ATTITUDES AND INTENTIONS TOWARDS EX-CONVICTS: AN INDIVIDUAL DIFFERENCE APPROACH

Kimberley R. Dalke

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ATTITUDES AND INTENTIONS TOWARDS EX-CONVICTS: AN INDIVIDUAL DIFFERENCE APPROACH

(Spine title: Attitudes and Intentions towards Ex-convicts)

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by

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Graduate Program in Psychology

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science

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Abstract

Independent determinants of intention to interact with ex-convicts were investigated, including attitudes, norms, and perceived controllability. Attitude measurement incorporated implicit and explicit attitudes assessed by employing the Affect Misattribution Procedure (AMP: Payne, Cheng, Govorun, and Stewart, 2005) and self-report questionnaires, respectively. It was anticipated that the individual difference of Uncertainty Orientation would moderate the relationship between these factors and intention. Results did not support predictions. Additional analyses however did reveal a significant 4-way interaction in predicting behavioural intentions. Potential modification of implicit attitudes towards ex-convicts using Affirmation-Negation training was also investigated. It was predicted that affirmation training would lead to a reduction in stereotype activation, whereas negation training would lead to greater activation of stereotypes. This pattern did interact significantly with uncertainty orientation, but not in the expected direction. Theoretical implications of these findings and limitations of the current study are discussed.

Keywords: ex-convict; attitudes; behavioural intentions; uncertainty orientation; affirmation-negation training; implicit attitude change
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Attitudes and Behavioural Intentions towards Ex-convicts: An Individual Differences Approach

Research on ex-convicts has concentrated on attitudes towards legislation and consequences for rehabilitation, with numerous studies devoting effort to investigating the repercussions of stigma for ex-convicts. Ostensibly, literature in this realm is fairly comprehensive. The negative effects of stigma on former criminal’s ability to successfully reintegrate into society have been widely reported (Fahey, Roberts, & Engel, 2006; Halsewood-Pócsik, Brown, & Spencer, 2008; Harding, 2003). However, research focusing on attitudes towards ex-convicts and willingness to interact with them is relatively sparse.

The present research was conducted to contribute to the incomplete volume of research on ex-convicts and was comprised of three primary components. First, this study investigated factors that influence an individual’s intention or willingness to interact with a former criminal. These factors included perceived controllability, norms, and attitudes. Attitudes were further differentiated into implicit and explicit attitudes. Second, the malleability of implicit attitudes toward ex-convicts was examined. Specifically, the effects of Affirmation-Negation training for implicit stereotype reduction were investigated. Third, a prominent aspect of psychological research is the identification of moderating variables. One category of a moderating variable previously applied in the course of stigma research is individual differences (e.g., Motivation to Control Prejudice; Dunton & Fazio, 1997). An individual difference of interest for the present research was the measure of Uncertainty Orientation (Sorrentino, Roney, & Hanna, 1992). This
measure tests how people cope with uncertainty in all aspects of their life (Sorrentino & Roney, 2003; Sorrentino & Short, 1986).

Collectively, perceived control, subjective norms, implicit attitudes, explicit attitudes, behavioural intentions, and the interplay of these variables with Uncertainty Orientation was investigated. It was anticipated that although attitudes would be generally negative toward former criminals, and participants would prefer not to interact with them, that variation would exist on the basis of the participant’s Uncertainty Orientation. Namely, differences in implicit-explicit consistency and the extent to which they predict behavioural intentions were expected to depend on Uncertainty Orientation. The degree to which subjective norms influence behavioural intentions was also expected to rely on Uncertainty Orientation. Lastly, the moderating effects of Uncertainty Orientation were anticipated to extend to Affirmation-Negation training as well. It was the intent of the present research to provide insight into attitudes and behavioural intentions towards ex-convicts.

**Part 1: Intentions to Interact with Ex-convicts**

**Stigmatization of Criminals**

The issue of stigma faced by ex-convicts is of mounting importance. Incarceration in Canada is on the rise. Incarceration has increased consecutively over the past several years, with a 1% increase from 2008-2009 (Statistics Canada, 2010). Approximately 117 people for every 100,000 people in Canada are incarcerated at any given time (Statistics Canada, 2010). Former criminals are a growing minority as the prevalence of incarceration proliferates. Consequently, the successful reintegration of these individuals into society has become increasingly vital, a key component of which is stigma reduction.
Extensive research has been conducted to examine the consequences of stigma. Stigma is defined as an individual’s possession of “some attribute, or characteristic, that conveys a social identity that is devalued in a particular social context” (Crocker, Major, & Steele, 1998, p. 505). Research investigating stigma has made evident its aversive social and psychological effects, including reduced self-esteem (Link, Mirotznik, & Cullen, 1991). For example, Link, Struening, Neese-Todd, Asmussen, and Phelan (2001) revealed that individuals who reported the highest levels of perceived stigma were seven to nine times more likely to have low self-esteem compared to individuals that reported the lowest levels of stigma. In addition, research conducted by Markowitz (1998) illustrated that stigma is associated with symptoms of depression and anxiety. A body of literature has accumulated that concentrates on the detrimental effects of stigma as they pertain directly to ex-offenders. A discussion of the most prominent issues experienced by ex-offenders is to follow.

Although many countries, including Canada, have passed legislation prohibiting discrimination on the basis of criminal record (Lam & Harcourt, 2003), stigmatization continues to impact ex-offenders. In North America, ex-offenders experience legal limitations to employment, housing, welfare, and educational benefits. They may also experience loss of parental rights, the right to vote, the right to serve on juries, and the right to hold public office (Burton, Cullen, & Travis, 1987; Demleitner, 2002; Rose, Clear, & Ryder, 2002; Uggen, Manza, & Thompson, 2006).

The stigma associated with being classified as an ex-offender governs re-entry into society (Harding, 2003). Stigma has been identified as one of the four major domains blocking successful reintegration for ex-convicts in addition to financial issues, obstacles
pertaining to identity, and the preservation of interpersonal relationships (Rose et al., 2002). One of the most detrimental constraints is discrimination in the job market, resulting in reduced employment opportunities. It has been estimated that, within Great Britain, 67% of ex-offenders are unemployed in comparison to 5% of the general population (Halsewood-Pócsik et al., 2008). Halsewood-Pócsik and colleagues (2008) reported that approximately two-thirds of employers request criminal record information of their applicants. In a study examining callback rates for job applications, individuals presented as possessing a criminal record received half the number of callbacks as their respective no criminal record counterparts (Pager, 2003).

Stigma can lead to the perpetuation of crime. It has been argued that a lack of gainful employment for ex-offenders, the result of discrimination, leads to higher recidivism (Albright & Denq, 1996; Dale, 1976; Demleitner, 2002; Fahey et al., 2006; Halsewood-Pócsik et al., 2008; Harding, 2003; Reinhardt, 1957). Furthermore, Halsewood-Pócsik and colleagues (2008) argue that the issue extends beyond providing ex-offenders with skills and education, that work must be done with employers to reduce discrimination as well.

The stigmatization of ex-offenders does not only affect the individual but their family and community as well (Rose et al., 2002). It has been proposed that the children of ex-offenders experience an array of issues corresponding to the stigma associated with their parent’s incarceration (Gabel & Johnson, 1995). Gabel and Johnson (1995) found that 11% of ex-offender’s offspring reported being very distressed by “stigmatizing remarks” made by other children in their community. Furthermore, the stigma is transferred to the community and its residents. A community’s reputation and economic
standing suffer when they are associated with high rates of former incarcerates (Rose et al., 2002).

The isolating component of stigma experienced by ex-offenders distinguishes them from other stigmatized groups (Harding, 2003). For example, conditions stipulated in parole requirements often prohibit ex-offenders from interacting with other ex-offenders (Harding, 2003). As a result they are unable to seek social support from similar others (Harding, 2003). As my brief review suggests, prejudice and legal barriers regularly deny ex-offenders the opportunity to successfully reintegrate into society.

**Predicting Behavioural Intentions**

An integral part of stigma research, particularly in the realm of intervention development and implementation, is behavioral intentions. The link between intentions and actual behaviour has been substantiated by previous research. Meta-analyses conducted by Sutton (1998) and Sheeran (2002) estimate, respectively, that 28% and 19-38% of the variance in behaviour can be accounted for by behavioural intentions.

Collapsing across the literature a number of variables expected to influence intentions and behaviour were compiled. Research pertaining directly to the discussion of stigma has identified attitudes, beliefs, and norms as key features for the conceptualization of stigma. Goffman (1963) highlighted perceived social consensus or normative expectations as essential components for behaviour towards stigmatized groups. It has been argued that in addition to contact with members of an out-group, perceived social norms are a determining factor of prejudice and stigma (Crandall & Stangor, 2005; Stangor, Sechrist, & Jost, 2001). Research on predicting behaviour further verifies the components suggested by the stigma literature. Of the variables proposed to
influence behavioural intentions some have been more commonly featured in theoretical frameworks predicting behaviour. For example, the Theory of Reasoned Action (TRA; Fishbein & Ajzen, 1975) and the subsequent Theory of Planned Behaviour (TPB; Ajzen, 1985) have been frequently employed for the study and prediction of behaviour.

Originally derived from the TRA, the TPB extended the former by incorporating a more detailed account of volitional control. A central feature of both theories is the individual’s intention to perform a given behaviour. As determinants of intention and behaviour these theories have identified attitudes and subjective norms as independent predictors. These theories have been successfully applied in a variety of subject areas (for a TPB Metaanalysis see Armitage & Conner, 2001). For example, the TPB framework has been used to predict behaviours such as adolescent condom use (Reinecke, Schmidt, & Ajzen, 1996) and smoking cessation (Norman, Conner, & Bell, 1999).

Collectively, the preceding literature has identified attitudes as one of the essential components for the prediction of intention. Attitudes have the capacity to exert influence through processes that are comparatively spontaneous and deliberative (Fazio & Olson, 2003). The present research isolated these two components of attitudes, termed implicit and explicit, utilizing relatively unintentional and intentional measures. Together, four determinants of behaviour were investigated each of which is discussed in turn below. Concurrently relevant existing literature on ex-convicts is also discussed.

Control. The degree to which an individual perceives that they have behavioural control is the first determinant of intention to be reviewed. Control was not manipulated or compromised in the present study. Although, it has been suggested that situations that provide complete (volitional) control over behavioural intentions alone are sufficient to
predict behaviour (Ajzen, 1991), perceived control was incorporated into the present study to accommodate potential non-volitional components of behaviour.

**Subjective norms.** The second anticipated determinant of intentions is subjective norms, which encompass one's perceptions of social pressure to perform or not perform the target behaviour (Ajzen, 1991; Armitage & Conner, 2001; Ajzen & Fishbein, 1973). Subjective norms are considered to be a function of salient normative beliefs (Armitage & Conner, 2001) and influence an individual's behaviour (Madden, Ellen, & Ajzen, 1992). Crandall, Eshleman, and O'Brien (2002) conducted a series of studies examining the normative appropriateness of ex-offenders among 104 other targets. Their studies demonstrated that prejudice towards ex-offenders is normatively appropriate and perceived as justifiable. Although, the essential components of prejudiced attitudes have been found to be consistent across targets, distinctions can be drawn on the basis of the external perceivers' opinion of the justification for the prejudice (Crandall, 2000). Therefore, suggesting it is normatively acceptable to express prejudice towards some groups (e.g., Criminals) and not others (e.g., African Americans). Crandall and colleagues (2002) further reported that the normative appropriateness of prejudice was substantially correlated with the amount of prejudice people were willing to publicly report, \( r = .96 \). This study also reported a high level of acceptability of discrimination toward those groups; ex-convicts were high on both.

**Attitudes.** Attitudes refer to the degree to which a person has a favourable or unfavourable evaluation of the attitude object (Ajzen, 1991; Ajzen & Fishbein, 1973). Recall, attitudes can be dichotomized into implicit and explicit components. Implicit attitudes are the product of automatic affective reactions. They occur through the
activation of associative links in the presence of appropriate stimuli (Gawronski & Bodenhausen, 2006a). These associations can be activated regardless of whether an individual personally endorses the affective response implied by the activated association. These associative processes do not require cognitive capacity or intent (Gawronski & Bodenhausen, 2006a). Explicit attitudes rely on qualitatively different mental processes. In contrast to implicit attitudes, explicit attitudes represent evaluative judgments and are the product of propositional processes (Gawronski & Bodenhausen, 2006a). The primary function of propositional processes is determining the validity of information implied by activated associations by assessing their consistency with other concurrently considered propositions. Thus, propositional processes are concerned with the validity of considered information and by definition are distinguished from implicit attitudes by their reliance on “subjective truth” values (Gawronski & Bodenhausen, 2006a, p. 713).

