The Rape Supportive Cognition of Rape Prone Men

By

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Publications

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Conventions Used in this Thesis

Numbering Studies

All of the studies in this thesis are numbered independently of the chapter in which they appear.

Numbering Tables and Figures

All tables and figures are numbered in terms of the chapter in which they appear. They are numbered as figure or table *x.y.,* with *x* referring to the chapter number, and *y*, the order that the figure or table is presented within that chapter.

Abbreviations

Abbreviations are described within the text. However, some of the more common abbreviations used in this thesis are:

IT Implicit Theory

IAT Implicit Association Task

LDT Lexical Decision Task

Abstract

The literature examining the offence supportive cognition of sexual offences against adult women appears to be divided into two different approaches. The social psychological approach utilises community samples of nonconvicted men such as men who demonstrate some level of Rape Proclivity, also known as rape prone men. In contrast, the forensic clinical literature utilises samples of convicted rapists. While the social psychology approach uses implicit methods in order to assess the non conscious aspect of cognition, forensic clinical researchers tend to rely on self report measures such as questionnaires and interviews.

The purpose of this thesis was to amalgamate these two disparate approaches, in order to systematically investigate the rape supportive cognition of rape prone men. Four studies were conducted in order to examine the four stages of a social cognition framework; structures, operations, products, and behaviour. Studies One to Three utilised implicit measures alongside traditional self report measures in order to examine the relative utility of each methodology. Study Four employed a unique design in which participants interacted with a female confederate, in order to examine their social perception abilities and further to study the links between rape supportive cognition and behaviour itself.

Contrary to expectations, the self report measure of rape supportive cognition appeared to be the most robust measure of cognition in rape prone men. The implicit measures used in Study One and Two, designed to measure rape supportive cognitive structure, however, failed to identify any such cognition in rape prone men. In Study Three, the implicit measure found evidence for just one of five rape supportive

schema hypothesised to be held by rapists (Ward & Polaschek, 2002) in rape prone men. Finally, Study Four found some evidence for a social perception deficit in rape prone men, but this did not appear to have an impact on behaviour.

The results of all four studies are discussed in terms of existing theory of rape supportive cognition, and the methodology used to assess such cognition.

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Chapter One: Using Non Convicted Samples in Sex Offender Research

Introduction

In studying the factors that contribute to the aetiology of rape it is useful to examine not only convicted, or incarcerated rapists, but also men in the community who demonstrate a proclivity towards sexual aggression.[1] Rape is one of the most under-reported crimes in the UK (Walby & Allen, 2004). The only study designed solely to examine the unreported incidences of rape in the UK (Painter, 1991) discovered that a massive 91% of cases go unreported. A more recent analysis of British Crime Survey responses (Walby & Allen, 2004), suggests that only 15% of rapes are reported to authorities. With an estimated figure of 47,000 incidences of rape a year, this more conservative figure still equates to approximately 39,950 of unreported rapes yearly in the UK. According to RAINN (Rape, Abuse, and Incest National Network) using figures from U.S. Department of Justice National Crime Victimization Study (2005), approximately 60% of sexual assaults are not reported to the authorities, and of those reported, only 6% of rapists will be convicted. These figures clearly show that with such a high prevalence of rape, and such a low level of reporting of these rapes, there must be many men living in the community who have either committed a rape, or are at risk of doing so. Many studies demonstrate this, with about one third of US college men sampled across a number of self report studies indicating some likelihood that they would rape a woman if guaranteed that they would not be caught or punished

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[1] Due to the very low numbers of sexual offences committed by women, this thesis shall focus only on male perpetrators of sexual offences.

(e.g., Greendlinger & Byrne, 1987; Malamuth, Haber, & Feshbach, 1980; Rapaport & Burkhart, 1984).

In response to this growing concern, social psychologists have conducted a large body of research with male college students who either report some likelihood to engage in acts of sexual aggression, or self report having committed acts of sexual aggression in the past. During the 1980s, the study of sexually aggressive men departed from an almost exclusive focus on incarcerated rapists. Research began to focus on the alarming prevalence of largely unreported acts of sexual aggression or victimisation (e.g., Koss, Gidycz & Wisniewski, 1987) and on specifically identifying some of the factors that differentiate these aggressors from nonaggressive men (e.g., Malamuth, 1986.) A large body of research conducted around this pivotal time provided considerable evidence for the widespread belief in rape supportive myths (e.g., Burt, 1980), for the prevalence of rape-conducive attitudes and dispositions among college men (Malamuth, 1981; Malamuth et al., 1980), and for the presence of sexual arousal patterns among populations of normal men, that are similar to those of convicted rapists (e.g., Malamuth, 1986; Malamuth, 1993; Malamuth, Check & Briere, 1986).

Definition of Terms

Before embarking on an analysis of the literature, it is important to define the terms used to describe the various populations that shall be discussed in this thesis. The research literature that focuses on community populations rather than incarcerated rapists tends to focus either on men who self report having committed acts of sexual aggression in the past—often termed unincarcerated, or nonconvicted offenders—and men who demonstrate some likelihood towards committing acts of sexual

aggression—often termed rape prone men. In addition, there is a body of sexual harassment literature which focuses on men who either have committed sexual harassment, or demonstrate some likelihood to sexually harass. The terms and definitions used in this thesis are as follows.

Sexual aggression

Sexual contact or behaviour that occurs without the consent of the recipient (e.g. rape or sexual assault).

Rapists

Men who have been convicted of rape and/or acts of sexual aggression against adult women.

Child molesters

Men convicted of sexual offences against children.

Sexual offenders

Men who have been convicted of sexual offences against children and/or adult women.

Rape prone men

Men in the community who demonstrate some likelihood or proclivity towards committing rape, or acts of sexual aggression against adult women. There are several self report measures that determine level of rape proclivity, and these shall be discussed in the next section.

Unincarcerated rapists

Men in the community who self report having sexually assaulted or raped adult women in the past, but have not been convicted of these offences.

Sexual harassment

Unwanted behaviour of a sexual nature—such as unwelcome sexual advances—often occurring in the workplace, between a male in a position of power over the female victim.

Sexual harassers

Men who have either been convicted of, or self reported sexually harassing adult women.

Men likely to sexually harass

Men who demonstrate some likelihood or proclivity towards sexual harassment.

Rape Proclivity

The term rape proclivity essentially refers to an individual's tendency to commit rape or likelihood that he will commit rape. One of the most widely used measures of rape proclivity is the Likelihood of Raping report (LR report; Malamuth, 1981). This measure is used to identify individuals who may possess a relative propensity to rape (but who have not necessarily actually committed such an act). In a number of US studies using the LR report (e.g., Malamuth, 1981; Malamuth & Check, 1980; Malamuth et al., 1980), males were asked to indicate, on a five point scale ranging from (1) not at all likely to (5) very likely, the likelihood that they personally would rape it they could be assured of not being caught and punished. Throughout these studies, this question was asked under a variety of conditions, such as following the reading of an explicit, pornographic description of rape, following the viewing of a videotaped interview with an actual rape victim, or without any prior exposure to such materials. As expected, there was some variability in the distribution of scores across

all these studies, but generally there was a great deal of consistency in the percentage of respondents indicating a likelihood to rape. On average about 35% of males indicated any likelihood at all (i.e., a score of two or more on each item on the above scale) and an average of about 20% indicated higher likelihoods (i.e., a score of three or above).

