were considered more deviant and their actions more harmful than adolescent male offenders, especially when the victim was a male child. Few differences emerged regarding offender ethnicity, though participants were more likely to recommend parental rather than formal interventions for East Indian offenders. However, Pfeifer and Ogloff (2003) conducted a study which found that both victim and offender ethnicity played important roles in determining the subjective ratings of guilt of a defendant accused of sexual assault. Specifically, the defendant was rated as most guilty when described as Native Canadian and the victim as French or English Canadian, and least guilty when this pattern was reversed. Participants also rated Aboriginal defendants as significantly more unattractive, poor, and lazy than their English and French Canadian counterparts.

Despite the status of risk assessment as a best practice in correctional interventions (Andrews, Bonta, & Wormith, 2006), very little research has been conducted on the impact of offender risk level on community responses. Levenson, Brannon et al. (2007) found that respondents did not differentiate between low, moderate, and high risk offenders, with 76.3%

agreeing that all offenders should be subject to community notification and only 6.3% agreeing that low risk offenders with no history of violence should be exempt. However, Schiavone and Jeglic (2009) found in their survey that only 51% of participants believed that low risk offenders should be required to register, compared to 86% and 89% endorsing registration the moderate and high risk groups respectively. This discrepancy may be attributable to differences between the samples—although both were recent community samples collected the U.S., Levenson, Brannon et al. (2007) specifically note that their data were collected during a time of significant media coverage regarding violent sex crimes against children in Florida, which may have contributed to especially punitive views on the part of their respondents.

There are many more opportunities for in-depth study of the role of offender and offense characteristics on attitudes, particularly given the insightful research that has been done on the effects of situational and individual characteristics on punitive attitudes and negative beliefs about offenders more generally (e.g., Applegate et al., 1996; Cumberland & Zamble, 2002; Gebotys & Roberts, 1987), suggesting that more sensitive research designs may reveal and explain similar complexities regarding perceptions of sex offenders. Research of this nature is also essential given that a persistent myth about sex offenders is that these individuals are all the same, which may be part of the justification for the lack of nuance in community approaches to sex offender management (Willis, G. M. et al., 2010).

1.3.2 Participant Characteristics

Substantially more research has been conducted on the influence of participant characteristics on their views toward sex offenders, although often these variables are found to have inconsistent or non-significant effects. For instance, Payne et al. (2010) conducted a large-scale survey of over 700 Virginian residents, measuring a series of demographic, experiential (e.g., victimization experiences, personal deviance), and structural (e.g., neighbourhood social disorganization) variables in relation to beliefs about the rehabilitative potential of sex offenders. They found only two significant associations amongst all of these factors—that belief in sex offender rehabilitation was negatively predicted by childhood experiences of corporal punishment, and positively predicted by personal use of physical coercion in a relationship.

In terms of demographic characteristics of participants, Brown, S. (1999) reported that older participants (over 50) were the least supportive of treatment and rehabilitation, while younger participants (under 30) were the most likely to accept community treatment of offenders

in their neighbourhoods. However, most studies found no effect of participant age where these analyses were reported (Olver & Barlow, 2010; Payne et al., 2010; Shechory & Idisis, 2006; Rogers & Ferguson, 2010). Parents and married participants tended to have more negative attitudes toward sex offenders, including more fearfulness and anger (Brown, S., 1999; Caputo & Brodsky, 2004; Levenson, Brannon et al., 2007), although this was not the cases in all samples (McGhee, 2008; Shechory & Idisis, 2006). Brown, S. (1999) reported a significant effect for socioeconomic status, with lower SES predicting less support for rehabilitation and treatment and more opposition to community treatment in participants' own neighbourhoods, but two other studies reported no effects of income or educational attainment (Olver & Barlow, 2010; Payne et al., 2010). Similarly, one study found that non-White respondents were more likely to believe that sex offenders cannot be rehabilitated (Payne et al., 2010), but participant ethnicity was otherwise non-predictive (Olver & Barlow, 2010; Shechory & Idisis, 2006; Rogers & Ferguson, 2010).

The relationship of gender with attitudes toward sex offenders has been investigated particularly thoroughly. Several studies have found that women reported higher levels of fear toward sex offenders in their communities and occasionally greater support for restrictive sex offender policies compared to men (Caputo & Brodsky, 2004; Chopin, 2011; Craig, 2005; Kernsmith et al., 2009; Levenson, Brannon et al., 2007). In some cases, women overestimated sex offender recidivism to a greater degree than men did (Brown, S. et al., 2008; Olver & Barlow, 2010). Some studies have also reported more punitiveness from male participants (McGhee, 2008; Viki et al., 2012), and others found that women had more positive attitudes toward sex offenders, although in this latter case, gender may have been conflated with abuse history and experience working with sex offenders (Ferguson & Ireland, 2006; Higgins & Ireland, 2009). The fact that women are significantly more likely to report being sexually victimized (Brennan & Taylor-Butts, 2008) may account for their increased fear and occasional greater support for protective measures. However, a number of studies have also reported no effect of participant gender on various aspects of responses to sex offenders (Hogue & Peebles, 1997; Johnson et al., 2007; Olver & Barlow, 2010; Sahlstrom & Jeglic, 2008; Roger & Ferguson, 2010). It may be that dispositions toward sex offenders more generally, including beliefs about offender characteristics and how sex offenders should be treated in principle, may be less subject to gender differences.

Despite the spectre of victimization and the danger sex offenders are seen to pose to their communities, participants' own victimization history tends not to predict their responses to sex offenders (Brown, S., 1999; Hogue & Peebles, 1997; Levenson, Brannon et al., 2007; Sahlstrom & Jeglic, 2008). In one study, having been the victim of sexual abuse related positively to attitudes toward sex offenders (Ferguson & Ireland, 2006), but it should be noted that these researchers did not address the potential confound of employment status between their student and forensic staff samples with regard to this finding.

A selection of personal disposition characteristics have been also been evaluated. Political conservatism has not been found to reliably predict attitudes toward sex offenders (McGhee, 2008; Olver & Barlow, 2010; Shechory & Idisis, 2006). However, various aspects of empathy, agreeableness, and openness have predicted stronger support for sex offender treatment and belief in offender capacity for change (Johnson et al., 2007; Olver & Barlow, 2010). In Johnson et al.'s (2007) study, higher levels of cognitive aspects of empathy, including perspective taking, were associated with more positive attitudes toward sex offenders, whereas support for treatment was predicted by greater emotional empathy. Higher extraversion was negatively associated with belief in the effectiveness of the criminal justice system to deal with sex offenders, but both openness and agreeableness, of which one component is empathy, were positively associated with pro-treatment beliefs and support for offenders' capacity to change (Olver & Barlow, 2010).

One of the most consistent predictors of attitudes toward sex offenders has been participants' professional experience or familiarity with these individuals. Forensic professionals, including correctional and probation officers, police, forensic therapeutic staff, psychologists, social workers, and nurses, evince relatively more positive attitudes toward sex offenders than community and student respondents, although these attitudes are still negative overall (Church, Wakeman, Miller, Clements, & Sun, 2010; Ferguson & Ireland, 2006; Johnson et al., 2007; Sanghara & Wilson, 2006; Viki et al., 2012). In some cases, however, the views of correctional officers and members of the public have been equally negative compared to the relatively more positive views of other forensic staff (e.g., Higgins & Ireland, 2009), suggesting that the nature of the contact with sex offenders is also important. Experience with sex offenders also predicts more accurate knowledge about rape and child abuse and less endorsement of sex offender stereotypes (Sanghara & Wilson, 2006; Shechory & Idisis, 2006). Shechory and Idisis (2006)

found that therapists were more willing to have contact with sex offenders than were students. Some researchers have suggested that associating with sex offenders may have the effect of humanizing these individuals, thus improving attitudes toward them (Willis, G. M. et al., 2010), which is consistent with findings regarding the relationship between participants' empathy and their responses to sex offenders. Viki and colleagues (2012) found that among forensic staff, quality of contact with offenders predicted more positive attitudes toward them, and that this relationship was fully mediated by the degree to which the offenders were dehumanized by the staff, such that less dehumanization was associated with more positive attitudes.

1.3.3 Dehumanization

Research on how people respond toward sex offenders thus far has largely been descriptive and atheoretical, and little is known about what mechanisms might be contributing to the development and maintenance of these beliefs, opinions, and attitudes (Brown, S., 2009a). While studies have been conducted on responses toward offenders and the criminal justice system more generally, including work on the role of attribution and lay theories of criminality (e.g., Cullen, Clark, Cullen, & Mathers, 1985; Maruna & King, 2009; Sims, 2003), this research has not been extended to sex offenders specifically. It is also reasonable to surmise that sex offenders may constitute a special class of offenders subject to extreme view which are possibly influenced by unique factors. This is evident in the manner in which sex offenders are singled out as an especially dangerous and reprehensible group, perceived of as 'the lowest of the low', and governed by special laws because of perceptions of their unmanageability and inherent risk (Griffin & West, 2006; Petrunik et al., 2008).

Dehumanization is one possible factor contributing to how people respond to sex offenders. Dehumanization has traditionally been evaluated in its extreme manifestations of complete denial of humanity and attendant severe violence (e.g., genocide; Haslam, 2006). However, recently researchers have suggested a variant which they call *infracumanization*, where targets are thought of as less human, but not necessarily as completely inhuman, and behavioural and attitudinal consequences are therefore more moderate (Leyens et al., 2007). Use of this specific terminology is not consistent throughout the literature (e.g., Haslam, 2006; Viki et al., 2012), but there is mounting evidence for subtle manifestations of dehumanization which do not result in extreme physical violence. This process can occur in the absence of salient intergroup conflict, and can be expressed in very subtle ways, such as denying the ability of the

dehumanized group to feel complex secondary emotions (e.g., hope, sympathy, remorse, and guilt), which are perceived as uniquely human compared to more basic emotions which are also expressed by animals (e.g., surprise, fear, excitement; Demoulin et al., 2004; Gaunt, Leyens, & Demoulin, 2002; Paladino, 2002). This can have behavioural consequences as well, such as greater refusal to help dehumanized outgroup members who are seen as less capable of secondary emotions than ingroup members (Cuddy, Rock, & Norton, 2007; Vaes et al., 2003). Given the relevance of such secondary emotions as remorse, guilt, and repentance to community members' perceptions of rehabilitation indicators (e.g., Clarke et al., 2002), denial of offenders' capacity to feel these emotions could have consequences for their beliefs about the ability of these offenders to change.

1.3.3.1 Affective consequences of dehumanization. Haslam (2006) identified two distinct forms of dehumanization, which differ in their targets, underlying causes, and related features. *Mechanistic* dehumanization is theorized to result when the target is seen as lacking qualities which are essential and innate to being human, such as warmth, emotional responsiveness, agency and individuality, cognitive openness, and depth (contrasted with being perceived as inert, cold, rigid, passive, and superficial), and as a result is considered as machine-like and viewed with indifference and objectification. In comparison, *animalistic* dehumanization occurs when the target is perceived to lack uniquely human traits, such as civility, refinement, morality, rationality, logic, and maturity, which are contrasted with animalistic traits such as lack of culture, coarseness, amorality and lack of restraint, irrationality and instinct, and childlikeness. These traits are not viewed as inborn, but rather as uniquely acquired through socialization and learning in a manner of which only humans are capable. Individuals perceived to lack these traits are perceived as animal-like, desire-driven, and lacking in refined intentional states, subject to disgust and contempt from others: "[r]epresented as apes with bestial appetites or filthy vermin who contaminate and corrupt, they are often viscerally despised" (Haslam, 2006, p. 258).

These descriptions are strongly reminiscent of the kind of language used to describe sex offenders. For example, stigmatizing terms such as 'predator' and 'monster', are commonly associated with sex offenders (Griffin & West, 2006; Olver & Barlow, 2010). The language used by participants in qualitative studies reflects similar views, such as the "mad, sick, twisted, and animalistic" (p. 23) predators ambushing unsuspecting victims in Clarke et al.'s (2002) study, and the descriptions of animalistic, savage monsters who hang out in packs, "*como animales* (like

animals)" (p. 346) given by Madriz's (1997) participants. Kosse's (2006) review of media narratives about rapists found that in the 'virgin rape narrative' victims are portrayed as innocent and pure while her assailant is "a depraved and perverted monster" (p. 249), or, in one case of multiple assailants, a "wolfpack" (p. 250). The pervasiveness of this language underscores the relevance of animalistic dehumanization in the formation of attitudes toward sex offenders.

Converging research from the stereotype content model perspective (Fiske, Cuddy, Glick, & Xu, 2002) has found that groups which are seen as both low in warmth and competence, such as homeless people and drug addicts, are also uniquely defined by attitudes of contempt and disgust toward them (Harris & Fiske, 2006). Vaes and Paladino (submitted manuscript, as cited in Leyens et al., 2007) found that the more that certain characteristics were evaluated as being typical of members of these low-low categories, the less humanistic these characteristics were perceived to be. Moreover, neurological research has found that when participants think about these groups, they do not experience activation in the medial prefrontal cortex (mPFC), which is associated with responses to humans or human-related objects, and instead show enhanced activity in the amygdala and insula regions, which is indicative of a disgust response (Harris & Fiske, 2006). These brain patterns are specific to dehumanized groups and not outgroups generally, as white participants observing black faces still exhibited mPFC activity. Interpersonal disgust has also been linked greater dislike of immigrants and foreign outgroups, and this relationship was mediated by the level of dehumanization of these groups (Hodson & Costello, 2007). Although responses to sex offenders have not yet been empirically linked to feelings of disgust and contempt, phenomena such as death and sexuality have been found to remind us of our fundamentally animal nature, and as such are also strongly linked with feelings of disgust (Rozin, Haidt, & McCauley, 2008).

1.3.3.2 Social consequences of dehumanization. In his review of dehumanization theories across multiple disciplines, Haslam (2006) discussed various perspectives on the potential social functions of dehumanization. By designating certain individuals and groups as being outside of the normal boundaries of human interaction, this justifies certain actions against them and becomes a means of expressing the shared moral values and basic humanity of the members of the in-group. Other researchers have spoken to the role of these processes in the criminal justice system. Myers, Godwin, Latter, & Winstanley (2004) found that the use of dehumanizing language in victim impact statements (e.g., "a parasite", "a murderous animal"; p.

46) resulted in greater support for the death penalty among individuals who were not opposed on principle to capital punishment.¹ This is consistent with Haney's (1997) argument that dehumanization, as a key component of moral disengagement, is a necessary mechanism for jurors when deciding guilt in capital punishment cases. By creating a barrier of inhumanity around the defendant, which is buttressed by the ritualistic nature of the courtroom and the prosecutor's efforts to downplay the defendant's humanity, and disassociating themselves from the consequences of their actions, jurors become able to condemn another person to death. Osofsky et al. (2005) made a similar argument regarding the role of dehumanization in the work of prison staff carrying out executions. They found that members of execution teams scored significantly higher on measures of moral disengagement and dehumanization compared to staff not involved in executions and members of support teams who counselled the offenders and the victims' families throughout the process. Support team members also increased in their level of moral disengagement and dehumanization as they participated in more executions, eventually reaching similar levels to the execution teams by their fifteenth execution.

It has been suggested that sex offenders constitute a type of person who exists outside the law and can be treated in ways that would otherwise be considered illegal or immoral (Spencer, 2009; Uggen et al., 2006). Although sex offenses are not punishable by execution in Canada, the U.S., or Europe, a substantial minority of individuals in some studies have expressed support for more extreme forms of punishment, including castration and execution (Clarke et al., 2002; Olver & Barlow, 2010; Levenson, Brannon et al., 2007; McGhee, 2008). Moral exclusion from humane treatment through dehumanization may relate to increased support for punitive measures in the form of longer sentences and restrictive community protection legislation, and less support for offenders' rights. Schiavone and Jeglic (2009) found that 37% of their American community respondents believed that sex offenders should have no rights. Olver and Barlow's (2010) study of Canadian undergraduates found only 15.4% support for the same sentiment. At least when framed explicitly, this is not a majority view, but there is still widespread support for specific measures which infringe upon sex offenders' autonomy, privacy, eligibility for social services and access to basic needs, and even their right to vote (Uggen et al., 2006; Ward et al., 2007),

¹ It should be noted that although the hypothetical defendant in Myers et al. (2004) study was on trial for murder, the fictional victim impact statement in the dehumanization condition contained a reference to a sexual motivation for the crime; "they are dead because some animal wanted sex from her and killed her when she tried to protect herself" (p. 46), confounding homicide with sexual assault. No research evaluating dehumanization in regard to capital punishment has remarked explicitly on the potential aggravating circumstances of sexually-motivated homicide.

though this is complicated by the fact that offenders' rights may be seen to be in competition with the rights of past and potential future victims (Ward & Connelly, 2008).

Specific empirical psychological research on the relationship between dehumanization and responses to sex offenders is currently limited to the pending publication of Viki and colleagues (2012). These researchers conducted a series of studies evaluating the responses of members of community and forensic professional samples toward sex offenders in relation to the degree to which the offender targets were associated with animal-related and human-related words (the latter were reverse-scored). These researchers established that greater levels of dehumanization were associated with more negative attitudes toward rehabilitation for both rapists and paedophiles (studies 1, 4); support for the social exclusion of sex offenders, particularly paedophiles, as function of dehumanization (studies 2, 3); and support for violence against paedophiles (study 3). They also found that quality of contact was negatively associated with dehumanization and positively associated with attitudes toward rehabilitation among community-based rehabilitation centre staff, and that dehumanization fully mediated the relationship between quality of contact and attitudes toward sex offender rehabilitation (study 4). These findings lend preliminary support to the role of dehumanization in explaining how negative views of sex offenders are developed and maintained.

1.4 Community Reintegration of Sex Offenders

Understanding how and why people feel the way they do about sex offenders may be of critical importance to helping these offenders successfully reintegrate into their communities and desist in their offending patterns. The crux of offender reintegration is the recognition that the societal response to crime must extend beyond levying a sentence and exacting punishment in response to a criminal transgression—once they have fulfilled the terms of their punishments, offenders must have a mechanism by which to return to their communities and shed the 'offender' label (Bazemore & Erbe, 2003). Various descriptions of reintegration, re-entry, and desistance, this is the process by which individuals end their offending patterns and become productive members of their communities (Willis, G. M. et al., 2010). As with addiction recovery, ex-offenders may experience lapses and relapses, and their pathways out of crime can be influenced by a variety of factors, including aging, marriage, work, education, social acceptance, the development of a new identity, the severing of criminal ties, spirituality, fear of assault or death, incarceration, and incapacitation (Laws & Ward, 2011). Successful re-entry involves more than

the cessation of offending. It also requires new, meaningful ways of living for ex-offenders (Petersilia, 2004; Wormith et al., 2007), including the development of non-offending identities based on prosocial bonds and the ability to meet one's needs without resorting to criminal behaviour (Willis, G. M. et al., 2010; Bazemore & Erbe, 2003).

1.4.1 The Role of the Community in Offender Reintegration

Until recently, the community role in the modern criminal justice system has been downplayed in favour of emphasizing the rational authority of the legal system and the expert opinions of forensic professionals (Petrunik, 2002). It has been argued that with the institution of formal justice systems, communities relinquished this aspect of their socialization role and become alienated from criminal justice processes (Bazemore & Erbe, 2003). Communities have since re-inserted themselves into the criminal justice process in the form of victims' rights and community protection movements, which focus on controlling offenders and agitating for more punitive measures to be taken against them, particularly in regard to sex offenders (Brown, S., 2009a; Petrunik, 2002). Although the ultimate goal of these movements may be community safety, their punitive approach is more likely to result in negative outcomes for both offenders and communities by contributing to the conditions which make criminal behaviours more likely (Wilson, Picheca, & Prinzo, 2005; Willis, G. M. et al., 2010). A restorative community-oriented approach where the community is included as a partner within the criminal justice process along with legal and clinical professionals has been advocated as an essential next step, but this will require challenging and changing deeply-held beliefs among community members about the nature of sexual offending and the most effective means for addressing criminal behaviour (McAlinden, 2006).

The constructive involvement of community members in offender reintegration cannot be understated in its importance. Byrne (1989) suggested that, in addition to their impact on the development of sentencing and correctional policy, communities affect how much support at-risk community members receive and the nature and effectiveness of local social controls. For example, the degree of attention paid to the behaviour of individuals or to criminogenic structures in the community may influence where and how police spend their time and which community members enter the formal justice system. In addition to being a powerful source of social control, the community also functions as a setting for aftercare treatment and a partner in providing reintegration services. Failure to provide on-going care in the community may

undermine any gains made in treatment while incarcerated, and, to some extent, prison-based treatment can be thought of as preparation for treatment in the community (Byrne, 1989; Wormith et al., 2007), despite lay expectations that "rehabilitation" is a status offenders should achieve prior to release (Clarke et al., 2002). Community willingness to support offenders is a key component in effective reintegration, as offenders face many barriers to successful re-entry (Bazemore & Erbe, 2003). However, while the community plays a crucial role in the desistance process, research suggests that sex offenders' needs in terms of community support are not being met, and there is little insight offered in the literature as to what is required to enhance community support for these offenders (Willis, G. M. et al., 2010).

1.4.2 Barriers to Reintegration

Despite the importance of encouraging offenders, and sex offenders in particular, to develop prosocial, non-criminal lifestyles, there are many barriers to successful reintegration. Often these barriers are also paradoxically exacerbated by community backlash and government policies intended to mitigate the risk posed by dangerous offenders (Willis, G. M. et al., 2010). The following is an overview of several significant barriers to reintegration, including unemployment, inadequate housing, denial of treatment and services, and stigma, isolation, and loss of social support.

1.4.2.1 Unemployment. Released offenders face high unemployment rates for many reasons. Offenders are often unemployed prior to incarceration, and do not experience better prospects upon release (Brown, K., Spencer & Deakin, 2007; Laws & Ward, 2011). They often have poor employment histories, limited education, and general skill deficits, and encounter structural barriers such as the stigma and prejudice associated with a criminal record and laws which prohibit offenders from holding certain jobs (Rakis, 2005). Sex offenders in particular experience serious hurdles to employment. For example, in the U.K., sex offenders' records can be readily requested by employers and there is no expiry on their records as with other offenders in this jurisdiction (Brown, K. et al., 2007). Regardless of the age of their victim, they are barred from working with anyone under the age of 18, whether customers or fellow employees, making it difficult to acquire the low skill, entry-level jobs that are also common among adolescents. Some sex offenders are prohibited from using computers either at home or at work and may be confined to their homes during certain times of the day, such as when schools let out, making it difficult to conform to normal work hours. Similar situations exist in the U.S., where a sample of

sex offenders reported serious employment difficulties due to restrictions on their movements, which prevented them from looking for work, attending interviews, and working regular shifts (Burchfield & Mingus, 2008). Some offenders also reported being denied employment on the basis of their criminal convictions and being fired after an employer or co-worker discovered their status. Reports of job loss and denial of employment as a direct result of sex offender status were common across several studies (Levenson & Tewksbury, 2009; Levenson, D'Amora et al., 2007; Mercado et al., 2008; Robbers, 2009; Tewksbury, 2005; Vandiver et al., 2008; Zevitz & Farkas, 2000). Prospective employers' sentiments echoed the experiences reported by sex offenders. The few employers who were willing to hire a person with a criminal record typically qualified their statements with a specific exclusion of sex offenders (Albright & Denq, 1996; Brown, K. et al., 2007; Brown, S., 1999;), in some cases rating sex offenders as even less appealing to hire than murderers (Alexinas, 2008; Haslewood-Pocsik et al., 2008). Justifications for this refusal include concerns about the safety of customers and other employees, potential liability for the offenders' actions, and negative publicity, as well as expressions of personal and moral aversion to sex offenders themselves (Alexinas, 2008; Brown, K. et al., 2007).

This situation is troubling because low levels of work performance/satisfaction is one of the eight major risk factors for criminal offending (Andrews et al., 2006) and work stability is recognized as an important factor in desistance (Laws & Ward, 2011). Employment was found to be one of three factors predicting sexual recidivism in a sample of New Zealand sex offenders (combined with accommodation planning and social support for an AUC of .71, controlling for static and dynamic risk and IQ; Willis, G. M. & Grace, 2008; 2009). Hepburn and Griffin (2004) also found, in a survey of 258 child molesters, that those with full-time employment were half as likely to terminate probation unsuccessfully than those with only part-time employment (median follow-up of 35 months).

1.4.2.2 Inadequate housing. Accessing safe, affordable, and stable housing can be a difficult standard to achieve even for individuals without a criminal conviction (Clark, 2007). Landlords typically rely on credit histories, rental histories, employment, and income when evaluating a potential lodger, all of which pose challenges for offenders who have been incarcerated for lengthy periods of time and are also struggling to find employment for similar reasons. Other practical barriers cited by offenders include insufficient financial assistance, lack of information on housing support services, difficulties making arrangements for

accommodations while incarcerated (e.g., access to phones), and a lack of suitable housing options (Wormith & Parhar, 2010).

Sex offenders must also contend with social obstacles to securing housing in the community. Community members are likely to be fearful or angry in response to having sex offenders live in their neighbourhoods (Levenson, Brannon et al., 2007). The consequences of this can be seen in the reaction to a convicted sex offender who was released to a halfway house in Ontario, and was subsequently forced to move to a new town following a public outcry because of the halfway house's proximity to an elementary school (Ladurantaye, 2011). Offenders throughout the U.S. have also reported difficulties in acquiring housing (Burchfield & Mingus, 2008; Levenson & Cotter, 2005; Tewksbury, 2005; Vandiver et al., 2008) or being forced to move after being evicted as a direct result of community backlash (Levenson & Cotter, 2005; Levenson & Tewksbury, 2009; Levenson, D'Amora et al., 2007; Robbers, 2009; Tewksbury, 2005; Zevitz & Farkas, 2000). Many incarcerated sex offenders report low expectations about their ability to secure housing upon release (Brown, K. et al., 2007; Wormith & Parhar, 2010), and surveys of landlords and potential renters justify these negative assessments. Helfgott (1997) found that 37% of property managers and owners reported the intention to refuse sex offender applicants outright, citing both safety concerns and explicit discrimination as their reasons. Brown S. (1999) reported that 72% of community members surveyed would not rent to a known sex offender. In a larger study of landlord attitudes toward different offender categories, Clark (2007) found that while landlords were often willing to reconsider their initial refusal of applicants with a criminal history if there was evidence of rehabilitation, this consideration did not extend to sex offender applicants, who would not be considered under any circumstances.

In the U.S., more than 20 states have enacted residence restriction policies that further limit the housing options for sex offenders (Levenson, Zgoba et al., 2007). Like much similar legislation, there is no empirical basis to suggest that these restrictions will meaningfully impact rates of sex crimes, as they have not been linked with reduced recidivism (Levenson & Cotter, 2005; Zandbergen et al., 2010) nor do they address typical offending patterns, as most child sex offenders who target strangers travel outside their own neighbourhoods to do so (Minnesota Department of Corrections, 2007). There is also some indication that they will exacerbate already difficult housing situations for released sex offenders (Levenson, Zgoba et al., 2007;

Zgoba et al., 2009). In research on offenders generally, housing instability has been linked with enhanced risk for recidivism (see Levenson, Zgoba, et al., 2007, for a review). Willis, G. M. and Grace (2008, 2009) found that quality of accommodation planning, along with employment and social support, was a moderate predictor of sexual recidivism specifically, even after controlling for risk and IQ (AUC = .71). It is also logical to conclude that offenders without stable residences are more difficult to supervise (Levenson, Zgoba et al., 2007), and there have been reports of offenders in the U.S. who have returned to prison because they were unable to secure accommodations in the community (Burchfield & Mingus, 2008), a costly and unproductive outcome. Surveyed community members do not feel these restrictions are unfair, however, even when they force offenders to live away from their friends and family (Schivone & Jeglic, 2009).

1.4.2.3 Denial of treatment and services. Access to social services and aftercare treatment is an essential element in community reintegration (Brown, S., 1999). Many offenders come from disadvantaged backgrounds, and it is common for them to be contending with physical health, mental health, and substance abuse issues in addition to their offending behaviours (Laws & Ward, 2011). Because of the barriers to stable housing and employment, many offenders also struggle with poverty and subsistence needs. Community agencies which provide food, shelter, clothing, parenting support, job assistance, counselling, and other important social supports to offenders and other disadvantaged members of the community tend to specifically deny these services to sex offenders (Helfgott, 1997). Even those agencies which are traditionally active in offender reintegration have been reluctant to work with sex offenders for fear of attracting negative publicity and potential liability for the offenders' actions (Cesarini, 2002). Government-run programs are not necessarily any more supportive—five of eight Reintegration Partnership Initiatives sites developed in the U.S. to facilitate offender reintegration specifically excluded sex offenders from their services (Taxman et al., 2003). No other offender group was excluded as frequently, including violent and mentally ill offenders. The result was that these sex offenders were released anyway, but did not receive re-entry assistance. Government and community agencies' fear of public backlash may be somewhat justified, however, given that community members often reject the idea of sex offenders receiving treatment in their neighbourhoods, even when they recognize the importance of treatment (e.g., Brown, S., 1999). Nonetheless, denial of services and treatment is both ethically and pragmatically dubious in terms of addressing sex offender behaviour (Ward et al., 2007).

1.4.2.4 Stigma and isolation. Underpinning all of the barriers to reintegration experienced by sex offenders, including difficulties obtaining work, accommodations, and necessary services, is the issue of stigma and their status as social outcasts (Willis, G. M. et al., 2010). Community members typically refuse to tolerate sex offenders in their midst, occasionally even escalating to vigilantism and violence in order to oust them (Kernsmith et al., 2009; Helfgott, 1997). Aside from forming new community ties, sex offenders' existing relationships are also threatened. Offenders across multiple studies reported rejection by friends and family members, sometimes as a result of their offense, but often because of legislative restrictions on where and with whom they were allowed to associate and live or because community protests forced them to re-locate (Mercado et al., 2008; Robbers, 2009; Tewksbury, 2005; Vandiver et al., 2008; Zevitz & Farkas, 2006). They also frequently reported distress, depression, anxiety, shame, fear, and loss of hope as a result of these experiences (Burchfield & Mingus, 2008; Levenson, D'Amora et al., 2007; Mercado et al., 2008; Robbers, 2009). Direct harassment and physical assault were less common, but not unheard of, especially when offenders were subject to community notification procedures (Burchfield & Mingus, 2008; Mercado et al., 2008; Robbers, 2009; Tewksbury, 2005; Vandiver et al., 2008; Zevitz & Farkas, 2006). Several studies found that family members, including children, were also subject to stigma, ostracism, and harassment by virtue of their association with a sex offender (Levenson & Tewksbury, 2009; Levenson, D'Amora et al., 2007; Zevitz & Farkas, 2000). Even without direct harassment, it was also not uncommon for offenders to report withdrawing voluntarily from social interaction in anticipation of negative responses (Burchfield & Mingus, 2008).

Some offenders believed that the stress of isolation negatively impacted their efforts not to re-offend (Levenson & Cotter, 2005; Levenson, D'Amora et al., 2007) and this perception has been validated by some research. Willis, G. M. and Grace (2008, 2009) found that social support, combined with accommodation planning and employment and controlling for risk and IQ, moderately predicted sexual recidivism (AUC = .71). In a sample of over two hundred child molesters, the presence of positive social bonds significantly predicted successful probation termination and longer survival times until revocation, controlling for age, arrest record, and prior treatment (Griffin & Hepburn, 1997). Probationers also had better outcomes if they had positive support from both friends and family, rather than one or the other, indicating an additive effect of support. In another study, high-violence sex offenders reported having fewer male

supports, particularly in terms of having someone to talk to and whom they can rely upon, compared to low violence sex offenders (Gutierrez-Lobos et al., 2001). Social networks have also been found to have instrumental utility in overcoming barriers to employment and housing when offenders can obtain jobs or places to live through friends (Brown, K. et al., 2007; Vandiver et al., 2008). The stigma of sex offending, however deserved community members may feel it to be, may in fact undermine offenders' chances for successful desistance.

1.4.3 Humanistic Approaches to Sex Offender Reintegration

Although the most politically popular approach to sex offender management in the community has taken the form of punitive policymaking, humanistic approaches to sex offender treatment and reintegration have also developed over recent decades. Within the forensic academic community, the commitment to the belief that treatment works and offenders are capable of change has been enshrined in the principles of effective correctional treatment outlined by Andrews and colleagues (1990) in the Risk-Need-Responsivity model. Recent meta-analyses have confirmed that programs which adhere to these principles contribute to decreases in criminal offending in the sex offender population, with reductions in recidivism of up to 40% for treated offenders compared to untreated offenders, although on-going research in this area is needed (Hanson et al., 2009). Another major contribution has come from desistance theorists in the form of the Good Lives Model (GLM), which holds that the most effective way to address offenders' antisocial behaviours is to help them live more meaningful and fulfilling lives through empowerment and prosocial skills enhancement (Ward & Connelly, 2008; Ward et al., 2007). The risk-oriented model developed by Andrews and colleagues and the strengths-based GLM are complementary approaches (Andrews, Bonta, & Wormith, 2011; Laws & Ward, 2011), which together represent a comprehensive, empirically-supported framework for working with sex offenders which rests on the dual assumptions that these individuals can change and that they have a right to be given the opportunity and to be supported in doing so.

In addition to these general frameworks for treatment and reintegration, specific reintegration programs have also been developed with varying attention to humanistic concerns. Some programs have focused primarily on addressing structural barriers in re-entry, such as the Reentry Partnership Initiatives, developed by the Office of Justice Programs in the U.S. to help offenders overcome barriers to housing, employment, transit, and access to services (Taxman et al., 2003). However, these programs often selectively exclude undesirable offender groups,

including sex offenders. More recent efforts have included community panels, in which various criminal justice professionals and community volunteers meet with offenders regularly to provide reintegration support (Fox, 2010). These programs vary in the level of intimacy/social distance that panel members had with the offenders and the types of problems they helped offenders address, from the more distal and authority-oriented approach which addressed primarily practical problems, to a mentoring model which provided more individualized care and emotional support and did not maintain the same level of formal social distance. The latter approach is more consistent with the restorative and community-building approach endorsed by desistance theorists (Fox, 2010).