The majority of research in the realm of attitudes and crime focuses on the public’s perception of criminal acts, sentencing, and rehabilitation programs (see Applegate, Cullen, Fisher, 2002; Brown, 1999; Cochran, Boots, Heide, 2010; McIntyre, 1967; Vidmar & Miller, 1980). However, little research to date has been conducted that evaluates implicit or explicit attitudes toward former criminals themselves. The bulk of research that has examined this relation draws upon Hierarchy of Acceptance research (e.g., Tringo, 1970), a collection of explicit attitude literature.

**Explicit attitudes.** The basic premise of Hierarchy of Acceptance research also referred to as Hierarchy of Preference and Hierarchy of Prejudice, is the establishment of a structure of preference. An essential component of this type of research is the rank
ordering of categories of individuals. The inherent comparative nature of hierarchy research supplements our understanding of the social construct of stigma and offers “insight into factors that underlie public attitudes” (Wilton, 2000, p. 590).

The pattern of preferences exhibited by hierarchy studies has remained relatively consistent over time (see Lyons & Hayes, 1993; Sigelman, 1991; Tringo, 1970). It is often reported that three basic dimensions exist within these studies: physical, mental, and moral (Wilton, 2000). At the top of the hierarchy the most accepted differences are physical impairments, followed by more serious physical disabilities commonly associated with aesthetic abnormalities, followed by sensory disabilities (Dear, Wilton, Gaber, Takahasi, 1997; Rabkin, 1974; Tringo, 1970). Reliably, brain-related conditions and social misconducts are located at the bottom of the hierarchy (Dear et al., 1997; Rabkin, 1974). Tringo (1970) reported that ex-offenders were consistently ranked in the bottom four positions of the hierarchy alongside mental retardation, alcoholism, and mental illness. Concurrent with Tringo’s findings Wilton (2000) found that parolees were reliably ranked at the base of acceptance hierarchies. Wilton attributed this to perceptions of violence and immorality that often surround ex-offenders. It has also been suggested that parolees are perceived as norm-rejecting, resulting in assessments of culpability (Dear et al., 1997). This, together with the impression of being dangerous and untrustworthy, explains their location at the base of the hierarchy (Dear et al., 1997).

Within the category of ex-offenders exists a further hierarchy, a hierarchy of offenses (Halsewood-Pócsik et al., 2008). It is maintained that sexual assault, violent offenses, and crimes against children are the least acceptable, whereas offenses such as
burglary and drug related offences are more acceptable (Albright & Deng, 1996; Gill, 1997).

Hierarchy of Acceptance research is useful in that it provides ranks for various stigmatized groups. It also provides some general information on the negativity of perceptions towards former criminals. However, this research is limited in that it integrates a vast and diverse assemblage of targets while offering little information about specific attitudes; it solely examines the acceptability of the category. Furthermore, research in this area remains constrained by the failure of these models to integrate a discussion of implicit attitudes, but this remains a void in the literature more generally.

**Implicit attitudes.** A meager accumulation of research investigating implicit attitudes and criminals has been acquired. Generally, the primary objective of this past research has not focused on attitudes towards criminals. Instead, criminals have been employed as an accessible socially undesirable target. For example, Castelli, Zogmaister, Smith, and Arcuri (2004) employed the categories of pedophile and child counselor for the purpose of investigating automatic evaluations of social exemplars when their category membership was learned earlier in the experimental session.

**Implicit-explicit attitude congruency.** The discovery of two distinct mental processes, an implicit or immediate affective reaction and an explicit or endorsed evaluative judgment, intrinsically lends itself to a discussion of the congruence between these processes. The conceptual framework of the Associative Propositional Evaluation (APE) Model (Gawronski & Bodenhausen, 2006a) provides insight into the discussion of the congruence between implicit and explicit attitudes. Proceeding under the APE Model, associative and propositional processes are argued to have bidirectional effects. That is,
although they can act independently they also have the potential to influence each other. It is speculated that affective reactions are translated into propositional format where they are either accepted or rejected on the basis of their (in)consistency with other relevant propositions. The default is to affirm the affective reaction but it can be rejected if it is inconsistent with other relevant propositions. For example, a negative affective reaction towards African Americans may be rejected because it is inconsistent with one’s endorsed goals to be non-prejudicial or egalitarian (Sritharan & Gawronski, 2010). Consistency is a primary component of the APE Model in addition to elaboration. Elaboration is concerned with motivation and opportunity (for a more in depth discussion see Gawronski & Bodenhausen, 2006a, 2006b, 2007).

**Uncertainty Orientation**

Extending the discussion of variables that may affect individual’s intentions to interact with former criminals, Trafimow and Finlay (1996) demonstrated that individual differences are a potentially influential factor for intentions. Individual difference measures have the capacity to moderate the relation between determinants of intention and behaviour. In the present research it was argued that a prospective moderating individual difference would be one’s Uncertainty Orientation (Sorrentino & Short, 1986).

The Theory of Uncertainty Orientation (Sorrentino & Short, 1986; Sorrentino & Roney, 2000) posits that an individuals’ affinity for certainty within themselves and their environment varies. The variation is anchored by two distinct classifications of individuals; those that are certainty-oriented (CO) and those that are uncertainty-oriented (UO). Sorrentino and Roney (2000) describe COs as oriented towards maintaining their current conceptualization of themselves and their environment. They actively seek to
maintain certainty. As a result they are attracted to familiarity and predictability (Sorrentino & Roney, 2000). COs prefer to maintain clarity and consistency. They tend to ignore new information and rely on heuristics rather than process information in situations of uncertainty (Brinol & Petty, 2004; Hodson & Sorrentino, 2001; Hodson & Sorrentino, 1997; Sorrentino & Short, 1986).

In contrast, uncertainty-oriented individuals (UOs) are described as oriented toward understanding and resolving uncertain aspects of themselves and their environment (Sorrentino & Roney, 2000). They are actively engaged in uncertain situations and have the desire to learn. They are attracted to novelty and unpredictability. UOs tend to process more information and are generally more reflective than COs when processing new or uncertain information (Hodson & Sorrentino, 1997; Sorrentino, Bobocel, Gitta, Olson, & Hewitt, 1988). It is important to note that both UOs and COs increase their desire to resolve uncertainty or maintain certainty, respectively, as personal relevance increases (e.g., Sorrentino et al., 1988).

The Moderating Role of Uncertainty Orientation Part 1

It is the purpose of the following section to amalgamate the theory and findings of the previous research and to inform the hypotheses to follow. Sequentially, the preceding variables were re-examined while concurrently demonstrating the potential intermediary effects of Uncertainty Orientation.

Perceived controllability. Uncertainty Orientation was not expected to moderate the predictive relation of perceived control. Differences on the basis of Uncertainty Orientation were not expected because of the lack of any theoretical foundation for this
type of speculation. In addition, the concept of control was measured but not manipulated.

**Subjective norms.** Uncertainty Orientation was expected to moderate the relationship between behavioural intentions and subjective norms. Specifically, behavioural intentions were predicted to reflect COs greater reliance on norms than UOs. Research supports this notion, as COs have been found to rely heavily on norms and the group for guidance as well as demonstrate greater in-group bias than UOs (Sorrentino, Seligman, & Battista, 2007; Hodson & Sorrentino, 2001). Recall that discrimination toward former criminals was observed to be normatively appropriate (Crandall et al., 2002). In accordance with the norms negativity and their reliance on them for information, COs were expected to respond more negatively toward interacting with former criminals than UOs. On the other hand UOs do not rely heavily on norms. UOs prefer to resolve and understand uncertainty.

**Implicit attitudes.** As previously demonstrated, there is a lack of literature addressing implicit attitudes towards ex-convicts. However, two programs of research informed our predictions. First, it has been well established that ex-convicts are stigmatized. Second, implicit evaluations have been found to be generally negative towards stigmatized and minority groups, irrespective of reported explicit attitudes. For example, Payne, Cheng, Govorun, and Stewart (2005) found that White participants held more positive implicit evaluations towards White faces than Black faces, such that individuals evaluated Chinese characters as more pleasant when they were preceded by White faces than when they were preceded by Black faces. Intuitively, these findings would suggest similar results for implicit attitudes towards ex-convicts. As a stigmatized
group, ex-convicts, similar to African Americans, were expected to generate negative implicit affective responses. Thus, it was inferred that implicit attitudes would be negative in valence. Lastly, Uncertainty Orientation does not speak directly to a discussion of implicit attitudes, thus all participants were expected to have equivalently negative implicit responses towards former criminals.

**Explicit attitudes.** On the basis of the valence of the Hierarchy of Acceptance literature, negative appraisals of former criminals were expected across Uncertainty Orientation classifications. Although, there were several factors that suggested that there would be differences on explicit attitudes reflecting the individual’s Uncertainty Orientation. For example, Authoritarianism is the second component of the resultant measure of Uncertainty Orientation. High scores on this scale are associated with a preference for familiarity and traditional values (Sorrentino & Roney, 2000). These attributes are characteristic of COs and are likely to be associated with greater distain for and stereotyping of ex-convicts. Additional evidence for differential UO and CO explicit evaluations was found in a study conducted by Roney and Sorrentino (1987). They revealed that COs have greater differentiated person-categories than UOs. This translates to categories of traits being seen as group specific for COs, implying a “black and white” less ambiguous worldview. This study also suggested that UOs see more common characteristics across categories of people therefore there was a greater expectation that they would perceive ex-convicts to be more like the common person than COs.

**Implicit-explicit attitude congruency.** Although unsubstantiated, research is consistent with the notions put forward here; it was expected that there would be a greater correspondence between implicit and explicit attitudes for COs than UOs. Research
conducted by Sorrentino and colleagues (1988) provides support for our predictions on implicit-explicit consistency. Specifically, they found that COs rely more on expertise and less on argument strength when making personally relevant judgments (Sorrentino et al., 1988). As previously detailed, this adheres to the idea that COs tend to rely on heuristics and do not engage in extensive reflective thought when making important decisions. These characteristics suggest that COs would make less thoughtful explicit evaluations in personally relevant situations. Instead, it seems more likely that COs would rely on the evaluation implied by their immediate affective response to infer and report their explicit attitudes. In contrast to COs, more reflective and deliberative thought was expected in UOs explicit evaluations. Incorporating what was known from the APE Model (Gawronski & Bodenhausen, 2006a), UOs would be more likely to perceive group membership as an invalid basis for an evaluative judgment. Conversely, COs would be more prone to “default” and affirm the validity of their immediate affective reaction while UOs would engage in a more “extensive” validation process when determining whether their affective reaction was an appropriate basis for an evaluative judgment.

UOs have been found to be motivated to seek out knowledge and understanding about themselves and the world (Hodson & Sorrentino, 1997; Briñol & Petty, 2004). They also score higher on theoretical values, than COs. Theoretical values concern the discovery of truth implying that UOs have a greater need to ascertain the truth (Roney & Sorrentino, 1995). Truth values are an essential feature of explicit attitudes as defined by the APE Model outlined by Gawronski and Bodenhaus (2006a). That is, associative and propositional process can be distinguished on the basis of their reliance on subjective truth values. UOs emphasis on truth was expected to be evident in their explicit attitudes
while COs lack of desire to seek truth suggested they would exhibit greater congruence with their implicit evaluations.

When making predictions about the interplay between the variables included in the present study it is valuable to emphasize the context. This is of particular importance for Uncertainty Orientation because when aspects of the environment are uncertain UOs are motivated to resolve the uncertainty whereas COs are motivated to maintain certainty. Deciding to interact with a former criminal is a situation characterized by high personal relevance and considerable uncertainty. The context is expected to be highly uncertain because of the general public’s lack of knowledge depicted by their overestimation of crime and recidivism (see Roberts & White, 1986). It is also deemed highly personally relevant because as we have seen former criminals are perceived as dangerous and immoral (Dear et al., 1997; Wilton, 2000) and a primary dependent measure in this study was the extent to which individuals were willing to interact with such people.

**Part 2: Attitude Malleability**

Devine (1989) revealed that stereotypes have the potential to be automatically activated upon encountering relevant stimuli. A host of literature examining the parameters of automatic stereotype activation stemmed from this discovery. More recently stereotype de-activation has been the focus of research, after the discovery that automatic stereotypes are malleable (see Blair, 2002). A model appropriate for the examination of the malleability of implicit attitudes is Gawronski and Bodenhausen’s (2006a) APE Model which incorporates a comprehensive discussion of implicit processes unlike other popular models of attitude change.\(^1\)

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\(^1\) Two prominent theories of attitude change and persuasion are the Systematic-Heuristic Model (Chaiken, 1980, 1987) and the Elaboration Likelihood Model (Petty & Cacioppo, 1981, 1986).
Implicit Attitude Change

The APE Model conceptualizes implicit attitude change and outlines two processes through which it can occur. First, changes can occur via adjustment in the associative structure (Gawronksi & Bodenhausen, 2007). Extensive research has been conducted employing techniques (e.g., Evaluative Conditioning) for altering associative structures. Typically, these studies involve incremental changes in the associative pathway as a consequence of repeatedly pairing an attitude object with a positively or negatively valenced stimuli. The second process for changing implicit attitudes is rooted in modifications to the pattern of activation. Two assumptions are required for this type of change to occur, a diverse mental representation of the attitude object must already exist and sufficient environmental cues to activate patterns of associations that reflect various components of the mental representation must be available (Gawronski & Bodenhausen, 2007).