Malamuth and colleagues recognised that without any additional information, it would be hard to judge the meaningfulness of this data, seeing as the question posed a hypothetical situation. In order to assess the construct validity of the measure Malamuth attempted to determine whether LR report ratings were associated with other responses that are known to distinguish convicted rapists from the general population. Several studies have identified the acceptance of rape myths (e.g., Abrams, Viki, Masser, & Bohner, 2003; Burt, 1980; Field, 1978) and relatively high sexual arousal to depictions of rape (Abel, Barlow, Blanchard & Guild, 1977; Abel, Becker & Skinner, 1980; Abel, Blanchard & Becker, 1976, 1978) as a defining characteristic of rapists. Rape myths are false or stereotyped beliefs about rape, rape victims, and rapists, that are widely prevalent in society (Burt, 1980). It has been consistently found that individuals in the community who achieve higher LR scores also believe in rape myths to a greater degree and have more callous attitudes towards rape than those with lower LR scores (Malamuth et al., 1980a; Malamuth & Check, 1980). In addition, it has been found that LR ratings are positively correlated with sexual arousal to rape, but not with arousal to consenting descriptions of sex (Malamuth, Heim & Feshbach, 1980b; Malamuth & Check, 1980b), thus demonstrating the validity of the LR report.

As previously mentioned, the LR report has been used in many studies to identify rape prone men. Osland, Fitch, and Willis (1996) conducted a study that aimed to extend the previous research on Rape Proclivity, by including measures of perceptions of and justifications for violence in specific situations. Participants were 159 men who attended a small, Protestant church-affiliated liberal arts college in the United States. All participants completed a battery of questionnaires which included three violence scenarios developed by Burt (1983), which depicted a man using increasing levels of violence in his interactions with a woman, and measured respondents' perceptions of the man's level of violence and justifications for the use of his violence. Other questionnaires included The Rape Myth Acceptance scale (RMAS; Burt, 1980), and the Short Form of the Attitudes Toward Women (AWS) Scale (Spence, Helmreich, & Stapp, 1975). The results of this study supported several hypotheses. First, as found in other studies, 34% of participants admitted to some proclivity to rape, an interesting finding when considering the sample was taken from a church affiliated college compared to most other studies taking samples from large universities. Second, those who reported rape proclivities showed higher acceptance of interpersonal violence, greater belief in the traditional roles of women, and higher rape myth acceptance than those who reported no such proclivities. There were no significant findings for perceptions of violence however, although there were borderline ($p < .06$) significant differences between rape prone and non rape prone men in their justifications for violence, with rape prone men more likely to justify violence than non rape prone men.

Another measure of Rape Proclivity was developed by Bohner, Reinhard, Rutz, Sturm, Kerschbaum, and Effler (1998). This measure consists of five realistic date-

rape scenarios that range in levels of force used by the male. Participants are instructed to imagine themselves in the position of the male protagonist in the scenario, and are asked to answer three questions that measure (a) the level of arousal they would feel in the situation, (b) the likelihood that they would behave in the same way as the protagonist if they were in that situation, and (c) how much they would have enjoyed getting their own way in that situation. In a study using a sample of German male college students, this rape proclivity measure was administered along with German versions of Costin's 'R scale', a measure of rape myth acceptance (Costin, 1985). This German version of the R scale—called the VMAS (Bohner, 1998)—contains 20 rape myth acceptance items (e.g. "Most women who claim they were raped by a man they knew probably consented at the time and then changed their mind afterward"). In addition, participants were asked a similar question to that found in the LR report; "if you could be assured that no one would know and that you could in no way be punished for engaging in the following acts how likely, if at all, would you be to commit such acts?" The two particular acts referred to in this study were "forcing a woman to have sexual intercourse against her will"' and "forcing a female to do something sexual she didn't want to do". The self-reported likelihood in engaging in each of these two behaviours was used to form an index of Rape Proclivity.

Bohner et al.'s (1998) scenario based measure of Rape Proclivity offers the most realistic method of assessing Rape Proclivity to date. This measure is designed to assess behavioural intention, through the strong activation of thoughts about using sexual violence (Bohner et al., 1998). In their first use of the measure, using a sample of 111 college males, Bohner et al., reported adequate internal consistencies for each

of the three assessment items (i.e., arousal index, behavioural intention index and enjoyment index, across all five scenarios (α = .76, α = .78, and α = .74 respectively). Furthermore, the index of Rape Proclivity—behavioural inclination index and enjoyment index summed—elicited a Cronbach's alpha of .85. Subsequent studies using this measure have also reported acceptable alpha levels of .75 and above (e.g., Bohner, Pina, Viki & Siebler, 2010; Bohner, Siebler & Schmelcher, 2006).

The mean scores, standard deviations and empirical range of scores for the three indices (see Table 1.1) indicate that while participants tended to score on the lower end of the scale, a wide range of scores were reported. Subsequent studies have reported similar data in German students (e.g., Bohner et al., 2006), and British students (e.g., Bohner et al., 2010). Finally, none of the Rape Proclivity items were found to correlate with a social desirability measure implemented by Bohner and colleagues, further validating the reliability of this measure.

Table 1.1

Means, Standard Deviations and Empirical Range of Bohner et al.'s (1998) Rape Proclivity Measure Items

Variable	Mean (*SD*)	Empirical range
Arousal index	2.64 (0.83)	1.00-4.40
Behavioural inclination index	1.72 (0.65)	1.00-4.00
Enjoyment index	1.99 (0.73)	1.00-4.00

Several studies have reported medium to large significant correlations between rape proclivity and rape myth acceptance (e.g., Malamuth, 1981; Malamuth & Check, 1985; Tieger, 1981), however Bohner et al. (1998) propose that although it is useful for us to have gained knowledge of this correlation, it is also important to explore the causal pathway underlying the correlation. They proposed several hypotheses to explain the link between the two variables; high rape myth acceptance may cause greater rape proclivity by neutralising norms that oppose violence before the offence, allowing it to occur, or conversely, a high proclivity towards raping may lead to the endorsement of rape myths in an attempt to justify either existing behavioural tendencies, or actual behaviour after the fact. A third possibility is that there is no direct causal link, and instead a third variable influences both kinds of belief. In order to examine this, the experimenters (Bohner et al., 1998) varied the relative cognitive accessibility of rape myths and Rape Proclivity by presenting the rape myth acceptance questionnaire first in one condition, and second in another condition. The correlation of rape myth acceptance and Rape Proclivity was significantly greater when the rape myth acceptance questionnaire was presented second, suggesting that the belief in rape myths has a causal influence on men's proclivity to rape.

As well as studies examining links between rape proclivity and rape myth acceptance, there have also been a number of studies that have focused on the social perception abilities of rape prone men (McDonel & McFall, 1991) and unincarcerated rapists (e.g., Bondurant & Donat, 1999; Malamuth & Brown, 1994). The results of these studies suggest that both rape prone men and unincarcerated rapists have difficulty interpreting women's communications, and therefore perceive these communications differently from non sexually aggressive men. McDonel and McFall (1991) suggest

that there is a specific cue-reading impairment in rape prone men's ability to decode a woman's negative cues. The consequences of this for sexual aggression are clear—if a man fails to recognise the negative reactions of a woman when he makes sexual advances towards her, it is likely that he will continue making these advances against her wishes.