Perhaps the most exemplary manifestation of the humanistic approach to sex offender reintegration is Circles of Support and Accountability (CoSA). This program represents a complete counterpoint to the popular sex offender legislation trends. Rather than assuming that sex offenders are irredeemably ill or evil and must be isolated and excluded from society in order to protect community members (Petrunik et al., 2008; Willis, G. M., 2010), CoSA operates from the perspective that offenders and community members' rights are not in competition and that the most effective way to protect communities is to embrace and support offenders while holding them accountable for their actions in a reintegrative way (Wilson, McWhinnie, & Wilson, 2008). Unlike many services which deliberately exclude sex offenders for fear of their notoriety and risk to re-offend, CoSA specifically targets the most high-risk, high-profile sex offenders. Often these are repeat offenders with a history of offenses against children—in other words, 'the worst of the worst' (Cesarini, 2002)—but, in keeping with the risk principle of offender rehabilitation, these are also the offenders who require the greatest support.

The program was initially developed in an *ad hoc* manner in response to community crises over the release of serious repeat sex offenders for whom there were no other support and monitoring systems available. It has since been successfully replicated across Canada, the U.S., and the U.K. (Wilson, Cortoni, & McWhinnie, 2009). Intended to complement rather than replace professional treatment and supervision of released offenders, the CoSA process involves connecting a 'Core Member' (the released individual) with a small group of community volunteers, or 'Inner Circle', who provide on-going emotional and social support to the offender as he or she adjusts to living in the community again, while an 'Outer Circle' of community-based professionals, such as psychologists and law enforcement officers, provide additional

support to the volunteer Circle members (Wilson et al., 2005; Wilson, McWhinnie, Picheca, Prinzo & Cortoni, 2007). In some cases, these groups have become surrogate families for the Core Member, and at a minimum they provide stable and constant community contacts for the released offenders to help them adjust to a new lifestyle and manage their risk to re-offend (Wilson et al., 2005). Evaluations of then outcomes for individuals who have participated in CoSA programs, compared to offenders matched on offense history and risk who did not receive such support, have found substantial reductions in sexual, violent, and overall re-offending rates for the CoSA participants (Wilson et al., 2005, 2009).

Despite evidence of its effectiveness for addressing criminal behaviour and its relative cost-effectiveness compared to other measures (e.g., costs associated with maintaining a sex offender registry, providing intensive supervision by police and probation officers in the community), the CoSA approach faces its most substantial challenge in volunteer recruitment (Cesarini, 2002; Wilson et al., 2007). Volunteers have historically tended to come from religious organizations, although as the program's profile has increased so has the diversity of its volunteers' backgrounds (Wilson et al., 2007), but not only is finding a sufficient number of volunteers for a functional Circle often challenging, volunteers must also be screened to ensure that they will be capable of fulfilling their role in supporting the Core Member, and not all volunteers are accepted. It is also unclear what the general public sentiment toward CoSA is. Community awareness of the program is not high, and law enforcement officials tend not to issue notification press releases for offenders who are released to a Circle (Cesarini, 2002). As such, communities may not even be aware of the operation of Circles or the presence of released offenders in their neighbourhoods. Nonetheless, some community members have reported being supportive of and feeling relieved about sex offenders being involved in such programs (Wilson et al., 2005). Community tolerance for and willingness to engage with sex offenders substantially impacts the ability of these individuals to disengage from offending patterns and re-establish themselves as functional members of their communities.

1.5 Overview of Current Research and Hypotheses

The purpose of the current study was to address the gap in the literature regarding knowledge about what factors influence the way people respond to perpetrators of sexual assault, particularly with regard to the community reintegration of these individuals. Reintegration was of interest because of the social significance of reintegration issues and the dearth of Canadian

research on this topic. This study examined the potential role of the dehumanization of sex offenders in explaining these responses.

In keeping with the conventions of the existing literature on researching attitudes, intentions, and beliefs regarding offenders, an experimental design using descriptive vignettes was employed to evaluate the differential impact of offender characteristics on participants' responses toward offenders returning to the community. First, to establish if dehumanization was especially pertinent to responses to sex offenders, the vignettes described a person convicted of either a violent sexual assault, a non-sexual physical assault, or a non-violent property offense, allowing comparisons between multiple offense types varying in both sexual and violent characteristics. A second manipulation concerned whether the offender was described as being at a high or low risk to commit another similar offense. This was significant because of the central role of risk assessment within current correctional practices (Andrews et al., 2006), but the lack of clarity in the literature as to whether laypeople consider this information relevant when reporting their responses toward offenders, including sex offenders. This approach was also in keeping with recommendations in the literature to take a more contextualized approach to assessing attitudes toward offenders by focusing on a specific perpetrator and seeking contextualized as opposed to global responses (e.g., Applegate et al., 1996; Cumberland & Zamble, 1992).

In addition to dehumanization, there were two other dependent variables of primary interest in this research, capturing two different aspects of offender reintegration. First, the present research examined the degree to which participants supported the rights of offenders in terms of how they are allowed to live in the community. Specifically, what participants were willing to endorse in terms of what these individuals should and should not be allowed to do in their communities and what types of policies should govern their release (e.g., should they be subject to community notification, should they be allowed to vote). Also of interest was participants' personal willingness to be in proximity to these offenders in their communities with varying degrees of intimacy (e.g., live in the same neighbourhood, work in the same organization, share a room). These outcomes reflected both a generalized stance toward how offenders should be governed in their communities as well as a personal stance on how much direct closeness participants were willing to tolerate, two aspects of community reintegration which may or may not be related. Brown, S. (1999) found that even those individuals who

supported offenders' access to treatment in the community were unwilling to allow such treatment to take place within their own neighbourhoods.

Based on the reviewed research, the following hypotheses were posited in relation to these variables:

1) Dehumanization would be negatively associated with support for offenders' rights, such that more the target was dehumanized, the less support participants would exhibit for this person's rights in the community.

2) Dehumanization would be positively associated with social distance from the offender, such that the more the target was dehumanized, the more distance participants would prefer to have from this individual.

3) There would be a main effect of offender risk level. Specifically, participants viewing the high risk offender vignette would exhibit less support for the offender's rights in the community and more desire for social distance from the offender compared to participants whose vignette described a low-risk offender. (No predictions were made regarding dehumanization.)

4) There would be a main effect of offense type. Specifically, participants viewing the sex offender vignette would exhibit less support for the offender's rights in the community, more social distance, and more dehumanization of the offender compared to participants whose vignette described a non-sexual offender (i.e., violent or property offense). (No predictions were made regarding the differences between violent and property offenders.)

Because of the lack of research in this area, specific hypotheses could not be generated additional relationships amongst the variables, including the potential interaction between risk level and offense type. Therefore additional exploratory analyses were also conducted to evaluate how these variables relate to one another within the study design.

CHAPTER 2: PRINCIPAL STUDY

2.1 Participants

A total of 349 student participants were recruited from the University of Saskatchewan through advertisements on the Psychology 110 Participant Pool and on the Personalized Access to Web Services (PAWS) Bulletin Board. Forty-six participants were excluded for large amounts of missing data (>90%), and one other was excluded for missing experimental condition data. Twelve participants were excluded for failing the manipulation check by providing incorrect responses on key check items. The final sample comprised 290 respondents in total (see Table 2-1 for condition assignment). Consistent with past research, the majority of participants were female (74.1%) and European/Caucasian (51%) in background, with a mean age of approximately 20. Although students represent a only subset of their communities and therefore are not a perfectly representative sample, past research has not suggested that students' responses to sex offenders are substantially different than those of other community members (Willis, G. M et al., 2010), and the reduced variance in more homogenous samples can be advantageous for hypothesis testing (Berkowitz & Donnerstein, 1982).

Table 2-1. Distribution of participants by experimental condition.

	Property	Violent	Sex	Total
Low risk	55	42	52	149
High risk	41	51	49	141
Total	96	93	101	290

2.2 Materials

The online survey included a measure of baseline attitudes toward various social groups (Appendix A); a vignette depicting an offender who is about to be released into the community (Appendix B); three measures of dehumanization (Appendix C – the order of scale presentation was randomized); a manipulation check (Appendix D); a series of questions regarding participants' perceptions of the offender and his offense, their beliefs about his rights in the community, and their willingness to be in proximity to the offender and his rehabilitation centre (Appendix E – the order of scale presentation was randomized); a test of general knowledge about sex offenders (Appendix F); and a series of demographic questions (Appendix G). The appendices have been organized to reflect the order of the presentation of each section in the

survey itself, but the following outline reviews first the independent variables, then the primary dependent variables (i.e., dehumanization, support for the offender's rights, and social distance), and finally the supplemental variables.

2.2.1 Vignettes

The vignettes provided a profile of a fictional adult offender who was about to be released in Saskatoon, Saskatchewan. The offender's name, gender, age, place of birth, and criminal history were identical for each vignette, as well as the description of his sentence, treatment participation, and release conditions. A first initial rather than a complete surname was given to avoid associating a living person with a hypothetical offender. He was described as having no criminal history to avoid potential confounds in terms of participants' responses toward other types of offenses. His length of sentence (5 years) was based on the average reported length of sentence for a sex offender in Canada given by a recent sample of students at the University of Saskatchewan (Olver & Barlow, 2010), which was not disproportionate to a relatively recent estimate of the actual average length of a federal sentence for sex offenders in Canada (Motiuk & Belcourt, 1996). The offender's age (32) was also consistent with the median age of accused sex offenders (Statistics Canada, 1999).

The description of the specific offense for which the hypothetical offender was incarcerated varied across conditions. In the sex offender condition, his offense referred to a sexual assault of a person of unspecified gender in a parking garage at night, thus depicting a sexual assault on an adult, consistent with the legal definition of this offense in the Criminal Code of Canada (as cited by Statistics Canada, 1999), and also consistent with the night-time stranger assault stereotype commonly associated with rapists (Clarke et al., 2002). Although some researchers have elected to focus on responses to child molesters as a subgroup of sex offenders (e.g., Viki et al., 2012), perpetrators of sexual assault on adult victims have been specifically shown in the literature to be described with animalistic language (e.g., beast, savage), particularly when they fit the stereotype of the stranger rapist, preying on victims who are unknown to them in public places (Clarke et al., 2002; Kosse, 2006; Madriz, 1997). Perpetrators of sexual assaults against child victims are especially reviled (e.g., Ferguson & Ireland, 2006; Viki et al., 2012), and may have generated more complex responses than the present study was intended to account for, as well as been more difficult to pair with comparable non-sexual and non-violent offenses against adult victims for the other vignettes.

In the non-sexual violent offender condition, the offense was described a physical assault on a person of unspecified gender in a parking garage at night, and in the property offender condition, as a break and enter of a parking garage at night. Specific details of the offenses were minimal to avoid potential emotional harm to participants who may have experienced similar crimes and to ensure that the scenario was ambiguous, allowing participants to impose their own interpretations and respond accordingly (Applegate, Wright, Dunaway, Cullen, & Wooldredge, 1993; Pfeifer & Ogloff, 1991).

The vignettes also systematically varied in their description of the offender as being at a "low" versus "high" risk to commit another similar offense, for a total of six different vignettes. This form of subtle manipulation is in keeping with past research in this area (e.g., Rogers & Ferguson, 2010; Salerno et al., 2010; Sahlstrom & Jeglic, 2008; Viki et al., 2012), as well as the argument made by Prentice and Miller (1992) in favour of minimal manipulations of independent variables as a means of showing the power of an effect through its occurrence in the absence of strong manipulation. However, to ensure that participants attended to the material, a note at the end of the vignette reminded them that they would be tested on their memory of the vignette at a later point in the survey. This memory test also served as a manipulation check, asking participants to report a series of details from the vignette, including the offender's current offense and risk level. The full vignette is available in Appendix B, and the manipulation check is available in Appendix D.

2.2.2 Dehumanization

The measurement of dehumanization has commonly relied on response latency tasks to detect the relative strength of associations between target and control groups and various stimuli associated with dehumanization, but this technique was not feasible in the current study due to technical constraints. However, several studies have employed questionnaire-based alternatives (e.g., Gaunt et al., 2002; Viki et al., 2006; Viki et al., 2012), some of which have demonstrated convergent validity with the traditional response latency measures (e.g., study 2, Demoulin et al., 2004; study 1, Viki et al., 2006). However, no questionnaire has yet emerged as a standard. Therefore, this study employed three relatively brief measures of dehumanization which were newly constructed based on past literature and theory regarding dehumanization. For all scales, items were scored such that higher values reflected greater dehumanization of the target. The complete list of each of the scales' items is available in Appendix C.

2.2.2.1 Attribution of dehumanized traits. Haslam (2006) postulated two distinct and independent forms of dehumanization—animalistic and mechanistic—which differ in how their targets are perceived. Mechanistically-dehumanized targets are seen as rigid, cold, passive, and superficial, rather than emotionally responsive, warm, open, and agentic. Animalistically-dehumanized targets are seen as uncivilized, coarse, amoral, irrational, and immature, as opposed to refined, civilized, moral, rational, and mature. Research has suggested that sex offenders may be particularly likely to be animalistically dehumanized (Viki et al., 2012). Therefore, a 20-item measure was developed for this study based on Haslam's theoretical model of dehumanization-related traits², including ten items pertaining to the traits identified by Haslam as being associated with animalistic dehumanization (e.g., rude, irrational, moral [reverse scored]). For purposes of discriminant validity, ten traits related to mechanistic dehumanization (e.g., cold, passive, sensitive [reverse scored]) constituted the remainder of this measure (see Table 2-2 for items). Participants indicated on a 7-point scale the degree to which they believed the offender target possessed these traits (1 = Not at all, 7 = Very much). For the mechanistic and animalistic traits respectively, the positively-worded items were reverse-scored, such that higher scores reflected greater attribution of dehumanized traits, and composite scores were calculated by averaging across the items representing each construct. The internal consistency of each scale based on Cronbach's alpha was .85 for the animalistic dehumanization scale and .77 for the mechanistic dehumanization scale (one very poorly performing item was deleted).

Table 2-2. Items on animalistic and mechanistic trait attribution scales.

Animalistic		Mechanistic	
Uncivilized	Polite (R)	Unfeeling	Emotional (R)
Rude	Refined (R)	Cold	Sensitive (R)
Lacking self-control	Moral (R)	Rigid	Warm (R)
Irrational	Rational (R)	Passive ^a	Open (R)
Childish	Mature (R)	Superficial	Deep (R)

Note. (R) indicates items which are reverse-scored. ^aRemoved as a poorly-performing item.

²Lammers and Stapel (2011) also developed a similar measure based on this theoretical construct. However, recent concerns have been raised about alleged data fraud on the part of the second author. Although it is unknown if the research reported in the 2011 article contains fabricated data, caution prohibits any claims to be made based on this article regarding prior statistical validation of this measure of dehumanization.

2.2.2.2 Attribution of emotional capacity. Several studies have found that dehumanized targets are considered less capable of experiencing complex secondary emotions (e.g., hope, sympathy, remorse, humiliation) compared to primary emotions (e.g., surprise, pleasure, anger, pain), regardless of the valance of these emotions, because the former are considered uniquely human characteristics (e.g., Demoulin et al., 2004; Gaunt et al., 2002; Paladino et al., 2002). Therefore, a 20-item measure was developed for this study consisting of ten secondary emotions and ten primary emotions, balanced in valance, based on normative data developed by Demoulin and colleagues on American students' ratings of the perceived humanity and valence of English emotion words (Appendix A in Demoulin et al., 2004). It should be noted, however, that their English-speaking sample was limited to 27 students, so care was taken to select only words that scored at the extreme ends in terms of both valance and perceived humanity/non-humanity, and which were also consistent with examples of primary and secondary emotions in other research (e.g., Cuddy et al., 2007; Gaunt et al., 2002; Paladino et al., 2002). The inclusion of close synonyms (e.g., anger and rage; humiliation and embarrassment) was also avoided to minimize redundancy in the scale or confounding with emotional subtypes. A similar approach to selecting emotions from the Demoulin et al. (2004) dataset was employed by Gaunt et al. (2002), although these were used as stimuli in a response latency task rather than items for a questionnaire. These researchers did not report all of the 64 words employed in their study, but the 16 examples they gave were among those selected for inclusion in the present measures as strong examples of positively and negatively-valenced primary and secondary emotions. See Table 2-3 for items.

Table 2-3. Items on primary and secondary emotion attribution scales.

<u>Primary</u>		<u>Secondary</u>	
Positive	Negative	Positive	Negative
Surprise	Pain	Sympathy	Humiliation
Pleasure	Fear	Passion	Remorse
Affection	Panic	Admiration	Guilt
Excitement	Suffering	Nostalgia	Resentment
Enjoyment	Anger	Hope	Repentance

For this measure, participants indicated on a 7-point scale the degree to which they believed that the offender was capable of feeling each of these emotions (1 = Not at all, 7 = Very much). Items were scored such that higher scores reflected greater attribution of capacity for

each type of emotion. For both the primary and secondary emotions subscales, composite scores were calculated by averaging across the ten items representing each construct. The internal consistency of the scales based on Cronbach's alpha was .91 for each subscale respectively.

2.2.2.3 Evocation of dehumanizing affect. Finally, an 8-item measure was developed to assess the evocation of dehumanizing affect by the target in the participant based on the affective components of each of the four major quadrants of the stereotype content model (i.e., pride/admiration, pity/sympathy, envy/jealousy, and disgust/contempt; Harris & Fiske, 2006). In particular, "disgust" and "contempt" constitute the affective component associated in this model with low-warmth, low-competence dehumanized groups. Disgust in particular has been found to relate to dehumanization of members of this category, including homeless people, drug addicts, and certain foreign and immigrant groups (Harris & Fiske, 2006; Hodson & Costello, 2007), and has also been theorized to link generally with targets of animalistic dehumanization (Haslam, 2006; Rozin et al., 2008).

As with the other measures, participants indicated on a 7-point scale the degree to which they felt these emotions toward the offender (1 = Not at all, 7 = Very much). All items except contempt and disgust for the offenders were reverse-scored such that higher scores reflected greater levels of dehumanizing affect and a composite score was calculated by averaging across the eight items. The internal consistency of the 8-item scale based on Cronbach's alpha was .66, which was deemed unsatisfactory. Exploratory factor analysis also did not support either the unidimensionality of the scale or the expected relationship between disgust and contempt. As such, disgust, being the item most closely related with dehumanization in the literature, was subsequently employed as a single-item measure of evocation of dehumanizing affect.

2.2.3 Support for Offenders' Rights

Existing measures to assess attitudes toward sex offenders (e.g., Church, Wakeman, Miller, Clements, & Sun, 2008; Johnson et al., 2007; Wnuk et al., 2006) tend to be multidimensional, and included an array of items which pertain to various beliefs about the nature of sexual offenses, the personal characteristics of the offenders, and the effectiveness of treatment and punishment, as well as support for particular actions against these individuals, including social exclusion and violence. For the purposes of the present study, a more specific and homogeneous set of items was used to evaluate participants' responses on a single dimension—support for offenders' rights.

Items were developed based on the literature on offenders' rights and existing legislation pertaining to the freedoms and obligations of offenders in the community (e.g., Petrunik et al., 2008; Uggen et al., 2006; Ward et al., 2007), as well as based on the existing measures discussed above. In total, the measure consisted of 18 items regarding participants' beliefs about what offenders should and should not be allowed (or be required) to do and how they should be treated. Example items include, "He should be required to register as an offender with the police"; "He should be executed"; "He should be allowed to rent an apartment" (reverse-scored), "He should be allowed to vote" (reverse scored). Participants responded to each item on a 7-point Likert scale indicating the degree to which they agreed or disagreed with the statement (1 = Strongly agree; 4 = Neither agree nor disagree; 7 = Strongly disagree). Items were scored such that higher scores reflected more support for the offender's rights. A composite score was calculated by averaging across all of the items. The internal consistency of the scale based on Cronbach's alpha was .91. The complete list of items is available in Appendix E.

2.2.4 Social Distance

The second major dependent variable was participants' willingness to be in proximity to offenders, or their treatment facilities, in a community setting. The issue of social distance is relevant as a separate issue from support for offenders' rights because, as prior research has demonstrated, even individuals who support the accessibility of treatment or acknowledge the importance of employment for an offender in the community in principle may still be averse to having that treatment take place in their own neighbourhood or be unwilling to personally work with an offender (Brown, S., 1999; Brown, S. et al., 2008).

This construct was assessed using a 10-item social distance scale adapted from previous research on social distance from sex offenders (Shechory & Idisis, 2006), itself based on the original scale developed by Bogardus (1925, as cited by Shechory & Idisis, 2006). One item pertaining to the willingness of the participant to marry the target was deleted because of the issues this item raised regarding participants' sexual orientation and general desire to be married. To compensate for this loss of sensitivity, one item was added regarding participants' willingness to reside in the same city as the target. Given the likelihood that participants would reject more intimate associations with offenders, adjusting the scale to include this more distal form of contact also addressed potential issues of restriction of range. As well, three additional items were included related to the participants' willingness to live or work near the offender's

community rehabilitation centre, or take part in his rehabilitation treatment. These were deemed relevant considerations as individuals are often as opposed to having proximity to an offender directly as to their treatment facilities (Brown, S., 1999), despite the importance of community-based care and supervision (Willis, G. M. et al., 2010; Wormith et al., 2007).

Although in their original conception social distance measures have been employed as dichotomous scales and scored in a hierarchical fashion (Bogardus, 1925, as cited by Shechory & Idisis, 2006), the present study employed 7-point Likert scales on which participants indicated the degree to which they agreed or disagreed with statements regarding their willingness to have contact with the target in a given scenario (1 = Strongly agree; 4 = Neither agree nor disagree; 7 = Strongly disagree). Items were scored such that higher scores reflected greater social distance (i.e., less willingness to have contact with the target), and a composite score was calculated by averaging across the items. The internal consistency of the scale based on Cronbach's alpha was .94. See Table 2-4 for items.

Table 2-4. Items on modified social distance scale.

I would be willing to...
... live in the same city ^a
... live in the same neighbourhood
... live in the same building
... work in the same organization
... spend time with him
... live in the same room
... be close friends
... live in the same neighbourhood as his rehabilitation centre ^a
... work in the same neighbourhood as his rehabilitation centre ^a
... assist in his rehabilitation treatment ^a

^a Modified from the original scale by Shechory and Idisis (2006).

2.2.5 Additional Variables

2.2.5.1 Secondary dependent variables. Because of the ambiguity of the vignette as presented and subsequent potential for variation in participants' perceptions of the offense and the offender, several aspects of participants' proximal evaluations of the vignettes were also assessed, including participants' perceptions of the appropriateness of the offender's sentence

length (2 items), the perceived offense severity (3 items, one each for physical, emotional, and financial harm), the perceived typicality of the offender and his offense (2 items), and his perceived dangerousness in the community (5 items). With the exception of the questions regarding sentence length appropriateness and preferred sentence length, which were assessed by a multiple choice and an open-ended question respectively, participants responded on 7-point Likert scales indicating the degree to which they agreed or disagreed with each statement (1 = Strongly agree; 4 = Neither agree nor disagree; 7 = Strongly disagree). All items except perceived offender dangerousness were treated as one-item measures, with a composite score for dangerousness calculated by averaging across its five items ($\alpha = .88$). A complete list of items is available in Appendix F.

2.2.5.2 Baseline attitudes toward social groups. Systematic differences in baseline attitudes toward the target offender groups of sex offenders, violent offenders, and property offenders were a potential confound. Although randomization would ideally control for these effects, participants' baseline attitudes toward these groups were established prior to the administration of the vignette in order to validate this assumption. Participants were presented with a series of 15 social groups, including five offender groups, and asked to rate each group on a feeling thermometer which ranged from 0° (extremely unfavourable) to 100° (extremely favourable). A range of social groups was provided to reduce the salience of the target groups and to provide interpretive context when comparing responses to these groups toward other more commonly measured targets (e.g., men, women, poor people, homeless people). This approach has been found to produce valid and reliable single-item measures of attitudes toward specific social groups in past research (Haddock, Zanna, & Esses, 1993).³ An outline of this measure and its accompanying instructions are available in Appendix A.

2.2.5.3 General knowledge about sex offenders. Participants completed an 8-item measure of true/false questions testing their general knowledge about sex offenders, including characteristics of sex offenders and facts about sex offenses and sex offender legislation in Canada. The following are examples of items on this measure, "Most sex offenses involve serious physical violence" (false) and "Most sex offenders know their victims" (true). Items were derived from a variety of sources of statistical information on sex offenders and sexual offending

³ Participants were also asked to rate each group on two 7-point scales on how competent and how warm they believed members of these groups are. This allowed for the possibility for future analysis of these groups within the framework of the stereotype content model (Fiske et al., 2002).

patterns (Brennan & Dauvergne, 2011; Brennan & Taylor-Butts, 2008; Hanson et al., 2009; Statistics Canada, 1999). Participants responded to each statement with "True", "False", or "Don't Know". Correct responses were given a score of one and a total score was calculated by summing across the items for a range of possible scores from 0 to 8. The complete list of items is available in Appendix G.

2.2.5.4 Demographic characteristics. Finally, participants were given a series of demographic questions pertaining to their sex, age, ethnicity, political leaning, religious identification and self-described religiosity, and citizenship status, as well as one item each on whether they or someone close to them such as friends or family had been a target of a crime (participants were presented with a list of crime categories and an "other" option and asked to indicate which categories applied to them or to their friends and family). Although the literature on the influence of participant characteristics on responses to offenders in the community has been inconsistent (e.g., Brown, 1999; Levenson et al., 2007, Olver & Barlow, 2010), the inconclusive nature of the evidence is sufficient reason for prudence. Measurement of these characteristics permitted a statistical overview of the characteristics of the sample generated for this study and statistical comparisons to ensure that they did not differ between experimental conditions. Participants were also given an open-ended question to report any questions, concerns, or general comments about the survey. The complete list of demographic items is available in Appendix H.

2.3 Procedure

Of the 290 participants included in the study, the majority were recruited through the Psychology 110 Participant Pool (N = 233) and with the remainder accessing the study through the PAWS Bulletin Board (N = 34)⁴. Students recruited through the former method were compensated with course credit, and those recruited via the latter method were entered into a draw for a cash prize. Those who agreed to participate were given a link to an online survey hosted through the Social Sciences Research Laboratories' (SSRL) Survey and Group Analysis Laboratory (SGAL). Once they accessed the survey, participants were provided with a more detailed description of the study and a consent form outlining the study's purpose and procedure,

⁴ Twenty-three participants did not indicate the specific source of their participation in the survey. These data were not tracked automatically by the survey software and were instead indicated manually at the end of the survey as part of the debriefing process. In some cases, participants experienced technical difficulties and were not able to complete the survey to this point.

emphasizing the participant's anonymity and their right to withdraw from the study at any point (see Appendix I for the consent form). They were informed that some of the material presented would relate to a criminal offense, but that the information would be presented in no more graphic detail than would be encountered in a typical media release. Once they gave their consent, participants were randomly assigned to one of six conditions (2 risk levels by 3 offense types). Table 2-5 summarizes the entire online survey presentation procedure.

Table 2-5. Summary of online survey protocol.

Section	Number of Items	Randomization
1. Consent Form/Instructions	-	-
2. Baseline Attitudes toward Social Groups	45 (3 per group)	Item order
3. Offender Vignette	-	Condition assignment
4. Dehumanization Measures		Block order
Attribution of dehumanized traits	20	
Attribution of emotional capacity	20	
Evocation of dehumanizing affect	8	
5. Manipulation Check	8	None
6. Secondary Dependent Measures		Block order
Perceived sentence appropriateness	2	
Perceived offense severity	3	
Perceived offense typicality	2	
Perceived offender dangerousness	5	
7. Responses to Offender Measures		Block order
Support for the offender's rights	18	
Social distance	10	
8. Sex Offender Knowledge Test	8	None
9. Demographic Items	11	None
10. Debriefing	-	-
Total items	160	

First, the baseline measure of their attitudes toward various social groups, including the three offender targets, was presented. This was followed by the presentation of the vignette, which included a notice that they would be tested on their memory of the vignette at a later point to encourage deep processing of the material. Following this, participants were given the three dehumanization measures, the specific presentation order of which was randomized to avoid

order effects. Following this, they were presented with the manipulation check in the form of a memory test, which included the key questions of what the offender's current offense and assessed risk level in an un-cued recall format (blank responses boxes). The next series of questions included the potential vignette confounds, which were followed by measures of the main dependent variables. The presentation of the scales was randomized within each block to countermand possible order effects. The survey concluded with the knowledge test, demographic items, and a debriefing form which also included instructions for receiving compensation as well as contact information for the Student Counselling Services at the University of Saskatchewan if any of the survey content had been upsetting to them (see Appendix J for debriefing form). Participants who chose to enter the draw were asked to provide their contact information, which was stored separately from their survey responses to protect their anonymity. Following the data collection period, one of these participants was randomly selected to receive a cash prize of \$150 as per the advertised incentive. The median time to complete the survey was 26 minutes.

2.4 Results

2.4.1 Data Cleaning

Prior to the analyses, the dataset was cleaned according to the protocol outlined by Tabachnick and Fidell (2007). First, responses were checked for invalid or miscoded entries. A number of responses categories for the demographic variables were recoded (see Appendix J for overview). Average scores were calculated for each scale and subscale as outlined above. Summed scores were calculated for the sex offender knowledge test. See Table 2-6 for an overview of all of the variables included in the analyses.

Forty-six participants were missing more than 90% of their data on key variables (survey non-completers) and were excluded from analysis. Remaining participants had less than 5% of their data missing and these data were not concentrated on any specific variable. As the dataset was large and the missing data were not concentrated in any particular variables, mean substitution was not used in order to avoid artificially decreasing the variance in the scores (Tabachnick & Fidell, 2007). Twelve participants were removed for failing the manipulation check, with responses inconsistent to their assigned condition (e.g., reported reading about a high risk sex offender when assigned to a low risk property offender vignette). One participant whose experimental condition data was not recorded was also removed. Of the 349 original cases, this left a total sample of 290 participants for analysis.

Table 2-6. Summary of variables included in analyses.

Variable	Type	Levels/Categories/Range
Independent		
Risk level	Manipulation	2
Offense type	Manipulation	3
Primary Outcome Measures		
Animalistic traits	Scale (10 items)	7
Mechanistic traits	Scale (10 items)	7
Primary emotions	Scale (10 items)	7
Secondary emotions	Scale (10 items)	7
Dehumanizing affect	Scale (8 items)	7
Support for the offender's rights	Scale (18 items)	7
Social distance	Scale (10 items)	7
Secondary Outcome Measures		
Sentence appropriateness	Categorical	3
Sentence length ^a	Open	-
Physical/emotional/financial severity	Scale (1 item each)	7
Offense typicality	Scale (1 item)	7
Offender typicality	Scale (1 item)	7
Offender dangerousness	Scale (5 items)	7
Demographic/Other		
Sex	Categorical	2
Age ^a	Open	-
Ethnicity	Categorical	11
Political leaning	Categorical	3
Religious identification	Categorical	8
Religiosity (self-reported)	Scale (1 item)	4
Citizenship status	Categorical	4
Property crime victimization (direct)	Categorical	2
Property crime victimization (vicarious)	Categorical	2
Personal crime victimization (direct)	Categorical	2
Personal crime victimization (vicarious)	Categorical	2
Baseline attitudes toward offenders	Scale (1 item)	100
Sex offender knowledge	Scale (8 items)	8

^a Allowed for opened-ended response in terms of number of years, from 0 to 100

Finally, checks of statistical assumptions, including normality, linearity, homoscedasticity, homogeneity of variance and covariance, and absence of multicollinearity, were conducted as necessary for each statistical procedure employed according to the standard criteria for univariate and multivariate analyses (Howell, 2009; Tabachnick & Fidell, 2007). See Appendix J for a detailed overview of all data cleaning procedures and assumption checks.

2.4.2 Preliminary Analyses

2.4.2.1 Overview of participant characteristics. Following the data cleaning, the distributions of participant characteristics for the sample as a whole and across each level of the experimental manipulation were checked to assess the nature of the sample as well as check the integrity of the randomization procedure. Means, standard deviations, and proportions were calculated and a series of independent samples *t*-tests, one-way analyses of variance and chi-squared tests were conducted to analyze the distribution of sample characteristics by each experimental condition to ensure that participants were evenly distributed by each level of manipulation.

The final sample comprised predominantly female (74.1%) students of European or other Caucasian ethnicity (51.0%), consistent with past research on this population (Chopin, 2011; Olver & Barlow, 2010). The average age of the sample was 19.97 years ($SD = 3.55$). A plurality of participants identified with one or more Christian denominations (45.5%) with the next largest proportion claiming an unspecified personal faith (32.1%), followed by atheism (10.7%). The mean level of reported religiosity was "somewhat religious" ($M = 2.14$, $SD = 0.98$). The mean score on the political leaning scale was close to neutral ($M = 3.90$, $SD = 1.61$), with the largest proportion describing themselves as "conservative" (35.9%), closely followed by "liberal" (31.4%). The large majority of respondents indicated that they were Canadian citizens born in Canada (79.3%). Participants did not differ in any of these characteristics by risk level ($ps \geq .104$) or offense type condition ($ps \geq .355$).

Most participants indicated that one or more close friends or family members had been a victim of a property crime at some point (69.3% of the total sample), with a minority indicating that they had been a victim of a property crime themselves (34.8%). The most common property crime experience reported in either case was theft (60% and 25.9% respectively). Victimization by a violent crime (e.g., robbery, physical assault, sexual assault, homicide) was less commonly reported either as a vicarious (38.6%) or direct experience (14.5%) compared to property crimes.