Affirmation-Negation Training

The method of implicit stereotype reduction of interest in this study was Affirmation-Negation training, which ascribes to the first method of implicit attitude change. That is, it attempts to adjust the associative links between the target and stereotype-type congruent and incongruent traits through repeated pairing. In a series of studies, Kawakami, Dovidio, Moll, Hermsen, and Russin (2000) found that extended practice in non-stereotypic responding has the capacity to reduce subsequent activation of stereotypes. In their studies, participants were required to respond ‘NO’ with a key press for each presentation of a stereotype-congruent person-trait combination (e.g., female and weak). Alternatively, they were requested to respond ‘YES’ with a different key press for
each combination of stereotype-incongruent person-traits (e.g., female and strong). This type of training was found to significantly reduce stereotype activation, as measured by a primed Stroop task.\(^2\)

The specific mechanism underlying implicit stereotype activation is unknown however, there have been several conjectures. Gawronski, Deutsch, Mbirkou, Seibt, and Strack (2008) provided support for one such explanation. They speculated that the affirmation of a stereotype incongruent trait for a group (e.g., female and strong) was more effective at stereotype deactivation than the negation of a stereotype congruent trait (e.g., female and weak). These authors believed that the former led to the formation of new non-stereotypic associations while the latter, which involves intentionally reversing the connotation of the presented trait, activates and reinforces existing stereotypes. Specifically, they dichotomized the training paradigm developed by Kawakami and colleagues (2000), into affirmation training and negation training. They found that affirmation training led to a marginally significant reduction in automatic gender stereotyping. Conversely, negation training significantly increased automatic gender stereotyping. They also replicated their findings with racial stereotypes of Blacks versus Whites. A similar paradigm to that which Gawronski and colleagues (2008) employed was used in the present study. Thus, training consisted of either affirmation or negation.

**Explicit Attitude Change**

Under the theoretical framework of the APE Model there are also three ways in which explicit attitudes can be altered. First, evaluative judgments stem from one’s affective reaction to the attitude object. As a result, preceding changes in the associative

\(^2\) The Stroop Task (Stroop, 1935) is an implicit measure that uses reaction time as the dependent measure. In this task participants are required to read the names of colours depicted in coloured font that is either consistent or not with the name of the colour.
links representative of the attitude object can subsequently produce changes in the relevant propositions (Gawronski & Bodenhausen, 2007). Second, attitude change may stem from alterations to the set of pertinent propositions (Gawronski & Bodenhausen, 2007). These changes transpire through the re-evaluation of one’s existing propositions or through the attainment of new propositions. The final avenue for explicit attitude change functions to maintain consistency among the set of considered propositions, and entails strategies for acquiring propositional consistency (Gawronski & Bodenhausen, 2007).

The Moderating Role of Uncertainty Orientation Part 2

Incorporating past research employing Affirmation-Negation training and research on Uncertainty Orientation several predictions were developed. It was hypothesized that Uncertainty Orientation would interact with the Affirmation-Negation training. This prediction was rooted in the idea the UOs and COs differ in their propensity for information processing. Several studies support this notion. For example, Shuper and Sorrentino (2004) found, that Uncertainty Orientation moderates the strength and direction of information processing. Specifically, UOs exhibit greater scrutiny of a message for which the content is unexpected; including messages endorsed by the majority comprised of counter-attitudinal information and ones endorsed by the minority comprised of pro-attitudinal information (Shuper & Sorrentino, 2004). Conversely, COs exhibit greater scrutiny when the Source-Position pairings were balanced (Shuper & Sorrentino, 2004). This idea is further supported by research conducted by Hodson and Sorrentino (2003). They found that UOs perform a greater amount of systematic information processing, particularly more argument strength differentiation, under incongruent conditions. For their study incongruent conditions consisted of disagreement
with one’s in-group and agreement with one’s out-group (Hodson & Sorrentino, 2003). Conversely, COs conducted more thorough processing when conditions were congruent (Hodson & Sorrentino, 2003). A final study that speaks to the differential processing of information by UOs and COs was conducted by Driscoll, Hamilton, and Sorrentino (1991). Their findings suggested that UOs and COs differ in their processing of congruent and incongruent information. Specifically they found the UOs recalled more incongruent person-descriptive information than COs.

On the basis of these characteristic-differences in information-processing Uncertainty Orientation was expected to interact with Affirmation-Negation training. UOs greater inclination for information processing of incongruent information suggested that they would process the stereotype-incongruent information of affirmation training (e.g., ex-convict and good) more deeply. Consequently, the effects of affirmation training would be more pronounced for this group. Conversely, COs greater affinity for processing congruent information suggested that they would be more engaged when asked to respond to stereotype-congruent information in the negation training (e.g., ex-convict and bad), leading to more pronounced effects of negation.

Hypotheses

The study and the respective hypotheses have been divided in two parts. The first part of the study consisted of measuring perceived control, implicit attitudes, explicit attitudes, subjective norms, and intentions. The second part of the study utilized these initial responses as pre-scores. The critical component of the second part was the implementation of Affirmation-Negation training in an attempt to modify existing
automatic associations, from their initial status in the first part of the study. Several hypotheses were made regarding the interplay between these variables.

Part 1 Predictions

First, it was predicted that perceived controllability, subjective norms, implicit attitudes and explicit attitudes would all independently predict behavioural intentions. It was expected that explicit attitudes would better predict behavioural intentions, indicated by a higher correlation between the two, than between implicit evaluations and behavioural intentions. That is, if an individual possessed a negative explicit evaluation of former criminals they would also display negativity toward former criminals in their behavioural intentions, such that the individual would display reduced willingness to interact with the target ex-convict. In addition, implicit attitudes were anticipated to be better predictors of behavioural intentions for COs than UOs because of COs anticipated reliance on their affective reactions for making and reporting judgments.

Second, it was hypothesized that there would be an overall negativity toward former criminals displayed in participant’s implicit and explicit attitudes, in comparison to the valance of participant’s attitudes towards the contrasting category, the law-abiding citizen. As well, it was expected that participant’s would have low scores on willingness to interaction with the target ex-convict. It was anticipated that COs would have congruent implicit and explicit evaluations toward former criminals designated by a high correlation between the two measures. Conversely, it was expected that UOs would display variation or significantly more incongruence between implicit and explicit evaluations, as indicated by significantly lower correlations between implicit and explicit measures than those of the COs. As well, UOs were expected to exhibit more positive
explicit evaluations of former criminals than COs such that UOs mean score for explicit evaluations would be significantly higher (more positive) than the mean for COs.

Finally, it was predicted that the influence of norms would be more prominent in COs. Specifically, COs responses on the subjective norms measure would be highly correlated with COs behavioural intentions. It was anticipated that this relationship would be less pronounced for UOs. Therefore, UOs subjective norms scores and behavioural intentions would have significantly lower correlations than the COs.

Part 2 Predictions

Consistent with the findings of Gawronski et al. (2008) it was predicted that participants that completed the affirmation training would exhibit a decrease in their stereotype activation such that implicit attitudes would be more positive than prior to the implementation of training. Conversely, negation training would reinforce negative stereotypes resulting in more negative attitudes towards ex-convicts than their attitudes preceding training. On the basis that UOs and COs differ in their tendencies to process congruent and incongruent information (Driscoll et al., 1991) it was also anticipated that Uncertainty Orientation would interact with the training. Specifically, affirmation training would be more effective in reducing stereotype activation for UOs than COs. In contrast, negation training would increase stereotype activation for COs more than for UOs.

Method

Overview

A correlational design was implemented with all variables being within-subjects. The predictor variables included the Affect Misattribution Procedure (Payne et al., 2005)
an implicit attitude measure involving a repeated measures design, self-report explicit attitude measures, self-report evaluation of subjective norms and perceived controllability, as well as the individual difference of Uncertainty Orientation. The dependent variable was behavioural intentions operationalized by willingness to engage in a number of interactions. Utilizing these responses as the pre-training scores a repeated-measures design was featured in the remainder of the study. Subsequent to affirmation or negation training a second measure of implicit attitudes, explicit attitudes and behavioural intentions were obtained.

Participants

One hundred twenty-five participants completed the study. The average age of participants was $M = 19.18$ ($SD = 4.28$). At the time of the study all participants were enrolled in Introductory Psychology at the University of Western Ontario. Participants were recruited through the University of Western Ontario’s web-based enrollment system and completed the study as part of their course requirements. Participants individually took part in one experimental session and received 1.5 credits toward their course for their participation. All participant sessions were conducted between January and March, 2011.

Nine participants were excluded from the analysis on the basis that they did not contribute responses to the implicit measure or did not provide a complete set of responses on the self-report questionnaires. Prior to analysis three outliers were also removed on the basis of a Mahalanobis Distance greater than $\chi^2 = 5.99$. Due to the fact that multivariate statistics were used the Mahalanobis Distance was the appropriate procedure for detecting outliers (Rencher, 2002). After the removal of the
aforementioned participants, 74 females and 38 males were included in the subsequent analysis.

Stimulus Materials

Prime stimulus. The primes consisted of 2 color photographs of Caucasian faces (head shots 6 x5 cm) modified to be the same size with a uniformly white background (see Appendix A). Category membership was assigned to the photographs either: former criminal or law-abiding citizen. Race was confined to Caucasians because of its possible confound. The ratio of men to women incarcerated in Canada is 100:1, consequently only male stimuli were utilized (Statistics Canada, 2010).

Previous research substantiates the use of photo exemplars as primes. For example, Gawronski, Rydell, Vervliet, and De Houwer (in press) obtained significant results with the AMP using a single picture per category. In addition, Castelli, Zogmaister, Smith, and Arcuri (2004) demonstrated the effects of being cognizant of an exemplar’s category membership on spontaneous affective responses. It has further been established that a single exposure to an exemplar is adequate to elicit an automatic affective reaction at a later encounter regardless of whether the individual’s category membership is signaled (De Houwer, Hermans, & Eelen, 1998; Castelli & Zogmaister, 2000). Castelli and colleagues (2004) also reported that it is not necessary to have strong stimulus-valence association for automatic evaluations to occur.

Profiles. Brief descriptions depicting stimuli’s respective category membership accompanied the initial presentation of the photographs (see Appendix A). The ex-convict description stated the target’s name followed by, “has a criminal record and has served 3 years in prison. Since his release from prison he has not been convicted of any
additional crimes”. The other description stated the law-abiding citizen’s name followed by, “has never been involved in a crime”. The length of incarceration was limited to 3 years to circumvent assumptions about the severity of the crime committed by the target ex-convict. Meanwhile, the crime was not specified to avoid preconceived notions about particular offenses.

**Measures**

**Implicit measure of attitude.**

*Implicit misattribution procedure.* Affect Misattribution Procedure (AMP) was developed by Payne et al. (2005) to measure implicit attitudes. The AMP quantifies implicit attitudes through pleasantness ratings. Subjects were asked to evaluate the pleasantness of Chinese characters as quickly as possible. The characters were preceded by photographs specific to this study (for the complete procedure see Appendix B). It has been argued that AMP effects are driven by misattribution in which “the affect elicited by the prime is (mistakenly) used to evaluate the Chinese character” (Gawronski, Deutsch, LeBel, & Peters, 2008, p. 220). It was predicted that the affective state elicited by the prime persists and results in a biased evaluation of the target (Gawronski et al., 2008).

At the commencement of the AMP a fixation cross was presented for 1000ms followed by the prime (photograph) for 75ms. Subsequently a blank screen was presented for 125ms followed by a Chinese character for 100ms. After the Chinese character was presented a pattern mask was displayed until the participant made their response (see Appendix B). Immediately after the participant responded the next trial began.

Participants were instructed to only make judgments and respond to the Chinese character. Specifically, participants made judgments as to whether the Chinese character
was more or less pleasant than the average Chinese character. Participants made their responses using two keys, one labeled “pleasant” and the other labeled “unpleasant”. They were also instructed to respond as quickly as possible. Finally, participants were informed that the photographs have the potential to bias their pleasantness ratings. As a result they were instructed to do their best to not let the photographs influence their judgments of the Chinese characters.

The AMP consisted of a total of 90 trials, each of which utilized a distinct Chinese character from Payne et al. (2005). The trials were comprised of 30 of the former criminal, 30 of the law-abiding citizen, and 30 of the neutral grey square. As previously mentioned, the AMP procedure was adapted from Payne et al. (2005) for use in this study.