The continuous nature of the Rape Proclivity measure (Bohner et al., 1998) described here is consistent with the view that the tendency towards sexual aggression is continuously distributed among men in the wider population. In fact, a number of studies have indicated that aggression and force are common in heterosexual sexual interactions among "normal" populations (Stille, Malamuth & Schallow, 1987), and it is this recognition of high rates of sexual aggression among these populations that led researchers to examine various attitudinal factors in these populations as well as in convicted sexual offenders (Stermac, Segal, & Gillis, 1990). Curiously, despite this interest in such populations, there appears to be some division between disciplines of psychology when it comes to data obtained from such studies. Generally, the studies using rape prone men or unincarcerated rapists as a sample tend to be conducted by social psychologists (e.g., Bohner et al., 1998; Malamuth & Brown, 1994; Malamuth et al., 1980a). In contrast, studies that use convicted, incarcerated samples of rapists tend to be conducted by forensic clinical psychologists (e.g., Beech, Ward & Fisher, 2006; Bumby, 1996; Polaschek & Gannon, 2004; Polaschek & Ward, 2002). Unfortunately, there appears to be little dialogue between these two disciplines, despite the potential usefulness of amalgamating both data and methodological techniques. This issue forms one of the key issues this thesis attempts to address, and shall be discussed in more detail in Chapter Two.

"Unincarcerated Rapists"

As well as studies conducted with rape prone males, there are also a subset of studies that identify "unincarcerated rapists" in the community to use as a sample. These men are classified as having committed rape, or some level of sexual aggression but not been convicted for the offence, usually because it has not been reported. Self-report measures such as the Sexual Experiences Survey (SES; Koss & Oros, 1982) which contains 13 yes-no questions referring to sexual experiences involving various degrees of threat, coercion, and force are often used to categorise participants.

Lisak and Roth (1990) designed a study to investigate the general applicability of the data on incarcerated rapists through a multi-method assessment of the motives and psychodynamic patterns in a sample of self-reported, unincarcerated rapists. Unincarcerated rapists were identified as men who had used force or threat of force to obtain or try to obtain sexual intercourse, or oral sex with a woman (as measured by the SES and interview). Participants were given a battery of standardised tests, completed a modified version of the Thematic Apperception Test (TAT) and participated in an autobiographical interview. The data from this study suggested that the principal motives, and psychodynamics found to be characteristic of convicted rapists are also important in understanding their unincarcerated counterparts. Unincarcerated rapists self-reported more hostility towards women, perceived greater betrayal and deception by women and also felt more threatened and demeaned by women compared to non sexually aggressive controls.

A more recent study by DeGue and Dilillo (2003) suggests similar themes. This study compared the risk characteristics of unincarcerated rapists and non offending college males across several domains. Participants completed a number of questionnaires including a modified version of the Sex Experiences Questionnaire (SEQ; Lisak & Roth, 1988) to measure participants' history of sexually coercive or sexually aggressive behaviour. Of the full sample 31.9% reported engaging in sexual coercion. The results of this comprehensive study are consistent with past research that suggests sexual aggression is a widespread problem on college campuses. Results revealed that sexually aggressive males differ from non offending men in that they more often subscribe to rape myths, are more likely to view interpersonal violence as acceptable, and have increased feelings of anger and mistrust towards females, perceiving male-female relationships as inherently adversarial. It appears from this research that these sexual aggressors also differ from non offenders in terms of personality—possessing more psychopathic personality traits, and being less well equipped with empathic personality traits. These findings—that sexual aggressors can be differentiated from non offenders on the basis of a variety of cognitive, personality and behavioural factors—mirrors past research (e.g., Malamuth, 1981) that has identified similar variables as important risk factors of sexual aggression. This thesis intends to examine in depth whether men who are at risk of sexually offending hold similar offence supportive cognition found to be held in convicted rapists, and whether this differs from men who do not appear to pose a risk for such behaviours.

Summary

Many researchers recognise the benefits to using unincarcerated or non convicted samples of rape prone men. As researchers have pointed out, most men who commit

rape never have their crimes reported, and so are not arrested, convicted or sent to prison (e.g., Koss et al., 1987; McFall, 1990). Abel and Rouleau (1990) state that due to the fact that such a small percentage of sex crimes lead to incarceration, the majority of sex offenders are not within the prison system, but "on the street". It is primarily for this reason that it is so important to use community samples when investigating the causes of sexual aggression, as convicted samples alone are not likely to be representative of all sexual offenders (McFall, 1990). The majority of studies using rape prone men have examined risk factors for sexually aggressive behaviour, under the assumption that these men may be at risk of committing such acts themselves. One oft studied factor is that of the social cognition of these men, with researchers aiming to identify how such cognition might be related to the commission of such offences. However, there appears to be two separate approaches to the cognition of sexual offending. The forensic clinical approach tends to use samples of convicted offenders, using traditional self report measures such as questionnaires and interviews. The social psychological approach however tends to use community samples of either rape prone men, or unincarcerated rapists, and uses more experimental methods, such as measures of task performance for example. Both sets of research in this area shall be discussed in the next chapter, including studies conducted with convicted offenders and men in the community who either self report some likelihood towards raping, or who have committed such acts in the past.

Chapter Two: The Offence Supportive Cognition of Sexual Offenders and Rape Prone Men

Introduction

The growing prevalence of rape in the United States and the United Kingdom has prompted many researchers to investigate the question, "Why do men rape?" Many researchers have proposed multi-factor models that go some way to explaining such offending behaviour (e.g., Hall & Hirschman, 1991; Malamuth, Sockloskie, Koss & Tanaka, 1991; Marshall & Barbaree, 1990; Ward, 2000; Ward & Siegert, 2002). These models all share a common factor—cognition—which is identified as a key component in the aetiology of sexual aggression in the form of "offence supportive cognitions". Many current treatment programmes for sexual offenders run by forensic psychologists aim to identify and challenge these offence supportive cognitions that are communicated by sexual offenders (Marshall, Anderson & Fernandez, 1999). Despite the apparent importance of these cognitions as contributing factors to sexual offending behaviour, little is known about the underlying structures or mechanisms of such cognitions (Drieschner & Lange, 1999; Langton & Marshall, 2001). Researchers have estimated that two thirds of rape related cognition research is conducted with rape prone students by social psychologists (Drieschner & Lange, 1999), but unfortunately there has been little collaboration between the forensic psychologists investigating the cognitions of convicted rapists and the social psychologists who use samples of rape prone men or unincarcerated rapists. For example, although much social psychological research has been conducted investigating levels of rape myth acceptance within populations of rape prone men, there are few structured theories postulated by these researchers regarding the possible function or structure of rape prone men's cognitions related to these rape myths. In contrast, the forensic clinical

psychology literature concentrates on formulating theoretical ideas that are tested on convicted samples only, ignoring unincarcerated rapists, or rape prone men.

Offence Supportive Cognition

Prior to discussing research investigating offence supportive cognition, it would be useful to define the nature of these cognitions. Both researchers and clinicians have often been rather taken aback by the distorted ways that sexual offenders describe and attempt to excuse their behaviour (Marshall, 1996; Ward, Hudson, Johnston & Marshall, 1997). For example, child molesters often describe children as being sexually provocative (e.g., Abel, Becker, & Cunningham-Rathner, 1984; Ward & Keenan, 1999), and rapists often describe women as being to blame for a sexual attack, either by "asking for it", or arousing the aggressor to the point where he can not control himself (e.g., Polaschek, Hudson, Ward & Siegert, 2001; Polaschek & Ward, 2002). These sorts of statements made by sexual offenders that blame the victim, justify the offence, or excuse the aggressive behaviour are often referred to as "offence supportive statements" or "cognitive distortions" (Ward, 2000). Ward et al. (1997) point out that the term "cognitive distortion" is typically used in the literature to refer to both maladaptive beliefs and attitudes, as well as cognitive operations, such as excusing, blaming, and rationalising sexually aggressive behaviour. This epitomises one of the largest problems within this research area—the definition of terms such as "cognitive distortions"—and the various ways in which researchers interpret this definition. Mann and Beech (2003) point out that it is not clear from the current literature whether "cognitive distortions" result from (a) a conscious desire on the part of the offender to reduce the levels to which he feels stigmatized from committing such an offence, (b) unconscious processes that attempt to alleviate the

offender from feelings of shame or guilt, or (c) an entrenched belief system that underlies the motivation, facilitation, and maintenance of offending behaviour.