The most common vicarious violent crimes reported were physical assaults (23.1%), with sexual assaults as the second most frequently reported (19.7%). In contrast, for their direct experiences, participants reported sexual assaults the most often (8.3%), followed by non-sexual physical assaults (4.1%), which is also consistent with the majority of participants being female, as women are more likely to be victims of sexual assault (Brennan & Taylor-Butts, 2008). Participants did not significantly differ in distribution of property victimization experiences between either risk level conditions (direct: $\chi^2(1) = 0.00, p = .979$; vicarious: $\chi^2(1) = 0.03, p = .853$) or offense type conditions (direct: $\chi^2(1) = 0.65, p = .419$; vicarious: $\chi^2(1) = 1.16, p = .282$). They also did not significantly differ in distribution of violent victimization experiences between either risk level conditions (direct: $\chi^2(2) = 0.45, p = .797$; vicarious: $\chi^2(2) = 2.181, p = .336$) or offense type conditions (direct: $\chi^2(2) = 1.64, p = .441$; vicarious: $\chi^2(2) = 4.19, p = .123$).

Respondents' baseline attitudes toward offender groups were generally negative. The mean score for attitudes toward sex offenders was 8.2 ($SD = 12.83$) out of a possible 100, with 57.9% of respondents reporting a response of 0 ("extremely unfavourable"). Violent offenders fared slightly better, with a mean response of 11.9 ($SD = 14.21$), and only 44.1% of respondents giving a score of 0. In contrast, the mean scores for property offenders, drug addicts and white-collar criminals were approximately 30.0. Homeless people, typically a highly reviled group (Harris & Fiske, 2006), achieved a mean score of 50.01 ($SD = 19.06$), close to the neutral point ("Neither favourable nor unfavourable"). Participants' mean attitudes toward the three target offender groups did not differ significantly by either the risk level ($ps \geq .121$) or the offense type ($ps \geq .296$) of the offender in their vignette conditions.

Factual knowledge about sex offenders in a Canadian criminal justice context was poor, with a mean score of 2.70 ($SD = 1.50$) out of a possible score of 8 on the knowledge-testing questions. No participants achieved a perfect score and only two participants achieved a score of 7, the next highest possible score. The most commonly correctly-answered question was "Sexual assault is one of the most under-reported crimes" (85.5% correctly responded "True") and the most commonly incorrectly-answered question was "Most convicted sex offenders do *not* commit multiple sexual offenses" (only 8.3% correctly responded "True"). There were no significant differences in participants' mean scores by risk level ($t(288) = 0.84, p = .402$) or offense type condition ($F(2,289) = 1.73, p = .179$). Tables 2-7 and 2-8 summarize the distribution of the participant characteristics by offense type and risk level respectively.

Table 2-7. Frequencies and mean scores of demographic characteristics by risk level.

Variable	Low Risk		High Risk		Total		<i>t</i>
	n	M (SD)	n	M (SD)	n	M (SD)	
<i>Age (Years)</i>	142	19.76 (3.63)	134	20.19 (3.47)	276	19.97 (3.55)	-1.69
<i>Religiosity</i>	142	2.17 (1.05)	135	2.12 (0.90)	277	2.14 (0.98)	0.43
	n	%	n	%	n	%	χ^2
<i>Gender</i>	149	100.0	141	100.0	290	100.0	0.90
Male	29	19.5	33	23.4	62	21.4	
Female	114	76.5	101	71.6	215	74.1	
Not given	6	4.0	7	5.0	13	4.5	
<i>Ethnicity</i>	149	100.0	141	100.0	290	100.0	14.05
Aboriginal	8	5.4	3	2.1	11	3.8	
African	8	5.4	2	1.4	10	3.4	
Caribbean	1	0.7	0	0.0	1	0.3	
Central American	16	10.7	8	5.7	24	8.3	
East Asian	13	8.7	9	6.4	22	7.6	
European/Caucasian	66	44.3	82	58.2	148	51.0	
Middle Eastern	2	1.3	1	0.7	3	1.0	
South American	1	0.7	0	0.0	1	0.3	
South Asian	5	3.4	3	2.1	8	2.8	
Southeast Asian	2	1.3	3	2.1	20	6.9	
Other/Mixed	9	6.0	11	7.8	5	1.7	
Not given	18	12.1	19	13.5	37	12.8	
<i>Religion</i>	149	100.0	141	100.0	290	100.0	3.73
Christian	68	45.6	64	45.4	132	45.5	
Muslim	4	2.7	4	2.8	8	2.8	
Buddhist	3	2.0	2	1.4	5	1.7	
Sikh	2	1.3	0	0.0	2	0.7	
Other religion	1	0.7	3	2.1	4	1.4	
Atheist	14	9.4	17	12.1	31	10.7	
Personal faith	49	32.9	44	31.2	93	32.1	
Not given	8	5.4	7	5.0	15	5.2	

Note. All tests were non-significant.

Table 2-7. Frequencies and mean scores of demographic characteristics by risk level, cont.

Variable	Low Risk		High Risk		Total		χ^2
	n	%	n	%	n	%	
<i>Political Leaning</i>	149	100.0	141	100.0	290	100.0	4.09
Conservative	43	28.9	56	39.7	99	35.9	
Liberal	47	31.5	39	27.7	86	29.7	
Neither	52	34.9	39	27.7	91	31.4	
Not given	7	4.7	7	5.0	14	4.8	
<i>Citizenship Status</i>	149	100.0	141	100.0	290	100.0	2.76
Citizen (born)	115	77.2	115	81.6	230	79.3	
Citizen (naturalized)	13	8.7	6	4.3	19	6.6	
Landed immigrant	7	4.7	8	5.7	15	5.2	
Other	7	4.7	5	3.5	12	4.1	
Not given	7	4.7	7	5.0	14	4.8	
<i>Victimization</i>							
<i>Property offense</i>	149	100.0	141	100.0	290	100.0	
Direct	52	34.9	49	34.8	101	34.8	0.00
Vicarious	104	69.8	97	68.8	201	69.3	0.03
<i>Offense against the person</i>	149	100.0	141	100.0	290	100.0	
Direct	24	16.1	18	12.8	42	14.5	0.65
Vicarious	62	41.6	50	35.5	112	38.6	1.16
	n	M (SD)	n	M (SD)	n	M (SD)	t
<i>Attitudes toward:</i>							
Sex offenders	141	7.06 (11.98)	130	9.48 (13.62)	271	8.22 (12.83)	-1.55
Violent offenders	142	11.82 (14.92)	130	11.96 (13.44)	272	11.89 (14.21)	-0.08
Property offenders	140	30.51 (18.36)	131	32.35 (16.96)	271	31.40 (17.69)	-0.86
<i>Sex offender knowledge</i>	149	2.77 (1.40)	141	2.62 (1.60)	290	2.70 (1.50)	0.84

Note. All tests were non-significant.

Table 2-8. Frequencies and mean scores of demographic characteristics by offense type.

Variable	Property		Violent		Sexual		Total		<i>F</i>
	<i>n</i>	<i>M</i> (<i>SD</i>)	<i>n</i>	<i>M</i> (<i>SD</i>)	<i>n</i>	<i>M</i> (<i>SD</i>)	<i>n</i>	<i>M</i> (<i>SD</i>)	
<i>Age</i> (Years)	92	20.50 (4.97)	89	19.63 (2.12)	95	19.77 (2.88)	276	19.97 (3.55)	0.53
<i>Religiosity</i>	92	2.12 (1.07)	90	2.08 (0.90)	95	2.23 (0.96)	277	2.14 (0.98)	0.61
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	χ^2
<i>Gender</i>	96	100.0	93	100.0	101	100.0	290	100.0	2.35
Male	18	18.8	24	25.8	20	19.8	62	21.4	
Female	74	77.1	66	71.0	75	74.3	215	74.1	
Not given	4	4.2	3	3.2	6	5.9	13	4.5	
<i>Ethnicity</i>	96	100.0	93	100.0	101	100.0	290	100.0	17.06
Aboriginal	3	3.1	4	4.3	4	4.0	11	3.8	
African	5	5.2	1	1.1	4	4.0	10	3.4	
Caribbean	0	0.0	1	1.1	0	0.0	1	0.3	
Central American	8	8.3	8	8.6	8	7.9	24	8.3	
East Asian	9	9.4	5	5.4	8	7.9	22	7.6	
European/ Caucasian	44	45.8	53	57.0	51	50.5	148	51.0	
Middle Eastern	1	1.0	1	1.1	1	1.0	3	1.0	
South American	1	1.0	0	0.0	0	0.0	1	0.3	
South Asian	3	3.1	2	2.2	3	3.0	8	2.8	
Southeast Asian	4	4.2	0	0.0	2	2.0	20	6.9	
Other/Mixed	3	3.1	10	10.8	6	5.9	5	1.7	
Not given	15	15.6	8	8.6	14	13.9	37	12.8	
<i>Religion</i>	96	100.0	93	100.0	101	100.0	290	100.0	13.87
Christian	38	39.6	42	45.2	52	51.5	132	45.5	
Muslim	3	3.1	2	2.2	3	3.0	8	2.8	
Buddhist	1	1.0	2	2.2	2	2.0	5	1.7	
Sikh	2	2.1	0	0.0	0	0.0	2	0.7	
Other religion	0	0.0	2	2.2	2	2.0	4	1.4	
Atheist	14	14.6	12	12.9	5	5.0	31	10.7	
Personal faith	34	35.4	28	30.1	31	30.7	93	32.1	
Not given	4	4.2	5	5.4	6	5.9	15	5.2	

Note. All tests were non-significant.

Table 2-8. Frequencies and mean scores of demographic characteristics by offense type, cont.

Variable	Property		Violent		Sexual		Total		χ^2
	n	%	n	%	n	%	n	%	
<i>Political leaning</i>	96	100.0	93	100.0	101	100.0	290	100.0	5.95
Conservative	29	30.2	28	30.1	42	41.6	99	35.9	
Liberal	29	30.2	33	35.5	24	25.3	86	29.7	
Neither	34	35.4	28	30.1	29	28.7	91	31.4	
Not given	4	4.2	4	4.3	6	5.9	14	4.8	
<i>Citizenship Status</i>	96	100.0	93	100.0	101	100.0	290	100.0	8.85
Citizen (born)	74	77.1	76	81.7	80	79.2	230	79.3	
Citizen (naturalized)	8	8.3	4	4.3	7	6.9	19	6.6	
Landed immigrant	6	6.3	3	3.2	6	5.9	15	5.2	
Other	4	4.2	7	7.5	1	1.0	12	4.1	
Not given	4	4.2	3	3.2	7	6.9	14	4.8	
<i>Victimization</i>									
<i>Property offense</i>	96	100.0	93	100.0	101	100.0	290	100.0	
Direct	36	37.5	31	33.3	34	33.7	101	34.8	0.45
Vicarious	66	68.8	60	64.5	75	74.3	201	69.3	2.18
<i>Offense against the person</i>	96	100.0	93	100.0	101	100.0	290	100.0	
Direct	11	11.5	13	14.0	18	17.8	42	14.5	1.64
Vicarious	32	33.3	33	35.5	47	46.5	112	38.6	4.19
	n	M (SD)	n	M (SD)	n	M (SD)	n	M (SD)	F
<i>Attitudes toward:</i>									
Sex offenders	90	6.82 (11.28)	87	8.01 (11.71)	94	9.76 (15.00)	271	8.22 (12.83)	1.22
Violent offenders	89	10.81 (14.17)	88	13.01 (13.76)	95	11.85 (14.71)	272	11.89 (14.21)	0.53
Property offenders	88	29.74 (17.26)	86	32.09 (17.71)	97	32.29 (18.13)	271	31.40 (17.69)	0.58
<i>Sex offender knowledge</i>	96	2.61 (1.30)	93	2.94 (1.67)	101	2.56 (1.49)	290	2.70 (1.50)	1.73

Note. All tests were non-significant.

2.4.2.2 Overview of primary dependent variables. The primary dependent variables included participants' views on offenders' rights and freedoms upon release into the community and their willingness for social contact with the offenders as well as the degree to which they dehumanized the offender targets. This latter variable was assessed as a composite of association with dehumanized traits, perceived capacity for experiencing complex and "human" secondary emotions, and the level of dehumanizing emotion evoked in the participant toward the target. The majority of scales used in the present study were either newly developed based on relevant theory or adapted from similar scales in previous studies. Comprehensive validation analyses were conducted, including exploratory and confirmatory factor analyses as well as supplemental exploratory analyses (see Appendix K for detailed overview).

To summarize, the support for offenders' rights and social distance measures were both found to have satisfactory unidimensional structures in exploratory factor analyses. For support for offenders' rights, the majority of the single-factor items loadings were .55 or greater ("good", accounting for at least 30% of shared variance in the underlying factor; Tabachnick & Fidell, 2007) and the factor accounted for 37.5% of the total common variance. For social distance, the item loadings were .63 or greater ("very good", 40% shared variance) and 62.6% of the total common variance was accounted for by this 1-factor solution. Reliability analyses of these scales also demonstrated excellent internal consistency, with Cronbach's alpha of .91 for the offenders' rights scale and .94 for the social distance scale (see Appendix K, Table K-1).

For evocation of dehumanizing affect, exploratory factor analysis found that the original four pairs of items representing each of the quadrants of the stereotype content model (Harris & Fiske, 2006) did not resolve adequately on to a single factor, consistent with the unsatisfactory Cronbach's alpha score of .66 for these eight items. Nor did the two items intended to represent the specific 'dehumanized' quadrant (disgust and contempt) load satisfactorily together in any solution or correlate as highly as would be expected for two items representing the same construct ($r = .31$). Ultimately, because all previous research in this area pertained exclusively to the role of disgust (e.g., Harris & Fiske, 2006; Hodson & Costello, 2007; Rosin et al., 2008), this item was therefore employed as a single-item measure of dehumanizing affect. See Appendix K, Tables K-2 through K-6 for complete results of exploratory factor analyses.

Confirmatory factor analysis, using EQS 6.2 software (Bentler, 2006), was used to analyse the dehumanized trait and emotional capacity scales, in order to test the specific

theoretically- and empirically-derived 2-factor structures which these scales were designed to have. For the dehumanized trait measure, this referred to the subscales of animalistic and mechanistic traits (Haslam, 2006), and for the emotion attribution measure, the primary and secondary emotion subscales (Demoulin et al., 2004; Gaunt, Leyens, & Demoulin, 2002; Paladino, 2002), each represented by a subset of ten items.⁵ Analyses of the expected 2-factor structures for each set of measures did not find adequate support for either model based on the goodness-of-fit tests and supplemental fit indices (comparative fit index [CFI] and standardized root mean square residual [SRMR]; see Appendix K, Figures K-1 and K-2). Nor was support found for subsequently-tested 1-factor models, despite high correlations between the proposed underlying factors in the 2-factor models ($r_s > .90$). Analyses of the residuals were also inconclusive, with no clear valid alternative factor structure emerging.

However, further analyses of the correlations between the proposed constructs of animalistic and mechanistic dehumanization and attribution of primary and secondary emotional capacity did find some evidence of theoretically-consistent relationships between the variables. Specifically, there were stronger negative correlations of both emotional capacity scales with mechanistic dehumanization ($r = -.62$ and $-.50$ for secondary and primary emotions respectively) than with animalistic dehumanization ($r = -.42$ and $-.24$; see Appendix K, Table K-7). From Haslam's (2006) discussion of these constructs, mechanistic dehumanization is thought to be associated with an absence of emotional capacity of any kind, whereas animalistic dehumanization is theorized to relate only to a lack of sophisticated human emotions, not the more basic and instinctive primary emotions, consistent with these findings.

Further evidence of the scales' construct validity was found when all of the dehumanization measures, including the four subscales and disgust as the single-item predictor, were combined as predictors of support for offenders' rights and social distance in a series of multiple regression analyses. Specifically, a negative suppression effect was identified between primary and secondary emotional capacity such that when these two constructs were entered together as predictors for either social distance or support for offenders' rights, the standardized regression coefficients for secondary emotional capacity were larger than the original correlations ($\beta_s > |.70|$; $r_s < |.60|$; see Tables 2-9 and 2-10). In contrast, the regression

⁵ One item, "passive", was excluded from the mechanistic traits subscale when early internal consistency analyses revealed that this item correlated negatively with the majority of the other items and had a corrected item-total correlation of $-.16$ with the overall scale. Thus further analyses for this scale were conducted on nine items, not ten.

Table 2-9. Multiple regression of dehumanization measures on support for offenders' rights.

Model	Variables	<i>r</i>	β	<i>t</i>	<i>p</i>	<i>F</i>	<i>p</i>	R ²
1a	Animalistic traits	-.43	-.08	-1.02	.311	53.75***	.000	.29
	Mechanistic traits	-.54	-.48	-6.09***	.000			
1b	Secondary emotions	.55	.71	7.06***	.000	57.05***	.000	.30
	Primary emotions	.39	-.20	-1.97 [†]	.050			
2	Animalistic traits	-.43	.01	0.09	.930	41.37***	.000	.44
	Mechanistic traits	-.54	-.16	-1.95 [†]	.053			
	Secondary emotions	.55	.40	3.92***	.000			
	Primary emotions	.39	-.12	-1.31	.193			
	Disgust	-.56	-.34	-5.93***	.000			

[†] *p* < .10, *** *p* < .001

Note. All models were significantly different from each other, *p* < .001.

Table 2-10. Multiple regression of dehumanization measures on social distance.

Model	Variables	<i>r</i>	β	<i>t</i>	<i>p</i>	<i>F</i>	<i>p</i>	R ²
1a	Animalistic traits	.47	.12	1.67 [†]	.096	69.77***	.000	.34
	Mechanistic traits	.58	.49	6.54***	.000			
1b	Secondary emotions	-.56	-.78	-7.98***	.000	63.53***	.000	.32
	Primary emotions	-.41	.27	2.77**	.006			
2	Animalistic traits	.47	.04	0.56	.573	46.16***	.000	.47
	Mechanistic traits	.58	.21	2.56*	.011			
	Secondary emotions	-.56	-.43	-4.32***	.000			
	Primary emotions	-.41	.18	1.97 [†]	.050			
	Disgust	.54	.29	5.12***	.000			

[†] *p* < .10, * *p* < .05, ** *p* < .01, *** *p* < .001

Note. All models were significantly different from each other, *p* < .001.

coefficients for primary emotional capacity in these analyses were weaker and in the reverse direction of the original correlations, such that greater attribution of primary emotional capacity was related to decreased support for offenders' rights and increased desire for social distance. When all the predictors were combined, attribution of primary emotional capacity was also no longer significantly predictive of support for offenders' rights at all ($\beta = -.28$, *p* = .193) and only weakly predictive of social distance ($\beta = .18$, *p* = .050). This finding was consistent with the expectation that attribution of secondary emotional capacity would indicate *less* dehumanization whereas attribution of primary emotional capacity would not (Leyens et al., 2007). However,

contrary to expectations, attribution of mechanistic traits was a stronger predictor than attribution of animalistic traits of negative responses to offenders.

On the basis of these analyses, and reliability analyses which supported the internal consistency of each individual measure ($.77 \leq \alpha \leq .91$), confirmatory factor analysis was employed again to test a model of a dehumanization composite construct. A five-factor model including primary and secondary emotional capacity, mechanistic and animalistic traits, and disgust was not an adequate fit to the data ($\chi^2(5) = 305.12, p < .001$; CFI = 0.66; SRMR = 0.13), owing primarily to a large residual between primary and secondary emotional capacity. However, a four-factor model excluding primary emotional capacity, which was not originally intended to be a predictor of dehumanization but rather to provide evidence of discriminant validity, proved to be a satisfactory fit ($\chi^2(2) = 19.11, p < .001$; CFI = 0.97; SRMR = 0.04; see Appendix K, Figures K-3 and K-4 for model diagrams with standardized path coefficients).⁶ No other four-factor model produced adequate results. It should be noted that a well-fitting model is not necessarily the correct model and that findings must be replicated on additional samples to establish validity (Kline, 2011). For the purposes of the present study, the dehumanization construct was deemed a satisfactory and composite dehumanization scores were calculated for each participant by averaging across the four scales of mechanistic and animalistic traits, attribution of secondary emotions, and disgust. The final composite variable was normally distributed and without univariate outliers ($M = 4.18, SD = 1.01$), as were the support for offenders' rights scale ($M = 5.02, SD = 0.99$) and social distance scale ($M = 4.20, SD = 1.49$).

2.4.2.3 Identification of important secondary dependent variables. In addition to the primary dependent variables, a number of other aspects of participants' interpretations of the vignettes were also assessed. These variables included the perceived severity and typicality of the offense, typicality and dangerousness of the offender himself, and appropriateness of his sentence length (5 years). All variables were measured by a single item, with the exception of perceived dangerousness of the offender, which was assessed by a 5-item scale. The internal consistency of the perceived dangerousness scale was satisfactorily high ($\alpha = .88, N = 279$) and all five items were retained with average scores calculated for each participant.

⁶ Because it is not uncommon for the overly-sensitive chi-squared goodness-of-fit test to indicate a significant difference in fit between the data and the model in larger samples, adjusted fit indices are also reported (Tabachnick & Fidell, 2007). For the indices reported here, a CFI of .95 or greater and an SRMR of .08 or less are indicative of a well-fitting model.

These secondary dependent variables were assessed for their potential relevance to the expected relationships between the experimental manipulations and the primary dependent variables. First, the experimental effects were assessed using 2x3 multivariate analysis of variance (MANOVA), looking at the main effects of risk level and offense type as well as their interaction. Differences in perceptions of the appropriateness of the offenders' sentences were compared using independent-samples chi-squared tests, as this variable was more categorical in nature. Participants' preferred sentence lengths were highly skewed and, as an optional response question, only reported by a small proportion of respondents, with cell sizes ranging from 2 to 49. Therefore, they were treated as descriptive and supplemental to the interpretation of perceived sentence appropriateness, and not subject to inferential analysis.

The multivariate tests found that there was a significant main effect of risk level ($\Lambda = .688$, $F(6,265) = 20.06$, $p < .001$), offense type ($\Lambda = .268$, $F(12,530) = 41.07$, $p < .001$), and a significant interaction effect as well ($\Lambda = .911$, $F(12,530) = 2.10$, $p = .016$) across all dependent variables. Examination of the univariate tests found that the main effect of risk was significant for only offender typicality ($F(1,270) = 20.04$, $p < .001$, $\eta^2 = .07$) and perceived dangerousness ($F(1,270) = 103.95$, $p < .001$, $\eta^2 = .28$). Specifically, high risk offenders ($M = 5.05$, $SD = 1.30$) were seen as more typical than low risk offenders ($M = 4.35$, $SD = 1.36$), regardless of their particular offense. High risk offenders were also seen as more dangerous ($M = 5.05$, $SD = 3.71$) than their low risk counterparts ($M = 3.71$, $SD = 1.18$) when averaging across offense types. Participants did not differ between risk conditions in terms of the perceived physical, emotional, or financial harm caused by the offense or the overall typicality of the offense ($ps \geq .282$; see Table 2-11 for a summary of the results).

A significant main effect of offense type was also detected for perceived physical ($F(2,270) = 247.01$, $p < .001$, $\eta^2 = .65$), emotional ($F(2,270) = 77.23$, $p < .001$, $\eta^2 = .36$), and financial harm ($F(2,270) = 20.63$, $p < .001$, $\eta^2 = .13$) of the offense, as well as for the perceived dangerousness of the offender ($F(2,270) = 12.28$, $p < .001$, $\eta^2 = .08$). There was no significant main effect of offense type on either perceived offense or offender typicality ($ps \geq .193$). *Post hoc* comparisons confirmed that property offenses ($M = 2.80$, $SD = 1.51$) were seen as causing significantly less physical harm than either the violent ($M = 6.24$, $SD = 1.03$, $p < .001$) or sexual offenses ($M = 6.29$, $SD = 1.00$, $p < .001$), regardless of risk level. Sexual offenses and violent offenses did not differ in this regard, however ($p = 1.000$). Property offenses ($M = 4.53$,

Table 2-11. Main effects of risk level on secondary dependent variables.

Dependent var.	Risk Level	<i>n</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>F</i>	<i>p</i>	Partial η^2
Physical harm	Low	143	4.97 _a	2.10	1,270	0.04	.842	.00
	High	133	5.26 _a	1.95				
Emotional harm	Low	143	5.79 _a	1.53	1,270	0.57	.450	.00
	High	133	5.79 _a	1.60				
Financial harm	Low	143	4.57 _a	1.62	1,270	1.16	.282	.00
	High	133	4.30 _a	1.75				
Offense typicality	Low	143	5.12 _a	1.17	1,270	0.08	.775	.00
	High	133	5.09 _a	1.16				
Offender typicality	Low	143	4.35 _a	1.36	1,270	20.04***	.000	.07
	High	133	5.05 _b	1.30				
Dangerousness	Low	143	3.71 _a	1.18	1,270	103.95***	.000	.28
	High	133	5.05 _b	1.10				

*** $p < .001$

Note. Subscripts indicate means which are significantly different at $p < .05$ within each set.

$SD = 1.76$) were also viewed as causing significantly less *emotional* harm than violent ($M = 6.06$, $SD = 1.06$, $p < .001$) or sexual offenses ($M = 6.77$, $SD = 0.69$, $p < .001$). Unlike with physical harm, where they were seen as equivalently harmful, sexual offenses were also seen as causing more emotional harm than violent offenses ($p < .001$). In contrast, when financial harm was considered, property offenders ($M = 5.17$, $SD = 1.76$) were viewed as the most severe in this respect, causing more harm than either violent ($M = 4.43$, $SD = 1.37$, $p = .004$) or sexual offenders ($M = 3.72$, $SD = 1.58$, $p < .001$). Interestingly, violent offenders were also seen as causing more financial harm than sexual offenders ($p = .005$). Finally, sex offenders were perceived as being significantly more dangerous ($M = 4.77$, $SD = 1.19$) than either violent ($M = 4.42$, $SD = 1.18$, $p = .024$) or property offenders ($M = 3.86$, $SD = 1.43$, $p < .001$). Violent offenders, however, were only seen as marginally more dangerous than property offenders ($p = .076$; see Table 2-12 for summary).

Finally, there were two interaction effects of note, one marginally significant interaction for financial harm ($F(2,270) = 2.74$, $p = 0.066$, $\eta^2 = .02$) and one significant interaction between risk level and offense type on perceived offender dangerousness ($F(2,270) = 5.99$, $p = .003$, $\eta^2 = .04$; see Appendix L for a complete summary of the simple effects analyses).

Table 2-12. Main effects of offense type on secondary dependent variables.

Dependent var.	Offense	<i>n</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>F</i>	<i>p</i>	Partial η^2
Physical harm	Property	92	2.80 _a	1.51	2,270	247.01***	.000	.65
	Violent	90	6.24 _b	1.03				
	Sex	94	6.29 _b	1.00				
Emotional harm	Property	92	4.53 _a	1.76	2,270	77.23***	.000	.36
	Violent	90	6.06 _b	1.06				
	Sex	94	6.77 _c	0.69				
Financial harm	Property	92	5.17 _a	1.76	2,270	20.63***	.000	.13
	Violent	90	4.43 _b	1.37				
	Sex	94	3.72 _c	1.58				
Offense typicality	Property	92	5.05 _a	1.28	2,270	0.67	.511	.00
	Violent	90	5.22 _a	1.02				
	Sex	94	5.04 _a	1.18				
Offender typicality	Property	92	4.74 _a	1.32	2,270	1.65	.193	.01
	Violent	90	4.52 _a	1.38				
	Sex	94	4.79 _a	1.43				
Dangerousness	Property	92	3.86 _a	1.43	2,270	12.28***	.000	.08
	Violent	90	4.42 _a	1.18				
	Sex	94	4.77 _b	1.19				

*** $p < .001$

Note. Subscripts indicate means which are significantly different at $p < .05$ within each set.

For financial harm, analysis of the simple main effects of offense type at each level of risk found greater differentiation among high risk than low risk offenders. Specifically, among the low risk offenders, sex offenders ($M = 4.10$, $SD = 1.58$) were seen as causing significantly less financial harm than low risk property offenders ($M = 5.06$, $SD = 1.79$, $p = .007$), but low risk violent offenders ($M = 4.49$, $SD = 1.23$) did not differ from either ($ps \geq .248$). However, high risk sex offenders ($M = 3.31$, $SD = 1.49$) were seen as causing significantly less financial harm than both high risk violent ($M = 4.39$, $SD = 1.48$, $p = .003$) and property offenders ($M = 5.33$, $SD = 1.74$, $p < .001$), and high risk violent offenders were also seen as causing significantly less harm than high risk property offenders ($p = .016$). Looking at the simple main effect of risk level at each offense type found that there was a simple main effect of risk for sex offenders, such that high risk sex offenders ($M = 3.31$, $SD = 1.49$) were seen as causing significantly *less* financial

harm than low risk sex offenders ($M = 4.10, SD = 1.58, p = .015$), but no similar effect of risk was detected for either violent or property offenders ($ps \geq .404$). See Figure 2-1 for the plotted simple effects of this interaction.

For the interaction effect on perceived dangerousness, when examining the simple effect of offense type at each risk level, it was found that there was more differentiation of dangerousness among low risk offenders compared to high risk offenders. Specifically, low risk sex offenders ($M = 4.36, SD = 1.20$) were perceived as more dangerous than low risk violent ($M = 3.78, SD = 1.02, p = .033$) and property offenders ($M = 3.05, SD = 0.91, p < .001$), while low risk violent offenders were also seen as more dangerous than low risk property offenders ($p = .003$). However, among the high risk offenders, there were no significant differences in perceptions of dangerousness across any offense category ($ps \geq .706$) – these offenders were perceived as being equivalently dangerous, regardless of their specific offense. See Figure 2-2 for the plotted simple effects of this interaction. Consistent with this, analysis of the simple effect of risk at each level of offense type showed that in all cases high risk offenders were also seen as more dangerous than low risk offenders ($ps < .001$).

Figure 2-1. Interaction of risk level and offense type for financial harm.

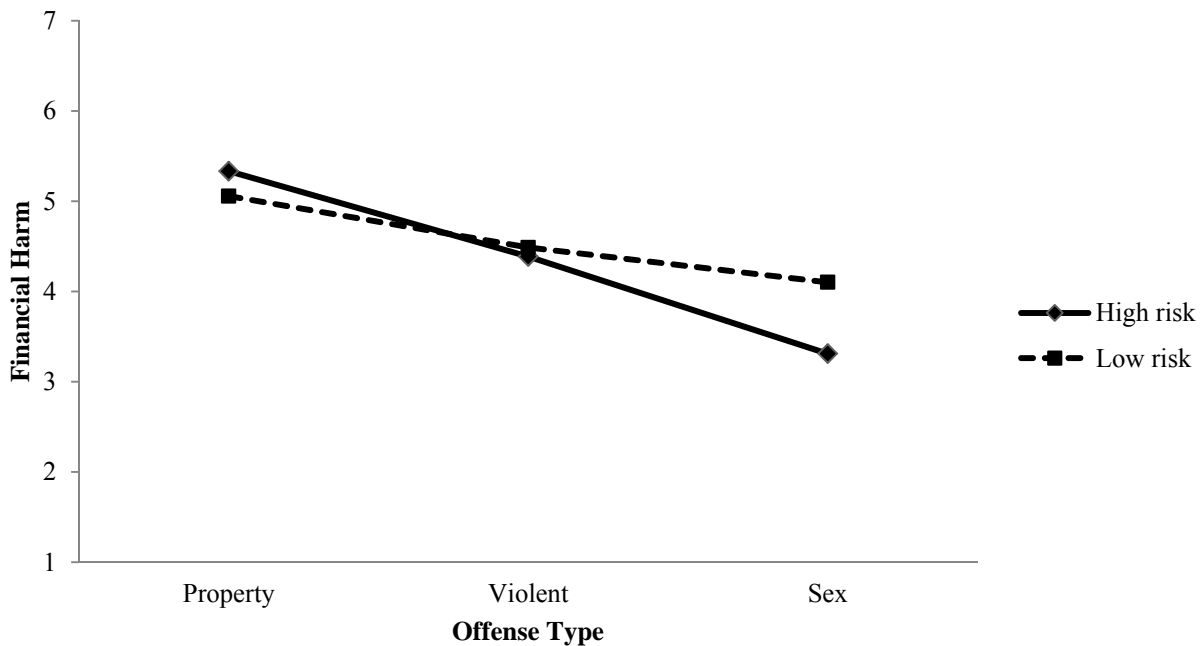
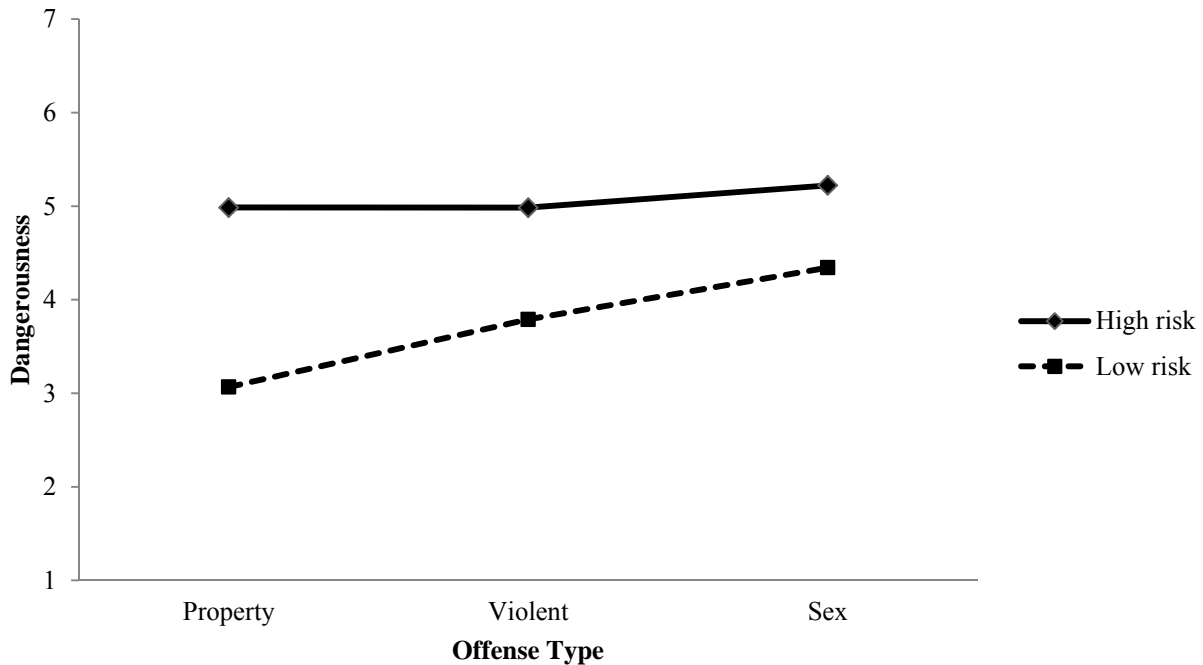


Figure 2-2. Interaction of risk level and offense type for offender dangerousness.