The AMP is an ideal implicit measure. Despite being warned that the images preceding the Chinese character have the potential to bias judgments, participants respond negatively when primed with stigmatized targets nonetheless. As a result, strengthening the idea that performance on this task reflects implicit attitudes of the prime (Payne et al., 2005). As well, the AMP has been shown to have high reliability (Cronbach’s $\alpha = .70-.90$; Gawronski et al., in press). In addition to high reliability across six studies conducted by Payne et al. (2005) the weighted average effect size of the AMP was 1.25 ($r = .53$) ultimately corresponding with high power.

**Explicit measures of attitude.** Explicit attitudes were obtained through the evaluative component of a semantic differential scale and the use of a feeling thermometer. A resultant score for explicit attitudes towards the target former criminal
was calculated by combining scores on the two measures. High scores were indicative of positive attitudes toward former criminals for both measures.

**Semantic differential scale.** The evaluative component of a semantic differential scale was adopted from previous stigma research on mental illness (see Norman et al., 2010) and research on common stereotypes of ex-convicts. The evaluative semantic differentials were measured on a 7-point scale ranging from 1 to 7 and anchored at either end with opposite adjective pairs. The adjective pairs included: *unpleasant-pleasant, good-bad, dumb-educated, diligent-lazy, dangerous-safe, adjusted-maladjusted, deceitful-moral, nice-mean, attractive-unattractive* (see Appendix C). Norman and colleagues (2010) reported a high alpha coefficient for a portion of this index, $\alpha = .82$.

**Feeling thermometer.** The feeling thermometer ranged from 0 to 100 and was numerically labeled at 10-degree intervals. It was anchored at zero by 'very cold or unfavourable feelings' and at 100 by 'very warm or favourable feelings' (see Appendix D). Ratings between 50 and 100 degrees corresponded with favourable or warm feelings towards the attitude object. Ratings between 0 and 50 degrees corresponded with unfavourable or cold feelings. A rating of 50 indicated that feelings were not particularly warm or cold. Feeling thermometers have high reliability and validity, in part due to the number of response categories (Alwin, 1997). The greater number of response categories provide more information, allow for more accurate communication of the participant’s internal state, and are typically more precise (Alwin, 1997).

**Subjective norms.** The subjective norms scale was adapted from Swartzman (unpublished). The scale was modeled after that used by Link (1987), Phelan (2005), and Lauber, Nordt, Falcato, & Rossler (2004). The scale requires participants to indicate the
extent to which important others, defined as family and friends, would approve of them engaging in twelve behaviours (see Appendix E). The behaviors were identical to those employed in the behavioural intentions scale to follow and feature interactions ranging in intimacy. Subjective norms were measured on a 7-point scale (1 = very strongly approve to 7 = very strongly disapprove). Swartzman reported high reliability for this scale and its two subscales, Cronbach’s $\alpha = .89$.

**Perceived behavioural control.** Primarily research employing measures of PBC involve single actor behaviours. The current study investigated intentions to interact with another (ex-convict) individual. As a result, a two-item scale was developed for the purpose of this study and attempted to gage control over interactions. More specifically, the scale inquired to what extent subjects felt they would have control over entering an interaction with a former criminal and once engaged the extent of their control over the interaction (see Appendix F).

**Uncertainty orientation.** In order to measure one’s Uncertainty Orientation, Sorrentino, Hanna, and Roney (1992) developed a resultant measure that takes into account two factors, one’s desire to resolve uncertainty ($n_Uncertainty$) and one’s desire to maintain certainty (Authoritarianism; Cherry & Byrne, 1977).

$n_Uncertainty$. This measure is similar to a Thematic Apperception Test (TAT; Morgan & Murry, 1935), where sentence leads, rather than pictures, are employed (Hodson & Sorrentino, 1999). The TAT is a projective psychological test involving narrative construction (Cramer, 1999). It was developed to access unconscious aspects of personality and motivation.
For the version developed to assess nUncertainty participants were required to write four stories. They were provided with ambiguous lead sentence and then given four minutes to write each story (see Appendix G). The total time of 4 minutes per story was divided into one-minute intervals during which participants are instructed to answer four questions designed to facilitate story writing (see Appendix G). Using a scoring manual (see Sorrentino, Roney, & Hanna, 1992), the stories were scored for need for uncertainty imagery and a standardized aggregate score is calculated. The measure was designed to reflect the extent to which one values, approaches, and resolves uncertainty in their environment (Shuper & Sorrentino, 2004; Driscoll, Hamilton, & Sorrentino, 1991). The appropriate criterion for determining reliability for this measure is high interrater reliability (above .90) with the scoring manual and with another expert scorer (see Sorrentino et al., 1992; Cramer, 1999).

**Authoritarianism.** This F-Scale (see Cherry & Byrne, 1977) assesses level of Authoritarianism and reflects orientation toward familiar and predictable situations (Roney & Sorrentino, 1995; see Appendix H). The acquiescence-free scale consists of 21 items and was scored on a 6-point scale (-3 = I disagree very much to +3 = I agree very much) (Cherry & Byrne, 1977). Although, this measure included items that do not directly assess one’s need to maintain certainty, the entire collection of items predicts information seeking behaviour (Roney & Sorrentino, 1995). Traditionally, scores were standardized and subtracted from the nUncertainty score to arrive at a resultant Uncertainty Orientation score (see Sorrentino, Hanna, & Roney, 1992). Test-retest reliability has been found to be above .90 (Sorrentino, 1977).

**Behavioural intentions.**
**Behavioural intentions scale.** Intentions were conceptualized in this study as one’s willingness to engage in a number of hypothetical interactions. As previously described the scale was adopted from Swartzman (unpublished). The scale has twelve questions varying in level of intimacy and was intended to gauge the level of acceptance felt for the target group (Parrillo & Donoghue, 2005). For example, a more casual scale item asked whether subjects would be lab partners with the target ex-convict. A more intimate scale item inquired as to whether subjects would have the target ex-convict as a roommate. Intentions were rated on a 7-point scale (-3 = *I certainly would not*; see Appendix I).

**Affirmation-negation training.** The Affirmation-Negation paradigm implemented by Gawronski et al. (2008) was adapted and applied to the reduction of implicit stereotype activation of former criminals. The training paradigm consisted of 200 trials. One hundred of the trials contained congruent stereotype trials and 100 trials contained incongruent stereotype traits. Participants in the affirmation condition were required to respond ‘YES’ by pressing the space bar each time incongruent stereotype traits were paired with the word ex-convict (or a synonym; e.g., ex-convict and friendly). In addition, they were instructed to refrain from responding if ex-convict was paired with a congruent stereotype trait (e.g., ex-convict and deceitful). On the refrain trials the next trial began after 2000 ms. The negation condition consisted of the reverse response patterns. That is, participants were required to respond ‘NO’ by pressing the spacebar when ex-convict was paired with congruent stereotype traits and refrain from responding on all other trials. Respective of the training task when a participant made an incorrect response the word “WRONG” appeared on the screen. Additionally, since a component
of this task was also to refrain from responding if a participant did not make a response on a trial for which they were required to after 500 ms the words “PLEASE RESPOND FASTER” were presented on the screen (for complete instructions see Appendix J).

Many of the stereotype congruent and incongruent traits were identical to those used in the evaluative component of the semantic differentials. The congruent traits included: *dumb, lazy, violent, maladjusted, ugly, deceitful, mean, dangerous, poor*. The incongruent traits included: *educated, safe, nice, attractive, friendly, moral, diligent, responsible, adjusted*. The effectiveness of this paradigm has been substantiated by previous research with gender and racial targets (Gawronski et al., 2008). A point of departure from previous research using this paradigm was that no training associated with the counterpart (law-abiding citizen) to the target (ex-convicts) was included. Training strictly pertained to ex-convicts.

**Demographic questionnaire.** The demographic questionnaire contained questions pertaining to individual’s age, sex, ethnicity, as well as familiarity with ex-convicts (see Appendix K). In a meta-analysis, Heijnders and Van Der Meji (2006) reported research suggesting the potential positive outcomes of interacting with a member of a stigmatized group. Further, they described research on mental illness that reported improved attitudes as a result of contact with individuals diagnosed with a mental illness. Thus, to control for this type of effect familiarity was assessed.

**Procedure**

Participants were greeted by the experimenter and presented with a letter of information and consent form. They were informed that the study aimed to examine conscious and nonconscious judgments of others and included a sentence interpretation
task followed by several questionnaires and computer categorization tasks, some of which pertained to former criminals. The experimenter provided a brief description of the tasks, all of which were completed on the computer. The first of these tasks was to identify participants' Uncertainty Orientation. Each participant was seated in front of a computer and informed that they would be asked to write four short stories and would be given four minutes to complete each story. They were also told that the computer program would prompt them with lead sentences and pre-recorded messages would let them know when it was appropriate to move on to the next questions as well as notify them of the time. After completion of the TAT, participants were presented with the F-scale.

Both implicit and explicit evaluations of former criminals were obtained; these evaluations were counterbalanced. Before the evaluation of former criminals was obtained a learning paradigm was completed. Participants were informed that they would be presented with photographs of people with or without a criminal record. The photographs and order they were presented were both counterbalanced. They were instructed to attend to the photographs and information presented as it would be relevant for subsequent tasks. In order to establish a strong association between exemplars and group membership participants were required to assign the group category, former criminal or law-abiding citizen, to the photographs five times for each category. If a participant made a mistake in this task the word “WRONG” was presented. To facilitate this task a name was assigned to each photograph along with a brief description of the individual’s criminal record or lack thereof (see Appendix A). The procedure for the learning paradigm was adapted from Neumann et al. (2004) in which they successfully
used photo exemplars to characterize individuals as either AIDS patients or as healthy individuals in a study examining implicit and explicit attitudes and their relation to behavioural intentions.

After completion of the learning paradigm, the AMP was implemented as a measure of implicit attitudes. Subsequently, participants were presented with the target photograph and asked to evaluate the ex-convict target using the semantic differentials and the feeling thermometer. Feeling thermometer ratings were also obtained for the law-abiding citizen, the category former criminals in general, and the category law-abiding citizens in general. Next, they were presented with the behavioural intentions scale and the subjective norms scale. These scales were counterbalanced.

Before proceeding to the affirmation or negation Training all participants completed a set of filler tasks comprised of questionnaires and an IAT on their feelings versus what they know about Canadians and Americans. Subsequently, participants were randomly assigned to affirmation or negation training. Participants were informed that the task was concerned with public stereotypes of ex-convicts. Further, stating that participants were probably aware that ex-convicts were often considered dangerous and dumb, but that these stereotypes may or may not be true. Following this information participants were informed as to the specifics of the task, relative to the training condition they were assigned to. Upon completing the training paradigm participants were presented with the AMP, as well as the same explicit attitude scales and the same behavioural intention scale. The final task was the demographic questionnaire. Once all tasks were completed, participants were thanked and debriefed. Additionally, participants in the negation condition were required to complete 200 trials of affirmation training
because negation training was expected to have the potential to strengthen implicit
stereotypes.

Results

Dataset

Analyses investigating specific predictions pertaining to Uncertainty Orientation
used a subset of the data. On the basis of participant’s stories and responses on the F-
scale a resultant Uncertainty Orientation score was computed for each participant.
Specifically, the scores on the four TAT stories were averaged and standardized to
produce a nUncertainty score. Subsequently, the items on the F-scale were summed;
reverse coding any items for which it applied. Next the F-scale score was standardized
and subtracted from the nUncertainty score, resulting in a score for Uncertainty
Orientation. Following this, a tertile split of the data was performed. The bottom third of
the participants were identified as COs, n = 40. The top third of participants were
classified as UOs, n = 38. Moderates, the middle third, were excluded on the basis that
they have displayed inconsistent response patterns in past research (see Sorrentino et al.
1992). For descriptive purposes, Table 1 presents the descriptive statistics, reliabilities
(Cronbach’s alpha), and correlations among the variables for part one this study.

Part 1 Results

Attitudes.

Explicit attitudes. First I examined the valence of attitudes towards the target ex-
convict. The responses to the evaluative components of the semantic differentials were
aggregated to create an attitude index, descriptive analyses revealed the average rating on
this scale to be $M = 3.65$ ($SD = .63$). In addition, descriptive analyses conducted with the
<table>
<thead>
<tr>
<th></th>
<th>Mean (SD)</th>
<th>Cronbach's alpha</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Behavioural Intentions</td>
<td>3.73(1.55)</td>
<td>.95</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Implicit Attitude</td>
<td>.52(.18)</td>
<td>.75</td>
<td>.102</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Explicit Attitude</td>
<td>-.04(.91)</td>
<td>.71</td>
<td>.238**</td>
<td>.318**</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Subjective Norms</td>
<td>2.50(.83)</td>
<td>.91</td>
<td>.114</td>
<td>.250**</td>
<td>.463*</td>
<td>---</td>
</tr>
<tr>
<td>5.</td>
<td>PBC</td>
<td>3.08(1.33)</td>
<td>.66</td>
<td>-.089</td>
<td>-.061</td>
<td>-.111</td>
<td>.039</td>
</tr>
</tbody>
</table>

*Note.* *p* < .05; **p** < .01.
feeling thermometer ratings depicted the average response as nearest the “a bit more cold or unfavourable feelings” anchor on the scale ($M = 43.76, SD = 15.22$).