The difficulty lies in the fact that different researchers subscribe to different definitions of the term and research has not yet clarified whether offence supportive statements made by offenders represent a type of belief structure (e.g., Abel et al., 1984; Ward & Keenan, 1999), an attempt at self-deception (Gannon & Polaschek, 2006), or simply post offence justifications or excuses (see Maruna & Mann, 2006). This confusion in the literature may stem from the fact then when an offender makes an offence supportive statement, it is very hard to determine whether he is making that statement as a result of underlying beliefs, or impression management strategies (Gannon, 2009a, 2009b; Ward, Polaschek, & Beech, 2006), and this is compounded by variations in researchers' coding, dependent on their definition of "cognitive distortions" (Gannon, 2009b).

Ward (2000; Ward & Polaschek, 2002) developed a pivotal theory—the Implicit Theory model—in an attempt to clarify some of the above confusion by outlining the structure and function of offence supportive beliefs.[2] The main thrust of Ward's argument is that underlying offence supportive statements made by offenders are offence supportive *cognitions*, that result from knowledge and experience gained in the early years of life. This knowledge is organised into theories that serve to facilitate understanding of the world. In this way, offence supportive beliefs are mechanisms that generate offence supportive cognitions, that surface at the time of

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[2] Ward did not focus on explaining post offence cognition or any of the other elements outlined by Mann and Beech.

offending, and facilitate and motivate offending behaviour. Ward was arguably the first person to apply a credible theory of cognition to sexual offender research,[3] and as such, the Implicit Theory model provides an extremely useful platform for research in this area. Other researchers have proposed theories that explain the role of schema in sexual offending. Mann and Beech (2003) constructed a model that describes how schemata interact with risk factors and other environmental variables to facilitate sexual offending. However, this model has yet to be tested empirically.

Given the confusion in the literature regarding the definition and meaning of the term "cognitive distortions" the terms used in this thesis shall be defined as follows. "Cognitive distortions" shall only be used with reference to research that uses this specific terminology, when it is unclear whether the researchers are referring to offence supportive cognition, or post offence justifications and excuses. When discussing the offence supportive cognitive content and structure (such as beliefs) of sexual offenders generally (i.e., rapists and/or child molesters), the term offence supportive cognition shall be used. When referring to these types of cognition specifically related to rape, in rapists, unincarcerated rapists, and rape prone men, the term "rape supportive cognition" shall be used. One other frequently used term, particularly in the literature using community samples is "rape myth acceptance". As briefly discussed in Chapter One, rape myths are false beliefs about rape, rapists and rape victims that are prevalent in society in general, rather than just sex offending males, or males at risk of sex offending. Generally, these myths are similar to those rape supportive cognitions thought to be held by offenders, such as "A woman who

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[3] Abel et al. 1984 provided the first theory of "cognitive distortions" as part of a broader theory of child sexual offending (Ward, Polaschek & Beech, 2006).

goes to the home or apartment of a man on their first date implies that she is willing to have sex" (Burt, 1980). Further to being prevalent in society, studies have found that level of acceptance of these myths is related to self reported intent to rape (e.g., Briere & Malamuth, 1983; Hamilton & Yee, 1990; Malamuth, 1981), and is higher in men who admit to having raped (Malamuth, 1981). Generally it appears that the term rape myth acceptance is most often used by social psychologists when using community populations such as unincarcerated rapists and rape prone men, whereas the forensic clinical researchers using convicted samples will refer instead to rape (or offence) supportive cognition. In this thesis then, the term rape myth acceptance shall be used only when referring to research that itself uses the term.

Implicit theories.

The groundbreaking Implicit Theory model, proposed by Ward (2000), and developed for rapists by Polaschek and Ward (2002), successfully outlines the structure and function of offence supportive beliefs, and the power these beliefs have to create offence supportive cognitions. The Implicit Theory model for rapists was developed using reviews of research on the rape supportive cognition of both rapists and rape prone men. Ward's approach to offence supportive cognition is based on information processing theory, and follows a framework of cognition. One theory of information processing, proposed by McFall (1982), suggests that the way we interpret and perceive social information depends on our internal belief system, or the way information is organised in our memory. These beliefs or information structures often bias our interpretation and perception, altering what we experience to make it congruent with the information we already have.

In his Implicit Theory model for rapists, Ward argues that rape supportive cognitions develop during childhood as a mechanism for understanding or explaining unusual childhood experiences. The information from these experiences cluster together into specific schemas that are unified by an underlying theme. For example, a boy may learn to cognitively associate women with unpredictability (e.g., from having experienced this kind of behaviour from his mother, or siblings). This boy may use this information to draw conclusions that women are not to be trusted, as they do not always mean what they say, or give false signals. If in conjunction with this, he perceives women as being open to sexual relationships, and sees their desires and preferences as being primarily sexual (e.g., from experiences of a sexually preoccupied mother), then it is possible that he will develop an implicit theory that emphasises the unreliability and inherent sexuality of women. The child may draw conclusions from these experiences that women constantly desire sex, and at the same time are not to be trusted. The Implicit Theory model hypothesises that with maturity, this schema will bias information processing, so that the individual will constantly perceive women as sexual objects who are to be treated with suspicion and possibly hostility. For example, in an interaction with a woman in a dating scenario, a man holding these cognitions may make sexual advances towards the woman, believing that she will be receptive due to his perception of women as sexual objects. If she rejects his advances his schema will bias this information, causing him to perceive her as acting incongruently with her true feelings. In other words, he may believe she is saying no when she really means yes. Combined with any feelings of hostility and his inaccurate perception of the woman and the situation, the man may persist with his advances despite such rejection, resulting in a sexual assault.

The above is an example of two implicit theories proposed by Ward; *women are sexual objects* (i.e., a woman's prime purpose is to give and receive sexual pleasure) and *women are unknowable* (a women can never fully be understood or trusted, you cannot believe what they say). There are three other proposed implicit theories: *entitlement* (i.e., the belief that males must have their needs met, regardless of women's needs or wishes), *male sex drive is uncontrollable* (i.e., the belief that male sex drive can not be controlled) and *dangerous world* (i.e., the belief that the world is an inherently dangerous place, where you must be on your guard at all times). The Implicit Theory model operates within a framework of cognition (see Figure 2.1) that shall now be discussed in further detail.

Cognition as a Framework

Cognition is thought to operate at different levels, in a framework consisting of cognitive structures, cognitive operations, and cognitive products (Hollon & Kriss, 1984; Ingram & Kendall, 1986). Cognitive structures exist at the deepest level of cognition, and organise knowledge that is stored in memory. The type of content, and the organisational structure of this knowledge, is reflected theoretically as schemata. These structures then operate as per McFall's (1982) model, by determining the way in which incoming information is processed through cognitive operations. The final level, cognitive products, refers to the end result of such operations, including attitudes, attribution and post offence statements, such as justifications or excuses for behaviour (Ward, 2000). Also operating at this final level is behaviour, which results from the preceding levels of cognition. Broadly speaking, the differing approaches to sexual offenders' cognition tend to focus on just one aspect of such cognition, with

research falling into three distinct categories, based on the three subdivisions of cognition (Segal & Stermac, 1990; Ward, 2000).