Finally, regarding sentence length, in most cases the majority of participants in each condition felt the described sentence of 5 years was appropriate, although for property offenders, over half of participants reported that the sentence was too long. Two independent sample chi-squared tests were conducted, one for each experimental manipulation. There was no significant association of perceptions of sentence length appropriateness with the offender's risk level ($\chi^2(2) = 0.82, p = .664$), but there was a significant association with offense type ($\chi^2(4) = 85.85, p < .001$). Specifically, participants in the sex offender condition were the most likely to request a longer sentence (34.7%), compared to participants who read about a violent offender (9.7%) or a property offender (2%; all proportions significantly different at $p < .05$; see Table 2-13). For sex offenders, the preferred longer sentences ranged from 7 to 100 years, with a modal response of 10 years, consistent with past research (Olver & Barlow, 2010). In comparison, participants in the property offender condition were most likely prefer a shorter sentence (51.0%), compared to violent offenders (20.4%) or sex offenders (4.0%; all significantly different at $p < .05$), and suggested sentences ranged from 0 to 4 years, with the majority preferring a 2-year sentence. Finally, the majority of participants (69.9%) were satisfied with the 5-year sentence for violent offenders, though 20.4% felt that even this was too long and with the 82.4% of these respondents recommending 2 or 3 years instead.

Table 2-13. Frequencies of perceived sentence appropriateness by risk level and offense type.

Sentence	Risk Level				Offense Type						Total	
	Low		High		Property		Violent		Sexual		N	%
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%		
Too short	21	14.1 _a	25	17.7 _a	2	2.1 _a	9	9.7 _b	35	34.7 _c	46	15.9
Appropriate	85	57.0 _a	81	57.4 _a	44	45.8 _a	64	68.8 _b	58	57.4 _{a,b}	166	57.2
Too long	39	26.2 _a	33	23.4 _a	49	51.0 _a	19	20.4 _b	4	4.0 _c	72	24.8

Note. Subscripts indicate column proportions which significantly differed at $p < .05$ based on Bonferroni-adjusted significance levels, for risk and offense type respectively.

Having identified the effects of the experimental manipulations on the secondary dependent variables, another series of analyses was conducted to identify which, if any, of these variables would be relevant to the prediction of the primary dependent variables. To this end, correlational analysis between all of the secondary and primary dependent variables and three sets of standard multiple regression analyses were conducted. Perceived appropriateness of the sentence and preferred sentence length were excluded from this stage of the analysis, again as these were more categorical and primarily descriptive in nature.

For both the correlational and regression analyses, perceived dangerousness emerged as the most relevant variable among the secondary outcomes. In the correlation analysis, perceived physical and emotional harm, offender typicality, and dangerousness exhibited the strongest associations with all primary dependent variables (see Table 2-14). However, perceived dangerousness exhibited the strongest correlations with the primary outcomes ($r_s \geq .56$). It was also moderately correlated with physical and emotional harm and offender typicality ($r_s \geq .32$), and, when combined with these measures in the multiple regression analyses, perceived dangerousness emerged as the strongest predictor of dehumanization ($\beta = .62, t(263) = 11.70, p < .001$), support for offenders' rights ($\beta = -.62, t(263) = -12.36, p < .001$), and social distance ($\beta = .50, t(263) = 8.64, p < .001$), while the other predictors were at best weakly associated (see Table 2-15). In combination with the results of the MANOVAs discussed above, these results indicated that perceived dangerousness in particular could play an important role in the relationships between the experimental manipulations and the primary dependent variables, and was therefore included in subsequent exploratory analyses.

2.4.2.4 Identification of important participant characteristics. Although in past research very few demographic variables have emerged as reliable influences on participants'

Table 2-14. Correlations between primary and secondary dependent variables.

Variable	1	2	3	4	5	6
1. Physical harm						
2. Emotional harm	.61***					
3. Financial harm	-.17**	-.07				
4. Offense typicality	.05	-.02	-.04			
5. Offender typicality	.01	.04	-.08	.23***		
6. Dangerousness	.32***	.29***	-.08	.13*	.40***	
Dehumanization	.32***	.30***	-.04	.06	.25***	.66***
Support for offenders' rights	-.42***	-.34***	.04	-.06	-.21**	-.68***
Social distance	.33***	.22***	.05	.12*	.23***	.56***

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 2-15. Multiple regression of secondary dependent variables on primary dependent variables.

Dependent var.	Independent var.	β	t	P	F	p	R^2
Dehumanization	Physical harm	.08	1.26	.207	37.49***	.000	.46
	Emotional harm	.09	1.59	.113			
	Financial harm	.03	0.66	.509			
	Offense typicality	-.04	-0.85	.395			
	Offender typicality	.01	0.17	.868			
	Dangerousness	.62***	11.70	.000			
Support for offenders' rights	Physical harm	-.19**	-3.29	.001	46.56***	.000	.51
	Emotional harm	-.05	-0.97	.333			
	Financial harm	-.06	-1.35	.178			
	Offense typicality	.03	0.68	.499			
	Offender typicality	.02	0.38	.701			
	Dangerousness	-.62***	-12.36	.000			
Social distance	Physical harm	.20**	3.01	.003	25.08***	.000	.36
	Emotional harm	-.02	-0.36	.715			
	Financial harm	.13*	2.60	.010			
	Offense typicality	.04	0.78	.435			
	Offender typicality	.03	0.62	.538			
	Dangerousness	.50***	8.64	.000			

* $p < .05$; ** $p < .01$; *** $p < .001$

responses to offenders, a select number of the participant a characteristics were examined as potential explanatory variables or confounds. Some research has indicated that gender may play a role in defining responses to offenders, with female participants tending to exhibit greater fear of offenders, particularly sex offenders, compared to male participants (Caputo & Brodsky, 2004; Chopin, 2011; Craig, 2005; Kernsmith et al., 2009; Levenson, Brannon et al., 2007). Although a number of other studies have found no differences by gender (e.g., Hogue & Peebles, 1997; Johnson et al., 2007; Olver & Barlow, 2010; Sahlstrom & Jeglic, 2008; Roger & Ferguson, 2010), it was considered prudent to assess whether this would be the case in the present study as well. Reported criminal victimization experiences were also assessed as another possible influential factor, although past studies have not consistently linked victimization with criminal justice attitudes (Hogue & Peebles, 1997; Levenson, Brannon et al., 2007; Sahlstrom & Jeglic, 2008), with some exceptions (Ferguson & Ireland, 2006). Nonetheless, a consensus on the possible influence of these variables has not been achieved. Therefore, a series of 2x2x3 MANOVAs were employed to assess the main effects of gender and crime victimization (both property and violent crimes, directly or vicariously experienced) and any interactions with the experimental manipulations of risk level and offense type⁷ on dehumanization, support for offenders' rights, and social distance, as well as perceived dangerousness.

Based on the results of the multivariate tests, there was no significant main effect of participants' gender ($\Lambda = .991$, $F(4,251) = 0.57$, $p = .686$). Nor were its interactions with offense type or risk level and offense type combined significant ($ps > .50$). The interaction of gender and risk level was significant, ($\Lambda = .962$, $F(4,251) = 2.46$, $p = .046$), but the univariate tests found that this effect was only marginally significant for dehumanization ($F(1,251) = 3.40$, $p = .067$) and perceived dangerousness ($F(1,251) = 3.50$, $p = .063$). Analysis of the simple main effects did not reveal any particular gender-related trends in the data beyond a marginal tendency for male participants to dehumanize low risk offenders slightly less than the female participants did ($p = .064$). All other significant effects were attributable to the risk manipulation. See Appendix M, Tables M-1 and M2 for full results of the analysis.

There were no significant main effects or interactions of property crime victimization, either direct ($ps \geq .284$) or vicarious ($ps \geq .146$), on the dependent variables. However, there was

⁷ Main effects of risk level and offense type were not analyzed at this time as these were to be assessed as part of subsequent multivariate analyses.

a significant main effect of vicarious violent victimization ($\Lambda = .934$, $F(4,255) = 4.48$, $p = .002$) on dehumanization, support for offenders' rights, and social distance. Specifically, participants who reported the victimization experiences of close friends or family also reported significantly less dehumanization of offenders ($F(1,258) = 9.63$, $p = .002$), more support for offenders' rights ($F(1,258) = 5.76$, $p = .017$), and less desire for social distance from offenders ($F(1,258) = 11.67$, $p = .001$). There was no significant effect of vicarious violent victimization on perceived dangerousness of the offender ($F(1,258) = 0.66$, $p = .416$; see Appendix M, Table M-3).

There was a significant main effect of direct violent victimization ($\Lambda = .947$, $F(4,255) = 2.81$, $p = .026$), as well as a marginally significant interaction between direct violent victimization and offense type ($\Lambda = .947$, $F(8,510) = 1.77$, $p = .080$). For the main effect, this was limited to a marginal effect on perceived dangerousness ($F(1,258) = 3.70$, $p = .055$), such that participants who reported personal experiences of violence reported slightly higher perceived dangerousness of the offender target ($M = 4.71$, $SD = 1.23$) than participants who did not report such experiences ($M = 4.27$, $SD = 1.31$). No other main effect of direct violent victimization was significant ($ps \leq .278$).

In contrast, the interaction effect between direct violent victimization and offense type was significant for dehumanization ($F(2,258) = 3.05$, $p = .049$), support for offenders' rights ($F(2,258) = 3.50$, $p = .032$), and desire for social distance ($F(2,258) = 6.52$, $p = .002$), though not for dangerousness ($F(2,258) = 2.19$, $p = .114$). Simple effects analysis found that participants in the sex offender condition who also reported direct violent crime victimization tended to express significantly more dehumanization of offenders ($F(1,258) = 4.49$, $p = .035$), less support for offenders' rights ($F(1,258) = 5.62$, $p = .018$), and more desire for social distance from them ($F(1,258) = 5.00$, $p = .026$) than participants in the same condition who did not report such victimization. Participants in the violent offender condition did not significantly differ in this regard on any dependent variable ($ps \geq .282$). Participants in the property offender condition, although they did not differ in terms of dehumanization or support for offenders' rights ($ps \geq .167$), did express significantly *less* desire for social distance from offenders when they also reported direct violent victimization experiences ($F(1,258) = 7.35$, $p = .007$) compared to participants who did not report such experiences. See Appendix M, Table M-4 for complete summary of results. Overall, these results suggested that gender was not a significant factor in participants' responses to offenders, nor was property crime victimization. Violent victimization

was somewhat influential, though in contradictory ways, sometimes resulting in more positive response and sometimes in more negative responses. However, many of the results were also only of marginal significance.

2.4.3 Hypotheses 1 and 2: Associations between Primary Dependent Variables

The first and second hypotheses predicted that dehumanization would be negatively associated with support for the offender's rights and positively associated with desire for social distance, such that participants who expressed greater dehumanization of the offender targets would also be less likely to support their rights and freedoms in the community and more likely to prefer greater social distance from these targets. Examination of the correlations between these variables supported both hypotheses. Dehumanization, defined as a composite variable of attribution of animalistic traits, attribution of mechanistic traits, perceived capacity for secondary emotions, and reported feelings of disgust toward the target, was significantly and strongly negatively correlated with support for offenders' rights ($r = -.65, p < .001$) and significantly and strongly positively correlated with desire for social distance ($r = .67, p < .001$; see Table 2-16).

No specific predictions were made regarding the relationship between support for offenders' rights and desire for social distance, given that respondents may have supported the offenders' rights to participate in their communities in a general sense while still desiring limited personal involvement with these individuals. However, the results of the correlational analysis indicated that there was a strong negative relationship between these two variables ($r = -.74, p < .001$). Finally, although not included in the original hypotheses, perceived dangerousness was also significantly and strongly related with each of the primary dependent variables in expected directions, as previously identified in section 2.4.2.3.

Table 2-16. Correlations between primary dependent variables.

Variable	1	2	3
1. Dehumanization			
2. Support for offenders' rights	-.65		
3. Social distance	.67	-.74	
4. Dangerousness	.66	-.68	.56

Note. All correlations significant at $p < .001$.

2.4.4 Hypotheses 3 and 4: Main Effects of Experimental Manipulations

The third hypothesis predicted that, compared to low risk offenders, high risk offenders would elicit less support for their rights and greater desire for social distance for respondents. There was nothing in the literature to suggest that dehumanization would be impacted by offender risk level so no hypothesis was made to this effect. The fourth hypothesis predicted that, compared to property and violent offenders, sex offenders would elicit less support for their rights, greater desire for social distance, and a greater degree of dehumanization, given the literature suggesting that sex offenders are often described in particularly dehumanizing terms (e.g., Griffin & West, 2006; Kosse, 2006; Madriz, 1997; Viki et al., 2012). These hypotheses were tested using a 2x3 MANOVA to assess the main effects of each manipulation as well as their possible interaction effects on each of the original primary dependent variables—support for offenders' rights, social distance, and dehumanization.⁸ As well, based on the exploratory analyses conducted on the demographic variables, a number of potential covariates were also assessed (participants' sex, indirect violent victimization, direct violent victimization, and political leaning) through MANCOVA analyses. However, none of these covariates meaningfully altered the nature or significance of the results, so for the sake of clarity only the results of the MANOVA analysis have been reported (Tabachnick & Fidell, 2007).

The multivariate tests found a main effect of risk level ($\Lambda = .908$, $F(3,262) = 8.83$, $p < .001$; see Table 2-17 for a summary of the multivariate tests). Univariate found that this effect was significant for three of the four dependent variables (see Table 2-18). For dehumanization ($F(1,264) = 13.12$, $p < .001$, $\eta^2 = .05$), high risk offenders ($M = 4.36$, $SD = 0.92$) elicited significantly higher levels of dehumanization than did low risk offenders ($M = 3.96$, $SD = 1.05$). In contrast, with respect to support for offenders' rights ($F(1,264) = 17.42$, $p < .001$, $\eta^2 = .06$), high risk offenders ($M = 4.81$, $SD = 0.95$) also elicited significantly less support than did their low risk counterparts ($M = 5.27$, $SD = 0.95$). However, although there was a small mean difference in the expected direction of greater desire for social distance from high risk ($M = 4.28$, $SD = 1.46$) compared to low risk offenders ($M = 3.99$, $SD = 1.49$), this was not significant ($F(1,264) = 2.67$, $p = .103$, $\eta^2 = .01$). Thus, the third hypothesis was therefore only partly

⁸ Perceived dangerousness was not included as a dependent variable having already been subjected to similar analysis in a previous stage. See section 2.4.2.3 for overview of these results.

Table 2-17. Multivariate tests of effects of risk level and offense type on dehumanization, support for offenders' rights, and social distance.

Effect	Wilks' Λ	<i>Df</i>	<i>F</i>	<i>p</i>
Risk level	.908	3,262	8.83***	.000
Offense type	.814	6,524	9.45***	.000
Risk level*Offense type	.984	6,524	0.69	.660

*** $p < .001$

Table 2-18. Main effects of risk level on dehumanization, support for offenders' rights, and social distance.

Dependent var.	Risk	<i>n</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>F</i>	<i>p</i>	Partial η^2
Dehumanization	Low	141	3.96 _a	1.05	1,264	13.12***	.000	.05
	High	129	4.36 _b	0.92				
Support for offenders' rights	Low	141	5.27 _a	0.95	1,264	17.42***	.000	.06
	High	129	4.81 _b	0.95				
Social distance	Low	141	3.99 _a	1.49	1,264	2.67	.103	.01
	High	129	4.28 _a	1.46				

*** $p < .001$

Note. Bonferroni adjustment applied to significance values for all pairwise comparisons. Subscripts indicate means which are significantly different at $p < .05$ within each set.

Table 2-19. Main effects of offense type on dehumanization, support for offenders' rights, and social distance.

Dependent var.	Offense	<i>n</i>	<i>M</i>	<i>SD</i>	<i>Df</i>	<i>F</i>	<i>p</i>	Partial η^2
Dehumanization	Property	92	3.81 _a	0.93	2,264	20.38***	.000	.13
	Violent	88	3.98 _a	0.92				
	Sex	90	4.66 _b	0.99				
Support for offenders' rights	Property	92	5.47 _a	0.92	2,264	20.74***	.000	.14
	Violent	88	5.08 _b	0.89				
	Sex	90	4.59 _c	0.92				
Social distance	Property	92	3.75 _a	1.49	2,264	8.03***	.000	.06
	Violent	88	4.02 _a	1.38				
	Sex	90	4.62 _b	1.44				

*** $p < .001$

Note. Bonferroni adjustment applied to significance values for all pairwise comparisons. Subscripts indicate means which are significantly different at $p < .05$ within each set.

supported, with high risk offenders eliciting less support for their rights, but not more desire for social distance compared to low risk offenders.

Multivariate tests also found a main effect of offense type ($\Lambda = .814, F(6,524) = 9.45, p < .001$), which subsequent univariate tests found was significant across all dependent variables (see Table 2-19 for complete summary), and pairwise comparisons confirmed that all of these effects were consistent with expectations. As a group, sex offenders ($M = 4.66, SD = 0.99$) were significantly more dehumanized than either violent offenders ($M = 3.98, SD = 0.92, p < .001$) or property offenders ($M = 3.81, SD = 0.93, p < .001$), although the latter two groups did not significantly differ in this respect ($p = 1.000$). An identical pattern was found for desire for social distance, where participants desired significantly more distance from sex offenders ($M = 4.62, SD = 1.44$) compared to either violent ($M = 4.02, SD = 1.38, p = .015$) or property offenders ($M = 3.75, SD = 1.49, p < .001$), but did not differ with respect to preferred distance from property and violent offenders ($p = .963$). Finally, sex offenders ($M = 4.59, SD = 0.92$) elicited significantly less support for their rights than did violent offenders ($M = 5.08, SD = 0.89, p < .001$) or property offenders ($M = 5.47, SD = 0.92, p < .001$), and violent offenders elicited significantly less support than did property offenders ($p = .045$). No predictions were made regarding the interaction of offense type and risk level on the dependent variables, and it was not significant ($\Lambda = .984, F(6,524) = 0.69, p = .660$). Thus, the fourth hypothesis was fully supported, with sex offenders experiencing the most negative outcomes on all dimensions.

2.4.5 Exploratory Analyses: Higher-Order Relationships and Model Building

MANOVA analyses confirmed that the four initial predictions made regarding the general associations between dependent variables, as well as the effects of the experimental manipulations on these variables, were largely supported, with the exception that the offender's risk to re-offend did not significantly impact participants' preferences for social distance from the offender. Supplemental analyses also confirmed that the effects of select participant characteristics on these variables were negligible. One important new consideration which arose from the analysis of the secondary dependent variables was the possible importance of perceived dangerousness, which demonstrated strong significant relationships with all of the primary dependent variables as well as each of the experimental manipulations. Given the lack of theoretical groundwork in this area, however, sophisticated predictions about the higher-order interrelations between these variables could not be made at the outset. Therefore, additional

exploratory analyses were conducted with the goal of more clearly elaborating the relationships between the experimental manipulations of offender characteristics, the proximal responses of dehumanization and perceived dangerousness, and the more distal responses of specific views on how such offenders should be treated (support for offenders rights) and preferences for hypothetical future interactions (social distance).

First, hierarchical multiple regression analyses were conducted to compare the relative predictive strength of each variable for both support for offenders' rights and social distance. To include the contributions of the experimental manipulations, these categorical variables were re-coded as dummy variables prior to being entered based on procedures outlined by Cohen, Cohen, West, and Aiken (2003). Specifically, risk was re-coded with high risk as the reference category (high risk = 1, low risk = 0), and offense type, with three levels initially, was split into two variables with violent offending as the reference category (1: sex offender = 1, else = 0; 2: property offender = 1, else = 0). This allowed for interpretations to be made in terms of the importance of the sexual aspect of the offense (dummy variable 1) versus the non-violent nature of the offense (dummy variable 2). Variance accounted for by the non-sexual but violent offense category can be understood as being represented by a linear combination of the two dummy variables. These variables constituted the first model as the experimental manipulations represented the most basic explanatory framework in this context. Dehumanization was entered on its own to assess its independent contributions to the model beyond the experimental manipulations. Perceived dangerousness, the newly identified predictor, was entered last. The results of the regression analyses were fairly consistent for both dependent variables, with some notable exceptions (see Tables 2-20 and 2-21 for summary of results).

Overall, all models were significant and each model was also a significant improvement over previous models ($p < .001$). For support for offenders' rights, the initial model with three dummy-coded variables for risk level, sex offense, and property offense was significant ($F(3,266) = 21.08, p < .001$) and accounted for a moderate proportion of the overall variance ($R^2 = .19$). In particular, risk level ($\beta = -.23, p < .001$) and sex offending ($\beta = -.26, p < .001$) were moderately negative predictors of support for offenders' rights (i.e., being a high risk or sex offender was associated with less support for one's rights), with property offending as a somewhat weaker positive predictor ($\beta = .17, p = .011$). Inclusion of dehumanization as a predictor resulted in substantial improvement to the model ($\Delta R^2 = .28, p < .001$), with the entire

Table 2-20. Multiple regression of risk level, offense type, dehumanization, and dangerousness on support for offenders' rights.

Model	Variables	<i>r</i>	β	<i>t</i>	<i>p</i>	<i>F</i>	<i>p</i>	R ²
1	Risk level	-.24	-.23	-4.17***	.000	21.08***	.000	.19
	Sex offense	-.33	-.26	-3.99***	.000			
	Property offense	.31	.17	2.57*	.011			
2	Risk level	-.24	-.11	-2.46*	.014	58.10***	.000	.47
	Sex offense	-.33	-.06	-1.14	.254			
	Property offense	.31	.14	2.56*	.011			
	Dehumanization	-.65	-.58	-11.70***	.000			
3	Risk level	-.24	.07	1.33	.185	65.19***	.000	.55
	Sex offense	-.33	-.09	-1.71 [†]	.088			
	Property offense	.31	.08	1.54	.125			
	Dehumanization	-.65	-.31	-5.29***	.000			
	Dangerousness	-.67	-.46	-7.09***	.000			

[†] $p < .10$, * $p < .05$, *** $p < .001$

Note. All models were significantly different from each other, $p < .001$.

Table 2-21. Multiple regression of risk level, offense type, dehumanization, and dangerousness on social distance.

Model	Variables	<i>r</i>	β	<i>t</i>	<i>p</i>	<i>F</i>	<i>p</i>	R ²
1	Risk level	.10	.10	1.69 [†]	.093	7.28***	.000	.08
	Sex offense	.24	.20	2.91**	.004			
	Property offense	-.20	-.09	-1.28	.202			
2	Risk level	.10	-.04	-0.84	.399	55.92***	.000	.45
	Sex offense	.24	-.03	-0.53	.595			
	Property offense	-.20	-.04	-0.85	.394			
	Dehumanization	.67	.68	13.70***	.000			
3	Risk level	.10	-.16	-3.06**	.002	51.96***	.000	.49
	Sex offense	.24	-.02	-0.32	.751			
	Property offense	-.20	-.01	-0.15	.878			
	Dehumanization	.67	.50	8.15***	.000			
	Dangerousness	.56	.31	4.49***	.000			

[†] $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Note. All models were significantly different from each other, $p < .001$.

model accounting for 47% of the total variance in support for offenders' rights ($F(4,265) = 58.10$, $p < .001$). With the inclusion of dehumanization as a strong negative predictor ($\beta = -.58$, $p < .001$), both risk level ($\beta = -.11$, $p = .014$) and property offending ($\beta = .14$, $p = .011$) continued to independently predict support for rights, albeit less strongly. Sex offending, however, was reduced to a non-significant and weak predictor ($\beta = -.06$, $p = .254$). Finally, the addition of perceived dangerousness in the third model produced a small degree of additional variance accounted for ($\Delta R^2 = .08$, $p < .001$), with the overall model accounting for 55% of the total variance in support for offenders' rights ($F(5,264) = 65.19$, $p < .001$). Despite the modest gains for the model as a whole, perceived dangerousness nonetheless emerged as the strongest predictor ($\beta = -.46$, $p < .001$) of support for offenders' rights, rivalled only by dehumanization ($\beta = -.31$, $p < .001$). In a reversal from the previous stage of the analysis, both risk level ($\beta = .07$, $p = .185$) and property offending ($\beta = .08$, $p = .125$) were no longer significant independent predictors, whereas sex offending ($\beta = -.09$, $p = .088$) partly re-emerged as a marginally significant negative predictor of support for offenders' rights.

For social distance, the initial model with only the experimental manipulations, while significant ($F(3,270) = 7.28$, $p < .001$), only accounted for a small proportion of the variance in the dependent variable ($R^2 = .08$). In this model, sex offending was a significant moderately positive predictor ($\beta = .20$, $p = .004$), with risk level contributing a small, marginally significant positive effect ($\beta = .10$, $p = .093$). Property offending did not significantly predict desire for social distance at all ($\beta = -.09$, $p = .202$). Inclusion of dehumanization resulted in a greatly improved model ($\Delta R^2 = .38$, $p < .001$), accounting for 45% of the variance overall ($F(4,269) = 55.92$, $p < .001$). Dehumanization was also the sole significant predictor in this model ($\beta = .68$, $p < .001$), with all of the experimental manipulations non-significant ($ps \geq .394$). The final model, incorporating perceived dangerousness, once again represented only a slight though significant improvement over the previous model ($\Delta R^2 = .04$, $p < .001$), with 49% of the variance in social distance accounted for in total ($F(5,268) = 51.96$, $p < .001$). Dangerousness once again emerged as a strong significant predictor ($\beta = .31$, $p < .001$), although in this analysis, dehumanization was the stronger predictor of the two ($\beta = .50$, $p < .001$). Sex and property offending remained non-significant predictors ($ps \geq .751$), but risk level re-emerged as a weak *negative* predictor of social distance ($\beta = -.16$, $p = .002$). This was indicative of a negative suppression effect as the

standardized regression coefficient for risk level was larger and in the opposite direction of its original zero-order correlation with social distance ($r = .10$).⁹

While these regression analyses allowed for greater insight into the inter-relations of these experimental and intermediate variables, the possibility of more complex, higher-order relationships was as yet unexplored, particularly in terms of possible mediating effects. Although such relationships can be tested via traditional multiple regression analyses, the application of structural equation modelling (SEM) techniques affords the opportunity to test all of the relationships simultaneously in a complete model (Tabachnick & Fidell, 2007). Although it is often assumed that SEM is a technique restricted to correlational data, it is also applicable to experimental data (Kline, 2011; McCallum & Austin, 2000). This procedure is advantageous over MANOVA analyses, which are traditionally used to test experimental effects, by allowing the analysis of latent rather than strictly measured variables, mitigating assumptions of error-free measurement and allowing for the consideration of mediating factors (Bagozzi & Yi, 1989). SEM and other confirmatory techniques have also been argued to be more effective in testing mediations than multiple regression analyses because they provide a simultaneous test of a complete model as well as a specific test of individual parameter estimates, which is particularly important in complex models involving more than three variables (LeBreton, Wu, & Bing, 2009). While there are a number of different methods for incorporating experimental effects into SEM, given the nature of the present study's design, it was deemed most appropriate to include the manipulations as simple dummy-coded exogenous (independent) variables which are not subject to the same assumptions of normality as endogenous (dependent) variables (McCallum & Austin, 2000). This also allowed the model to be tested on the complete sample of participants without missing data on any of the included variables ($N = 246$), ensuring a minimally-sufficient sample size (at least 200; Tabachnick & Fidell, 2007).

The technique of parcelling was employed to reduce the number of parameters being tested and avoid under-identification of the model. Parcelling involves aggregating items on otherwise unidimensional scales into smaller composites, usually three in number, which are used as indicators for the latent variable (Little, Cunningham, Shahar, & Widaman, 2002). Both support for offenders' rights and social distance were identified as unidimensional measures,

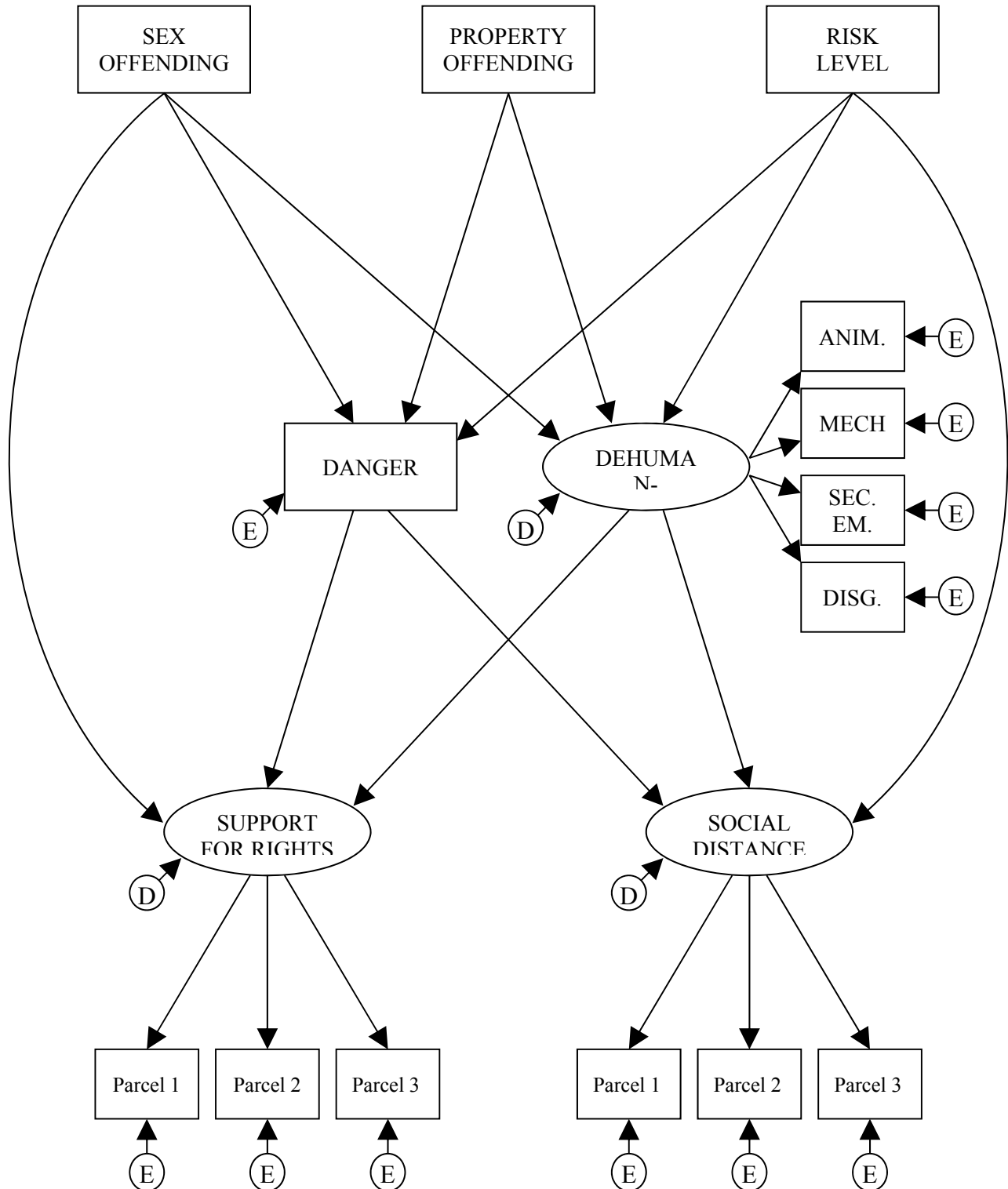
⁹ Prior to the inclusion of dehumanization, the standardized regression coefficient of perceived dangerousness was also inflated beyond its original zero-order correlation for social distance ($\beta = .66$, $r = .56$), further substantiating the negative suppression effect.

making them acceptable candidates for this practice. The item-to-construct balance method was employed, as outlined by Little and colleagues (2002), where the three items with the highest loadings were used to anchor each parcel and then additional items were added in inverse order, repeating until all items were included, at which point parcels were constructed by averaging each set of items.¹⁰ Perceived dangerousness, although also unidimensional, was not a candidate for parcelling as its scale consisted of only five items. Instead, for model simplicity, it was included as a manifest (measured) variable represented by its single composite score rather than a latent variable represented indirectly by indicator variables. Finally, dehumanization was represented as a latent variable with four indicators: animalistic traits, mechanistic traits, secondary emotional capacity, and disgust. See Appendix N for the covariance matrix.

In the absence of an *a priori* model design, initial model specification was derived on the basis of the logic of the experimental design as well as the results of previous MANOVA and multiple regression analyses. The experimental manipulations were assumed to take causal precedence and, as noted, were included as exogenous manifest variables. Dehumanization and perceived dangerousness were conceptualized as intermediate-level variables which captured participants' more proximal responses to the offenders, their assessment of his personal characteristics. These were assumed to mediate the relationships between the experimental manipulations of these characteristics and the more distal assessments of how the participants chose to respond to the hypothetical offender upon release (i.e., support for offenders' rights and desire for social distance). These intermediate variables were also measured prior to the latter outcome variables, contributing to the temporal logic of the proposed model. See Figure 2-3 for a diagram of the initial model specification. This model did not adequately fit the data ($\chi^2(68) = 357.87, p < .001$; CFI = 0.89; SRMR = 0.16) with a large number of residuals greater than .10 (48%). Initial efforts at re-specification through "tweaking" of the model parameters based on analysis of these residuals were insufficient to resolve these issues. As the initial model exceeded the desired maximum ratio of participants-to-estimated parameters (10:1; Tabachnick & Fidell, 2007), a simplified alternative model with fewer estimated parameters was identified to rectify these concerns.