To determine participant’s explicit attitudes toward former criminals in comparison to the law-abiding citizen (control) a series of t-tests were conducted (see Figure 1). Specifically, paired t-tests were performed for the feeling thermometer responses. Recall, participants were required to make four feeling thermometer ratings towards the target ex-convict, the law-abiding citizen (control target), ex-convicts in general, and law-abiding citizens in general. Interestingly, participants rated ex-convicts in general ($M = 30.59, SD = 15.05$) as significantly less favourable than the target ex-convict ($M = 44.38, SD = 15.51$), $t(111) = 9.90, p < .001$. It is important to note that both of the ex-convict stimuli (the target and in general) were rated lower than the two law-abiding citizen stimuli (the target and in general), indicating more negative evaluations of the ex-convict stimuli relative to law-abiding citizen stimuli. Differences were also found between the two law-abiding citizen ratings. Participants rated law-abiding citizens in general ($M = 71.30, SD = 14.89$) as significantly more favourable than the target law-abiding citizen ($M = 63.07, SD = 16.29$), $t(111) = 5.09, p < .001$. Importantly and as expected, participants rated the law-abiding citizen as more favourable than the ex-convict. Participants rated the target ex-convict ($M = 44.38, SD = 15.05$), as significantly less favourable than the law-abiding citizen ($M = 63.07, SD = 16.29$), $t(111) = 8.55, p < .001$. Thus, indicating that participants liked the law-abiding citizen more than the ex-convict.

The semantic differential attitude index and the feeling thermometer ratings were highly correlated, $r = .71, p < .001$. As a result, the remainder of the analyses used an
Figure 1. Feeling Thermometer ratings reflecting explicit attitudes towards: the target ex-convict, ex-convicts in general, the target law-abiding citizen, and law-abiding citizens in general. Higher scores indicate more favourable explicit attitudes.
explicit attitude resultant measure, unless otherwise specified. To compute the resultant explicit attitude measure both the semantic differentials attitude index and the feeling thermometer ratings were standardized. Subsequently they were aggregated to produce a single score for explicit attitudes ($M = -.04, SD = .91$).

**Implicit attitudes.** Implicit attitude scores were created for each of the three targets (ex-convict, law-abiding citizen, and grey square) using participant’s average AMP score for the respective target. Responses on each trial were given a score of zero if the participant selected ‘less pleasant’ and a score of one if the participant selected ‘more pleasant’. Thus, average scores for each target ranged from zero to one.

As predicted, and congruent with the explicit ratings, participants evaluated the Chinese characters as significantly more pleasant if it was preceded by the law-abiding citizen ($M = .57, SD = .20$) than by the ex-convict ($M = .52 SD = .18$), $t(112) = 2.12, p = .04$ (see Figure 2). The same effect was evident between the ex-convict ($M = .52 SD = .18$) and the neutral gray square ($M = .56 SD = .18$), $t(111) = 2.23, p = .03$. There were no differences between the control and gray square, $t(111) = .37, p = .71$. As a result, the data indicate that implicit attitudes towards the law-abiding citizen were more pleasant (favourable) than implicit attitudes towards the ex-convict.

**Implicit-explicit attitude congruency.** Next, to test the congruence between implicit and explicit attitudes, a correlational analysis was conducted. Results indicate a significant correlation between the two attitudes measures, the ex-convict AMP scores and resultant explicit attitude scores, $r = .32, p < .001$. This finding indicates that greater implicit liking of the ex-convict was associated with greater explicit liking, and vice versa. Correlations between implicit and explicit attitudes towards law-abiding citizens
Figure 2. AMP scores reflecting implicit attitudes towards the target ex-convict, the target law-abiding citizen, and the grey square. Higher scores indicate more pleasant evaluations of the Chinese character following the respective stimuli.
were also examined. Participants were only required to make feeling thermometer ratings towards the law-abiding citizen as a result no resultant explicit attitude measure was created for them. All analysis examining the law-abiding citizen used the feeling thermometer ratings as the sole measure of explicit attitudes. There was a significant correlation between feeling thermometer ratings for the law-abiding citizen and AMP for the law-abiding citizen, $r = .22, p = .05$.

**Uncertainty orientation and explicit attitudes.** To examine the hypothesis that Uncertainty Orientation would moderate explicit attitudes, a series of independent samples t-test were performed. First, to investigate the potential differences between UOs and COs, a t-test was performed using the resultant attitude scores. Contrary to predictions, no significant differences were found on this explicit attitude measure (CO: $M = .19, SD = .71$; UOs: $M = -.11, SD = .99$), $t(71) = 1.52, p = .13$. Subsequently, a t-test was conducted using the feeling thermometer ratings to investigate differences for the law-abiding citizens. There was a significant difference between UOs and COs ratings of the law-abiding citizen. UOs rated the law-abiding citizen as significantly more favourable ($M = 67.70, SD = 15.07$) than COs ($M = 59.31, SD = 12.82$), $t(71) = 2.56, p < .01$.

**Uncertainty orientation and implicit attitudes.** Following the tests of explicit attitudes, I tested for potential differences between UOs and COs on implicit attitudes again using a t-test. Results indicate no significant difference on the ex-convict AMP for UOs ($M = .52, SD = .18$) and COs ($M = .53, SD = .18$), $t(71) = .21, p = .84$. As expected, at the implicit level UOs and COs attitudes towards ex-convicts were similar. There were
also no differences between UOs and CO on the law-abiding citizen AMP or the neutral grey square AMP (all \(ps > .67\)).

**Uncertainty orientation and implicit-explicit attitude congruency.** Congruence predictions were also made with respect to Uncertainty Orientation. I tested to see if the correlation between implicit and explicit attitudes were different on the basis of one’s Uncertainty Orientation. There were no significant differences between implicit and explicit attitude correlations for UOs, \(R = .18\), and COs, \(R = .09\), \(z = .39, p = .65\).

**Behavioural intentions.** Subsequently, I tested the main hypothesis that implicit attitudes, explicit attitudes, subjective norms, and PBC would all independently add to the prediction of behavioural intentions. Uncertainty Orientation was also added independently to determine whether it influenced intentions. To test this hypothesis the behavioural intention scale items were aggregated, the resultant index \((M = 3.76, SD = 1.53)\) had a high reliability, Cronbach’s \(\alpha = .95\). In addition, a subjective norm index was computed \((M = 2.50, SD = .83)\). Consistent with the behavioural intentions index, the index produced for subjective norms was reliable, Cronbach’s \(\alpha = .91\). Finally a perceived behavioural control (PBC) index \((M = 3.09, SD = 1.32)\) was computed but contrary to the other two indices it had a lower reliability, Cronbach’s \(\alpha = .66\). However, the two items on the scale were correlated, \(r = .50, p < .01\).

A multiple linear regression analysis employing an enter method was completed to examine the nature of the relationship between the four predictor variables, Uncertainty Orientation, and the criterion, behavioural intentions. The predictors were all entered independently with Uncertainty Orientation treated as a continuous measure. Results of this analysis indicate that the overall regression was not significant regardless
of whether the Uncertainty Orientation moderates were included, $R = .15$, $F(5, 106) = .53$, $p = .76$, or excluded, $R = .19$, $F(5, 67) = .49$, $p = .78$. Further, none of the individual betas for the predictors were significant, (all $ps > .36$), signifying that the variables do not independently predict behavioural intentions towards the target ex-convict.

**Correlations.** As a follow-up to the regression analysis a series of bivariate correlations were computed between the predictor variables and behavioural intentions. Several significant correlations were identified. Specifically, there was a significant correlation between explicit attitudes and behavioural intentions, $r = .24$, $p < .001$, as well as between explicit attitudes and subjective norms, $r = .46$, $p < .05$, implicit attitudes and subjective norms, $r = .25$, $p < .001$, and as previously reported between implicit and explicit attitudes, $r = .32$, $p < .001$.

**Correlations and uncertainty orientation.** For the purpose of examining Uncertainty Orientation separate correlational analyses were computed for COs and UOs (see Table 2 and 3). Three of the correlations differed between UOs and COs. First, whereas COs increase their perceived behavioural control as their perceptions of norms increase, UOs report less behavioural control as their perceptions of norms increase $r = .32$, and $r = -.45$, respectively, $z = 3.46$, $p = .03$. Second, implicit attitudes towards the target ex-convict increase as perceived behavioural control increases for UOs, $r = .29$, while they decrease for COs, $r = -.22$, $z = 2.21$, $p = .02$. Third, as implicit attitudes increase for UOs, so do perceptions of subjective norms while gains in implicit attitudes for COs were associated with decreases in their perceptions of norms, $r = .22$, and $r = -.14$, respectively, $z = 1.55$, $p = .06$.

**Supplementary Analysis.**
Table 2

*Correlations Among Behaviour Intentions and the Predictor Variables for COs*

<table>
<thead>
<tr>
<th>Mean (SD)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Intentions</td>
<td>3.91(1.43)</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2. Implicit Attitude</td>
<td>.53(.18)</td>
<td>-.088</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Explicit Attitude</td>
<td>.19(.71)</td>
<td>.119</td>
<td>.087</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>4. Subjective Norms</td>
<td>2.59(.69)</td>
<td>-.127</td>
<td>-.138</td>
<td>.443**</td>
<td>--</td>
</tr>
<tr>
<td>5. PBC</td>
<td>3.26(1.27)</td>
<td>-.232</td>
<td>-.219</td>
<td>-.130</td>
<td>.323</td>
</tr>
</tbody>
</table>

*Note.* *p < .05; **p < .01.*
Table 3

Correlations Among Behaviour Intentions and the Predictor Variables for UOs

<table>
<thead>
<tr>
<th>Mean (SD)</th>
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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intentions</td>
<td>3.63(1.59)</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implicit Attitude</td>
<td>.52(.18)</td>
<td>.102</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explicit Attitude</td>
<td>-.11(.99)</td>
<td>.238**</td>
<td>.318**</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>Subjective Norms</td>
<td>2.48(.82)</td>
<td>.114</td>
<td>.250**</td>
<td>.463*</td>
<td>--</td>
</tr>
<tr>
<td>PBC</td>
<td>2.89(1.44)</td>
<td>-.089</td>
<td>-.061</td>
<td>-.111</td>
<td>.039</td>
</tr>
</tbody>
</table>

*Note.* *p < .05; **p < .01.
Factor analysis of behavioural intentions. For exploratory purposes, the factor structure of the behavioural intentions index was analyzed. A principal component factor analysis with a varimax rotation was conducted with an initial cutoff value of an eigenvalue greater than one. The resulting factor structure replicated that produced by previous research employing the same behavioural intentions scale. Two distinct factors accounted for 80.57% of the variance. Examining the loadings of the scale items it was evident that the components could be distinguished on the basis of relative proximity of the hypothetical interaction. These components were classified as intimate (5 items) and casual (7 items), in line with previous research (see Appendix M). Accordingly, additional multiple regression analyses were conducted employing intimate ($M = 3.40$, $SD = 1.92$) and casual ($M = 4.01$, $SD = 1.50$) behavioural intentions indices. The intimate and causal behavioural intentions indices had high reliabilities, Cronbach’s $\alpha = .96$ and .94, respectively. The identical five predictor variables were used in the follow-up multiple regression analyses, implicit attitudes, explicit attitudes, subjective norms, PBC and Uncertainty Orientation. Results of the analysis show that together the five predictor variables did not add significantly to prediction. Evident by the fact that the overall regression for the intimate and casual factors were not significant, $R = .19$, $F(5, 67) = .49$, $p = .61$ and $R = .23$, $F(5, 67) = .72$, $p = .78$, respectively. As well, individually the five predictor variables did not add significantly to prediction of the intimate or casual behavioural intentions indices as none of the predictor’s betas were significant, all $ps > .31$ and $ps > .16$, respectively.

Predictor variable interactions. Alternatively, post hoc speculation suggested that the predictor variables may have a multiplicative effect on the criterion. It was speculated
that the predictor variables may interact to add to the prediction of behavioural intentions towards ex-convicts. Multiplicative techniques have been utilized in past research (e.g., De Vries, Dijkstra, & Kuhlman, 1988). To test this research question, scores for the predictor variables were standardized. Subsequently, interaction terms were created. Uncertainty Orientation was used as a continuous variable (with moderates removed) for the computation of the interaction terms. A total of 26 interactions terms were computed. A multiple linear regression analysis was conducted. Five predictor variables as well as 26 interaction terms were entered utilizing the enter method. Results indicated a significant regression equation, \( R = .79, F(31, 41) = 2.31, p = 0.01 \), that accounted for 36.10\% of the variance in the criterion. The highest order significant interaction was a four-way interaction between explicit attitudes, subjective norms, PBC, and Uncertainty Orientation, \( b = -.460, p = .03 \); which appears uninterpretable at this point (see Figure 3). Although, it appears that participant’s high on subjective norms report similar intentions regardless of their PBC, intentions vary across Uncertainty Orientation when participants are low on subjective norms.