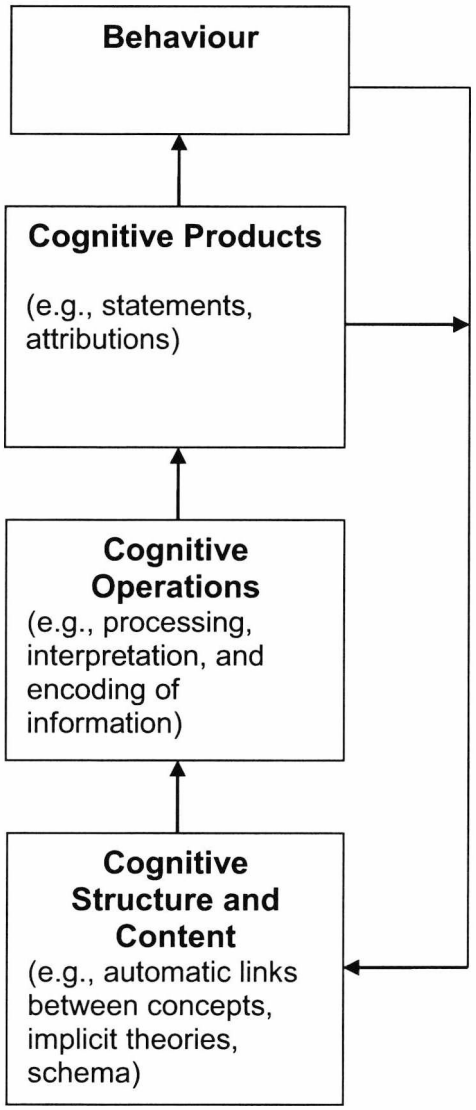

Figure 2.1. The cognitive framework of offence supportive cognition.

Cognitive structures and content.

The term cognitive structures refers to the storage of knowledge in memory, and the organisation of such knowledge. There are thought to be links and associations between stored knowledge which also make up cognitive structure. The *type* of

information stored, or represented by cognitive structures is also relevant to this domain. Schema, or implicit theories (ITs), for example, are formed of networks between salient cognitive content (Ward, 2000; Ward & Keenan, 1999).

To date, research on this aspect of cognition has been fairly limited, as identification and measurement of such structures requires a more complex methodology than the self report measures commonly used in this field of research (Gannon, 2009; Segal & Stermac, 1990; Ward et al., 1997). Generally speaking researchers have instead tried to assess the information processing bias that is thought to result from these structures, and used these findings to make assumptions about underlying cognitive structure, or measured cognitive processing in isolation from these structures (Segal & Stermac, 1990).

Alternatively, researchers have attempted to examine cognitive content through the assessment of cognitive products, such as attitudes, attributions or self statements (Gannon, 2009b; Mann & Beech, 2003; Ó Ciardha & Gannon, 2011; Segal & Stermac, 1990; Ward et al., 1997). The investigation into cognitive structures and their content initially began as an examination of offence supportive beliefs or attitudes that are hypothesised to play a role in the aetiology and maintenance of sexual offending (Ward et al., 1997). This approach typically measured the extent to which offenders endorsed specific offence supportive statements—cognitive *products*—using questionnaire measures, and then used this data to make inferences about the cognitive *structures* underlying these attitudes (e.g., Abel et al., 1984; Blumenthal, Gudjonsson & Burns, 1990; Bumby, 1996; Harmon, Owens & Dewey, 1995; Sattem, Savells & Murray, 1984).

The distinction therefore, between cognitive *structure* and cognitive *products* in the research literature is a fuzzy one. For example, cognitive *structure* such as schema are thought to contain attitudes and beliefs about the world. However, attempting to assess such schema by self report questionnaire, for example, will more likely capture cognitive *products*—defined by Hollon and Kriss (1984) as "end-stage cognitions" that result from the interaction between *content*, *structures* and *processing*. Similarly, Segal and Stermac (1990) describe cognitive *products* as actual thoughts and images that individuals experience as a result of cognitive *structure*. This presents the difficulty of separating beliefs and attitudes as *structure*, and thoughts and images as *products*, and then adopting appropriate methodology to measure each. Whilst questionnaires have been designed specifically to measure offence supportive beliefs—making up the content of cognitive structures such as schema and ITs—some theorists argue that these questionnaires are only capable of assessing cognitive *products*, and can only be seen as an indirect measure of cognitive structure (Kwon & Oei, 1994).

More recently, since the dawn of Ward's pivotal Implicit Theory model, however, a small body of research has attempted to identify such offence supportive schema, beliefs or ITs—that is cognitive *structure*—using analysis of offence accounts (Polaschek & Gannon, 2004), interviews (Beech, Ward & Fisher, 2006), or questionnaires created from rapists' offence accounts (Mann & Hollin, 2001; Milner & Webster, 2005).

Cognitive operations.

Cognitive structures impact on the processing of salient social information. For example, the presence of a schema will affect the way information is attended to, processed and encoded. These different processes are collectively known as cognitive operations (Hollon & Kriss, 1984). The relative accessibility of schema—that is the extent to which they dominate cognitive operations—can vary from accessible to chronic (Anderson, Anderson & Deuser, 1996), and are more likely to be activated in situations where stimuli are ambiguous (Kelly, 1950). As discussed previously, it is thought that the presence of specific, offence supportive schema—like ITs—will create a bias in cognitive processing—with sexual offenders likely to attend to information in a schema consistent way—even in the face of contradictory information cues (Ward, 2000; Ward & Keenan, 1999). It is postulated that these operations all occur outside of unconscious awareness, with cognitive structures allowing processing and subsequent behaviour to operate at an automatic level (Ward, 2000; Ward & Keenan, 1999).

Researchers have attempted to assess the extent of these cognitive operations in a number of different ways. Early researchers investigated cognitive operations within the larger context of social skills and competence of sexual offenders. Commonly referring to the measurement of "heterosocial skills", these studies examined sexual offenders' and rape prone men's ability to interact with females, and their ability to accurately decode cues, affect and emotion in females (e.g. Lipton McDonel & McFall, 1987; McDonel & McFall, 1991; Stahl & Sacco, 1995). More recent research, however, has adopted methods from cognitive psychology to directly

measure automatic information processing (e.g., Chapleau & Oswald, 2010; Leibold & McConnell, 2004).

Cognitive products.

As mentioned previously, a large number of researchers examining sexual offenders' cognition focus their attention on cognitive products, opting to use self report measures—such as questionnaires—and examining endorsement of offence supportive statements, which are assumed to represent corresponding beliefs or schemas—described as cognitive structure and content (e.g., Blumenthal et al., 1999; Harmon et al., 1995; Sattem et al., 1984). There are several difficulties with this approach. As discussed earlier, the research literature on offence supportive cognition is marred by a confusion regarding terminology and theory, and this is also true of research methods used to investigate offence supportive cognition. For example, cognitive structures such as schema and ITs are considered to represent deep cognition (Kwon & Oei, 1994), and as such can only ever be assessed indirectly when using questionnaire measures (Ward et al., 2006).