¹⁰ For support for offenders' rights, parcel one consisted of items 15, 1, 12, 10, 14, and 16; parcel two of items 6, 7, 9, 3, 17, and 5; and parcel three of items 2, 13, 4, 8, 11, and 18. The averaged factor loadings for each parcel ranged from .60 to .61. For social distance, parcel one consisted of items 4, 1, 8, and 6; parcel two of items 2, 7, and 9; and parcel three of items 5, 3, and 10. The averaged factor loadings ranged from .77 to .80.

Figure 2-3. Initial model specification for prediction of responses to offenders in the community.



Note: "E" refers to error in manifest variables; "D" refers to disturbance in latent variables.

First, the property offending dummy-coded variable was dropped from the analysis. Initial model estimates showed that it did not substantially contribute to the overall model fit, with small and non-significant relationships to the endogenous variables. Based on the results of the previous MANOVA and multiple regression analyses and the main purpose of the present study, sex offending was considered the more relevant indicator and was retained. The second simplification was to reduce the latent measure of dehumanization with its four indicators to a single measured variable of disgust. This was because initial analyses consistently found residuals greater than .10 between disgust and the experimental variables, and because each of the other indicators—animalistic traits, mechanistic traits, and secondary emotional capacity—had been found in previous analyses to be less reliable measures, being relatively new and unrefined measures of the dehumanization construct. SEM assumes highly reliable measures, therefore it seemed prudent to restrict this variable to a simple measured indicator for which there is definitive empirical support relating it to dehumanization (Harris & Fiske, 2006; Hodson & Costello, 2007). Ideally, further refinement of the other dehumanization indicators and a larger sample on which to test the model could permit future analysis of a more complex conceptualization of dehumanization.

With these adjustments, model fit was somewhat improved but still lacking. The goodness-of-fit test was significant ($\chi^2(29) = 188.38, p < .001$) and the comparative goodness-of-fit index approached but did not exceed its minimum threshold of acceptability (CFI = 0.92) while the residual-based index did not substantially improve (SRMR = 0.17). Further examination of the standardized residuals found that over 45% exceeded a value .10, and the largest residuals concentrated around the parameters related to disgust, dangerousness, support for offenders' rights, and social distance. The results of the Lagrange Multiplier test also suggested that model fit was particularly poor due to unestimated parameters accounting for the respective relationships between dangerousness and dehumanization, and support for rights and social distance. This was consistent with previous analyses which had indicated strong associations between each of these pairs of variables which the initial model specification failed to account for. However, the SEM technique does not allow for the estimation of direct reciprocal relationships between endogenous variables and neither theory nor prior research clearly indicated an appropriate unidirectional causal relationship in either case.

Two different strategies were undertaken to account for the correlation between each pair of variables. First, two equivalent models were tested in which dehumanization (disgust) was allowed to freely predict dangerousness and vice versa. As dangerousness was a newly identified variable in this context, there was no existing rationale in the literature to prefer either causal explanation. However, they both possessed the same logical premise: an object which is viewed as being dangerous may also lead to feelings of disgust in participants as a means of psychologically distancing themselves from it. Similarly, an object which is viewed with disgust, an emotion associated with loathing and perceptions of filth and beastliness (Haslam, 2006), may also evoke a sense of fear. Realistically, these emotions are likely mutually reinforcing, but it is impossible to test such a model while also analyzing the additional exogenous effects of the experimental manipulations (Kline, 2011), therefore this option was not pursued.

Both models resulted in identical overall solutions as they were statistically equivalent, possessing the same number but different configuration of paths between the same measured variables (Kline, 2011). The general fit represented a significant improvement on the previous model ($\Delta\chi^2(1) = 71.76, p < .001$), but the goodness-of-fit index was still significant ($\chi^2(28) = 116.619, p < .001$), and while the CFI met the minimum threshold (.95), the SRMR index was still high (.11). Only nine of the standardized residuals (16%) exceeded .10, the majority of which were again related to unaccounted-for variance between the social distance and support for offenders' rights indices, indicating that this particular portion of the model still poorly fit the data.

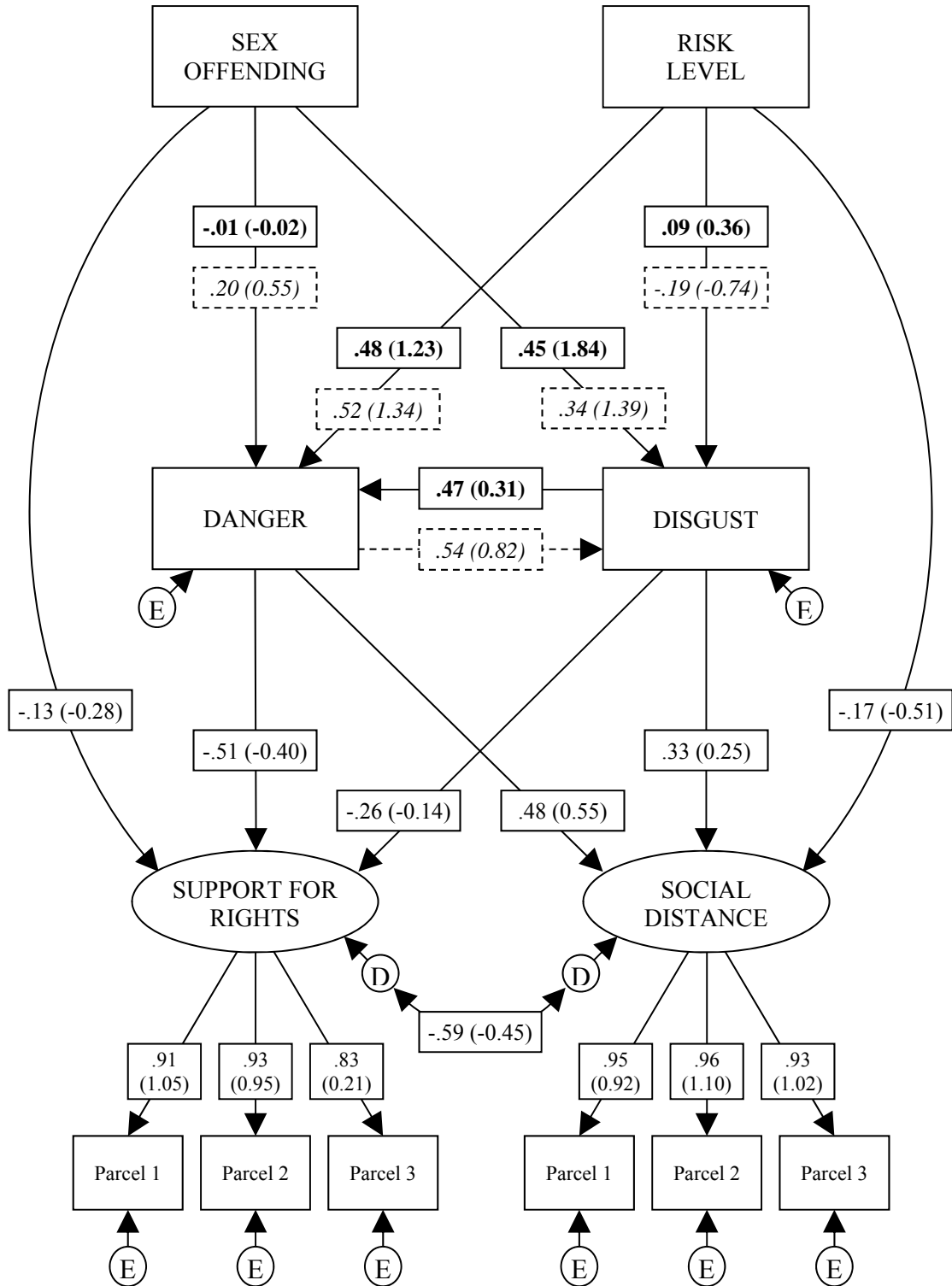
When accounting for residual variance between dangerousness and disgust, two similar emotional responses, it was reasonable to test possible causal relationships. However, this strategy was not appropriate to account for the residual association between social distance and support for offenders' rights. Unlike dangerousness and disgust, preference for social distance and beliefs about that offender's rights in the community were specifically selected as distinct aspects of responses to offenders that were not intended to causally predict each other. In fact, it was not initially certain that they would necessarily be strongly related, as an individual may reasonably believe that offenders should receive support and treatment in terms of reintegrating into the community while still not wanting to have any personal contact with this offender (Brown, S., 1999). Thus, it was more likely that the close association between these two variables was not causal but due to additional factors outside the model which were not

measured in the present study. This was incorporated into the model by allowing the disturbances (residual variance of the latent variables) to correlate, with the assumption that this error was not entirely random or due to measurement error, but rather was related to unspecified outside factors common to both latent variables. While the practice of allowing correlated residuals to improve model fit can be problematic in SEM (Kline, 2011), this is when the model is suggested as being complete and well-fitting *despite* these unexplained correlations, rather than because of them. In these circumstances, given that this area of study is currently lacking in explanatory models grounded in theory, the purpose of these analyses was not to arrive at a final solution but rather to attempt to understand how the particular variables measured in this study might contribute to a model. It is therefore understood that these proposed models might be incomplete and in need of additional theoretical constructs to fully explain the variance in the data. See Figure 2-4 for the final simplified model specifications with standardized path coefficients.

The addition of the correlated residual to the equivalent models produced an extremely good fit, with a non-significant goodness-of-fit test ($\chi^2(27) = 36.03, p = .110$), and goodness-of-fit indices which well exceeded their respective thresholds (CFI = 1.00; SRMR = 0.03). It was also a significant improvement over the previous models ($\Delta\chi^2(1) = 80.58, p < .001$). This general good fit was further substantiated by examination of the standardized residuals, of which none were greater than .10, indicating no particular portion of the model was poorly estimated. The only parameters which differed between the two models were those which directly predicted either dangerousness or disgust; all other parameters were identical regardless of the direction of the relationship between the intermediary variables.

Both dangerousness ($\beta = -.51, p < .05$) and disgust ($\beta = -.26, p < .05$) significantly negatively predicted support for offenders' rights, and dangerousness ($\beta = .48, p < .05$) and disgust ($\beta = .33, p < .05$) also both significantly positively predicted social distance. Unlike in the multiple regression analyses, dangerousness was the stronger predictor in both instances, but this was attributable to the different conceptualization of the dehumanization variable. In the initial analyses which retained the complex construct, dehumanization was the stronger predictor of social distance, but not of support for offenders' rights, comparable to the original regression analyses. Sex offending had a small negative relationship with support for offender's rights ($\beta = -.13, p < .05$) and no direct effect on social distance, whereas risk level had a negative

Figure 2-4. Final structural model for prediction of responses to offenders in the community.



Note. $\chi^2(27) = 36.03, p = .110$; CFI = 1.00; SRMR = 0.03. All pathways significant at $p < .05$. Numbers in parentheses are unstandardized coefficients. Bolded coefficients refer to model in which disgust predicted dangerousness; italicized coefficients in dashed boxes refer to model in which dangerousness predicted disgust. "E" refers to error in manifest variables; "D" refers to disturbance in latent variables.

relationship with social distance ($\beta = -.17, p < .05$) and no direct effect on support for offenders' rights, once again displaying the negative suppression effect noted in the previous analyses (i.e., higher risk predicting less rather than more social distance desired).

The estimated relationships between dangerousness and disgust themselves varied between both models to some extent, with dangerousness predicting disgust ($\beta = .54, p < .05$) with somewhat greater strength than the reverse ($\beta = .47, p < .05$), although it was not clear if this was a meaningful difference. More striking was the difference in the pattern of relationships between the experimental manipulations and each of the intermediate variables. When dangerousness was estimated as predicting disgust, sex offending moderately positively predicted both dangerousness ($\beta = .20, p < .05$) and disgust ($\beta = .34, p < .05$). In comparison, risk level strongly positively predicted dangerousness ($\beta = .52, p < .05$) but unexpectedly had a moderate *negative* association with disgust ($\beta = -.19, p < .05$). This appeared to be another manifestation of the negative suppression effect between risk and dangerousness described previously, with higher risk offenders being associated with less disgust.

In contrast, in the alternative model, where disgust was estimated to predict dangerousness, risk level strongly and positively predicted dangerousness ($\beta = .48, p < .05$) but only weakly predicted disgust ($\beta = .09, p < .05$), with no suppression effect in evidence. Mirroring this pattern, sex offending strongly predicted disgust ($\beta = .45, p < .05$), more so than in the previous model, but very weakly predicted dangerousness ($\beta = -.01, p < .05$). Therefore in the disgust-to-dangerousness model, risk level appeared to primarily impact perceptions of dangerousness, but not disgust directly. In contrast, sex offending had a strong relationship with disgust and this relationship fully mediated its effect on dangerousness (a similar pattern was detected in the analyses of the more complex model, suggesting that this was not unique to disgust as an indicator of dehumanization).

CHAPTER 3: DISCUSSION

Data analysis was extensive, including hypothesis testing as well as a number of exploratory analyses of higher order relationships among the primary variables, additional findings for participant characteristics and secondary variables, and validation of measures of key constructs. Specific interpretations of these results are first discussed, followed by a consideration of the extended implications of these findings for future research and their potential applications. Key limitations of the study are then reviewed and addressed.

3.1 Hypothesis Testing and Exploratory Analyses

3.1.1 Hypotheses 1 and 2: Associations between Primary Dependent Variables

The first two hypotheses were both supported. Dehumanization was significantly negatively related to support for offenders' rights and positively related to social distance from the offender: the more that participants dehumanized the offender target, the less they agreed he should enjoy basic freedoms within the community and the less willing they were to be near this offender or his treatment centre in their living or work environments. The same pattern held for perceived dangerousness, which was also significantly positively associated with dehumanization. These relationships were all strong, with correlations greater than an absolute value of .50, indicating a large effect size (Cohen et al., 2003). These findings replicated those of Viki and colleagues (2012) who found that dehumanization was correlated with more negative attitudes toward the rehabilitation of rapists and paedophiles, and greater support for the social exclusion of and violence toward these offenders.

Although not specifically predicted, support for offenders' rights was also strongly significantly negatively associated with desire for social distance ($r = -.74$). Participants who did not support offenders' rights also tended to be unwilling to have contact with these offenders and vice versa. This result was understandable, although it did not parallel Brown's finding (1999) that participants may sometimes support offenders' rights in the community (e.g., approving of community-based treatment) while simultaneously not wanting to have personal exposure to these offenders in their own communities (i.e., the "Not In My Backyard" or NIMBY mentality). In this study, participants' responses did not display notable ambivalence or contradiction between the different types of responses, as would have been indicated by a weaker correlation.

3.1.2 Hypotheses 3 and 4: Main Effects of Experimental Manipulations

The third hypothesis, regarding the experimental effect of offender risk level, was only partly supported. High risk offenders elicited significantly less support for their rights in the community than did the low risk offenders, consistent with Jeglic and Schiavone's (2009) research that found participants were less likely to endorse offender registration for low risk than high risk offenders. However, there was no detectable difference in participants' desire for social distance between the two groups. Although there was no theoretical basis for predicting the effect of assessed risk to re-offend on dehumanization, this was also significant, with high risk offenders being significantly more dehumanized than low risk offenders. They were also perceived as significantly more dangerous.

The fourth hypothesis, regarding the effect of the original offense type, was fully supported, with significant main effects for support for offenders' rights, social distance, and dehumanization, as well as perceived dangerousness as a supplemental finding. Specifically, participants were least supportive of sex offenders' rights, least willing to be in contact with them, and most likely to dehumanize sex offenders and perceive them as dangerous. In contrast, participants were no more likely to avoid or dehumanize violent offenders than property offenders, although they were less supportive of violent offenders' rights compared to property offenders'. In an interaction between offense type and risk level, low risk violent offenders were also seen as more dangerous than low risk property offenders, although sex offenders were still seen as the most dangerous of all the low risk offenders. However, among the high risk offenders there was no differentiation by offense type—high risk sex offenders were considered as dangerous as their violent and property offender counterparts. There were no interactions between risk level and offense type on any other outcome variable.

Overall, these findings were consistent with expectations that high risk offenders and sexual offenders would experience the most negative outcomes. Interestingly, high risk sex offenders were not especially poorly regarded, as the effects of the manipulations were largely independent of each other. Even in the case of perceived dangerousness, this interaction only suggested that when participants are told that an offender presents a high risk to commit their crime again, then all offenders are perceived of as equally dangerous, regardless of the initial crime. When the assigned risk level was low, participants did rely on the offense type information and sex offenders were again judged as the most dangerous. However, even low risk

sex offenders were perceived of as being significantly less dangerous than high risk sex offenders. This relatively optimistic finding demonstrates that participants were sensitive to the risk level information and responded to it in meaningful ways. Although promoting greater antipathy toward high risk offenders is not a goal of this research, it is valuable to know that risk assessments, which are so fundamental to modern correctional treatment (Andrews et al., 2006), can be credible to lay audiences, even when applied to sex offenders. Nonetheless, the majority of the findings for sex offenders were negative, confirming this group as "the lowest of the low" (Griffin & West, 2006) even when compared to violent non-sexual offenders. That participants made more distinctions between sexual and violent offenders than between violent and property offenders was consistent with expectations that it is the sexual and not merely the violent nature of these crimes which evokes hostility toward these offenders.

3.1.3 Exploratory Analyses: Higher-Order Relationships and Model Building

Building on the results of the hypothesis testing, the exploratory multiple regression and structural equation analyses allowed for the identification of more specific relationships between the variables. Despite the strong correlation between support for offenders' rights and social distance, analyses revealed that they were differentially affected by the experimental manipulations. For support for offenders' rights, initial regression analyses found that being a sex offender and a high risk offender independently predicted reduced support for offenders' rights. However, the introduction of perceived dangerousness into the model largely eliminated this direct effect, such that the effect of risk level on support for offenders' rights was fully mediated. Sex offending in the final model, however, was still weakly but independently predictive of less support for rights. This may be because many of the items for this scale were drawn directly from the literature on the actual expectations and legislation governing sex offenders' behaviour in the community (e.g., staying away from areas where children gather, registering with the police, having their address publicized), and may be especially associated with these offenders.

In contrast, in the initial regression models, being a sex offender was significantly predictive of participants' desire for social distance, but risk level was only marginally so. However, in the final structural model, the effect of sex offending on social distance was fully mediated, while the effect of risk level emerged as significantly predictive in the opposite direction, such that being a high risk offender predicted less desire for social distance. This appeared to be a negative suppression effect in combination with perceived dangerousness. This

effect was interpreted to reflect the fact that risk level represented a forensic professional's assessment of risk to reoffend, but that perceived dangerousness represented participants' own assessments of the danger (i.e., risk) posed by the offender in the community. Having accounted for the shared variance between the two assessments, the remaining variance most likely represented disagreement between the given risk assessment and the participants' own judgments (i.e., the degree to which a low risk offender was perceived as being high risk and vice versa). Therefore, the resulting negative relationship between risk level and social distance was congruent with the expectation that offenders who were perceived as more likely to commit further crimes, regardless of the results of their formal risk assessment, had more negative outcomes in terms of participants' willingness to have proximity to them.¹¹

In both the regression and structural analyses, dangerousness and dehumanization/disgust were independent and moderately-sized predictors of both social distance and support for offenders' rights. Disgust, representing only one aspect of dehumanization, was somewhat more weakly associated with these outcomes than the full dehumanization composite. Disgust and dangerousness were also differentially affected by the experimental manipulations, although the exact pattern of effect depended on the direction of the hypothesized causal relationship between them. In the dangerousness-to-disgust model, being a sex offender had a small positive association with ($\beta = .20$) and a moderate positive relationship with disgust ($\beta = .34$), while risk level had a strong positive relationship with dangerousness ($\beta = .52$) and a small negative relationship with disgust ($\beta = -.19$), replicating the negative suppression effect previously identified on social distance (i.e., that once perceived dangerousness is accounted for, the remaining variance in risk level represents the degree to which the assessed risk to re-offend is disbelieved and therefore has the opposite effect than would be expected). The disgust-to-dangerousness model was statistically-equivalent in terms of its overall fit to the data, but revealed a somewhat more meaningful pattern of effects in terms of the specific path coefficients. In this model, sex offending had a moderately strong positive relationship with disgust ($\beta = .45$) and a significant but insubstantial relationship with perceived dangerousness ($\beta = -.01$). Thus, the greater perception of the dangerousness of sex offenders was fully mediated by

¹¹ A set of unreported exploratory regression analyses found a similar suppression effect for perceived dangerousness and risk level in regards to support for offenders' rights, but this was ultimately obscured in the final model in which dehumanization was also included.

the disgust they evoked. As with the previous model, risk level strongly predicted perceived dangerousness ($\beta = .48$), only weakly predicted disgust ($\beta = .09$).

This pattern of effects showed two distinct sets of responses to offenders based on their characteristics. While high risk offenders evoked more negative responses in terms of support for rights and social distance, this effect was primarily due to increases in perceptions of dangerousness and not the contribution of disgust, which was only either weakly or negatively predicted by risk level, depending on the specific model configuration. While there was a moderate positive effect of sex offending on perceived dangerousness when disgust was not allowed to intervene, reversing this pathway resulted in full mediation. Sex offenders elicited more disgust, and were as a result perceived as more dangerous, the combination of which strongly predicted negative responses in the community. That this pattern of effects does not generalize to the effect of risk level, despite high risk offenders also being very negatively regarded, suggests that the dehumanization mechanism is specific to sexual offending and not all negative offender characteristics.

However, while the models discussed demonstrated good statistical fit to the data and the disgust-to-dangerousness model in particular appears to provide evidence for the role of dehumanization in mediating responses to sex offenders in the community, replication on new samples as well as ruling out logical alternative models is also important (Kline, 2011). It must also be recalled that the fit of the present models was achieved partly by the recognition that the two main outcomes of support for offenders' rights and social distance were likely also affected by external factors unaccounted for in the current model, and that the regression models only accounted for roughly half of the variance in each outcome variable, allowing room for improvement. Nonetheless, the results presented here represent an adequate starting point for further theoretical refinement.

3.1.4 Exploratory Analyses: Participant Characteristics and Additional Dependent Variables

In addition to the main analyses, a number of supplemental exploratory analyses were conducted both on participant characteristics and on the direct assessments of the vignettes, and a number of these results also bear discussion. Consistent with the previous literature on the effects of participant characteristics on responses to sex offenders (e.g., Payne et al., 2010), findings tended to be marginal or non-significant. As with a number of prior studies, participants' gender

was not a meaningful factor, even in the case of perceived dangerousness of the offender. Nor was property crime victimization of any type a meaningful factor. Violent victimization was somewhat influential, though in some unexpected ways. The more easily interpreted results were that participants who reported direct violent victimization perceived offenders, regardless of offense type, as being more dangerous, and were also significantly more likely to dehumanize, desire distance from, and not support the rights of sex offenders in particular. This latter finding in particular was consistent with the fact that over half of the participants in the sample who reported violent victimization specifically reported having been sexually assaulted ($N = 24$, 57% of the violently victimized subsample).

A less clear result was that vicarious or indirect violent victimization (i.e., the victimization of friends and family) predicted more positive responses to offenders in general, with less dehumanization, less social distance, and more support for rights. Direct violent victimization also predicted less desire for social distance from property offenders in particular. These paradoxical results were difficult to interpret, but one possible explanation is that participants who have more exposure, especially indirectly, to violent victimization may also have more exposure to perpetrators of crime, as many of the risk factors for violent victimization are also risk factors for violent offending (e.g., substance abuse, prior victimization; Shaffer & Ruback, 2002). A similar effect has been detected in another study, with vicarious violent victimization experiences predicting less support for the death penalty for sexual offenders (Mancini & Mears, 2010), and some research findings suggest that increased contact with offenders can be associated with relatively more positive attitudes toward them (Church, Wakeman, Miller, Clements, & Sun, 2010; Ferguson & Ireland, 2006; Johnson et al., 2007; Sanghara & Wilson, 2006), although negative contact experiences (i.e., direct violent victimization) would likely counteract this effect, as found in the present sample. Regardless, additional data would be required to test this interpretation, and, as stated, many of these results were only of marginal significance and none of these participant characteristics contributed meaningfully to the final model. It should also be noted that the student sample for this study was not selected with the intention of testing the range of characteristics present in more heterogeneous community samples.

Of the secondary dependent variables, perceived dangerousness was identified as having particular relevance to the original primary dependent variables and was included in the final

model. However, analyses of the other secondary assessments of the vignette produced other interesting results. High risk offenders were considered more "typical" than low risk offenders, suggesting that participants generally assume that posing a high risk to re-offend is the norm among offenders. This is consistent with findings that participants tend to overestimate recidivism rates (Brown, S. et al., 2008; Levenson, Brannon et al., 2007; Olver & Barlow, 2010) and have a generally pessimistic outlook on offenders' capacity to change (Payne et al., 2010; Roberts & Hough, 2005), though because of the lack of interaction with offense type, it suggests this is not a particular bias against sex offenders. No main effects of risk were present for perceptions of the offence itself in terms of severity or typicality. This was logical given that the risk assessment was described as occurring after the crime as well as a period of incarceration and treatment, and therefore should have no bearing on perceptions of the original crime.

Physically violent crimes, regardless of sexual nature, were seen as causing more physical harm than property crimes. However, sex offenders were seen as the most dangerous of the offender groups and sexual assaults were seen to cause the most emotional harm. Interestingly, sexual offenses were also seen as causing the least financial harm, even compared to physical assaults, and high risk sex offenders were seen as causing even less financial harm than low risk sex offenders. The explanation for these findings is uncertain, though it is possible that sexual assaults have more obvious non-financial motivations (i.e., sexual gratification for the assailant) compared to a physical assault, which may be viewed as implicitly oriented to material gain (e.g., part of a robbery). However, this does not explain the difference between low and high risk sex offenders, particularly given the absence of a risk effect on all other aspects of offense severity. Without additional data on the participants' understanding of risk, the nature of offending, and the precipitates of financial harm in this context, it is difficult to confidently interpret the meaning of these results. One possibility may be that this finding reflects polarization in participants' views of the consequences of crime—that an act which causes personal bodily harm is diametrically opposite from an act which causes monetary damages, therefore the closer to one end of the spectrum a behaviour falls, the further from the other end it must logically be. As stated previously, there were no differences in the perceived physical harm caused by the non-sexual and sexual assaults, but the latter was perceived to cause significantly more emotional harm. In comparison to the emotional consequences of sexual assault, the financial consequences may seem especially irrelevant and minimal. This effect may be heightened

when the offender is subsequently identified as being a high risk to re-offend, a characteristic consistent with the stereotype of the incorrigible sexual offender motivated by uncontrollable lust (Sanghara & Wilson, 2006). This offender may be seen as especially unlikely to desire or achieve material gain from his crimes. It must be noted, however, that the interaction result in question was also of only marginal significance ($p = .066$) and may be a statistical artefact. The results must be interpreted cautiously until they have been replicated in additional samples.

3.1.5 Exploratory Analyses: Validity of the Dehumanization Construct

Finally, a crucial component of the present study was the development and initial validation of a number of measures, in particular a number of measures intended to capture participants' dehumanization of the offender targets. While the detailed results of this set of analyses can be found in Appendix K, one particular issue related to the theoretical constructs of animalistic and mechanistic dehumanization as applied to offenders must be mentioned.

First introduced in Haslam's (2006) integrative review and further elaborated in Haslam, Loughnan, Kashima, and Bain (2009), this model proposed two distinct modes of dehumanization—one pertaining to the denial of uniquely human characteristics, which only humans can develop (e.g., rationality, morality, sophistication, maturity), and the other referring to innate and necessary characteristics which define human nature but aren't exclusive to humans (e.g., emotionality, agency, individuality, depth). According to Haslam (2006), failure to accord unique human traits results in animalistic dehumanization (e.g., uncultured, amoral, irrational), while failure to accord natural human traits results in mechanistic dehumanization (e.g., passive, superficial, cold). While empirical support for this model has been found (Haslam et al., 2009), its use with offenders in the present study encountered unforeseen complexities. In the present study, it was anticipated that sex offenders would be subject to animalistic but not mechanistic dehumanization, given the stereotypes of these offenders, and particularly stranger rapists, as wild, ravenous, sex-driven beasts (e.g., Clarke et al., 2002; Kosse, 2006; Madriz, 1997). Instead, it was found that mechanistic dehumanization was the stronger predictor of the two, but that one item in particular on this scale had to be dropped—passive—because it was negatively associated with the rest of the scale.

Although these results were unexpected, it can be noted that while one stereotype of offenders is that they are emotionally-driven and incapable of controlling themselves (animalistic), another relevant stereotype is that of the calculating, remorseless predator. The

traits of mechanistic dehumanization map well onto some of the characteristics of psychopathy (i.e., superficiality, lack of emotion), which, while this is not a term exclusive to sex offenders or accurately descriptive of the vast majority of sex offenders (Hanson & Morton-Bourgon, 2005), it is nonetheless a popular perception, such as in the long history of "sexual psychopath" legislation (Petrunik et al., 2008). However, an inconsistency between the mechanistic construct as initially described by Haslam (2006) and this alternative offender stereotype is in the notion of passivity and inertness, which clearly does not apply well to a group literally defined by the actions they have taken (i.e., to have committed an offense), further substantiated by this item's poor fit with the overall scale. Additional research by Haslam (Jones-Lumby & Haslam, 2005, as cited by Haslam et al., 2009) found that highly stigmatized out-groups (i.e., in the low-warmth, low-competence quadrant of the stereotype content model) tend to experience both forms of dehumanization simultaneously. Therefore, while the results were counter to initial expectations, this does not necessarily invalidate the application of these constructs to offenders, although it was not clear from the present analysis that both constructs made independent contributions to the findings.

3.2 Implications for Future Research and Application

Fundamentally, this study was intended to serve as a starting point for development of a model to understand the specific mechanisms and motivations behind community members' responses to re-integrating sex offenders. The social significance of this issue is the role that individual members of the public and the community at large play in shaping the environment into which sex offenders must successfully integrate. The primary goals of reintegration are to uphold human rights and to prevent future sexual victimization by mitigating factors associated with recidivism, such as inadequate employment, unstable housing, lack of access to treatment, and social isolation. Currently, the community and forensic professionals are not acting in concert with each other toward rehabilitative aims (Bazemore & Erbe, 2003; McAlinden, 2006; Roberts & Hough, 2005), hence the interest in better understanding how the community reacts to sex offenders as a precursor to encouraging more productive responses.

3.2.1 Offender Characteristics

The majority of research in this area has focused on descriptively documenting the "what" of responses to sex offenders—what beliefs and attitudes are endorsed based on which characteristics of offenders, victims, and respondents? The present study contributed to this line

of inquiry by comparing offenders by risk level and offense type. While some studies have compared responses to different types of sex offenders (e.g., Kernsmith et al., 2009; Ferguson & Ireland, 2006; Viki et al., 2012), few studies have compared sex offenders to other offense categories. Offender risk level has also rarely been explicitly studied and never in an experimental design. This type of research contributes to an understanding of what characteristics, if any, participants find salient when expressing their views through surveys. However, without an organizing theoretical framework, it is difficult to go beyond description and to explain the significance of these characteristics' effects.

One relevant offender characteristic suggested by the dehumanization framework is offender ethnicity, which has received only limited attention in the literature so far. Dehumanization has been linked with negative reactions toward black men, including increased tolerance of police violence toward them and greater rates of dehumanizing language used in media reports of their capital punishment trials, even compared to white offenders who committed crimes of similar severity (Goff, Eberhardt, Williams, & Jackson, 2008). Dehumanizing descriptions of sex offenders have also been found to be strongly racialized, with stereotypes focusing on Black and Latino men (Ardevini-Brooken & Caringella-MacDonald, 2002; Kosse, 2006; Madriz, 1997). The population of Black men in the U.S. criminal justice system is disproportionately large, and a recent study found that Black sex offenders with lower risk profiles were over-represented in the higher-risk tiers of community notification schemes compared to White offenders with similar profiles (Koetzle-Shaffer & Mieth, 2011). If racially-marginalized offenders are more likely to be dehumanized and this dehumanization increases punitive responses, this might partially account for the especially disadvantaged position of these offenders.

Although no dehumanization and ethnicity research has been conducted in a specifically Canadian criminal justice context, Aboriginal offenders in Canada are similarly over-represented in the justice system, including among incarcerated sex offenders (Statistics Canada, 1999). Aboriginal sex offenders also face additional barriers to reintegration, particularly those from rural areas and reserves as they typically have fewer resources in their communities including housing, employment opportunities, treatment and other essential services (Saulis et al., 2000; Willis, M. & Moore, 2008). The possible role of additional stigma toward these offenders as a function of their ethnicity and offender status has not been explored in terms of community

reintegration, but an experimental study by Pfeifer and Ogloff (2003) found that hypothetical Aboriginal defendants accused of sexual assault were rated as guiltier than equivalent White defendants. This effect was especially pronounced when the victim was White, and the defendants rated as least guilty were White with Aboriginal victims. As with the Black defendants and offenders in the U.S.-based research, dehumanization may play a role in the expression of these negative attitudes. The study of the effects of offender and victim ethnicity within a framework of dehumanization and racism could be highly significant to understanding systemic injustice within the justice system.

3.2.2 Cognitive Processes

Building on the "what" contribution of the study of offender and participant characteristics, the present study predominantly focused on identifying a possible mechanism behind these responses, attempting to answer the "how" question—how are these attitudes, beliefs, and intentions created and sustained? Dehumanization offers one potential cognitive route. It can also be regarded as one component of a more complex system of cognitive mechanisms, such as moral disengagement. Moral disengagement is a process by which the regular internal sanctions which inhibit immoral behaviour are subverted or deactivated to allow for such behaviour to be committed without incurring self-recrimination (Bandura, 1999). Dehumanization of the target is one identified mechanism for this process, along with diffusion or displacement of responsibility, minimizing of consequences, and rationalizations of the actions. In a criminal justice context, moral disengagement has already been explored in relation to capital punishment, both in the court room (Haney, 1997) and in the carrying out of executions themselves (Osofsky et al., 2005). Extending this research framework to responses to sex offenders in the community may offer further insights into the underlying mechanics of how these perspectives operate.