Part 2

Affirmation-negation training.

Implicit attitude change and uncertainty orientation. On the basis of past research revealing that COs demonstrate greater in-group bias analysis examining both target’s AMP scores was conducted. Prior research employing contrasting group categories (e.g., black vs. white targets or male vs. female targets; Gawronski et al., 2008) frequently use difference scores for the purpose of data analysis. Difference scores were computed using participants’ average ratings of pleasantness towards the two targets. Law-abiding citizen AMP scores were subtracted from ex-convict AMP scores.
UO (explicit -1 SD)

-1.5000 -1.0000 -0.5000 0.0000 0.5000 1.0000

pbc=-1 pbc=+1

UO (explicit +1 SD)

0.0000 0.1000 0.2000 0.3000

pbc=-1 pbc=+1

Norm=-1 Norm=+1
Figure 3. The four-way interaction between Uncertainty Orientation, subjective norms (norm), perceived behavioural control (pbc) and explicit attitudes (explicit). Plotted at one standard deviation above and below the mean.
Thus, larger difference scores indicate greater discrepancy between the law-abiding citizen and ex-convict. Positive values signify better liking of the ex-convict relative to liking of the law-abiding citizen and negative values indicate better liking of the law-abiding citizen. It is important to keep in mind that these results denote differences relative to the law-abiding citizen.

The main hypothesis of part two was that affirmation training would increase liking of the ex-convict from time one to time two whereas negation training would decrease liking of the ex-convict from time one to time two. In addition, it was anticipated that the effects of affirmation would be more pronounced for UOs while the effects of negation training would be more pronounced for COs. To test this hypothesis an a priori one-tailed t-test based on the within cell error term of analysis of variance was conducted. Results indicated that there was a significant difference in UOs and COs pattern of responding to affirmation and negation training, $t(78) = 1.75, p < .05$, but was only partially in support of the hypothesized direction. Upon further examination the specifics of each pattern were evident. As shown in Figure 4, the pattern of results suggests that COs responded in the opposite direction of prediction such that, affirmation decreased liking relative to the law-abiding citizen from time one ($M = -.06, SD = .30$) to time two ($M = -.12, SD = .27$); and negation training increased liking of ex-convicts relative to law-abiding citizens from time one ($M = .03, SD = .17$) to time two ($M = .05, SD = .18$). Conversely, UOs responded in the predicted direction. For UOs, negation training decreased liking of the ex-convict relative to the law-abiding citizen (time 1: $M = -.04, SD = .19$; time 2: $M = -.10, SD = .18$) while affirmation training did not affect liking of the ex-convict (time 1: $M = -.04, SD = .16$; time 2: $M = -.04, SD = .12$).
Figure 4. Implicit attitudes towards the target ex-convict relative to the law-abiding target as reflected by difference scores. Positive scores indicate greater liking of the ex-convict relative to the law-abiding citizen. Larger scores indicate greater difference between implicit attitudes towards the two targets.
Subsequently, the data was split by training to investigate whether UOs and COs differed with respect to affirmation training over time. This analysis revealed that UOs and COs did not differ significantly with respect to the effects of affirmation training, $t(71) = 1.32$, $p = .20$. However, partially consistent with the predictions the effects of affirmation training did not reduce liking for UOs. Thus, although not significantly so, affirmation was more effective for UOs than COs. The differences at time two were also of interest. Therefore, a t-test comparing UOs and COs in the affirmation training condition at time two was conducted. There was no significant difference between UOs and COs at time two for affirmation training, $t(71) = 1.15, p = .20$. Next, whether UOs and COs differed with respect to the effects of negation training was investigated. Since the interaction in the negation condition was opposite to predictions, a post hoc two-tailed t-test was administered. Similar to affirmation training there was no significant difference between UOs and COs for negation training over time, $t(71) = 1.33, p = .20$. Again, the differences at time two were of interest a t-test comparing UOs and COs in the negation condition at time two was also computed. It was found that UOs and COs differed with respect to negation training at time two, $t(71) = 2.69, p < .01$, such that negation training produced less positive implicit attitudes for UOs while it produced more positive implicit attitudes for COs at time two. Although, not in the direction of the original prediction, this finding is interesting and suggests that the mechanism underlying training produces different effects for UOs and COs.

**Explicit attitude change and uncertainty orientation.** To investigate changes in explicit attitudes after training was implemented, the index for evaluative components of the semantic differential scale and feeling thermometer were tested separately. This
allowed for difference scores to be created between the ex-convict and law-abiding citizen’s feeling thermometer ratings, ultimately diminishing confounds. A 2 (time 1 vs. time 2) × 2 (affirmation vs. negation) × 2 (UO vs. CO) repeated measures analysis was conducted using the feeling thermometer difference scores as explicit attitude measures. The three way interaction was not significant, $F(1,69) = .003, p = .96, \eta^2 = .00$, indicating that explicit attitudes did not change from time one to time two for UOs or COs regardless of training condition.

**Behavioural intention change and uncertainty orientation.** As with explicit attitudes another 2 (time 1 vs. time 2) × 2 (affirmation vs. negation) × 2 (UO vs. CO) repeated measures analysis was conducted, this time using the behavioural intentions index (see Figure 5). Results revealed a significant two-way interaction between time and Uncertainty Orientation, $F(1,69) = 3.96, p = 0.04, \eta^2 = .05$. Such that, COs willingness to engage in the behaviour detailed in the scale increased from time one ($M = 3.91, SD = 1.31$) to time two ($M = 4.12, SD = 1.16$), $t(69) = 2.31, p < .02$, while UOs behavioural intentions remained constant over time (time 1: $M = 3.91, SD = 1.31$; time 2: $M = 3.91, SD = 1.31$), $t(69) = .00, n.s.$ Thus, the data indicated that COs were more willing to interact with the target ex-convict at time two, regardless of the training type, than at time one, but UOs were not.

**Supplementary Analysis.**

**Replication attempt of implicit attitude change.** To determine if the results of previous studies were replicated, the effects of Affirmation-Negation training on implicit attitudes towards ex-convicts were examined without Uncertainty Orientation. Including the Uncertainty Orientation moderates allowed for a larger sample size and ultimately
Figure 5. Behavioural intention scores at time 1 and time 2 as a function of uncertainty orientation. Higher scores indicate a greater willingness to interact with the target ex-convict.
more power. First, a covariate was created using the AMP scores for the grey square at
time one and time two. It was suspected that because they were highly correlation, \( R = .510, p < .001 \), that they may produce artifacts within the results. Thus, an average score
was calculated. Using this new score as a covariate measures, a GLM repeated measures
analysis was conducted. More precisely, a \( 2 \) (affirmation vs. negation) \( \times 2 \) (time 1 vs.
time 2) analysis was performed with the ex-convict AMP scores as the dependent
measure (see Figure 6). Results indicate a marginally significant interaction between
training and time, \( F(1,109) = 3.32, p = 0.07, \eta^2 = .03 \). Further, investigation employing a
post hoc test of means revealed a significant effect of negation. That is, participants in the
negation condition rated the ex-convict as more pleasant at time two \( (M = .52, SD = .19) \)
relative to time one \( (M = .48, SD = .17) \), \( t(109) = 2.15, p = .03 \). There was no significant
difference between time one \( (M = .52, SD = .20) \) and time two \( (M = .51, SD = .22) \) for the
affirmation training condition, \( t(109) = 1.17, p = .20 \)

Discussion

In the absence of any extensive research examining attitudes and willingness to
interact with former criminals, the present study was implemented to address this void in
the literature. Founded within past theory and research, implicit attitudes, explicit
attitudes, subjective norms, and PBC were identified as potential predictors of intention.
Once attitudes and intentions were established the Affirmation-Negation training
paradigm was employed to alter implicit attitudes towards the stigmatized target of ex-
convicts. A final key tenet of the present research was the examination of the moderating
effects of the individual difference of Uncertainty Orientation.

Summary of the Results for Part 1
Figure 6. AMP scores reflecting implicit attitudes towards the target ex-convict at time 1 and time 2 as a function of affirmation and negation training. Collapsed across Uncertainty Orientation. Higher scores indicate more pleasant evaluations of the Chinese character following the ex-convict prime.
The results of the study supported the rudimentary hypotheses about attitude valence. Ex-convicts were evaluated negatively on the semantic differential index and the feeling thermometer. Furthermore, participants reported more favourability and liking for the law-abiding citizen relative to the ex-convict. This negativity was also reflected in participants’ implicit attitudes towards the ex-convict. Specifically, the ex-convict was rated as less pleasant than both the law-abiding citizen and the grey square. The reported differences in valence suggest that the target’s category membership was successfully learned, signifying that the manipulation was effective. A final component of the attitude analysis examined congruency, implicit and explicit attitudes were positively correlated.

The more central hypotheses of this study involved predicting behavioural intentions and the moderating role of Uncertainty Orientation. It was predicted that the variables, implicit attitudes, explicit attitudes, subjective norms, PBC, and Uncertainty Orientation would all independently predict behavioural intentions. Contrary to the hypothesis and theoretical tenets on which it was based, none of these variables independently predicted behavioural intentions. However, consistent with the hypothesis there was a stronger relationship between explicit attitudes and behavioural intentions than implicit attitudes, as exhibited by a higher correlation. The significant positive correlation between explicit attitudes and behavioural intentions indicates that as participants’ attitudes became increasingly more positive their willingness to engage in a variety of interactions with the target ex-convict also increased. Lastly, with the

3 Note that a single exposure to an exemplar is sufficient to elicit an automatic affective reaction was demonstrated by De Houwer et al. (1998) and Castelli et al. (2004).
4 Prominent theories within psychology such as TRA and TPB identified attitudes, subjective norms and pbc as chief predictors of intention and subsequent behaviour.
exception of explicit attitudes none of the variables significantly correlated with intentions. Even though the hypothesis of independent influence was not supported it was apparent that these variables interacted to predict willingness to engage in a variety of interactions. Specifically, the four-way interaction including Uncertainty Orientation added to the prediction of intentions. The exact nature of this relationship is unclear at this time.

Predictions were also made specifically on the basis of Uncertainty Orientation. It was expected that the Uncertainty Orientation would moderate the congruency between implicit and explicit attitudes. These hypotheses were not supported. Specifically, COs did not exhibit higher congruency between implicit and explicit attitudes than UOs. As well, UOs did not express more positive explicit evaluations of the ex-convict than COs. Overall, no differences were found between implicit and explicit attitudes of the ex-convict for the two groups, nor were differences between the attitude measures and behavioural intentions evident.

The final prediction for the first part of the study pertained to Uncertainty Orientation and subjective norms. It was predicted that the influence of norms would be more prominent for COs than UOs but results revealed no difference between the two groups on subjective norms. COs responses on the subjective norms measure were not more highly correlated with behavioural intentions than UOs correlations. Although, the anticipated differences between UOs and COs were not evident there were significant differences on the correlations between some of the predictor variables which suggest that these relationships are moderated by Uncertainty Orientation.

**Implications for Part 1**
Of primary interest, the results of this study suggest that implicit attitudes, explicit attitudes, subjective norms, and PBC do not independently predict behavioural intentions to interaction with an ex-convict. Further, the variables’ predictive power is not independently a function of Uncertainty Orientation. Instead, Uncertainty Orientation and three other predictor variables interacted to predict behavioural intentions. Of secondary interest, the results of this study suggest that people are more negative in their attitudes towards ex-convict in comparison to law-abiding citizens and with respect to their willingness to interact with ex-convicts who have served brief terms of incarceration.

This research has several implications. First, the majority of research on behavioural intentions and stigmatized groups has focused on self-reported explicit attitudes, subjective norms and at times PBC. Second, research has neglected to study attitudes and intentions to interact with former criminals. Third, behavioural intentions research has insufficiently examined the unique role of groups for which prejudice is perceived as justifiable. Finally, research has yet to incorporate individual differences of Uncertainty Orientation. The present study went beyond past approaches by incorporating both implicit attitudes and explicit attitudes towards the stigmatized group. As well as extending the research to the study of the socially undesirable target of ex-convicts and the investigation of the potential moderating role of Uncertainty Orientation.

Finally, an interesting and unexpected finding was that UOs and COs differ on some of the correlational relations between the predictor variables. The specific relationships between implicit attitudes, subjective norms, and PBC merit further investigation as they produced significant differences for UOs and COs (all $ps < .07$). This finding may inform future research in terms of how these variables operate for the
cognition and behavior of UOs versus COs. Additional research may clarify the nature of these relationships, as well as provide insight into differences in implicit attitudes as a function of Uncertainty Orientation, an area of research yet to be thoroughly explored.