This difficulty is of course compounded by the issue of social desirability bias, that is, the tendency for participants to respond to questionnaires in a manner that they feel is socially favourable, instead of their true response. This is an important factor in forensic research, and shall be discussed in more detail in the next chapter. Bearing these issues in mind, one has to be cautious when reviewing the early research into offence supportive cognition.

Behaviour.

As the model of cognition (Figure 2.1) shows, behaviour operates at the highest level of the cognition framework. Despite the fact that investigations into sexual offenders' cognition is undertaken primarily to understand offence related behaviour, little research actually examines the relationship between cognitive structure, cognitive operations and behaviour itself, with early cognition researchers concluding that the knowledge to be gained from such work is an "untapped goldmine" (Fiske & Linville, 1980). Not much has changed since then in the cognition of sexual offending literature with Mann and Beech (2003) pointing out that the relationship between cognition and behaviour has largely been ignored. Thus, little of the following research includes studies that include behaviour as a variable to be investigated, despite its prominence at the top of the cognition framework.

However, a small proportion of the literature investigating cognitive operations of rapists (e.g., Segal & Marshall, 1985; Stermac & Quinsey, 1986), and unincarcerated rapists (e.g., Koralewski & Conger, 1992), have utilised behavioural measures to some extent. In these studies, participants held conversations with a confederate, and their performance in these interactions were assessed. However, because these studies were primarily attempting to measure social skills, the relationship between underlying cognitive structure and task performance were not examined, and so knowledge of such a relationship is scarce.

The second half of this chapter will review some of the key pieces of research in these three areas of cognition. As this research has been conducted on a mixture of convicted sexual offenders (often both rapists and child molesters), unincarcerated

rapists, and rape prone men, each section shall be divided according to the populations used.

Research Investigating Cognitive Structure and Content

The implicit theories of rapists.

Several empirical studies have been designed to assess the ITs of convicted rapists. Polaschek and Gannon (2004) analysed the content of offence accounts that were obtained through interviews of 37 convicted rapists, and found strong evidence for all five ITs, the most prevalent being *women are sexual objects*, which occurred in 70% of interviews, *entitlement*, occurring in 68% of interviews, and *women are dangerous* occurring in 65% of interview transcripts. Interestingly, *male sex drive is uncontrollable* and *dangerous world* only occurred in a minority of cases. A prominent finding of this research was that rapists tended to describe women as being malevolent and unpredictable which prompted Polaschek and Gannon to suggest that the *women are unknowable* IT should be renamed as *women are dangerous*, to more accurately reflect this cognitive content.

Beech et al. (2006) conducted a content analysis on interview transcripts from 41 rapists who had been participants in the sex offender treatment programme run in prisons in England and Wales. Semi structured interviews were conducted in which offenders were asked to talk about their actual offences, including their feelings and attitudes before, during, and after the offence. Again, evidence for all five ITs was found, this time however with more emphasis on the *dangerous world* IT, which was found in 79% of the sample. *Women are sexual objects* was the next most common, found in 51% of the sample. *Entitlement* was found in 44% of the sample, *male sex*

drive is uncontrollable in 15%, and *women are unknowable/dangerous* in just 9% of the sample.

A recent study of adult males who had committed sexual, or sexually motivated offences examined the concept of entitlement in these men (Pemberton & Wakeling, 2009). In this study, each offender was identified as having sexual entitlement as one of their dynamic risk factors by a structured clinical judgement procedure implemented as part of the Summary Assessment of Risk and Need (SARN), that is carried out in UK prisons. These offenders then completed a piece of written work known as a "decision chain" as part of their participation in the Sex Offender Treatment Programme (SOTP). This decision chain records the chronological build up to an individual's offence, and forms a chain of thoughts, behaviours and feelings (Pemberton & Wakeling, 2009). A deductive content analysis was conducted, and the decision chains of rapists, sexual murderers, intrafamilial child molesters and extrafamilial child molesters were compared. Rapists' sense of sexual entitlement related to six different domains, and elicited such attitudes such as "I can offend because women are my property", or "I can offend because I am a man and it's my birthright". This supports previous research and provides further support for the entitlement IT (Polaschek & Ward, 2002).

Finally, Beech Fisher and Ward (2005) also found evidence for ITs in a sample of sexual murderers. Given the knowledge that child sex abusers and rapists have ITs in common (*entitlement, dangerous world, uncontrollability*) and some that are different, Beech et al. hypothesised that sexual murderers may also have some ITs in common with rapists. Twenty-eight sexual murderers participated in a semi-structured

interview that focused on their account of the offence and their motivation. Analysis of the interview transcripts revealed, rather worryingly, that the way the sexual murderers viewed themselves, the world and their victims could be coded into the five ITs identified in rapists. In other words, sexual murderers share the same schema as rapists, highlighting the potential for escalation in the levels of violence used by rapists.

Other researchers have found evidence for cognitive structures similar to ITs, in earlier studies that have examined cognitive content only, such as the meaning of offenders' beliefs and attitudes (Ward, 2000). For example, rapists have been found to hold traditional, sex-role stereotyped beliefs (Check & Malamuth, 1983), or hostile attitudes towards women (e.g., Burt, 1983). Most of the research into such attitudes and beliefs precedes the theoretical proposals of ITs and offence supportive schema, and therefore these beliefs have been measured in terms of cognitive content only, rather than cognitive structure. For example, Malamuth and colleagues describe several related attitudes that are thought to facilitate sexual aggression, such as adversarial beliefs about heterosexual relationships, acceptance of the use of force in sexual interactions, rape myth acceptance, and hostility towards women. Evidence of these attitudes have been reported in studies of rapists (e.g. Scully, 1990) and rape prone men (e.g. Malamuth, 1981; Malamuth & Brown, 1994; Malamuth & Check, 1990). This tendency to distrust women, or hold negative beliefs about women and their behaviour is strikingly similar to the women are unknowable/dangerous IT (Polaschek & Gannon, 2004; Polaschek & Ward, 2002).

These findings all suggest adequate empirical support for rapists' ITs. However, due to difficulties within the methodology of these studies it would be unwise to take these findings as fact. The explicit self report methodologies of these studies are limited as they may reflect deliberate attempts by the offender to provide more socially acceptable justifications or excuses for his behaviour (Gannon, 2009; Maruna & Mann, 2006). Due to the difficulties associated with self report measures it would be useful to develop implicit, cognitive measures to help us to better understand rapists' true offence supportive cognitions. This may be possible through the adaptation, or extensions of, methods from other areas of psychology.

Furthermore, although the forensic clinical literature has found support for structures such as ITs, other earlier research also conducted by forensic clinical psychologists that examine cognitive *content* only—such as attitudes related to sexual aggression—have failed to find differences between rapists and nonsexual offenders. For example, Blumenthal et al. (1999) found that rapists' beliefs about women and violence were not dissimilar to those of nonsexual violent offenders. Harmon et al. (1995), Sattem et al. (1984) and Segal and Stermac (1984), all report that rapists could not be statistically discriminated from offender and community comparisons on measures of attitudes towards women, or traditional sex roles. Polaschek, Ward and Hudson (1997) similarly report that the difference in beliefs in different offender groups appears to be one of degree, rather than presence or absence of specific beliefs and attitudes.

Further to these problems in the literature, to date no research has been implemented to specifically investigate the ITs of rape prone men. As shall be discussed in more

detail shortly, the social psychological literature includes a body of research examining the cognitive content of rape prone men or unincarcerated offenders, while the forensic clinical literature has investigated the cognitive content and structure of rapists by examining ITs in these men. However, neither discipline has as yet examined both cognitive content and structure—in the form of ITs, or rape supportive schema—in rape prone men. This is particularly puzzling when we consider that Ward's Implicit Theory model for rapists was developed using reviews of research that included investigations with both convicted rapists and rape prone men, making it all the more surprising that researchers in the forensic clinical domain favour convicted rapist samples.