A complementary avenue of study would be to look at what mechanisms are, or are not, in play in contrary contexts, such as among volunteers in the grass-roots Circles of Support and Accountability (CoSA) program, where community members work closely with high risk sex offenders, who most likely to be rejected by their communities (Wilson, McWhinnie, & Wilson, 2008). The recruitment of effective volunteers for this program is an on-going challenge, and there are few insights into what motivates these volunteers and how they are able to engage with such highly stigmatized individuals where other community members are not. Religious

affiliation and a vocation for volunteerism are two factors which have been suggested (Wilson et al., 2007), but the ability to resist dehumanizing these offenders may be another. For example, Viki et al. (2012) found that dehumanization (or the lack thereof) mediated the relationship between quality of contact with sex offenders and positive attitudes toward these offenders for forensic professionals. Related to this, empathy, or the ability to think and feel as another person feels, which is likely incompatible with a dehumanizing response, has also been associated with more positive attitudes toward sex offenders and their treatment (Johnson et al., 2007). This suggests that one possible means of improving support for sex offenders in the community is to find ways to humanize them to community members. However, dehumanization is a strong emotional response and attempting to humanize sex offenders could backfire and provoke reactance depending on the level of resistance to this conceptualization. Thus, it may be insufficient only to know *what* these attitudes are and *how* they operate—the question of *why* the public endorses these beliefs and opinions must also be understood.

3.2.3 Motivational Frameworks

Negative attitudes toward sex offenders and offenders in general are often attributed to the widespread ignorance in the general public of the nature of sex offending, the offenders' likelihood for recidivism, the effectiveness of current treatment practices, and the ineffectiveness and potential harmfulness of popular punitive approaches (e.g., Brown, S. et al., 2008; Griffin & West, 2006; Levenson, Brannon et al., 2007; Quinn, Forsyth, & Mullen-Quinn, 2010; Salerno et al., 2002; Sanghara & Wilson, 2006). However, efforts at attitude change through educational interventions have not been consistently successful (Willis, G. M. et al., 2010), so while lack of knowledge may account for negative reactions to some extent, alternative approaches can also be explored. Another possible explanation is that community members are not passive possessors of misinformation, but rather are actively motivated to hold particular views because of deeper cognitive needs.

There are a number of possible cognitive explanations for these reaction patterns. Fearfulness of risk posed by sex offenders and desire for safety is one commonly suggested rationale (Brown, S., 1999; Chopin, 2011), despite the fact that many of the actions taken to control sex offenders do not practically mitigate the risk they pose and may in fact exacerbate it (Letourneau et al., 2011; Willis, G. M. et al., 2010; Zevitz, 2006). Again, while insufficient knowledge may partially explain this paradox, another possibility is that the risk being mitigated

is more symbolic than realistic. One study found that many community members felt safer knowing that a public sex offender registry existed, despite never accessing it or making changes to their behaviours in response to the release of specific offenders (Sample et al., 2011). Such websites also tend not to provide useful information for increasing safety and preventing victimization (Caputo & Brodsky, 2004; Sample et al., 2011), further supporting the argument that these websites are largely symbolic in nature. Which, given the widespread support for these measures regardless, is consistent with Freiberg's (2001) argument that, to be successful, criminal policy must take into account the emotional needs of the public as well as the rational purposes of such legislation.

In the case of sex offender registries and similar policies, emotional ends appear to have trumped instrumental goals entirely, given that such punitiveness may in fact decrease public safety. Researchers often raise the point that measures taken to control and punish sex offenders in the community are contrary to the principles of effective rehabilitation and likely increase public risk through offender mismanagement (Cohen & Jeglic, 2007; Petrunik, 2002; Willis, G. M. et al., 2010). However, such objections assume that rehabilitation and community safety are the true priorities of these activities. Durkheim (1938), a functionalist sociologist, argued that crime is a normal characteristic of healthy societies and suggested therefore that, "If crime is not pathological at all, the object of punishment cannot be to cure it, and its true function must be sought elsewhere" (p. 73). Durkheim was not suggesting that crime is not abhorred, but rather likened its function to that of pain in a physiological context—aversive, but necessary and useful. Parsons, another functionalist theorist, further explained the possible social functions of crime and punishment:

It may be asked why, apart from merely keeping the criminal out of circulation, does society go on punishing even where the vicious circle exists and it will not 'cure' the criminal. [...] It is, in a sense, a ritual expression of the sentiments which uphold the institutionalized values which the criminal has violated. This ritual expression serves to consolidate those sentiments and above all to strengthen them in that part of the population which has positive but latent motivations to the deviance being punished. Punishment is thus a kind of declaration that "you are either with us or against us," and tends to mobilize the sentiments of solidarity with the group in the interest of continuing conformity. (Parsons, 1951, p. 310)

Parsons further acknowledged that the severity of these reactions and their detrimental effects on the violator's support system tend to preclude the possibility of rehabilitation and reintegration; "It constitutes a kind of extrusion from the social group, with little concern for his return. He is used rather in a sense as a 'scapegoat' on whom to project sentiments in such a context as to strengthen the institutionalized values. What happens to *him* becomes secondary" (p. 312, emphasis in the original). Thus, in this framework, the 'functional' social response to criminal violations of community standards is one which naturally runs counter to effective offender rehabilitation and desistance, with symbolic goals prioritized over practical ones. The symbolic or literal exclusion of the unwanted other is the primary goal, rather than a side effect of the necessary steps to ensure personal safety.

Such irrational-seeming beliefs are well within the scope of *motivated social cognition*, a theoretical framework which assumes that people adopt particular ideologies and belief systems because they satisfy some kind of psychological need (Jost, Glaser, Kruglanski, & Sulloway, 2003). This approach recognizes the concept of *subjective rationality*, in which the satisfaction of the deep-seated emotional and cognitive needs are ends in and of themselves, even if the practical effect of pursuing these needs is counter-productive (Kruglanski, 1999). These motivations may take many forms, from basic mindsets to complex ideological reactions, such as need for closure, avoidance of uncertainty, preservation of self-esteem, fear of death, system justification, and so on (Jost et al., 2003). Dehumanization may not be motivation in and of itself for negative responses to sex offenders, but rather a mechanism by which one or more such needs are met, such as fomenting a sense of community solidarity or moral unity by rejecting social deviants, as suggested by Durkheim (1938) and Parsons (1951), or the mitigation of a symbolic fear or anxiety (e.g., Sample et al., 2011).

While the present study cannot suggest a specific psychological need at work, it lays the groundwork for an integrative model by which such complex relationships between distal cognitive needs and specific reactions to sex offenders might be tested. The identification of specific concerns which motivate community members' responses would allow for the identification of key targets for change and strategies for communicating to the public about the importance of their role in offender reintegration. Ideally, this approach would allow policymakers to address the public's needs with regards to the management of sex offenders

without sacrificing the priorities of humane treatment and meaningful contributions to community safety.

3.3 Limitations

The primary limitations for this study were the reliance on unvalidated measures as well as the preponderance of *post hoc* exploratory analyses. In both instances these limitations were unavoidable, but challenge the confidence with which the results can be interpreted.

The reliance on new, unstandardized measures was due to the dearth of appropriate existing measures of the central concepts of study. While a number of attitude toward sex offender scales have been developed recently, including the Community Attitude toward Sex Offenders (CATSO) scale (Church et al., 2008), Attitudes toward Treatment of Sex Offenders (ATTSO) scale (Wnuk et al., 2006), and the recently published Public Attitudes toward Sex Offender Reintegration (PATSOR) scale (Rogers, Hirst, & Davies, 2011), collectively these scales consist of a wide ranging sets of items arranged by factors identified via exploratory analyses rather than explicit, well-defined constructs. The relationships among these factors can be complex and difficult to interpret (Rogers et al., 2011) and the factor structures are not always consistent across samples (Conley, Hill, Church, Stoeckel, & Allen, 2011).

For the present study, in order to simplify the analyses, a number of uniform measures of specific discrete constructs were created or adapted from existing measures. Of these new measures, the support for offenders' rights scale and the adapted social distance scales were both fairly well validated in their initial use, with strong unidimensional solutions and distinct patterns of results between them. The single-item measure of disgust was also found to be an effective and straightforward measure, with discriminant validity provided by its lack of association with the other non-dehumanization-related emotional responses. However, evidence for the validity of the emotional capacity and dehumanized trait scales was inconsistent, particularly for the confirmatory factor analyses. Ultimately, these two scales could not be included in the final structural analyses. Both scales, and their respective subscales, require additional validation to ensure that their respective items adequately represent the intended constructs and can adequately discriminate between these constructs.

At the outset of this study, specific hypotheses regarding the relationships between variables were difficult to generate given the scarcity of theory and consistent research findings in this area. This was especially true for the more complex relationships which were ultimately

analyzed, as well as the supplemental analyses for the participant characteristics and the secondary dependent variables. While exploratory analyses were therefore necessary, this increased the difficulty in making sense of the complex data and ran the risk of "fishing" for significant and interesting results, as well as inflating the familywise error rate of repeated mean comparisons (Howell, 2009). To compensate for this, conservative corrections were made to the alpha levels for all pairwise comparisons, reducing the risk of Type I errors. Analyses such as structural equation modelling are not subject to the same error rate inflation due to repeated trials (Kline, 2011), but these analyses were also guided by adherence to the best practices for SEM interpretation to avoid over-interpreting the data. Where possible, the variables of interest were selected based on explicit and well-defined theoretical constructs with at least some empirical support in past research. While the substantial exploratory analyses were not ideal, the results of this study also lay the groundwork for future research.

The relative homogeneity of the student sample was an asset rather than a limitation of this study. The goal for this research was to test possible experimental effects in relation to key outcomes and not to generalize these results directly to a broader community population. Therefore, internal validity was prioritized over external validity (Mook, 1983), and a more uniform sample provided better conditions for testing subtle experimental effects (Prentice & Miller, 1993). However, while not a limitation per se, this does serve as a caveat for how these results can be interpreted and applied.

3.4 Conclusion

The present study has made a number of empirical and theoretical contributions to the literature. The use of randomized experimental design allowed for the inference of causal effects in an area of research which is predominantly descriptive and correlational. Structural analyses techniques also facilitated the development of an embryonic model of different aspects of participants' responses to offenders in the community. As understandings of these attitudes and opinions become more complex, such analyses will become increasingly important to allow for the testing of detailed theoretical models.

Another advantage of the present design was the use of specific rather than global targets for inquiry—participants were asked to formulate their responses in relation to a specific offender and not to comment on their general opinions out of context. Research suggests that such specific questions generate more complex and thoughtful responses than broad polls

(Applegate et al., 1996; Cumberland & Zamble, 1992; Roberts & Hough, 2005). Indeed, while the baseline attitude measures were quite skewed for sexual and violent offenders in particular, despite the 101-point range of the scales, the majority of the variables of interest in the study were normally-distributed and had adequate variance to permit reliable analyses.

Although not the first study to look at reactions to sex offenders in the context of dehumanization (Viki et al., 2012), the present study replicated and expanded upon past results by conceptualizing dehumanization in a more multi-faceted manner, incorporating perceived personality traits (Haslam, 2006), capacity for emotions (Leyens et al., 2007), and feelings of disgust (Harris & Fiske, 2006). It also distinguished dehumanization from another important reaction to offenders, perceived dangerousness, and demonstrated differential paths between the manipulations of offense type and risk level to the related but distinct outcomes of support for offenders' rights and desire for social distance. Focusing on well-defined and separate aspects of responses to offenders also added further nuance to the model.

The findings of this study confirmed expectations that sex offenders are particularly poorly viewed and unwelcome in the communities to which they will almost certainly return. There is some optimism to be had in that participants were more willing to accept lower risk sex offenders. Unfortunately, because high risk offenders pose the greatest danger to their communities, the successful reintegration and desistance of these offenders is in fact more crucial, consistent with the risk principle of the Risk-Need-Responsivity model (Andrews et al., 1990). Nonetheless, improving our understanding of the nature of these responses will improve our ability to devise means of changing them.

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APPENDIX B: VIGNETTES

Section 2: Scenario

In the following section, you will be given information about someone who is about to be released from prison. Please read the information carefully as your recall of this information will be important later in the survey.

The following section contains a single non-graphic reference to a [sexual assault / physical assault / property crime]. You are free to stop participating in this study at any time without consequence and your information will not be included in the results.

Name: William B.

Gender: Male

Age: 32

Place of birth: Saskatoon, Saskatchewan

Criminal history: No previous criminal history

Current offense: [Sexual assault / Assault / Breaking and entering]

William was convicted for [sexually assaulting a person in / physically assaulting a person in / breaking and entering] a parking garage at night. He was sentenced to 5 years in a federal institution, which he served at the Saskatchewan Penitentiary. During his time there, he completed an institution-based treatment program for [sexual / violent / property] offenders. He has been assessed by a forensic professional to be at a [high / low] risk to commit another similar offense.

Having served the majority of his sentence in the facility, he is now being released to the community under supervision to serve the remainder of his sentence while reintegrating into the community. Some of the conditions of his release are that he must be employed, find stable housing, and successfully complete a community-based rehabilitation program for [sexual / violent / property] offenders.

Before moving on to the next section, make sure you have carefully read this page. **You will be asked about your recall of this information.** For the purposes of this research, do not take notes on this material.

APPENDIX C: DEHUMANIZATION MEASURES

Section 3: Response to Scenario

In the following section, you will be asked a series of questions about how you feel about the person described in the preceding section.

Please answer honestly – there are no right or wrong answers and your responses will be kept strictly confidential.

Rate the degree to which you believe that the individual described in the preceding section **has** **the following characteristics:**

1	2	3	4	5	6	7
Not at all						Very much

Uncivilized

Unfeeling

Polite (R)

Emotional (R)

Rude

Sensitive (R)

Refined (R)

Cold

Lacking in self-control

Rigid

Moral (R)

Warm (R)

Irrational

Open (R)

Rational (R)

Passive

Childish

Superficial

Mature (R)

Deep (R)

[Italicized items are animalistic traits; non-italicized items are mechanistic traits. (R) items are reverse-scored.]

APPENDIX D: MANIPULATION CHECK

Section 4: Knowledge Recall

The following questions will ask you about the information you read in the preceding section about an individual about to be released from prison.

Please answer to the best of your memory.

What is his name?

Where was he born?

How old is he?

What is his current conviction for?

How many years was his sentence?

What is his risk to reoffend?

What are the conditions of his release?

APPENDIX E: SECONDARY DEPENDENT VARIABLES, SUPPORT FOR OFFENDERS' RIGHTS, SOCIAL DISTANCE

Section 5: Response to Scenario, Part 2

The following section contains another series of questions relating to how you feel about the person described in the earlier scenario. Please answer honestly – there are no right or wrong answers and your information will be kept strictly confidential.

Perceived sentence appropriateness:

His sentence length was (select one):

- Too short
- Appropriate
- Too long

If it was not appropriate, his sentence should have been (in years):

years

Rate the degree to which you **agree or disagree** with the following statements as they relate to the individual described in the earlier scenario:

Strongly agree	Somewhat agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Somewhat disagree	Strongly disagree
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Perceived offense severity:

1. His offense involved serious physical harm.
2. His offense involved serious emotional harm.
3. His offense involved serious financial harm.

Perceived typicality:

4. His crime was typical of offenses of that type.
5. He is different from other people who have committed similar crimes. (R)

Perceived dangerousness/rehabilitation:

6. He will commit another crime.
7. He is a danger to the community.
8. He is not a threat to anyone (R).
9. He has been rehabilitated. (R)
10. He is a changed person. (R)

[(R) items are reverse-scored.]

Beliefs about the offender's rights

Rate the degree to which you **agree or disagree** with the following statements as they relate to the individual described in the earlier scenario:

Strongly agree	Somewhat agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Somewhat disagree	Strongly disagree
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1. He should be monitored at all times.
2. He should be allowed to return to the community. (R)
3. Landlords should be allowed to refuse to rent to him because of his offense.
4. He should be allowed to hold a job. (R)
5. He should be required to register as an offender with police.
6. He should not be allowed to live near schools, daycares, or places where children gather.
7. He should be allowed to rent an apartment. (R)
8. He should be required to report his whereabouts to the police.
9. He should not be harassed because of his offense. (R)
10. He should be incarcerated for life.
11. He should be allowed to attend treatment in the community. (R)
12. His name and address should be public knowledge.
13. He should be allowed privacy. (R)
14. Employers should be allowed to refuse to hire him because of his offense.
15. He should not be allowed to work near schools, daycares, or places where children gather.
16. He should be allowed to vote. (R)
17. He should not be assaulted because of his offense. (R)
18. He should be executed.

Social distance

Rate the degree to which you **feel willing or unwilling** with regard to the following propositions as they relate to the individual described in the earlier scenario:

Strongly agree	Somewhat agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Somewhat disagree	Strongly disagree
----------------	----------------	----------------	----------------------------	-------------------	-------------------	-------------------

I would be willing to:

1. Live in the same city as him.
2. Live in the same neighbourhood as him.
3. Live in the same building as him.
4. Work in the same organization as him.
5. Spend time with him.
6. Live in the same room as him.
7. Be close friends with him.
8. Live in the same neighbourhood as his rehabilitation centre.
9. Work in the same neighbourhood as his rehabilitation centre.
10. Assist with his rehabilitation treatment.

APPENDIX F: GENERAL KNOWLEDGE ABOUT SEX OFFENDERS

Section 6: General Knowledge

The following questions relate to your general knowledge about sex offenders and criminal justice in Canada. Answer honestly and to the best of your ability. There are no grades and your responses will be kept strictly confidential.

Indicate which of the following statements are **true** and which are **false**.

1. Most sex offenses involve serious physical violence. (F)
2. Most convicted sex offenders do not commit multiple sexual offenses. (T)
3. Sexual assault is one of the most under-reported crimes. (T)
4. There is no evidence that sex offenders can be rehabilitated. (F)
5. Most sex offenders know their victims. (T)
6. Sex offenders are very similar to each other. (F)
7. The federal sex offender registry is open to the public. (F)
8. Community notification laws do not lower sex crime rates. (T)

APPENDIX G: DEMOGRAPHIC AND PERSONAL CHARACTERISTICS

Section 7: Demographics

This final section contains questions about your basic demographic information. No personally identifying information is required and all of your responses will be kept strictly anonymous.

Thank you for your participation.

1. What is your sex (select one)?

- Male
- Female
- Other

2. What is your age?

_____ years

3. With which ethnic group(s) of descent do you identify? (select as many as apply)

- Aboriginal (Inuit, Métis, First Nations)
- African
- East Asian
- Caribbean
- Central American
- European
- Middle Eastern
- South American
- South Asian
- Other (please specify) _____

4. What is your political leaning? Please rate yourself on the scale below which ranges from 1 to 7. Choose the number on the line that best reflects your political leaning.

1	2	3	4	5	6	7
Very Liberal	Liberal	Somewhat Liberal	Neutral	Somewhat Conservative	Conservative	Very Conservative

5. With which religious group do you identify?

- Protestant
- Catholic
- Jewish
- Muslim
- Personal Religion (no affiliation with a religious group)
- Other (please specify) _____
- No religion, because I am an atheist
- No religion, though I am not an atheist

6. By your own definition, would you consider yourself to be:

1	2	3	4
Not at all	Somewhat	Fairly	Very
Religious	Religious	Religious	Religious

7. Please select which of the following categories best reflects your citizenship status in Canada:

- Canadian citizen (born in Canada)
- Canadian citizen (naturalized)
- Landed immigrant
- Other

8. Has someone close to you, such as family members or close friends, ever been the target of a crime? (Please check all that apply.)

- Break and enter
- Vandalism
- Theft
- Physical assault
- Robbery (i.e., theft where there was violence or the threat of violence)
- Sexual assault
- Homicide
- Other (please specify)

9. Have you ever personally been the target of a crime? (Please check all that apply.)

- Break and enter
- Vandalism
- Theft
- Physical assault
- Robbery (i.e., theft where there was violence or the threat of violence)
- Sexual assault
- Other (please specify)

10. Which of the following best describes your current status with the University of Saskatchewan?

- Undergraduate student
- Graduate student
- Employee
- Alumnus/alumnae
- Other

11. If you have any questions, comments, or concerns, please feel free to write these thoughts in the space below. _____

APPENDIX H: CONSENT FORM

Researcher(s):

Graduate Student: Carolyn Camman
Department of Psychology, University of Saskatchewan
Email: carolyn.camman@usask.ca

Faculty Supervisor: J. Stephen Wormith
Department of Psychology, University of Saskatchewan
Phone: 966-6818
Email: s.wormith@usask.ca

Purpose and Procedure: The release of incarcerated offenders back into the community raises many interesting social issues. Most studies in this area have relied on asking broad, general questions about these issues, but relatively little research has looked at how people respond to the release of specific offenders.

As a participant, you will be asked to read about a fictional offender who is about to be released to the community, and respond to a survey on various aspects of what you think about these individuals in the community. The survey questionnaire should take no more than 30 to 45 minutes to complete. If you are participating through the Psychology 110 Participant Pool, you will be compensated in the form of course credit. Otherwise, you will be provided with the opportunity to enter into a draw for \$150 (cash).

Potential Benefits: Following the completion of the survey, you will receive a debriefing form which will provide you with a summary of current research regarding how people respond to offenders in the community. This form will also provide you with several references in case you would like to do some further reading on the subject. Furthermore, your answers will aid in a further scientific understanding of the topic.

Potential Risks: Because you will be reading about a fictional offender, you may find some of the information related to the offender's criminal offense distressing. However, this offence information is summarized in about the same level of detail as you would see in a brief news report or press release. While the description should not be more distressing than you would encounter in a typical day, if participating in this study causes you distress, please contact Carolyn Camman at the contact information above or Student Counselling Services at 966-4920.

Storage of Data: The research data will be stored on the secure servers in University of Saskatchewan's Arts building by the Social Science Research Laboratory's Survey Research Lab. The data will not be accessible by the general public.

Confidentiality: Your participation is anonymous and confidential. Although the data from this research project will be published and presented at conferences, the data will be reported in aggregate form, so that it will not be possible to identify individuals. Please do not put your name or other identifying information in the online questionnaire's fields. You will be asked to

provide your name, NSID, and PAWS email address following the study in order to be provided with compensation, but this information will not be associated with your survey responses.

Right to Withdraw: Your participation is voluntary and you only have to answer questions that you are comfortable with. There is no guarantee that you will personally benefit from your involvement. You may withdraw from the research project for any reason, at any time, without penalty of any sort. Withdrawing from the study will not affect your grades or research credit.

Questions: If you have any questions concerning the research project, please feel free to ask at any point by contacting Carolyn Camman or Steve Wormith at the contact information above. You are also free to contact the researchers at the numbers provided if you have questions. This research project has been approved on ethical grounds by the University of Saskatchewan Behavioural Research Ethics Board on [insert date of ethics approval]. Any questions regarding your rights as a participant may be addressed to that committee through the Ethics Office (966-2084). Out of town participants may call collect.

Follow-Up or Debriefing: After you complete the survey or in the event you withdraw from the study, your web browser will link to a debriefing sheet providing more information on the study's background and purpose. If you wish to receive a summary of the research results, please submit your request to Carolyn Camman or Steve Wormith at the contact information above.

Consent to Participate: Completion of the online survey questionnaire will constitute consent to participate and permission for the researcher to use the data gathered in the manner described above. If you would like a copy of the consent form, please print a copy for your records before proceeding to the questionnaire. You may also contact the researcher, Carolyn Camman, for a copy of the consent form.

APPENDIX I: DEBRIEFING FORM

Thank you for participating in this study. Please be assured that your responses to the survey questionnaire are anonymous. See below for an overview of the study's objectives, instructions for receiving compensation for participation, and follow-up information.

Study Objective

The main objective of this study is to better understand how people respond to offenders in the community. We are particularly interested in learning about how people respond to the community reintegration of sex offenders, because this is a complex and difficult issue, but very important to our ability to successfully reintegrate offenders. Therefore, some participants received a vignette which described a sex offender while others received vignettes describing individuals who had committed violent or property-based offenses, for comparison purposes.

The primary goal of offender rehabilitation and reintegration is to make communities safer. Successful reintegration of sex offenders means that these individuals are able to return to their communities, but not to their previous offending behaviours. Barriers to reintegration include the denial of stable jobs, adequate housing, and access to treatment and services for these offenders, as well as stigma and isolation. Some policies which have been developed for sex offenders in the community, such as sex offender registries and community notification laws, have not been found to reduce rates of sexual offending. However, some evidence-based treatment and reintegration support programs have been associated with reductions in re-offending, even for high-risk sex offenders. This research is intended to contribute to the development of policies and programs which are both effective at reducing crime and can be supported and embraced by the community at large.

Participant Compensation

If you participated via the Psychology 110 Participant Pool, you must enter your full name, NSID, and PAWS email address below so that credit can be assigned to you. You are not eligible for additional compensation.

If you **did not** participate via the Psychology 110 Participant Pool, you are eligible to be entered into a draw for \$150 prize draw (cash). If you wish to be entered into this draw, you must enter your full name, NSID, and PAWS email address below.

This information will not be connected to your survey responses. Your survey responses are anonymous. You will only be contacted if you have won the draw and your information will not be used for any other purposes.

1. Select one:

- I DID participate through the Psychology 110 Participant Pool (eligible for course credit)
- I DID NOT participate through the Psychology 110 Participant Pool (eligible for cash draw)

If you are eligible for course credit OR you would like to be entered in a draw for \$150, respond below:

2. Your FIRST and LAST name

3. Your NSID: (e.g., abc123)

4. Your PAWS e-mail address (e.g., abc123@mail.usask.ca). Please only use a valid U of S PAWS email address.

Follow-up information

While we designed the information in the study to be no more distressing than might be encountered during a brief newscast or press release, if participating in this study has caused distress, please contact Carolyn Camman at carolyn.camman@usask.ca or Student Counselling Services at 966-4920. If you would like to receive a summary of the results for this study, please contact Carolyn Camman at carolyn.camman@usask.ca or Dr. J. Stephen Wormith at s.wormith@usask.ca or (306) 966-6818.

Thank you again for your participation. Please print a copy of the debriefing form for your records. You may also contact the researcher, Carolyn Camman, for a copy of the debriefing form.

If you are interested in further reading on the topic, the following articles are recommended:

Bazemore, G. & Erbe, C. (2003). Operationalizing the community variable in offender reintegration: Theory and practice for developing intervention social capital. *Youth Violence and Juvenile Justice*, 1, 246-275.

Willis, G. M., Levenson, J. S., & Ward, T. (2010). Desistance and attitudes towards sex offenders: Facilitation or hindrance? *Journal of Family Violence*, 25, 545-556.

Wilson, R. J., Picheca, J. E., & Prinzo, M. (2005). *Circles of Support and Accountability: An evaluation of the pilot project in South-Central Ontario*. Retrieved from: <http://www.csc-scc.gc.ca/text/rsrch/reports/r168/r168-eng.shtml>

APPENDIX J: DATA CLEANING PROCEDURES AND RESULTS OF MANIPULATION AND ASSUMPTION CHECKS

Several demographic variables were re-coded following administration of the survey. Gender originally included three response options, but no participants reported a non-binary gender identity and thus this category was removed. For ethnic group affiliation, 34 respondents selected "Other" and self-identified as "Canadian", "North American", "Russian" or "Caucasian" rather than (or in addition to) selecting "European"; all of these responses were re-coded as a single category of "European/Other Caucasian"¹². Five respondents also self-identified as "Southeast Asian", which was included as an additional category. Respondents who selected two or more distinct categories were coded as "Mixed/Other", a category which also included one participant who was adopted and could not specify their ethnicity.

For religious affiliation, the Protestant and Catholic categories were collapsed into a single category of "Christian" which also included "Other" responses that identified the respondent as "Christian" or affiliated with a specific Protestant denomination (e.g., Anglican, Presbyterian). Additional categories were created for Buddhism and Sikhism, which were identified by five and two respondents respectively. Affiliations given by a single respondent only were condensed into an "Other religion" category (4 in total). All responses which indicated a specific personal faith or spirituality that was not a formally-organized religion were categorized with the responses to the original "No religion, not atheist" category under "Personal faith/not atheist".

For the political leaning variable, responses were condensed from the original 7-item scale to permit more straightforward comparisons of the proportions of liberal, conservative, and unaffiliated participants. Participants who scored 1-3 (strongly to slightly conservative) were re-classified as "Conservative", those scoring 5-7 (slightly to strongly liberal) as "Liberal", and the remainder who scored 4 (the neutral point) were retained as "Neither conservative nor liberal".

For the crime victimization experiences questions, responses were collapsed across the specific crime types into broader categories of any experiences as the target of a property-related crime (i.e., break and enter, vandalism, theft, and "other" responses such as fraud) and any experiences as the target of a crime against the person (i.e., robbery, physical assault, sexual

¹² A relatively larger proportion of the sample also identified as Central American than in past research on similar recent samples (e.g., 8.3% versus 1.5% in Chopin, 2011) and it is possible that this option was mistakenly selected by participants looking for an absent "North American" option, although this cannot be confirmed.

assault, homicide, and "other" responses such as harassment) for both experiences of the participants themselves (direct victimization) and for those of their close others, such as friends and family (indirect or vicarious victimization).

A manipulation check was employed to ensure that participants correctly identified the experimental condition to which they had been assigned. This check required participants to report specific details of the vignette they had read. These details included the offender's name, age, place of birth, current offense, length of sentence, assessed risk to reoffend, and conditions of release. Success of the manipulation check was determined based on the accuracy of the key indicators, current offense and risk to reoffend. Participants' responses to these items were coded for accuracy by two independent raters. Kappa, an index of inter-rater reliability, approached 1 for both offense type ($\kappa = .990$, $p < .001$) and risk level ($\kappa = .948$, $p < .001$), indicating near-perfect agreement between the raters, correcting for chance (Cohen, 1960).

Finally, assumption checks and screening procedures for univariate and multivariate outliers were conducted for each of the statistical procedures used. Univariate outliers were identified by an examination of standardized scores, box-plots, and histograms for each variable. A response was judged to be an outlier if its standardized score exceeded an absolute value of 3.29 and was clearly disconnected from the rest of the scores in the distribution in the histogram and box-plots (Tabachnick & Fidell, 2007). Multivariate outliers for all multivariate analyses were identified and excluded on the basis of Mahalanobis distances exceeding a critical χ^2 value with $p = .001$ as the threshold for significance. Where identified, cases with univariate and multivariate outliers were excluded from analysis of the affected variables.

Normality of distributions was assessed on the basis of normal probability plots, histograms, and z-scores calculated for skewness and kurtosis with a significance threshold of $p = 0.001$. Where scores were found to be skewed even after outliers were eliminated, a sequence of linear transformations was applied, starting with a square root transformation and proceeding through the log and inverse transformations until the distribution was normalized. Analyses were then conducted on both the transformed and untransformed variables. Where the results of these analyses did not differ, only the untransformed results were reported for ease of interpretation (Howell, 2009; Tabachnick & Fidell, 2007).

An exception to this transformation process was in the case of variables with literal, meaningful units of measurement (e.g., counts, years) where the role of the variable was

primarily descriptive and not intended for complex inferential analyses. In these cases, both parametric and non-parametric analyses, which do not assume normality, were conducted on the variables. In all cases the results of these analyses did not differ, and only the results of the more standard parametric analyses were reported. It should also be noted that in the case of simpler inferential statistics, such as *t*-tests and one-way ANOVAs, these analyses are robust to violations of the assumption of normality, particularly with larger samples ($N > 50$; Keppel & Wickens, 2004; Lumley, Diehr, Emerson, & Chen, 2002).

A number of the participant characteristic variables exhibited non-normal distribution. Age was significantly positively skewed ($z_{\text{skew}} = 27.96, p < .001$), with over 95% of participants reporting ages from 17 to 29, and the remainder reporting ages from 30 and above. As indicated above, transformation of this variable was deemed inappropriate, and an alternate procedure was employed of re-categorizing the small number of high, extreme outlying values (ages 36 and above; $z \geq 4.52, p < .001$) as a category of 30 or older (Tabachnick & Fidell, 2007). This substantially reduced but did not eliminate the skew in the distribution ($z_{\text{skew}} = 14.44, p < .001$), but results of analyses did not differ between parametric and non-parametric analyses and therefore only the results of the parametric analyses were reported. Self-reported religiosity, measured on a 4-point scale, was also slightly positively skewed ($z_{\text{skew}} = 3.74, p < .001$), with the majority of participants reporting lower levels of religiosity. There were no clear extreme outlying responses on this variable, but application of a square-root transformation eliminated the skewness ($z_{\text{skew}} = 1.37, ns$). Subsequent analyses determined that reported results for both the transformed and untransformed data were equivalent and therefore the untransformed results were reported. Finally, baseline attitudes toward sex offenders ($z_{\text{skew}} = 14.86, p < .001$) and toward violent offenders ($z_{\text{skew}} = 10.50, p < .001$) were significantly positively skewed, with the majority reporting extremely negative attitudes toward both offender groups. Two participants' responses on these attitude scales were identified as extreme outliers ($z \geq 4.39, p < .001$) and these cases were excluded from analysis of these variables. This reduced but did not fully correct the non-normality of the distributions (sex: $z_{\text{skew}} = 12.27, p < .001$; violent: $z_{\text{skew}} = 8.06, p < .001$). A square-root transformation was sufficient to address the skew for attitudes toward violent offenders ($z_{\text{skew}} = 1.87, ns$), and the inverse transformation ultimately corrected the skew for attitudes toward sex offenders ($z_{\text{skew}} = -2.29, ns$). As with religiosity, however, subsequent

analyses determined that the non-significance of the results for both t-tests and one-way ANOVAs did not differ between the transformed and untransformed data.