**Summary of the Results for Part 2**

The predictions for this study were only partially supported. It was anticipated that Uncertainty Orientation would interact with Affirmation-Negation training, which was partially corroborated by an interaction between Uncertainty Orientation and training. Specifically, it was predicted that affirmation training would be more effective for UOs than COs while negation training should increase stereotype activation for COs more than for UOs. Although, these predictions were undermined, the pattern of responses depicted by UOs differed significantly from the pattern depicted by COs. The results suggest that COs responded in the opposite direction as predicted with affirmation training producing more negative evaluations and negation training producing more positive evaluations. Contrary to COs training effects, UOs responded in the predicted direction for negation training while affirmation training appears to have had little effect.

The predicted replication of Affirmation-Negation training as exhibited by Gawronski et al. (2008) was not supported. Collapsing across Uncertainty Orientation, it was predicted that consistent with past findings, participants that completed the affirmation training would exhibit a decrease in their stereotype activation resulting in more positive implicit attitudes than prior to the implementation of training. Conversely, negation training would reinforce negative stereotypes resulting in more negative attitudes towards ex-convicts than their attitudes preceding training. In actuality, the results depicted negation as improving implicit attitudes while affirmation had a minimal
effect on implicit attitudes. It is important to note that at time one there was a significant
difference between participants in the affirmation and negation training for implicit
attitudes. This may be indicative of a sampling error instead of a systematic effect of
training. That is, the differences from time one to time two in the negation condition may
be attributed to the participants regressing towards the mean. However, sampling error in
the negation condition cannot fully account for the differential response patterns
exhibited by UOs and COs, with negation training leading to more positive implicit
attitudes for COs and more negative implicit attitudes for UOs.

Implications for Part 2

The previous effects of affirmation and negation training were not replicated.
Specifically, the effects of training for the target of ex-convicts were not consistent with
the effects of past research employing other stigmatized targets. In addition, there is some
evidence to support the differentiated effects of training as a function of the individual
difference of Uncertainty Orientation. Implications of these findings are that a portion of
the inconsistency between past and present research can potentially be explained by the
role of Uncertainty Orientation and/or the distinctiveness of the target.

In the reduced sample of UOs and COs, results advocate the mechanism put forth
by Gawronski et al. (2008) for UOs. Although the results are weak, the pattern of
interaction is such that, negation training reinforced existing stereotypes. Conversely, the
anticipated strengthening of the associative link between non-stereotypic traits and ex-
convicts was not evident. Interestingly, the converse pattern was expressed by COs such
that COs increased their liking of the ex-convict relative to the law-abiding citizen under
negation training. Previously it was argued that COs decreased affinity for reflective
thought and processing of incongruent information when forming attitudes would produce more pronounced effects of negation training. It is unclear why COs responded more positively after negation training.

This study's results conflict with the findings of past research. Three possible explanations for this inconsistency are suggested. First, the results lead to speculations about the strength of the stereotypes used in the training paradigm. It is conceivable that the absence of knowledge for ex-convict stereotypes could render inconsistent patterns of training. Gawronski et al. (2008) used targets (e.g., females and African American) with well-known stereotypes, a necessary component for the training paradigm. Recall, negation training is speculated to activate and reinforce existing stereotypes (Gawronski et al., 2008). If stereotypes are not strongly held the effects of training may not coincide with the effects for targets with strongly held stereotypes. With the exception of the stereotype of dangerous, other stereotypes used in this study may be relatively weak and not readily accessible. An interesting future study would involve the comparison of target with strong and weak stereotypes to explore how UOs and COs differ with respect to affirmation and negation training for these groups. The second explanation is rooted within the first. Specifically, the inconsistency with past research may be a reflection of the distinctiveness of the target. Ex-convicts are an extremely socially undesirable group for which prejudice is perceived as justifiable. As a partial explanation to the findings it is possible that ex-convicts are a unique target for which implicit training paradigms are not consistently effective.

The third potential explanation for the inconsistency concerns the methodology used in this study. The training paradigm employed in the present study did not involve a
comparison group, in this case law-abiding citizens. Due to the fact that the results were not replicated it is possible that a portion of the effect evident in past literature can be accounted for by the contrasting group training component. The paradigm employed by Gawronski et al. (2008) involved training of both the target group and a comparison group. Their affirmation training involved responding ‘yes’ to incongruent stereotypes of the target (e.g., female and strong) as well as responding ‘yes’ to incongruent stereotypes of the contrasting category (e.g., male and weak). Following, their negation training consisted of responding ‘no’ to congruent stereotypes for both the target and contrasting category. It would be interesting to explore whether the addition of a contrasting category would alter the results of affirmation and negation training towards ex-convicts.

**Limitations and Directions for Future Research**

When speculating about why the proposed variables did not independently predict behavioural intentions it is important to note that participants’ willingness to interact with the ex-convict although not positive were also not very negative. Assuming the scale is representative of participant’s true behavioural intentions, such intentions were on average just below the neutral point of the scale, indicating relatively mild negative feelings towards ex-convicts. There are two possible explanations for this.

First, participants may have responded more positively towards interacting with the ex-convict because they felt pressure to respond in a socially desirable fashion. Social desirability refers to the tendency of research subjects to respond in a manner that will be viewed favourably by others instead of selecting responses that reflect their true feelings (Grimm, 2010). This response bias can pose a major problem when investigating socially sensitive issues (Grimm, 2010). Further, it has been found to affect both prejudiced and
non-prejudiced individuals (e.g., Blanchard, Lilly, & Vaughn, 1991). Social desirability might also have been exhibited in the explicit attitudes. Recall, explicit attitudes were the only predictor that significantly correlated with behavioural intentions. On the other hand, subjective norms are less susceptible to social desirability because participants are reporting about the attitudes and beliefs of other individuals. Social desirability effects were unforeseen. Research has validated ex-convicts as a justifiable target of prejudice and discrimination (e.g., Dear & Wilton, 2000), as a result it was not anticipated that this class of individuals would induce a socially desirable response bias.

The second possibility is that participants did not perceive the target ex-convict as representative of ex-convicts in general. Recall that, participants rated the target ex-convict as significantly more favourable than ex-convicts in general on the feeling thermometer scale. The biased evaluation of a single member of an out-group is termed as an attribution error. More precisely, this bias involves the process of discounting positive actions of an out-group member via dissociating them from their group (Wilder, 1984). That is, an atypical out-group member can be classified as an “exception to the rule” allowing their amicable behaviour to be amended with existing cognitions about the out-group (Pettigrew, 1979). There is speculation that this mechanism may reinforce out-group stereotypes as well (Wilder, 1984). The target ex-convict was described without reference to a specific crime and portrayed as a one-time offender who served minimal incarceration. This depiction may be counter to participants’ cognitions about a “typical” ex-convict. The idea that the target ex-convict was not representative also provides an explanation why the widely reported in-group bias of COs was not replicated.
The second point also lends itself to the explanation of the Affirmation-Negation training paradigm results. Affirmation-Negation training was directed at changing implicit attitudes towards the category of ex-convicts and not the target ex-convict in particular. As a result, it is possible that the inconsistency with prior research findings in this area is due to the fact that implicit attitudes towards ex-convicts in general were modified. It is plausible that the effects of the affirmation and negation training were not transferred to the target ex-convict because the training was actually directed at the category in general. Future research should focus on either the manipulation of implicit attitudes towards a specific target or towards the category in general in order to avoid this possible confound. Resolving this confound cannot directly explain the effects of Uncertainty Orientation but it may help clarify the distinction between UOs and COs on affirmation and negation training.

Finally, a few limitations with respect to the measures must be addressed. There was low reliability for the PBC scale items. It would be beneficial for future research to develop a more reliable scale for measuring this component. In addition, the behavioural intentions measured hypothetical willingness to engage in a number of behaviours. It would be fruitful for future research to include a measure of actual behaviour as well. A final limitation, previously alluded to, is that it is unclear whether participants were sufficiently familiar or aware of stereotypes of ex-convicts. For a better understanding it is necessary to measure knowledge of ex-convict stereotypes and then use the most prominent stereotypes in the training paradigm.

Conclusion
The present study attempted to contribute to the body of literature on stigmatization. In particular, the present study sought to investigate the category of ex-convicts, by examining implicit and explicit attitudes as well as behavioural intentions towards this group. First, it was shown that there is high consistency between implicit and explicit attitudes towards former criminals and that the valence of these attitudes is moderately negative. Second, contrary to past research, attitudes, subjective norms, and PBC, did not independently predict behavioural intentions. Further, this study also demonstrated that behavioural intentions did not directly vary as a function of Uncertainty Orientation. However, the results of this study showed that Uncertainty Orientation interacted with explicit attitudes, subjective norms, and PBC to predict behavioural intentions to interact with ex-convicts.

The second goal of this research was to investigate the malleability of implicit attitudes towards ex-convicts through the use of Affirmation-Negation training. Although the results are inconclusive, this study provides evidence for increased liking of the ex-convict as a function of negation training, particularly for COs. More definitive support is needed to distinguish the moderating role of Uncertainty Orientation and merits further investigation. Ultimately, the inconsistency of the training effects suggests that the variation of Affirmation-Negation training and target (ex-convict) used in this study may not produce the same modifications to the associative links as previously established with other groups. Additional research is required to solidify the mechanism underlying implicit stereotype (de)activation as it pertains to ex-convicts.
References


Gawronski, B., & Bodenhausen, G. V. (2006b). Associative and propositional
processes in evaluation: Conceptual, empirical, and meta-theoretical issues.


Appendix A

Ex-convict and Law-Abiding Citizen Stimuli

Ex-convict: ______________(name) has a criminal record and has served 3 years in prison. Since his release from prison he has not been convicted of any additional crimes.

Law Abiding Citizen: ______________ (name) has never been involved in a crime.
Appendix B

Implicit Attitude - Affect Misattribution Procedure (Payne et al., 2005)

Instructions

The next component of this study is a concentration test. For this purpose, you will be
presented with Chinese pictographs.

In addition, following these instructions, you will be presented with pictures of consumer
products that will briefly appear before several Chinese pictographs.

Your task is to indicate for each Chinese pictograph if you consider the pictograph as
more visually pleasant or less visually pleasant than the average Chinese pictograph.

Please press the "A" key on the left side of the keyboard when you think the Chinese
pictograph is less pleasant than average, and please press the "5" key on the right side of
the keyboard if you think the Chinese pictograph is more pleasant than average.

Please note that the pictographs will be presented only for a very brief time.

So, please pay close attention to the Chinese pictographs and try not to be distracted by
the pictures.

IMPORTANT! Note that the pictures tend to bias people's judgments of the Chinese
pictographs.

Because we are interested in how people can avoid being biased, please try your absolute
best not to let the pictures bias your judgments of the Chinese pictographs in ANY
possible way.

Again, please press the "A" key on the left side of the keyboard when you think the
Chinese pictograph is less pleasant than average, and please press the "5" key on the right
side of the keyboard if you think the Chinese pictograph is more pleasant than average.

*REMINDER* Please remember to keep the digit-string in mind. You will be quizzed
on your recall following the completion of these tasks.

Please begin.
General AMP procedure

Fixation Cross 1000ms

Stimulus Prime 75ms

Blank Screen 125ms

Chinese Character 125ms

Mask
Prime Stimuli used in the AMP

*Ex-convict and Law-Abiding Citizen Primes*

[ Images of ex-convict and law-abiding citizen primes ]

*Grey Square*  
[ Image of grey square ]

*Mask*  
[ Image of mask ]
Appendix C

Explicit Attitudes — Evaluative Component of the Semantic Differential Scale

In this section you will be presented with the photographs from the previous section of the study and asked to rate them on the scales provided. Please note the scale in each question as they change from question to question.

<table>
<thead>
<tr>
<th>Scale</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unpleasant</td>
<td>Neither Pleasant nor Unpleasant</td>
<td>Pleasant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good</td>
<td>Neither Good nor Bad</td>
<td>Bad</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dumb</td>
<td>Neither Dumb or Educated</td>
<td>Educated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diligent</td>
<td>Neither Diligent nor Lazy</td>
<td>Lazy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dangerous</td>
<td>Neither Dangerous nor Safe</td>
<td>Safe</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
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<td>---</td>
</tr>
<tr>
<td>Adjusted</td>
<td>Neither</td>
<td>Adjusted</td>
<td>nor Mal-</td>
<td>Adjusted</td>
<td>Mal-</td>
<td>adjusted</td>
<td>adjusted</td>
</tr>
<tr>
<td>Deceitful</td>
<td>Neither</td>
<td>Deceitful</td>
<td>nor Moral</td>
<td>Moral</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nice</td>
<td>Neither</td>
<td>Nice nor</td>
<td>Mean</td>
<td>Mean</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attractive</td>
<td>Neither</td>
<td>Attractive</td>
<td>nor Un-</td>
<td>Attractive</td>
<td>Un-</td>
<td>attractive</td>
<td>attractive</td>
</tr>
</tbody>
</table>
Appendix D

Explicit Attitude – Feeling Thermometer

We’d like to get your feelings toward ex-convicts and law-abiding citizens. Please rate ex-convicts and law-abiding citizens using this feeling thermometer. You may use any number from 0 to 100 for a rating. Rating between 50 and 100 degrees mean that you feel favourable or warm toward ex-convicts/law-abiding citizens. Rating between 0 and 50 degrees mean that you don’t feel favourable (or feel unfavourable) toward ex-convicts/law-abiding citizens. If you don’t feel particularly warm or cold toward ex-convicts/law-abiding citizens, you would rate at the 50-degree mark.