The offence supportive schema of rapists.

Other forensic clinical studies although not specifically investigating Ward and Polaschek's ITs, have attempted, instead, to identify other rape supportive schema. For example, Mann and Hollin (2001) examined 45 rapists' explanations for offending, and identified five categories of schema; grievance, entitlement, self as victim, control, and disrespect for certain women. These beliefs were then used to construct a questionnaire, My Life (Mann & Hollin, 2001), consisting of 43 items organised into three subscales; passive victim, vengeful entitlement, and need for control. Milner and Webster (2005), used this questionnaire along with "Life Maps" (autobiographical accounts of the key life events of offenders), to identify the presence of schema in sexual offenders. A sample of 12 rapists, 12 child molesters and 12 violent offenders completed Life Maps and the My Life questionnaire. A content analysis template containing nine schemas was constructed and applied to the Life Map data and a comparison between offender types revealed significant

differences in the prevalence and type of schemas held. For example, suspicious/hostility towards women was the most prevalent schema for rapists, whereas child molesters tended to hold a sense of worthlessness schema. The suspicious/hostility towards women schema held by rapists in the study is consistent with Polaschek and colleague's "women are unknowable/dangerous" IT (Polaschek & Gannon, 2004; Polaschek & Ward, 2002), and is also a theme that shall be encountered later when discussing the literature on the cognitive operations of sexual offenders.

It appears then, that to date, most research into the cognitive structure of sexual offenders has attempted to identify offence supportive schema through the use of self report methodology. These methods, while arguably fruitful thus far (e.g. Milner & Webster, 2005; Polaschek & Gannon, 2004), do suffer from several limitations. The most pertinent of these is the issue of social desirability, and is of greatest concern when using incarcerated offenders as a research sample. These participants have several motivations for responding to questionnaires and interviews in a manner in which they deem to elicit the most favourable response. Not only that, but the unconscious nature of schema makes it difficult to reliably identify the presence of these structures through the measurement of cognitive products alone. This shall be discussed in more detail in Chapter Three.

The issue of social desirability, however, is not one that has been brushed under the carpet, as researchers are actively developing more reliable methods of examining these structures (see Gannon, 2009b). Researchers are increasingly turning to the use of implicit, cognitive measures to investigate the information processing biases of

sexual offenders, and men who are identified as being at risk of sexual offending. For example, the strength of an automatic association (thought to represent one shared cognitive structure) between children and sex has been measured successfully in child molesters using Implicit Association Tasks (IATs) (e.g., Brown, Gray & Snowden, 2009; Gray, Brown, MacCulloch, Smith & Snowden, 2005; Nunes, Firestone & Baldwin, 2007). Furthermore, child molesters' ITs have also been successfully examined using IAT methodology (Mihailides, Devilly & Ward, 2004), demonstrating a very promising area of research. However, this body of research is largely restricted to the investigation of child molesters, and therefore research with rapists or rape prone men is scarce. These implicit methods shall be discussed in further detail in the next chapter, alongside a research agenda for exploring rape prone men's cognition.

The offence supportive schema of rape prone men.

Again, there is little research that examines rape supportive cognition in the form of schema in rape prone men. Although much research has been conducted that investigates levels of rape myth acceptance within populations of rape prone men, there are few structured theories postulated by these researchers regarding the possible function or structure of rape prone men's cognitions. As mentioned earlier, even Ward's Implicit Theory model has not been used as an explanatory framework, despite the fact that the model was developed from reviewed research that included investigations with both convicted rapists and rape prone men. This is particularly interesting due to the fact that some of the research in this area indirectly provides support for the Implicit Theory model, despite not being designed with this in mind. For example, Lisak and Roth's (1990) study of unincarcerated rapists and their

motives and psychodynamic patterns (mentioned in Chapter One) reported that these men showed greater hostility towards women, and felt deceived and demeaned by women, compared to non offending controls. These results appear to provide support for the *women are unknowable/dangerous* IT.

Another study by Rapaport and Burkhart (1984) provides more evidence for the *women are unknowable/dangerous* IT. In this study of 201 college males, 28% of whom had sexually offended, it was revealed that unincarcerated rapists viewed women as manipulative and untrustworthy. These men also legitimised the use of force as a viable means of obtaining gratification which is suggestive of the *entitlement* IT.

Finally, DeGue and Dilillo (2003), found that self reported sexually coercive college men subscribed to rape myths, viewed interpersonal violence as acceptable, and had increased feelings of anger and mistrust towards females in comparison to non coercive college men. Of particular interest to this thesis is the extent to which these attitudes and beliefs mirror the IT *women are unknowable/dangerous*, possibly providing the first evidence for ITs in an unincarcerated sample.

Shared cognitive structure in men likely to commit sexual aggression.

An entirely separate body of work, mostly conducted in the 1980s and 1990s by social psychologists, examines offence related cognitive structure in men who demonstrate some likelihood to sexually harass women. In this literature, sexual harassment is viewed as a sexually aggressive behaviour, and is therefore of interest to the investigation into rape related cognition in this thesis. Furthermore, this body of

research has uncovered a large correlation between likelihood to sexually harass and likelihood to sexually aggress against women, further highlighting the usefulness of such research for the present purposes.

This social psychological approach to offence related cognition proposes that men at risk of committing these sexual behaviours hold specific cognitive structures that differ from those held by men not thought to be at risk of such behaviours. Social psychological researchers (e.g. Bargh, Raymond, Pryor and Strack 1995; Pryor, 1987; Pryor & Stoller, 1994; Pryor, LaVite & Stoller, 1993) propose that men likely to sexually harass have strong links between mental representations of the concepts of sex and power—to the extent that these two concepts make up one cognitive structure. Although these studies were conducted before the advent of Ward's ITs, the hypothesis that two concepts can be so strongly linked as to share one cognitive structure has also been used by clinical forensic researchers using IATs to investigate child molesters' ITs. For example, as briefly mentioned earlier, these researchers have examined the possibility that the *children are sexual beings* IT is represented as a strong association in memory between children and sex, creating one cognitive structure (e.g., Brown et al., 2009; Gray et al., 2005; Nunes, et al., 2007).

In a similar way, the strength of association between power and sex concepts has been examined in men who demonstrate a likelihood to sexually harass women and rape prone men. Pryor and colleagues (Pryor 1987; Pryor & Stoller, 1994; Pryor et al., 1993), measured the extent to which men linked the concepts of power and sex, using an illusionary correlation task, finding that men likely to sexually harass had a stronger association between the two concepts than men not likely to harass. Bargh et

al. (1995) used the sequential priming paradigm to assess the automaticity of the power-sex association in men using a pronunciation task, and found evidence for a bidirectional automatic power sex association for participants likely to sexually harass, and a unidirectional automatic association for power and sex for rape prone participants. This suggests that for men likely to sexually harass, the accessibility of power related concepts automatically leads to increased accessibility of sex concepts, and for rape prone men, this pattern can also be reversed, with mental representations of sex concepts triggering greater accessibility to power related concepts. Bargh et al. argue that this mental association will automatically trigger sex related goals when these individuals are exposed to situations that involve power concepts—thus explaining scenarios of sexual harassment in the work place by males who hold positions of power over female employees.