Some of secondary dependent variables also demonstrated skewed distributions. Perceived physical ($z_{\text{skew}} = -5.37, p < .001$) and emotional harm ($z_{\text{skew}} = -8.98, p < .001$) of the offense were both significantly negatively skewed, with the majority of respondents reporting the maximum value of perceived severity on each scale. No clear outliers were identified by visual inspection of the box-plots or histogram or by analysis of the standardized scores. The square-root transformation was sufficient to normalize the skew for perceived physical harm ($z_{\text{skew}} = 3.26, ns$) and the inverse transformation corrected the skewness of perceived emotional harm ($z_{\text{skew}} = -0.83, ns$). In all cases, analyses conducted on transformed and untransformed data were equivalent and therefore only results based on the untransformed data were reported. In the structural equation modelling analysis, the third support for offenders' rights parcel was also significantly negatively skewed ($z_{\text{skew}} = -3.99$). Square-root transformation corrected this skew, and the transformed parcel was reflected so that it would have the same direction of relationship with its latent variable as the other two indicators.

Levene's test was used as the criterion for homogeneity of variance for all ANOVAs and Box's M test was used to establish homogeneity of the variance-covariance matrices for all MANOVAs, with a significance threshold of $p = 0.05$ in either case. While in a small number of cases the assumptions for homogeneity were not met (especially where the included variables were non-normal), this was not a great concern because the discrepancies between cell sizes tended to be small and the overall cell sizes were generally large. However, as a precaution, all mean comparisons were conducted using a conservative Bonferroni correction to address concerns about homogeneity of variance violations as well as to control the familywise error rate (Howell, 2009; Keppel & Wickens, 2004).

Bivariate scatterplots were analysed to assess linearity and homoscedasticity of the dependent variables. Multicollinearity for MANOVAs and the structural equation model analyses was assessed on the basis of the determinant of the within-cell variance-covariance matrix not exceeding a value of 0.0001. For the multiple regression analyses, the condition was for meeting the assumption was no condition indexes greater than 30 combined with variance proportions greater than 0.50. All of these assumptions were met across each analysis. Although ultimately not reported, for the MANCOVA analyses, all assumptions of homogeneity of

regression, such that the covariate and did not significantly interact with any of the independent variables, were also met (pooled interaction term of the covariates and the independent variables were non-significant at $ps > .20$).

APPENDIX K: SCALE VALIDATION PROCEDURES FOR PRIMARY DEPENDENT VARIABLES

The present study introduced a series of new measures which have not been employed in past research or have received only limited validation thus far. The reliability of these scales was evaluated based on the internal consistency of the component items through the calculation of Cronbach's alpha and examination of the inter-item correlations for each scale. Evidence for the validity of each scale was generated through examination of the results of a series of factor analyses, correlational analyses, and multiple regressions in relation to the theories and assumptions upon which the scales were developed. Validation of each scale must be considered on-going and the results of all subsequent analyses should be interpreted in light of this.

Reliability Analyses

The primary dependent variables in the present study were support for offenders' rights (18 items), social distance (10 items), and the array of three measures of different aspects of dehumanization, including attribution of animal and mechanistic traits (two subscales, 10 items each), attribution of secondary and primary emotions (two subscales, 10 items each), and evocation of dehumanizing affect (8 items). Reliability analyses were conducted for each unidimensional scale and each subscale of the multidimensional scales (see Table K-1 for summary). One item on the mechanistic traits subscale ("passive") was found to be poorly inter-correlated with all other items (all $r_s \leq .30$) and negatively correlated with all but three items as well as having an overall small and negative item-total correlation ($r = -.16$), indicating that its actual relationship with the other trait items was the reverse of its theoretically-expected relationship (after confirming that all items had been correctly reverse-scored). This item was therefore excluded from the scale, resulting in an increase in overall internal consistency from .72 to .77 for this scale, which was deemed a satisfactory improvement in scale reliability.

The internal consistency of the evocation of dehumanizing affect scale was also considerably lower than desired ($\alpha = .66$) and there were a number of small and negative inter-item correlations present. However, no particular item could be identified as being especially weak or divergent from the other items in this case. Rather, the overall association between the eight items was relatively poor compared to the other scales, whose internal consistencies ranged from .77 to .94 (values greater than .80 are generally considered satisfactory; Fields, 2007). This lack of scale unity was addressed in subsequent factor analyses.

Table K-1. Cronbach's α scores for all primary outcome scales and subscales.

Scale	Subscale	N	N (Items)	α
Support for offenders' rights	-	259	18	.91
Social distance	-	274	10	.94
Attribution of dehumanized traits	Animalistic	284	10	.85
	Mechanistic	275	10	.72
	Mechanistic (revised)	280	9	.77
Attribution of emotional capacity	Secondary	267	10	.91
	Primary	275	10	.91
Evocation of dehumanizing affect	-	278	8	.66

Exploratory Factor Analyses

To further evaluate the internal scale structure of the measures, a series of factor analyses were conducted. For the two multidimensional scales, confirmatory factor analyses were employed because although these specific scales were newly developed for this study, their construction was explicitly based on pre-existing theoretical frameworks supported by empirical findings. The goal of this analysis was not data reduction but confirmation of the expected factor structure, and CFA provided the more appropriate test in this context (Tabachnick & Fidell, 2007), to be discussed in the following section. The expected underlying factor structures of the evocation of dehumanizing affect, support for offenders' rights, and social distance were less certain and therefore they were subjected to exploratory factor analysis instead.

Prior to analysis, the composite items for each scale were screened for univariate and multivariate outliers. Univariate outliers were identified by a combination of identifying standardized scores which exceeded an absolute value of 3.29 ($p < .001$) as well as visual confirmation of disconnection from the main distribution on the histograms or box-plots. Six such outliers were identified and these cases were excluded from analysis of these variables. Multivariate outliers were identified by calculating the Mahalanobis distance and comparing participants' scores to a critical value with degrees freedom based on the number of items in the scale (Tabachnick & Fidell, 2007). This process identified a number of multivariate outliers for each set of scale items and these cases were excluded from the analysis of their respective variables. Even with the elimination of outliers, the sample size in all cases exceeded 200, which is considered adequate for these analyses, and the ratio of participants to variables exceeded

10:1, the preferred minimum ratio (Tabachnick & Fidell, 2007). Several of the items exhibited non-normal distribution, but because the goal of the analysis was to evaluate and validate standardized scales, transformation of individual items was deemed inappropriate. Non-normality can weaken but does not invalidate factor analytic methods (Tabachnick & Fidell, 2007).

Initial analyses employed a principle axis factoring approach, to maximize the amount of common variance explained, with a varimax rotation to maximize the differentiation of identified factors and enhance their interpretability (Tabachnick & Fidell, 2007). The initial factor structure was selected based on eigenvalues greater than 1. From these initial results, additional factor analyses were run until a satisfactory solution was obtained. All analyses returned satisfactory values for the Kaiser-Meyer-Olkin measure of sampling adequacy ($> .60$; Tabachnick & Fidell, 2007) and no problems with multicollinearity were detected for any variables (all determinants greater than 1×10^{-5} ; all initial communalities less than $.90$). The majority of the partial correlations for the analysis of the support for offenders' rights were small ($< |.35|$) indicating a high degree of commonality among the items. However, for the social distance items, six (13%) of the partial correlations exceeded this threshold, up to values of $|.64|$. Findings such as this would generally indicate the possibility of multiple underlying factors, but this concern was later offset by the strength of the eventual unidimensional factor solution. For the evocation of dehumanizing affect items, there were also three sizeable partial correlations between three pairs of items (admiration and pride, $|.40|$; jealousy and envy, $|.59|$; sympathy and pity, $|.61|$), which in this case was ultimately reflected in the multi-factorial solution.

The initial factor extraction for the support for offenders' rights scale was a 3-factor solution accounting for 48.4% of the common variance among the items (see Table K-2 for all support for offenders' rights measure factor loadings). However, there was substantial cross-loading between all factors and the third factor was small (two pure items and one complex). A 2-factor orthogonal solution did not reduce the incidence of cross-loading, but a second series of analyses employing oblimin rotations, which allowed the extracted factors to correlate, produced similar solutions with substantially less cross-loading and therefore more interpretable factors. Specifically, the first factor appeared to be populated mainly by items pertaining to the general rights and freedoms that offenders should expect (e.g., "He should be allowed to hold a job", "He should be incarcerated for life"), whereas the second factor included items more related to

Table K-2. Factor loadings by solution for support for offenders' rights scale.

Factor	3-Factor		2-Factor		1-Factor
	Varimax	Oblimin	Varimax	Oblimin	
1	R4 (.683)	R4 (.747)	R15 (.771)	R4 (.756)	R15 (.761)
	R13 (.624)	R17 (.669)	R6 (.760) _c	R17 (.670)	R6 (.757)
	R17 (.617)	R13 (.626)	R8 (.669)	R13 (.630)	R2 (.740)
	R2 (.600) _a	R2 (.568)	R1 (.607) _c	R2 (.559)	R13 (.687)
	R10 (.561)	R10 (.550)	R5 (.597)	R11 (.554)	R7 (.677)
	R9 (.554)	R9 (.547)	R12 (.571) _c	R9 (.550)	R1 (.677)
	R18 (.518)	R18 (.546)	R14 (.537)	R18 (.539)	R12 (.646)
	R7 (.511) _a	R11 (.540)	R3 (.537) _c	R10 (.532)	R9 (.629)
	R11 (.503)	R16 (.458)	<i>R7 (.440)_c</i>	R16 (.463)	R4 (.622)
	<i>R16 (.442)</i>	R7 (.455)	<i>R2 (.435)_c</i>	<i>R7 (.442)</i>	R8 (.621)
	<i>R12 (.344)_a</i>		<i>R13 (.339)_c</i>		R3 (.616)
	<i>R1 (.336)_a</i>		<i>R9 (.325)_c</i>		R10 (.578)
	<i>R6 (.328)_a</i>				R14 (.547)
	<i>R15 (.323)_a</i>				R17 (.501)
					R11 (.458)
				R18 (.453)	
				R5 (.447)	
				<i>R16 (.439)</i>	
2	R15 (.834) _a	R15 (.894)	R4 (.703)	R15 (.783)	
	R6 (.799) _a	R6 (.843)	R13 (.640) _c	R6 (.769)	
	R8 (.602)	R8 (.598)	R2 (.611) _c	R8 (.703)	
	R5 (.532)	R5 (.571)	R17 (.605)	R5 (.688)	
	R12 (.531) _a	R12 (.493)	R9 (.568) _c	R1 (.577)	
	R1 (.501) _{a,b}	<i>R1 (.419)</i>	R10 (.540)	R14 (.540)	
	<i>R7 (.378)_a</i>		R7 (.515) _c	R12 (.537)	
	<i>R2 (.341)_a</i>		R11 (.515)	R3 (.501)	
			R18 (.503)		
			R16 (.448)		
			<i>R1 (.346)_c</i>		
			<i>R12 (.338)_c</i>		
			<i>R3 (.329)_c</i>		
		<i>R6 (.316)_c</i>			
3	R14 (.715)	R14 (.706)			
	R3 (.673)	R3 (.641)			
	<i>R1 (.345)_b</i>				
Common Variance Extracted	48.38%	48.40%	44.11%	44.12%	37.48%

Note. N = 246. Factor loadings above .32 in parentheses in order of descending value. Same subscript indicates cross-loading item. Poorly-loading items (< .45) in italics.

specific monitoring policies around offenders in the community (e.g., "He should be required to report his whereabouts to the police", "His name and address should be public knowledge"). The third factor consisted of two similarly-worded items regarding whether landlords and employers should be allowed to refuse to hire or rent to offenders, and was subsumed by the second factor in the 2-factor solution. See Table K-3 for specific items per factor for the oblimin-rotated solutions for this scale.

Although the simple structure in the obliquely-rotated solutions was improved compared to the orthogonal solutions, the correlations between these factors tended to be large (from .35 to .59; see Table K-6 for all factor correlations), suggesting an underlying unidimensional structure. A 1-factor solution representing scale unidimensionality still accounted for a sizeable proportion of common variance (37.5%), in addition to obtaining appreciable factor loadings for all items,

Table K-3. Item description for 3-factor oblimin solution of support for offenders' rights scale.

Factor	Item	Loading
1	4. He should be allowed to hold a job.	.747
	17. He should <u>not</u> be assaulted because of his offense.	.669
	13. He should be allowed privacy.	.626
	2. He should be allowed to return to the community.	.568
	10. He should be incarcerated for life.	.550
	9. He should <u>not</u> be harassed because of his offense.	.547
	18. He should be executed.	.546
	11. He should be allowed to attend treatment in the community.	.540
	16. He should be allowed to vote.	.458
	7. He should be allowed to rent an apartment.	.455
2	15. He should not be allowed to <u>work</u> near schools, daycares, or places where children gather.	.894
	6. He should not be allowed to <u>live</u> near schools, daycares, or places where children gather.	.843
	8. He should be required to report his whereabouts to the police.	.598
	5. He should be required to register as an offender with police.	.571
	12. His name and address should be public knowledge.	.493
	1. He should be monitored at all times.	.419
3 ^a	14. Employers should be allowed to refuse to hire him because of his offense.	.706
	3. Landlords should be allowed to refuse to rent to him because of his offense.	.641

^a Distribution of items for the 2-factor solution was identical except for items 14 and 3, which also loaded on the second factor in that solution.

with the smallest loading of .44, just below the minimum cut-off for "fair" loadings (.45, or 20% shared variance with the factor; Tabachnick & Fidell, 2007), and almost three-quarters of the items loading above .55 ("good", 30% shared variance). Overall, the oblique rotations were superior to the orthogonal rotations in producing multi-factorial solutions with simple structure, but the substantial correlations between factors and the satisfactory loadings on the 1-factor solution were all consistent with the intended unidimensional structure of the scale, suggesting that this was the optimal solution for the present study.

A similar process was conducted with the social distance measure. The initial analysis with a varimax rotation produced a 2-factor solution accounting for 71.2% of the common variance, but with all but three of 10 items cross-loading between factors. Re-running the analysis with an oblimin rotation resulted in a much clearer 2-factor solution with minimal cross-loading (see Table K-4 for all social distance measure factor loadings). Specifically, factor 1 contained all of the seven items which referred to preferred distance from the offender himself, all of which, with the exception of one poorer-loading item (.43), loaded above .63 ("very good", 40% shared variance; Tabachnick & Fidell, 2007). Factor 2 contained the three items which referred to preferred distance from the offender's rehabilitation centre or participating in his rehabilitation as well as one cross-loaded item from the first factor, ("I would be willing to live in the same city as him"), with all items loading above .45 ("fair", 20% shared variance). Once again, however, the correlation between these factors was strong ($r = .63$), and the subsequent 1-factor solution was highly satisfactory, accounting for 62.6% of the common variance by way of a single factor containing all 10 original items, all loading above .63, strongly supporting the use of this scale as a unidimensional measure.

Finally, the initial extraction for the evocation of dehumanizing affect scale produced a 3-factor solution which accounted for 59.7% of the common variance between items, but the strength of the loadings was mixed with some cross-loading between factors (see Table K-5 for all dehumanizing affect measure factor loadings). Subsequent 2- and 1-factor solutions did not result in clear improvements in the strength of the loadings or reductions in cross-loadings where multiple factors were present. Given that the original scale was based on a quadrant construct, the stereotype content model, with two emotional response items included per quadrant (Harris & Fiske, 2006), a 4-factor solution was also attempted. However, the extraction analysis failed to converge on a solution before reaching singularity, despite low multicollinearity among the items

Table K-4. Factor loadings by solution for social distance scale.

Factor	<u>2-Factor</u>		<u>1-Factor</u>
	Varimax	Oblimin	
1	Distance3 (.801) _a	Distance6 (.900)	Distance4 (.873)
	Distance6 (.777)	Distance3 (.843)	Distance2 (.864)
	Distance7 (.775) _a	Distance7 (.822)	Distance5 (.860)
	Distance5 (.762) _a	Distance5 (.771)	Distance3 (.844)
	Distance4 (.722) _a	Distance4 (.700)	Distance7 (.806)
	Distance2 (.692) _a	Distance2 (.655)	Distance1 (.802)
	Distance1 (.536) _a	<i>Distance1 (.429)_b</i>	Distance8 (.739)
	<i>Distance10 (.397)_a</i>		Distance9 (.734)
			Distance10 (.683)
			Distance6 (.670)
2	Distance9 (.928)	Distance9 (1.00)	
	Distance8 (.804)	Distance8 (.814)	
	Distance1 (.599) _a	Distance10 (.515)	
	Distance10 (.588) _a	Distance1 (.462) _b	
	Distance2 (.509) _a		
	Distance4 (.489) _a		
	<i>Distance5 (.428)_a</i>		
	<i>Distance3 (.365)_a</i>		
	<i>Distance7 (.338)_a</i>		
Common Variance Extracted	71.82%	71.82%	62.55%

Note. N = 268. Factor loadings above .32 in parentheses in order of descending value. Same subscript indicates cross-loading item. Poorly-loading items (< .45) in italics. Items 1 through 7 pertained to distance from the offender himself. Items 8 through 10 referred to distance from the offenders' rehabilitation centre or willingness to participate in his rehabilitation.

Table K-5. Factor loadings by solution for evocation of dehumanizing affect scale.

Factor	<u>5-Factor</u>		<u>3-Factor</u>	<u>2-Factor</u>	<u>1-Factor</u>
	Varimax	Oblimin	Varimax	Varimax	
1	Sympathy	Pity	Envy	Sympathy	Admiration
	(.800)	(.806)	(.900)	(.878)	(.702)
	Pity	Sympathy	Jealousy	Pity	Pride
	(.782)	(.774)	(.630)	(.594)	(.636)
			<i>Admiration</i>	Pride	Sympathy
			(.415) _b	(.462) _c	(.608)
				<i>Disgust</i>	Envy
				(.443)	(.494)
				<i>Admiration</i>	Disgust
				(.434) _c	(.488)
2	Envy	Jealousy	Sympathy	Envy	
	(.771)	(.781)	(.860)	(.860)	
	Jealousy	Envy	Pity	Jealousy	
	(.745)	(.751)	(.743)	(.601)	
				Admiration	
			(.493) _c		
			<i>Pride</i>		
			(.368) _c		
3	Admiration	Admiration	Disgust		
	(.696)	(.740)	(.610)		
	Pride	Pride	Contempt		
	(.691)	(.614)	(.575)		
			<i>Admiration</i>		
		(.423) _b			
		<i>Pride</i>			
		(.405)			
4	Contempt	Contempt			
	(.608)	(.599)			
	Disgust				
	(.522) _a				
5	<i>Disgust</i>	Disgust			
	(.432) _a	(.540)			
Dropped				Contempt	Contempt
Common					
Variance	59.67%	59.67%	51.03%	40.81%	26.01%
Extracted					

Note. N = 267. Factor loadings above .32 in parentheses in order of descending value. Same subscript indicates cross-loading item. Poorly-loading items (< .45) in italics. Dropped items failed to load above .32 on any factor.

and admiration; sympathy and pity; envy and jealousy) were replicated by a single factor each. The fourth pair (disgust and contempt) did load onto a single factor together (at .52 and .61 respectively), but disgust also cross-loaded onto a fifth factor alone at .43. The oblimin rotation of this 5-factor solution produced an even clearer structure, where the same three pairs indicated above again loaded on unique factors, and disgust and contempt each loaded onto their own separate factor (at .54 and .60, respectively). The majority of correlations between factors in this solution were also low to moderate (60% were greater than .30 and none were greater than .50; see Table K-6 for all factor correlations), further supporting the multi-factorial solution.

These results largely supported the expected pattern of emotional responses across the stereotype content model quadrants (Harris & Fiske, 2006). However, along with the unsatisfactory internal consistency ($\alpha = .66$) of the attempted composite scale, the results of this analysis did not support the synthesis of these items into a unidimensional scale of dehumanization. Moreover, disgust and contempt, the two emotional responses associated with the low-warmth, low-competence quadrant and therefore the emotions most strongly implicated in dehumanization, were only moderately correlated with each other ($r = .31$), further indicating that these two items alone were not a unified measure of dehumanization. While it has been posited that the dehumanized quadrant of the stereotype content model is represented by both contempt and disgust (Harris & Fiske, 2006), in the literature only the relationship of disgust and dehumanization has been investigated and received empirical support (Harris & Fiske, 2006; Hodson & Costello, 2007), with contempt receiving no similar validation as an indicator of dehumanization. Therefore, for the purposes of the present study and all subsequent analyses, "disgust" was employed as a single-item measure of evocation of dehumanizing affect.

Confirmatory Factor Analyses

The factor structures of the two multivariate scales for attribution of dehumanized traits (animalistic and mechanistic) and for the attribution of emotional capacity (secondary and primary emotions) were evaluated by confirmatory factor analysis using EQS 6.2 software (Bentler, 2006). For the attribution of dehumanized traits scale, based on Haslam's (2006) model of dehumanization, one factor was expected to account for the variance in the ten items associated with animalistic dehumanization and another was expected to account for the variance in the nine items associated with mechanistic dehumanization (excluding passivity, which was already identified as a poorly-associated item through the reliability analyses). For the attribution

Table K-6. Correlations between factors for oblimin-rotated solutions of exploratory factor analyses.

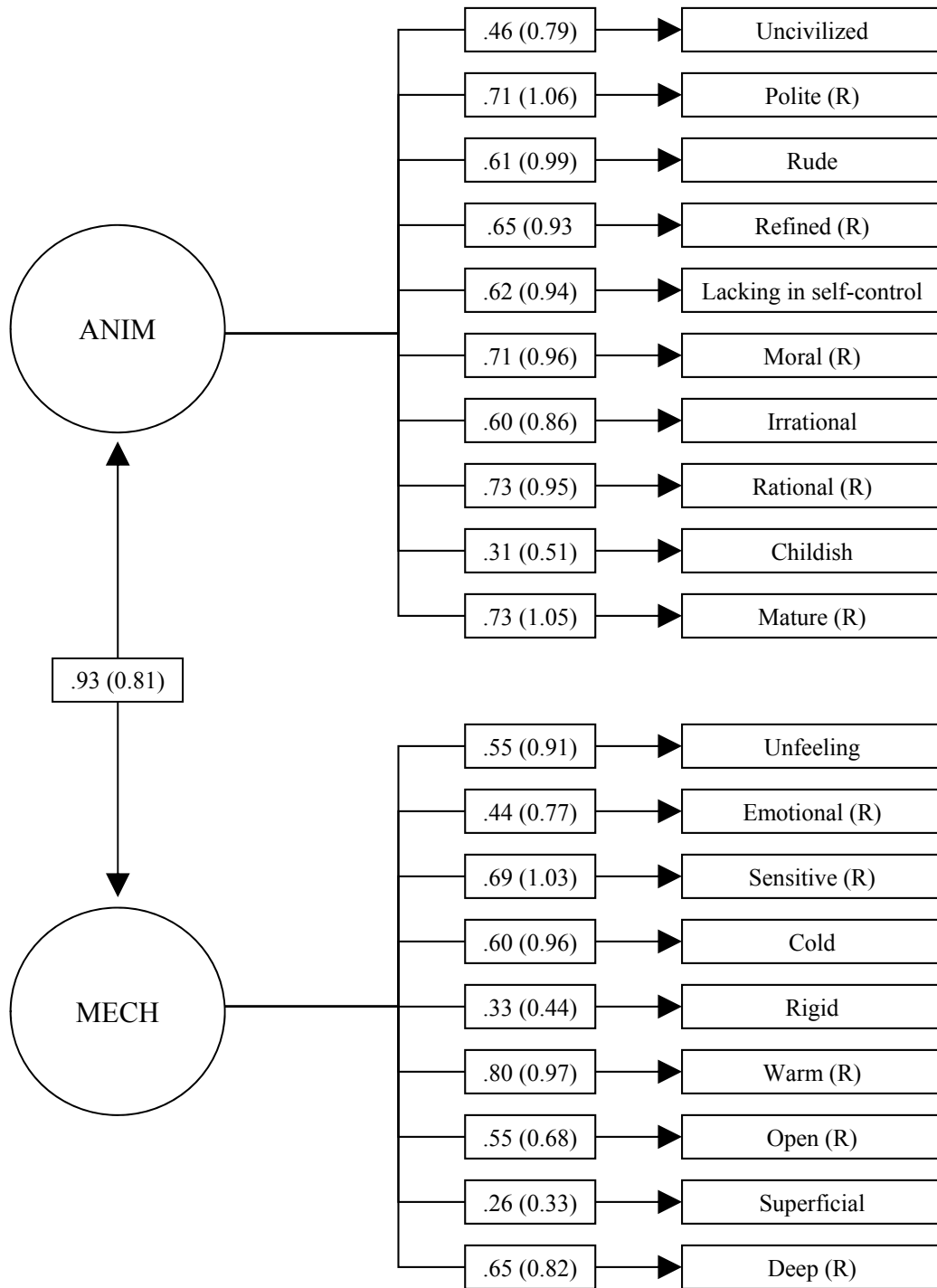
Scale	<i>N</i>	Factor	1	2	3	4
Support for offenders' rights	246	1	-			
		2	.55	-		
		3	.35	.47	-	
		1	-			
		2	.59	-		
Social distance	268	1	-			
		2	.63	-		
Evocation of dehumanizing affect	267	1	-			
		2	.39	-		
		3	.16	.05	-	
		4	.36	.13	.05	-
		5	.44	.20	.46	.24

Note. All values are absolute values. Values above the diagonals are identical to values below. Diagonal values equal 1.

of emotional capacity scale, based on the research on the relationship of attribution of different types of emotion to dehumanization (e.g., Demoulin et al., 2004; Gaunt, Leyens, & Demoulin, 2002; Paladino, 2002), one factor was expected to account for the variance in the ten items associated with perceived capacity for complex secondary emotions and the other was expected to account for the variance in the ten items associated with basic primary emotions. Therefore, both models were identified with two latent factors, each predicting their own subset of items (see Figures K-1 and K-2 for models with standardized path coefficients). Although not specifically discussed in the literature, it was also expected that there might be some degree of correlation between the latent factors in both models given the relatedness of their underlying constructs.

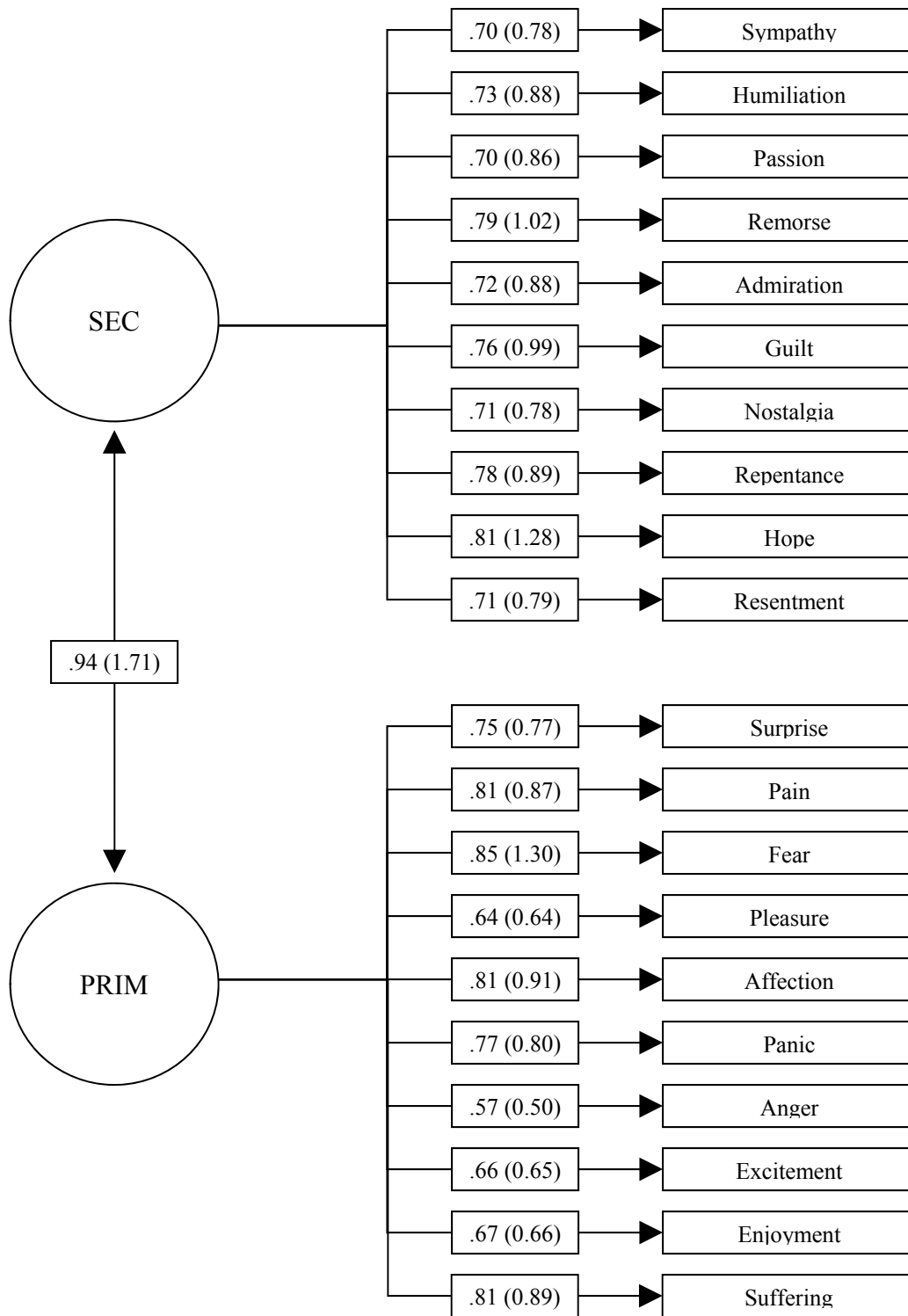
Screening for univariate and multivariate outliers among the scale items was conducted as described above. No univariate outliers were identified, but several multivariate outliers were identified for the attribution of dehumanized traits items and the attribution of emotional capacity items. These cases were excluded from analysis of their respective variables. The resulting sample sizes for the trait and emotional capacity scales were 266 and 242, in excess of the minimum recommended sample size of 200 (Tabachnick & Fidell, 2007). However, given the

Figure K-1. Confirmatory factor analysis model for animalistic and mechanistic trait subscales.



Note. $\chi^2(151) = 715.23, p < .001$; CFI = .69; SRMR = .12. All pathways significant at $p < .05$. Numbers in parentheses are unstandardized coefficients.

Figure K-2. Confirmatory factor analysis model for secondary and primary emotion subscales.



Note. $\chi^2(169) = 833.61, p < .001$; CFI = .81; SRMR = .10. All pathways significant at $p < .05$. Numbers in parentheses are unstandardized coefficients.

large number of measured variables involved, the ratio of parameters estimated to participants only just exceeded the absolute minimum ratio of 5:1 and did not meet the ideal minimum ratio of 10:1 (Kline, 2011), which could result in unreliable solutions and must be considered when interpreting the results.

Models were estimated using the maximum likelihood estimation procedure. Robust analytic methods were employed to correct for the persistent non-normality of some items.¹³ Analyses were re-run with different marker variables selected to ensure that all path coefficients were tested for significance and that the solutions were stable (Kline, 2011). All analyses ran without error. Multicollinearity was not a concern in any analysis (all determinants greater than 1×10^{-5}). Model fit was assessed on the basis of the chi-squared goodness-of-fit test as well as two standard goodness-of-fit indices. Because chi-squared is partly a function of sample size, large samples tend to produce significant goodness-of-fit tests (indicating a significant difference between the model and the data) even for well-fitting models (Tabachnick & Fidell, 2007). Thus the goodness-of-fit indices provide a less sensitive and more reliable indication of the overall model fit. Because these indices can be calculated based on different criterion, standard practice is to report at least two indices of different types. Following Hu and Bentler's (1999) recommendation, the two fit indices that have been reported include one comparative-based fit index (Comparative Fit Index [CFI]; ideal values are greater than .95) and one residual-based fit index (Standardized Root Mean Square Residual [SRMR]; ideal values are less than .08). For this particular set of analyses, because of the non-normality of some items, the robust CFI value has been reported in all cases as well as the scaled Sartorra-Bentley chi-squared values, which corrected for non-normality (Tabachnick & Fidell, 2007).

Overall, the tests of these models did not provide consistent support for their fit to the data. The goodness-of-fit tests for both the dehumanized traits ($\chi^2(151) = 715.23, p < .001$) and emotional capacity ($\chi^2(169) = 833.61, p < .001$) models were significant, indicating significant differences between the tested model and the data, though this is not uncommon with larger samples because the test is overly sensitive (Tabachnick & Fidell, 2007). However, the goodness-of-fit indices also did not indicate adequate model fit in either case, with robust CFI scores less than .95 (.69 and .81, respectively, for the trait and emotional capacity models) and SRMR scores greater than .08 (.12 and .10, respectively). There were also a number of large

¹³ Robust analysis methods require raw data entry and therefore no covariance matrix can be reported.

standardized residuals in each model (36.8% and 23.3% of all residuals $>.10$, respectively), indicating specification errors where certain portions of the models were not estimated well. Otherwise, all path coefficients were significant and the majority of the standardized path coefficients, which are the equivalent of factor loadings, were satisfactorily large ($\beta >.45$; 20% shared variance with the underlying factor; Tabachnick & Fidell, 2007).

Post hoc Lagrange multiplier and Wald tests were performed on both models to identify possible parameters for inclusion or deletion, but neither analysis identified parameter changes which would substantially improve either model. However, for the trait attribution scales, some items were particularly poorly-loading ("childish", $\beta = .31$, for the animalistic traits; "superficial", $\beta = .26$, for the mechanistic traits), and another analysis was run excluding these two items. The resulting model had significantly improved fit to the data ($\Delta\chi^2(33) = 114.51, p < .001$)¹⁴, but the model fit was still inadequate overall (CFI = .72; SRMR = .11). No such excessively weak items were identified on the emotional capacity attribution scales.