100° Very warm or favorable feeling
85° Quite warm or favorable feeling
70° Fairly warm or favorable feeling
60° A bit more warm or favorable than cold feeling
50° No feeling at all
40° A bit more cold or unfavorable feeling
30° Fairly cold or unfavorable feeling
15° Quite cold or unfavorable feeling
0° Very cold or unfavorable feeling

1. Your feeling towards John is _____ (0 - 100) degrees.
2. Your feeling towards Matt is _____ (0 - 100) degrees.
3. Your feeling towards ex-convicts in general is _____ (0 - 100) degrees.
4. Your feeling towards law-abiding citizens in general is _____ (0 - 100) degrees.
Appendix E

Subjective Norms Index

To what extent would people that are important to you, such as family and friends, approve of each of the following behaviours?

1 2 3 4 5 6 7
Very Strongly DISAPPROVE
Very Strongly APPROVE

1. If you went out for coffee with ________ (insert name of former criminal either John or Matt) important people to you would:

2. If you had ________ as a friend important people to you would:

3. If you introduced ________ to someone you are friendly with important people to you would:

4. If you went to a party with ________ important people to you would:

5. If you invited ________ over for dinner important people to you would:

6. If you worked alongside ________ in a part-time job important people to you would:

7. If you were lab partners with ________ important people to you would:

8. If you supported a child/sibling have a child with ________, important people to you would:

9. If you supported a sibling/child marrying ________, important people to you would:

10. If you had ________ look after a younger sibling or cousin for a couple of hours important people to you would:

11. If you recommended ________ for a job important people to you would:

12. If you had ________ as a roommate important people to you would:
## Appendix F

### Perceived Behavioural Control Index

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Strongly Disagree</td>
</tr>
</tbody>
</table>

1. If I met a former criminal it would be entirely up to me whether I interacted with them.

2. If I were interacting with a former criminal I would have complete control over the interaction.
Appendix G

Thematic Apperception Test

Instructions

You are going to see a series of sentences, and your task is to tell a story that is suggested to you by each sentence. Try to imagine what is going on. Then tell what the situation is, what led up to the situation, what the people are thinking and feeling, and what they will do.

In other words, write as complete a story as you can—a story with plot and characters.

You will have twenty (20) seconds to look at a sentence and then 4 minutes to write your story about it. You will be prompted with questions, one per minute, to aid you in writing your story. Write your first impressions and work rapidly. The computer will keep time and tell you when it is time to finish your story and to get ready for the next question and sentence.

There are no right or wrong stories or kinds of stories, so you may feel free to write whatever story is suggested to you when you look at a sentence. Spelling, punctuation, and grammar are not important. What is important is to write out as fully and as quickly as possible the story that comes into your mind as you imagine what is going on.

Notice that there is one page for writing each story. If you need more space for writing any story, use the reverse side of the paper.

Sentence Leads

1. Two people are working in a laboratory on a piece of equipment.
2. A person is sitting, wondering about what may happen.
3. A person is seated at a desk with a computer and books.
4. An older person is talking to a younger person.

Questions

1. What is happening? Who is (are) the person(s)
2. What has led up to this situation? That is, what has happened in the past?
3. What is being thought? What is wanted? By whom?
4. What will happen? What will be done?
Appendix H

Authoritarianism - F-Scale

Personal Opinion Questionnaire

The following is a questionnaire on what the general public thinks and feels about a number of important social and personal questions. The best answer to each statement below is your personal opinion. We have tried to cover many different and opposing points of view; you may find yourself agreeing strongly with some of the statements, disagreeing just as strongly with others, and perhaps uncertain about others; whether you agree or disagree with any statement, you can be sure that many people feel the same as you do.

Select one of the following depending on how you feel in each case.

<p>| | | | | | |</p>
<table>
<thead>
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</thead>
<tbody>
<tr>
<td>-3</td>
<td>-2</td>
<td>-1</td>
<td>+1</td>
<td>+2</td>
<td>+3</td>
</tr>
<tr>
<td>I DISAGREE VERY MUCH</td>
<td>I DISAGREE SOMEWHAT</td>
<td>I DISAGREE A LITTLE</td>
<td>I AGREE A LITTLE</td>
<td>I AGREE SOMEWHAT</td>
<td>I AGREE VERY MUCH</td>
</tr>
</tbody>
</table>

1. There is hardly anything lower than a person who does not feel a great love, gratitude and respect for his or her parents.
2. An insult to our honour should always be punished.
3. Books and movies ought not to deal so much with the unpleasant and seamy side of life; they ought to concentrate on themes that are entertaining or uplifting.
4. What the youth needs most is strict discipline, rugged determination, and the will to work and fight for family and country.
5. No sane, normal, decent person could ever think of hurting a close friend or relative.
6. Young people sometimes get rebellious ideas, but as they grow up they ought to get over them and settle down.
7. The findings of science may someday show that many of our most cherished beliefs are wrong.
8. People ought to pay more attention to new ideas, even if they seem to go against the Canadian way of life.
9. If people would talk less and work more everybody would be better off.
10. A person who has bad manners, habits, and breeding can hardly expect to get along with decent people.
11. Insults to our honour are not always important enough to bother about.
12. It is right for people to raise questions about even the most sacred matters.
13. Obedience and respect for authority are the most important virtues children should learn.
14. There is no reason to punish any crime with the death penalty.
15. Anyone who would interpret the Bible literally just doesn’t know much about
geology, biology, or history.

16. In this scientific age the need for a religious belief is more important than ever before.

17. When they are little, kids sometimes think about doing harm to one or both of their parents.

18. It is possible that creatures on other planets have founded a better society than ours.

19. The prisoners in our corrective institutions, regardless of the nature of their crimes should be treated humanely.

20. The sooner people realize that we must get rid of all traitors in the government, the better off we'll be.

21. Some of the greatest atrocities in history have been committed in the name of religion and morality.
Appendix I

Behavioural Intentions Index

Please answer the following set of questions. To what extent would you engage in the following situations? Please rate your responses on the scale provided.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
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<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I certainly would</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>I certainly would not</td>
</tr>
</tbody>
</table>

1. Would you go out for coffee with ________ (insert name of former criminal either John or Matt)
2. Would you ________ as a friends
3. Would you introduce ________ to someone you are friendly with
4. Would you go to a party with ________
5. Would you invite ________ over for dinner
6. Would you work alongside ________ in a part-time job
7. Would you be lab partners with ________
8. Would you support a child/sibling have a child with ________
9. Would you support a sibling/child marrying a ________
10. Would you have ________ look after a younger sibling or cousin for a couple of hours
11. Would you recommend ________ for a job
12. Would you have ________ as a roommate
Affirmation-Negation Training

Affirmation Instructions

Thank you very much again for your participation. The following task is concerned with public stereotypes of ex-convicts. As you probably know, ex-convicts are often considered as dangerous and dumb. This, however, is a public stereotype that may or may not be true.

In the following task, you will be presented with synonyms for ex-convict such as, former criminal and ex-offender. In addition, you will be presented with words relating to negative and positive characteristics, that will appear on the screen briefly after the synonyms for ex-convict. Your task is to respond "YES!" each time you see a combination that is INCONSISTENT with the public stereotype of ex-convicts.

Specifically, you are asked to respond "YES!" with the space bar each time you see ex-convict (or a synonym) and a word relating to "POSITIVE" characteristic.

Please attend particularly to combinations that are INCONSISTENT with the public stereotype of ex-convicts! For combinations that are consistent with the public stereotype of ex-convicts, you don't have to do anything.

Again, please respond "YES!" with the space bar each time you see a combination that is INCONSISTENT with the public stereotype of ex-convicts. Please try to respond as quickly as possible!
Negation Instructions

Thank you very much again for your participation. The following task is concerned with public stereotypes of ex-convicts. As you probably know, ex-convicts are often considered as dangerous and dumb. This, however, is a public stereotype that may or may not be true.

In the following task, you will be presented with synonyms for ex-convict such as, former criminal and ex-offender. In addition, you will be presented with words relating to negative and positive characteristics, that will appear on the screen briefly after the synonyms for ex-convict. Your task is to respond "NO!" each time you see a combination that is CONSISTENT with the public stereotype of ex-convicts.

Specifically, you are asked to respond "NO!" with the space bar each time you see ex-convict (or a synonym) and a word relating to "NEGATIVE" characteristic.

Please attend particularly to combinations that are CONSISTENT with the public stereotype of ex-convicts! For combinations that are inconsistent with the public stereotype of ex-convicts, you don't have to do anything.

Again, please respond "NO!" with the space bar each time you see a combination that is CONSISTENT with the public stereotype of ex-convicts. Please try to respond as quickly as possible!
Affirmation-Negation Training Stimuli

Stereotype congruent traits:
Dumb, Lazy, Violent, Maladjusted, Ugly, Deceitful, Mean, Dangerous, Poor

Stereotype incongruent traits:
Educated, Safe, Nice, Attractive, Friendly, Moral, Diligent, Responsible, Adjusted

Ex-convict synonyms:
Ex-convict, Former Criminal, Ex-offender, Ex-con
Appendix K

Demographic Questionnaire

Finally, please answer the following questions regarding your demographic characteristics.

1) Ethnicity (circle one)

   a) Asian; Asian-Canadian (please specify: ______________)
   b) Black; African-Canadian
   c) Native-Canadian
   d) White; Caucasian
   e) Other (please specify: ______________)

2) Place of Birth: Canada _________ or other (please specify) _______. If you were not born in Canada, how many years have you lived in Canada? __________

3) What is your first language: ______________

4) What is your most fluent language: ______________

5) Age: ______________

6) Sex: ______________
Acquaintanceship Component of the Demographic Questionnaire

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not familiar at all</td>
<td>Very familiar</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. To what extent are you familiar with someone who has a criminal record?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Experience at all</td>
<td>Lots of Experience</td>
<td></td>
<td></td>
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<td></td>
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</tbody>
</table>

2. How much personal experience do you have with individuals with a criminal
### Appendix L

**Behavioural Intentions Factor Structure**

<table>
<thead>
<tr>
<th>Behavioural Intention Scale Items</th>
<th>Factor 1: Casual</th>
<th>Factor 2: Intimate</th>
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</thead>
<tbody>
<tr>
<td>Go for coffee with</td>
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</tr>
<tr>
<td>Friends with</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Introduce to a friend</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Went to a party with</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Invite over for dinner</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Worked alongside in a part-time job</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Lab partner with</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Support having a child with</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Support marrying</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Look after younger sibling</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Recommend for a job</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Have as a roommate</td>
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Use of Human Subjects - Ethics Approval Notice

<table>
<thead>
<tr>
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<th>Approval Date</th>
<th>Principal Investigator</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 10 10</td>
<td>10 10 06</td>
<td>Richard Sorrentino/Kim Dalke</td>
<td>11 04 30</td>
</tr>
</tbody>
</table>

This approval shall remain valid until the end date noted above assuming timely and acceptable responses to the University's periodic requests for surveillance and monitoring information.

During the course of the research, no deviations from, or changes to, the protocol or consent form may be initiated without prior written approval from the PREB except when necessary to eliminate immediate hazards to the subject or when the change(s) involve only logistical or administrative aspects of the study (e.g., change of research assistant, telephone number, etc.). Subjects must receive a copy of the information/consent documentation.

Investigators must promptly also report to the PREB:
- a) changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
- b) all adverse and unexpected experiences or events that are both serious and unexpected;
- c) new information that may adversely affect the safety of the subjects or the conduct of the study.

If these changes/adverse events require a change to the information/consent documentation and/or recruitment advertisement, the newly revised information/consent documentation, and/or advertisement, must be submitted to the PREB for approval.

Members of the PREB who are named as investigators in research studies, or declare a conflict of interest, do not participate in discussion related to, nor vote on, such studies when they are presented to the PREB.

Chair, Psychology Expedited Research Ethics Board (PREB)
The other members of the 2009-2010 PREB are: David Dozois, Bill Fisher, Riley Hinson, and Steve Lupker.

CC: UWO Office of Research Ethics

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