Finally, the high correlations of the latent factors in both the dehumanized trait ($r = .93$) and emotional capacity models ($r = .94$), strongly suggested the possibility of a 1-factor solution (Kline, 2005). Alternative 1-factor models were constructed with all items determined by a single underlying factor each to test this possibility. However, despite the high correlation between the factors, this 1-factor solution was not an adequate fit for either the dehumanized trait data ($\chi^2(152) = 727.34, p < .001$; CFI = 0.69; SRMR = 0.12) or the emotional capacity data ($\chi^2(170) = 856.83, p < .001$; CFI = .80; SRMR = .09). Further modification of the models was unwarranted without clear rationales for these changes given the possibility of inflated Type I error rates and inability to cross-validate the adapted models on a new sample (Tabachnick & Fidell, 2007).¹⁵

Based on these results, the expected two-factor scale compositions for both measures were not conclusively supported, and the lack of fit for the 1-factor solution also suggested that there was no clear unidimensionality to the items, despite the high correlations between the expected latent factors. Analysis of the residuals did not provide a clear direction for identifying the optimal model for explaining the data. Overall, the paired subscales failed to provide

¹⁴ The comparison of nested models, where models are identical in structure except for the number of parameters included, is conducted by subtracting the smaller chi-squared goodness-of-fit value from the larger and comparing this difference score to a critical value based on the difference in degrees freedom between the models (Tabachnick & Fidell, 2007).

¹⁵ Additional exploratory factor analyses also did not provide a clear interpretable factor structure for either scale.

discriminant validity for each other in these analyses, although it is difficult to contribute this to a failure of theory or the inadequacy of the data themselves, given the small ratio of parameters estimated to the overall sample size. However, while both scales were clearly in need of refinement, subsequent analyses provided alternative evidence for their conceptual validity.

Correlational and Multiple Regression Analyses

Based on the initial reliability analyses which demonstrated satisfactory to excellent internal consistency ($.77 \geq \alpha \geq .91$), it was felt that the individual measures of animalistic and mechanistic dehumanization and attribution of secondary and primary emotions could represent relatively homogeneous, reliable constructs, though this was not supported by the factor analyses. The concerns raised by the results of the confirmatory factor analyses were that each of these pairs of subscales were too highly correlated with each other to be reliably distinguished as discrete constructs, at least when applied to such extreme targets such as criminal offenders. To further investigate this concern, correlational analysis and a series of exploratory multiple regression analyses were run to evaluate and compare relationships between these variables.

Composite variables based on average scores for each of the four dehumanization scales, as well as the support for offenders' rights and social distance scales, were computed for each participant providing they were missing no more than one item was missing per scale. With the exception of the mechanistic trait item "passive", which demonstrated a negative relationship with all other scale items in the reliability analyses, all other weakly performing items were retained as the samples of items were already quite small and the early stage of the analysis did not warrant aggressive data reduction. Cases identified previously as containing univariate or multivariate outliers on individual scale items were not excluded from the computation of the scales; rather the outlier identification procedures were re-conducted on the composite variables in order to minimize unnecessary exclusion of data. No univariate outliers on the composite scales were detected, but three multivariate outliers were identified with Mahalanobis distance values exceeding a critical value of $\chi^2 (7) = 24.32$. These cases were subsequently excluded from all multivariate analyses. All variables were otherwise normally distributed. See Table K-7 for means and standard deviations. The minimum sample size of participants who had valid scores on all main dependent measures excluding all outliers was 266.

The pattern of correlations between the primary dependent variables was largely consistent with expectations (see Table K-8). First, support for offenders' rights was strongly

Table K-7. Means and standard deviations of dehumanization component measures, support for offenders' rights, and social distance.

Variable	Risk Level				Offense Type						Total	
	Low		High		Property		Violent		Sexual		n	M (SD)
	n	M (SD)	n	M (SD)	n	M (SD)	n	M (SD)	n	M (SD)		
Support for offender's rights	142	5.24 (0.97)	131	4.78 (0.95)	90	5.46 (0.92)	90	5.05 (0.92)	93	4.56 (0.93)	273	5.02 (0.99)
Social distance	144	4.04 (1.50)	134	4.37 (1.47)	91	3.76 (1.47)	92	4.11 (1.42)	95	4.70 (1.45)	278	4.20 (1.49)
Animalistic traits	147	4.71 (0.95)	139	5.09 (0.79)	94	4.67 (0.94)	92	4.86 (0.83)	100	5.13 (0.86)	286	4.90 (0.90)
Mechanistic traits	146	4.23 (0.83)	140	4.56 (0.80)	94	4.23 (0.79)	91	4.27 (0.80)	101	4.66 (0.82)	286	4.39 (0.83)
Secondary emotions	143	4.85 (1.25)	137	4.31 (1.15)	92	4.61 (1.15)	90	4.86 (1.22)	98	4.31 (1.27)	280	4.59 (1.23)
Primary emotions	144	5.20 (1.16)	138	4.95 (1.08)	92	5.06 (1.08)	92	5.28 (1.12)	98	4.91 (1.15)	282	5.08 (1.13)
Disgust	146	3.89 (2.05)	137	4.25 (1.91)	94	3.09 (1.67)	91	3.75 (1.80)	98	5.30 (1.81)	283	4.06 (1.99)

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Table K-8. Correlations between dehumanization component measures, support for offenders' rights, and social distance.

Variable	1	2	3	4	5	6
1. Animalistic traits						
2. Mechanistic traits	.73					
3. Secondary emotions	-.42	-.62				
4. Primary emotions	-.24	-.50	.85			
5. Disgust	.53	.55	-.43	-.32		
6. Support for offenders' rights	-.43	-.54	.55	.39	-.56	
7. Social distance	.47	.58	-.56	-.41	.54	-.74

Note. All correlations significant at $p < .001$.

negatively correlated with desire for social distance, indicating that the less participants supported offenders' rights, the more they also preferred social distance from the offender. Consistent with the findings of the confirmatory factor analyses, there were substantial correlations between the attribution of animalistic and mechanistic traits scales ($r = .73, p < .001$) and attribution of secondary and primary emotional capacity scales ($r = .85, p < .001$), likely due to the similarity of the underlying constructs, measuring either traits or emotional capacity.

The measures of animalistic traits, mechanistic traits, and disgust toward the offenders all had moderate to large negative associations with support for offenders rights ($-.43 \leq rs \leq -.56, p < .001$) and moderate to large positive associations with social distance ($.47 \leq rs \leq .58, p < .001$), indicating that the more participants felt that offenders possessed these traits and the more they were disgusted by them, the less they supported the offenders' rights and the more social distance they desired from the offender. In contrast, attribution of secondary emotional capacity was strongly positively associated with support for offenders rights ($r = .55, p < .001$) and negatively associated with social distance ($r = -.56, p < .001$), such that the more participants perceived offenders as capable of complex, "human" emotions, they more likely they were to support offenders' rights and less likely to desire social distance from them. However, attribution of primary emotional capacity, which is not theoretically linked with dehumanization and was therefore not expected to have any significant relationship with either response to offenders, was also significantly positively associated with support for offenders rights ($r = .39, p < .001$) and negatively associated with desire for social distance ($r = -.41, p < .001$) in the same pattern as secondary emotional capacity. This suggests that the attribution of any emotional capacity at all was related to more approving responses to offenders, although it must be noted that the relationships for primary emotional capacity were relatively smaller than those for secondary emotional capacity.

As mechanistic dehumanization is specifically associated with an overall denial of emotional capacity (Haslam, 2006), the particularly strong negative correlations of this variable with both secondary ($r = -.62, p < .001$) and primary emotional capacity ($r = -.50, p < .001$) were expected. Animalistic dehumanization, however, is thought to be associated particularly with the denial of more human secondary emotions, but not with the more basic primary emotions which even animals are thought to exhibit, a pattern which was also supported by the relatively stronger association of attribution of animalistic traits with denial of emotional capacity ($r = -.42, p <$

.001) than with denial of primary emotional capacity ($r = -.24, p < .001$). These findings provided some evidence for the validity of these constructs to the extent that they displayed relationships between theoretically-related variables in the expected strength and direction.

A series of hierarchical multiple regressions were also conducted to assess the independent contribution of each variable in predicting support for offenders' rights and social distance respectively. In the first model, both animalistic and mechanistic traits were entered together in the first stage to predict support for offenders' rights, then primary and secondary emotion attribution, and finally disgust. Then the analysis was re-run entering primary and secondary emotion attribution in the first stage, then animalistic and mechanistic traits, and finally disgust again. The same sequence of analysis was conducted for social distance. Only the results of the two first stages (models 1a and 1b) as well as the final stage with all five predictors (model 2) have been reported here (see Tables 2-9 and 2-10 in section 2.4.2.2).

All tested models were significant ($ps < .001$) and explained a substantial amount of variance in both dependent variables of support for offenders' rights ($.29 \leq R^2 \leq .44$) and social distance ($.32 \leq R^2 \leq .47$). Despite the high correlations between some of the variables, multicollinearity was not detected as a concern for any model. While the tolerance scores for secondary and primary emotional capacity in particular were somewhat low (less than .30), none of the condition indexes exceeded 30 (Tabachnick & Fidell, 2007), indicating that the solution was most likely stable and that the included variables were not redundant with each other, despite concerns raised by other analyses.

When animalistic and mechanistic traits were entered together, attribution of animalistic traits was not a significant independent predictor of support for offenders rights ($\beta = -.08, t(263) = -1.02, p = .311$) and only a marginally significant predictor for social distance ($\beta = .12, t(267) = 1.67, p = .096$). In comparison, attribution of mechanistic traits significantly predicted both support for offenders' rights ($\beta = -.48, t(263) = -6.09, p < .001$) and social distance ($\beta = .49, t(267) = 6.54, p < .001$). Contrary to expectations, attribution of mechanistic traits rather than attribution of animalistic traits was the more powerful predictor of participants' responses to offenders. When the capacity for secondary and primary emotion variables were entered together, secondary emotional capacity was a strong significant predictor of both support for offenders' rights ($\beta = .71, t(263) = 7.06, p < .001$) and desire for social distance ($\beta = -.78, t(267) = -7.98, p < .001$) in the predicted direction, while primary emotional capacity was a somewhat

weaker predictor of desire for social distance ($\beta = -.27, t(267) = 2.77, p = .006$) and only marginally predictive of support for offenders' rights ($\beta = -.20, t(263) = -1.97, p = .050$). This was consistent with expectations that secondary emotional capacity would be the more powerful predictor of participants' responses to offenders.

Moreover, these latter two variables exhibited a negative suppressor effect (Howell, 2009). Despite both demonstrating relatively strong zero-order correlations with the dependent variables, when these two variables were regressed together, the standardized regression coefficients for capacity for primary emotions became smaller and reversed signs from their original correlations while the standardized coefficients for capacity for secondary emotions were even larger than their original correlations. Therefore, when the shared variance between them was partialled out, attribution of secondary emotions became an even stronger predictor of support for offenders' rights and desire for social distance while attribution of primary emotions became a somewhat weaker predictor of *decreased* support for offenders' rights and *increased* desire for social distance (i.e., more dehumanization). Thus, while the general capacity for emotion might be associated with positive, humanizing responses, this effect pertains most specifically to the "human" secondary emotions (e.g., hope, guilt, nostalgia; Leyens et al., 2007). In contrast, attribution of the more primal emotional responses (e.g., anger, fear, surprise) is somewhat associated with negative, dehumanizing responses, once the positive influence of attribution of emotional capacity in general has been accounted for, providing further evidence of construct validity for these measures.

Finally, the regression models which incorporated all five dehumanization measures as independent variables each significantly predicted support for offenders' rights ($R^2 = .44, F(5,260) = 46.37, p < .001$) and social distance ($R^2 = .47, F(5,264) = 46.16, p < .001$), with both models accounting for nearly half of the overall variance in their respective dependent variables. These 5-variable models were also significant improvements on the previous models including either trait attribution or emotional capacity scales alone (all ΔR^2 s $\geq .12, ps < .001$), indicating that the combination of the three different aspects of dehumanization was a better predictor of the dependent variables than any of the aspects alone.

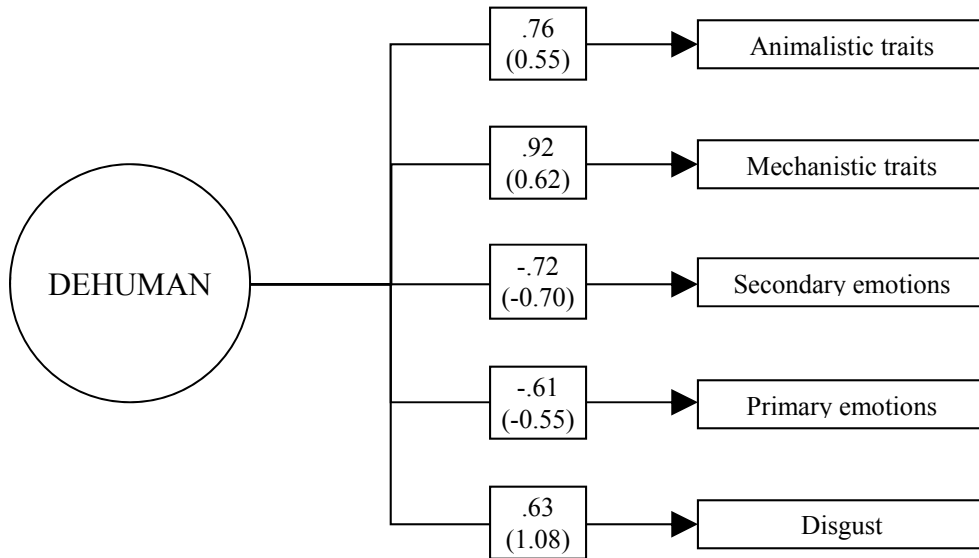
In both models, the same general pattern for the standardized regression coefficients was observed. Attribution of animalistic traits exhibited an even weaker and still non-significant influence in prediction of both support for offenders' rights ($\beta = .01, t(260) = 0.09, p = .930$) and

social distance ($\beta = .04$, $t(264) = 0.56$, $p = .573$). Attribution of mechanistic traits was a smaller but still significant predictor of social distance ($\beta = .21$, $t(264) = 2.56$, $p = .011$), but only marginally significant in predicting support for offenders' rights ($\beta = -.16$, $t(260) = -1.95$, $p = .053$). Secondary emotional capacity remained a strong significant predictor of both support for rights ($\beta = .40$, $t(260) = 3.92$, $p < .001$) and social distance ($\beta = -.43$, $t(264) = -4.32$, $p < .001$), but was somewhat less influential than when combined with primary emotion capacity alone. Primary emotional capacity remained a marginal predictor of social distance ($\beta = .18$, $t(264) = 1.97$, $p = .050$), but failed to significantly predict support for offenders' rights ($\beta = -.12$, $t(260) = -1.31$, $p = .193$). The sign reversal observed previously for primary emotional capacity was still in effect, although the suppressor effect of the exaggerated standardized coefficients for secondary emotions was no longer apparent. Finally, disgust emerged as a reasonably strong independent predictor of both support for offenders' rights ($\beta = -.34$, $t(260) = -5.93$, $p < .001$) and social distance ($\beta = .29$, $t(264) = 5.12$, $p < .001$) even when combined with the other variables. The results of these analyses indicated that while there was substantial overlap between some of the dehumanization measures, a number of them also contributed independently to the prediction of the outcomes of interest, representing related but distinct aspects of dehumanization.

Modelling of a Dehumanization Composite

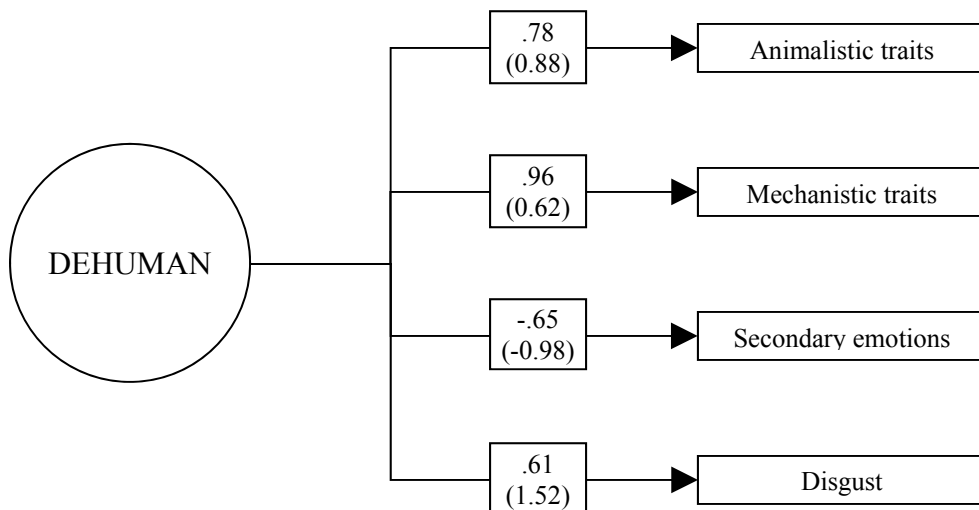
Following these analyses, an attempt was made to construct a composite dehumanization variable incorporating each of the facets of dehumanized trait association, attribution of emotional capacity, and evocation of dehumanizing affect (i.e., disgust). To this end, all five dehumanization measures were entered into a confirmatory factor analysis model as measured variables representing a single latent variable, dehumanization (see Figure K-3 for model with standardized path coefficients; see Table K-9 for the covariance matrix). Multivariate outliers were excluded from the analysis and all variables were otherwise normal in their distribution. The analysis ran without error and the determinant was sufficiently large (0.173) to suggest no problems with multicollinearity. The overall goodness-of-fit test of the model was significant ($\chi^2(5) = 305.12$, $p < .001$) and the goodness-of-fit indices failed to meet thresholds of adequacy (CFI = 0.66; SRMR = 0.13), indicating a poor fit between the model and data. The average off-diagonal standardized residual was not excessively large (0.10), but there was one fairly large residual (0.42) evident as a missing parameter between secondary emotions and primary emotions, suggesting a relationship between these two variables not accounted for by the present

Figure K-3. Five-variable model of dehumanization composite.



Note. $\chi^2(5) = 305.12, p < .001$; CFI = 0.66; SRMR = 0.13. All pathways significant at $p < .05$. Numbers in parentheses are unstandardized coefficients.

Figure K-4. Four-variable model of dehumanization composite.



Note. $\chi^2(2) = 19.11, p < .001$; CFI = 0.96; SRMR = 0.04. All pathways significant at $p < .05$. Numbers in parentheses are unstandardized coefficients.

Table K-9. Covariance matrix for dehumanization composite confirmatory factor analysis.

Variable	1	2	3	4	5
1. Anim.	1.00	0.75	-0.42	-0.26	0.54
2. Mech.	0.75	1.00	-0.63	-0.52	0.57
3. Sec. Em.	-0.42	-0.63	1.00	0.86	-0.44
4. Pri. Em.	-0.26	-0.52	0.86	1.00	-0.33
5. Disg.	0.54	0.57	-0.44	-0.33	1.00
St. Dev.	0.91	0.84	1.21	1.13	1.99
Mean	4.90	4.39	4.60	5.08	4.06

model. Otherwise all path coefficients were significant ($p < .05$) and all items loaded well ($\beta \geq .61$), with primary emotional capacity as the lowest loading variable.

Because primary emotional capacity was never intended as a direct measure of dehumanization and rather was included to provide discriminant validity with secondary emotional capacity and its overall associations with the other dehumanization indicators were relatively weak, a second analysis was run deleting this parameter (see Figure K-4). Once again, the analysis ran without error and the determinant was large (0.553). The goodness-of-fit test was still significant ($\chi^2(2) = 19.11, p < .001$), which is not uncommon with large sample sizes, but both goodness-of-fit indices exceeded their critical thresholds (CFI = 0.97; SRMR = 0.04), and neither the average standardized residual nor any individual residual value was greater than 0.10, indicating a well-fitting model. The standardized path coefficients were again all significant and large. Comparison of the goodness-of-fit tests also confirmed that this model represented a significant improvement on the five-variable model ($\Delta\chi^2(3) = 286.01, p < .001$).

A 1-factor CFA model must have at least four indicators in order to be over-identified and therefore testable (Kline, 2011), and as such smaller models of only three variables could not be tested because of insufficient degrees of freedom. However, additional models with four indicators were tested with the systematic deletion of each of the other indicators in turn. Universally, these models ran with substantial residuals, singularity errors, and extreme volatility of the solutions depending on which variable was selected as the marker variable. In contrast, the initial four-variable model from which primary emotions was excluded exhibited highly stable and equivalent solutions regardless of which variable was fixed as the marker. No other factor structure was as well-fitting to the data as this model.

On the basis of these results, a composite dehumanization variable was created as an average of participants' scores on these remaining four items (i.e., animalistic and mechanistic traits, secondary emotions, and disgust), excluding any case with missing data on at least one of the variables and reversing the secondary emotions variable to be scored in the same direction as the other items (i.e., that higher scores reflect greater dehumanization). The items were not weighted by their coefficients because to do so would be premature without validation from additional samples that their relative weightings are reliable and not a product of chance based on this sample alone (Tabachnick & Fidell, 2007). The final composite variable was normally distributed and without univariate outliers ($M = 4.18$, $SD = 1.01$, $N = 280$).

APPENDIX L: SIMPLE EFFECTS ANALYSES OF INTERACTION OF RISK LEVEL AND OFFENSE TYPE ON SECONDARY DEPENDENT VARIABLES

A 2x3 MANOVA found a marginally significant interaction between risk level and offense type on the perception of the financial harm caused by the offense ($F(2,270) = 2.74, p = 0.066, \eta^2 = .02$) and a significant interaction for perceived dangerousness of the offender ($F(2,270) = 5.99, p = .003, \eta^2 = .04$). Table L-1 summarizes the results of the pairwise comparisons and omnibus ANOVAs of the simple effects analyses on financial harm. Table L-2 summarizes the results of the pairwise comparisons and omnibus ANOVAs of the simple effects analyses on perceived dangerousness.

Table L-1. Simple effects of risk level and offense type interaction on perceived financial harm.

Simple main effect	Level	<i>n</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>F</i>	<i>p</i>	Partial η^2
Low risk	Property	53	5.06 _a	1.79	2,270	4.78**	.009	.03
	Violent	42	4.49 _{a,b}	1.28				
	Sex	49	4.10 _b	1.58				
High risk	Property	39	5.33 _a	1.74	2,270	17.45***	.000	.11
	Violent	49	4.39 _b	1.48				
	Sex	45	3.31 _c	1.49				
Property	Low risk	53	5.06 _a	1.79	1,270	72.84***	.000	.21
	High risk	39	5.33 _a	1.74				
Violent	Low risk	42	4.49 _a	1.28	1,270	27.02***	.000	.09
	High risk	49	4.39 _a	1.48				
Sex	Low risk	49	4.10 _a	1.58	1,270	15.11***	.000	.05
	High risk	45	3.31 _b	1.49				

** $p < .01$, *** $p < .001$

Note. Subscripts indicate means which are significantly different from each other at $p < .05$ for each simple main effect. Bonferroni adjustment applied for all pairwise comparisons.

Table L-2. Simple effects of risk level and offense type interaction on perceived dangerousness.

Simple main effect	Level	<i>n</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>F</i>	<i>p</i>	Partial η^2
Low risk	Property	53	3.05 _a	0.91	2,270	19.37***	.000	.12
	Violent	42	3.78 _b	1.02				
	Sex	49	4.36 _c	1.20				
High risk	Property	39 _a	4.97 _a	1.25	2,270	0.85	.427	.01
	Violent	49 _a	4.96 _a	1.03				
	Sex	45 _a	5.22 _a	1.03				
Property	Low risk	53	3.05 _a	0.91	1,270	0.79	.404	.00
	High risk	39	4.97 _b	1.25				
Violent	Low risk	42	3.78 _a	1.02	1,270	0.09	.764	.00
	High risk	49	4.96 _b	1.03				
Sex	Low risk	49	4.36 _a	1.20	1,270	5.95*	.015	.02
	High risk	45	5.22 _b	1.03				

* $p < .05$, *** $p < .001$

Note. Subscripts indicate means which are significantly different from each other at $p < .05$ for each simple main effect. Bonferroni adjustment applied for all pairwise comparisons.

APPENDIX M: MULTIVARIATE ANALYSES OF VARIANCE FOR GENDER AND CRIME VICTIMIZATION ON PRIMARY DEPENDENT VARIABLES

A series of 2x2x3 MANOVAs were conducted to analyze the relationships of participants' gender and crime victimization experiences in conjunction with risk level and offense type manipulations on dehumanization, support for offenders' rights, social distance, and perceived dangerousness. Crime victimization experience was assessed separately for both direct (victimization of self) and vicarious (victimization of close friends and family) experiences of property crimes and violent crimes. Table M-1 summarizes the multivariate results of these analyses. Table M-2 summarizes the results of the simple main effects analyses for the interaction effect of gender and risk level on dehumanization and perceived dangerousness. Table M-3 summarizes the significant simple main effects analysis for the interaction effect of direct violent victimization and offense type on dehumanization, support for offenders' rights, and social distance.

Table M-1. Multivariate tests of 2x2x3 MANOVAs for participants' gender and victimization experiences by risk level and offense type on primary dependent variables.

IV	Effect	Wilks' Λ	<i>df</i>	<i>F</i>	<i>p</i>
Sex	Main	.991	4,251	0.57	.686
	Risk level	.962	4,251	2.46	.046
	*Offense type	.972	8,502	0.90	.513
	*Risk level*Offense type	.977	8,502	0.75	.650
Property crime victimization (vicarious)	Main	.974	4,255	1.72	.146
	*Risk level	.982	4,255	1.16	.328
	*Offense type	.967	8,510	1.09	.368
	*Risk level*Offense type	.959	8,510	1.35	.217
Property crime victimization (direct)	Main	.987	4,255	0.81	.517
	*Risk level	.988	4,255	0.79	.534
	*Offense type	.961	8,510	1.28	.249
	*Risk level*Offense type	.963	8,510	1.22	.284
Violent crime victimization (vicarious)	Main	.934	4,255	4.48**	.002
	*Risk level	.995	4,255	0.35	.846
	*Offense type	.967	8,510	1.06	.388
	*Risk level*Offense type	.954	8,510	1.51	.150
Violent crime victimization (direct)	Main	.958	4,255	2.81*	.026
	*Risk level	.997	4,255	0.18	.950
	*Offense type	.947	8,510	1.77 [†]	.080
	*Risk level*Offense type	.969	8,510	1.01	.426

[†] $p < .10$, * $p < .05$, ** $p < .01$

Note. "Direct" victimization included participants' own experiences of victimization; "vicarious" victimization referred to crimes committed against close friends or family. Property crimes included theft, vandalism, and break and enter. Violent crimes included robbery, physical assault, sexual assault, and homicide.

Table M-2. Simple effects of risk level and gender interaction on dehumanization and perceived dangerousness.

DV	IV 1	IV 2	<i>n</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>F</i>	<i>p</i>	
Dehumanization	Low	Male	28	3.61 _a	1.07	1,254	3.45	.064	
		Female	110	4.02 _a	1.02				
	High	Male	33	4.45 _a	0.84	1,254	0.53	.467	
		Female	95	4.33 _a	0.96				
	Dangerousness	Male	Low	28	3.61 _a	1.07	1,254	12.19**	.001
			High	33	4.45 _b	0.84			
		Female	Low	110	4.02 _a	1.02	1,254	6.65*	.010
			High	95	4.33 _b	0.96			
Dehumanization	Low	Male	28	3.38 _a	0.96	1,254	2.61	.108	
		Female	110	3.76 _a	1.22				
	High	Male	33	5.16 _a	1.08	1,254	1.04	.309	
		Female	95	4.99 _a	1.07				
	Dangerousness	Male	Low	28	3.38 _a	0.96	1,254	43.05***	.000
			High	33	5.16 _b	1.08			
		Female	Low	110	3.76 _a	1.22	1,254	67.06***	.000
			High	95	4.99 _b	1.07			

* $p < .05$, ** $p < .01$, *** $p < .001$

Note. Subscripts indicate means which are significantly different from each other at $p < .05$ for each simple main effect. Bonferroni adjustment applied for all pairwise comparisons.

Table M-3. Main effect of vicarious violent victimization on dehumanization, support for offenders' rights, and social distance.

DV	IV	<i>n</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>F</i>	<i>p</i>
Dehumanization	Yes	109	4.02 _a	1.12	1,258	9.63**	.002
	No	161	4.24 _b	0.92			
Support for offenders' rights	Yes	109	5.16 _a	1.03	1,258	5.76*	.017
	No	161	4.98 _b	0.94			
Social distance	Yes	109	3.84 _a	1.49	1,258	11.67**	.001
	No	161	4.32 _b	1.44			

* $p < .05$, ** $p < .01$

Note. Subscripts indicate means which are significantly different from each other at $p < .05$ for each simple main effect. Bonferroni adjustment applied for all pairwise comparisons.

Table M-4. Simple effects of offense type and direct violent victimization interaction on dehumanization, support for offenders' rights, and social distance.

DV	IV 1	IV 2	<i>n</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>F</i>	<i>p</i>
Dehumanization	Prop.	Yes	11	3.62 _a	0.85	1,258	0.78	.377
		No	81	3.84 _a	0.94			
	Vio.	Yes	12	3.73 _a	1.05	1,258	0.92	.339
		No	76	4.02 _a	0.89			
	Sex	Yes	16	5.10 _a	0.86	1,258	4.49*	.035
		No	74	4.56 _b	0.99			
	Yes	Prop.	11	3.62 _a	0.85	2,258	11.16***	.000
		Vio.	12	3.73 _a	1.05			
		Sex	16	5.10 _b	0.86			
	No	Prop.	81	3.84 _a	0.94	2,258	11.78***	.000
		Vio.	76	4.02 _a	0.89			
		Sex	74	4.56 _b	0.99			
Support for offenders' rights	Prop.	Yes	11	5.77 _a	0.68	1,258	1.92	.167
		No	81	5.44 _a	0.94			
	Vio.	Yes	12	5.09 _a	1.07	1,258	0.00	.978
		No	76	5.08 _a	0.86			
	Sex	Yes	16	4.20 _a	0.87	1,258	5.62*	.018
		No	74	4.68 _b	0.91			
	Yes	Prop.	11	5.77 _a	0.68	2,258	12.10***	.000
		Vio.	12	5.09 _a	1.07			
		Sex	16	4.20 _b	0.87			
	No	Prop.	81	5.44 _a	0.94	2,258	12.34***	.000
		Vio.	76	5.08 _a	0.86			
		Sex	74	4.68 _b	0.91			
Social distance	Prop.	Yes	11	2.73 _a	1.32	1,258	7.35**	.007
		No	81	3.89 _b	1.47			
	Vio.	Yes	12	3.61 _a	1.56	1,258	1.16	.282
		No	76	4.09 _a	1.35			
	Sex	Yes	16	5.26 _a	1.33	1,258	5.00*	.026
		No	74	4.48 _b	1.43			
	Yes	Prop.	11	2.73 _a	1.32	2,258	12.11***	.000
		Vio.	12	3.61 _a	1.56			
		Sex	16	5.26 _b	1.33			
	No	Prop.	81	3.89 _a	1.47	2,258	2.92	.056
		Vio.	76	4.09 _a	1.35			
		Sex	74	4.48 _a	1.43			

* $p < .05$, ** $p < .01$

Note. Bonferroni adjustment applied for all pairwise comparisons.

APPENDIX N: COVARIANCE MATRIX FOR STRUCTURAL MODEL PREDICTING SUPPORT FOR OFFENDERS' RIGHTS
AND SOCIAL DISTANCE

Table N-1. Covariance matrix for structural model predicting support for offenders' rights and social distance.

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. R-1	1.00	0.85	0.76	-0.67	-0.65	-0.63	-0.60	-0.40	-0.51	-0.47	-0.52	-0.18	-0.29	0.27
2. R-2	0.85	1.00	0.76	-0.70	-0.69	-0.67	-0.61	-0.43	-0.54	-0.51	-0.55	-0.21	-0.33	0.31
3. R-3	0.76	0.76	1.00	-0.61	-0.61	-0.57	-0.63	-0.37	-0.47	-0.53	-0.48	-0.30	-0.23	0.22
4. SD-1	-0.67	-0.70	-0.61	1.00	0.92	0.88	0.53	0.45	0.54	0.51	0.51	0.06	0.19	-0.17
5. SD-2	-0.65	-0.69	-0.61	0.92	1.00	0.90	0.53	0.44	0.55	0.54	0.53	0.09	0.20	-0.13
6. SD-3	-0.63	-0.67	-0.57	0.88	0.90	1.00	0.51	0.48	0.56	0.50	0.54	0.07	0.22	-0.16
7. Dang.	-0.60	-0.61	-0.63	0.53	0.53	0.51	1.00	0.52	0.56	0.52	0.50	0.52	0.18	-0.23
8. Anim.	-0.40	-0.43	-0.37	0.45	0.44	0.48	0.52	1.00	0.75	0.40	0.51	0.19	0.17	-0.13
9. Mech.	-0.51	-0.54	-0.47	0.54	0.55	0.56	0.56	0.75	1.00	0.62	0.54	0.19	0.22	-0.11
10. Sec. Em.	-0.47	-0.51	-0.53	0.51	0.54	0.50	0.52	0.40	0.62	1.00	0.42	0.19	0.16	0.01
11. Disg.	-0.52	-0.55	-0.48	0.51	0.53	0.54	0.50	0.51	0.54	0.42	1.00	0.08	0.44	-0.30
12. Risk	-0.18	-0.21	-0.30	0.06	0.09	0.07	0.52	0.19	0.19	0.19	0.08	1.00	-0.04	-0.07
13. Sex Off.	-0.29	-0.33	-0.23	0.19	0.20	0.22	0.18	0.17	0.22	0.16	0.44	-0.04	1.00	-0.51
14. Prop. Off.	0.27	0.31	0.22	-0.17	-0.13	-0.16	-0.23	-0.13	-0.11	0.01	-0.30	-0.07	-0.51	1.00
St. Dev.	1.16	1.08	0.26	1.43	1.54	1.63	1.28	0.91	0.86	1.24	1.93	0.50	0.47	0.48
Mean	4.97	4.68	-1.52	4.14	3.96	4.14	4.29	4.86	4.34	3.34	3.92	0.48	0.33	0.35