This association is particularly interesting considering research on convicted rapists has found both dominance and sexuality to motivate sexual aggression. For example, Groth and Birnbaum (1979) interviewed convicted rapists and found forcible rape to be motivated by power needs and anger as well as sexuality, with the need to dominate the most common motive among rapists. Examining sexual aggression in college students, Malamuth (1986) discovered that responses to questions concerning dominance motivation correlated reliably with self-reported sexual aggression. In addition, self-reported sexual arousal at thinking about forcible sex correlated reliably with both self-reported sexual aggression and with the dominance motivation scales, supporting the link between dominance and sexuality.

Research Investigating Cognitive Operations

Several studies have examined the cognitive operations involved in rape supportive cognition, by investigating cognitive bias in convicted rapists (e.g., Lipton et al., 1987; Segal & Marshall, 1986), although the majority of the work in this area is conducted with non convicted samples, primarily by social psychologists (Mann & Beech, 2003). Lipton et al., (1987) used videotaped vignettes, that depicted heterosexual couples' interactions, to test rapists' social information processing. The aim of the study was to explore the hypothesis that rapists are selectively deficient in their ability to process interpersonal cues from women. In comparison with control groups of violent nonrapist offenders and nonviolent nonrapist offenders, rapists showed greater difficulties in recognising women's negative affect. The problem with this study is that the methodology allowed participants to explicitly deliberate on their responses, thus giving them the opportunity to decide on the most appropriate response.

Additionally, despite the interesting results, the authors made no attempt to investigate the underlying mechanisms behind this effect. This is a puzzling finding considering that the hypotheses for this study were based on McFall's information processing theory (1982), that offers us an ideal structure for the investigation of offence supportive cognitions, and the operations that are affected by such cognitions. McFall's model originated as a framework of social competence and much research has focused on the apparent difficulties that rapists and rape prone men have in this domain. The literature suggests that the attitudes and belief systems—the cognitive structure and content—held by these men cause bias in the information received from women, resulting in misunderstandings about their behaviour and emotions (e.g.,

Malamuth & Brown, 1994; McDonel & McFall, 1991). For example, research indicates that unincarcerated rapists (e.g., Farris, Viken, Treat & McFall, 2006; Malamuth & Brown, 1994) and rape prone men (McDonel & McFall, 1991) are less accurate than controls in reading women's negative cues in romantic interactions, while other research finds that unincarcerated rapists tend to misperceive women's sexual intent (Bondurant & Donat, 1999; Treat, McFall, Viken & Kruschke, 2001).

A fundamental problem with research in this area, as demonstrated by Lipton et al. (1987), is that cognitive structures thought to underlie such cue reading deficits are not explored alongside these deficits. Several studies have examined rapists', or unincarcerated rapists' cognitive operations, but tend to view these in isolation from the other levels of cognition, such as structures and products. For example, Farris et al. (2006), in a social psychological investigation, found unincarcerated rapists were less sensitive to women's affect than non offending males. Furthermore, these men were also more likely to associate women's provocative clothing as indicative of sexual interest. However, despite these findings, the authors do not make any inference to the underlying cognition that may lead to these processing biases. The authors note that heterosocial perception may be used to help predict sexually aggressive behaviour and therefore be a treatment target for intervention. However, from a forensic or applied viewpoint, if the cognition underlying such bias is not known, it is questionable how such a deficit could be targeted in treatment.

Furthermore, it appears that this area of research also suffers from a different problem—a lack of consensus. Alongside the above social psychological studies that have found differences in rapists', unincarcerated rapists' and rape prone men's

perception, or social skills, is a small body of forensic clinical research that has found no such deficiency in rapists compared to controls. For example, using a similar methodology to Lipton et al. (1987), Stahl and Sacco (1995) showed videotaped presentations of heterosexual couples in first date situations to five groups of participants: heterosexual child molesters, homosexual child molesters, rapists, nonviolent non-sex offenders, and violent non-sex offenders. Participants then categorised the female's affect in each date situation, as either rejecting, friendly, romantic, bored, or neutral and estimated how much sexual activity they thought she wanted. Heterosexual child molesters reported lower estimates of sexual desire when the women displayed friendly and romantic affect compared to nonviolent non-sex offender controls, and also exhibited less accurate affect categorisation. Rapists however, did not demonstrate any affect categorisation deficits compared to their control group of violent non-sex offenders, contrary to the authors' hypotheses. However, the authors do report that due to poor reliabilities for most of the categorisation scales, it is not possible to infer whether the null findings are due to an absence of a deficit in rapists, or related to the unreliable measures. Conversely, although rapists also did not appear to differ in their perception of sexual interest of the female in the video compared to controls, this measure was found to be reliable and valid, leading the authors to conclude that rapists experience no difficulty in perceiving sexual interest, converse to predictions.

Two earlier forensic clinical studies examining levels of communication ability in child molesters and rapists (Segal & Marshall, 1985; Stermac & Quinsey, 1986) also failed to detect a deficiency in rapists. In Segal and Marshall's (1985) novel study, participants engaged in a conversation with a female confederate. Behavioural ratings

were then taken by the confederate, two independent judges, and the participants themselves. Results showed that child molesters were more deficient in communication skills than control groups, but rapists performed no worse than a control group of low socioeconomic status men. This suggests that rapists, unlike child molesters, do not appear to have any more of a problem with communication than low socioeconomic status men, suggesting this does not play a role in the offence process.

Similar findings emerged in a rigorously controlled study of rapists' ability to interact socially with both a male and female confederate, and perceptions of others' social competence (Stermac & Quinsey, 1986). In this study, Stermac and Quinsey examined the social skills and social perceptions of 20 rapists, 20 non sexual offenders, and 20 non psychiatric, non offender controls. Participants held five minute conversations with either a male or female confederate, and their performance was assessed for global social skill and anxiety by independent raters. Additionally, the participants self rated their performance and perception abilities. In a further task, participants listened to pre-recorded audio taped conversations between men and women, and were asked to identify different types of behaviour. Results could not differentiate rapists from non sexual offenders or community controls. Rapists demonstrated neither a social skill deficit specific to female interaction, nor a situation dependent deficit different from other participants. The only measure on which rapists differed from both control groups was self reported assertiveness in both general and heterosexual situations. The authors (Stermac & Quinsey, 1986) tentatively suggest that rapists may have particular assertion deficits, rather than overall social competence deficits. Furthermore, in explaining the finding that rapists

appeared to be as competent as controls in identifying social behaviour of others accurately, the authors point out that how rapists appraise these stimuli and how they draw inferences is still not known. They propose that further work is necessary to examine how rapists' perception of social cues are mediated by their cognitions and affect.

Research with unincarcerated rapists.

Using similar measures to Stermac and Quinsey (1986), social psychologists Koralewski and Conger (1992) examined the social skills of college males, and also failed to find any differences between the unincarcerated rapists in this group, and non sexually aggressive males. This study included 'performance' measures such as a three minute conversation with a confederate in which participants' levels of skills and anxiety were measured; the same audio tape stimuli as used by Stermac and Quinsey (1986); and measures of assertiveness and social perception skills. Koralewski and Conger cite methodological reasons for this null finding. For example, the Dating Questionnaire-Revised (DQR: Muehlenhard & Linton, 1987) was used as a selection measure to form high (unincarcerated rapists), moderate (sexually coercive) and low sexually coercive (non offending) groups. As the authors point out, results indicated that all participants—regardless of group—had some dating experience. This suggests that in fact all participants must have some level of social competence, which may account for the null finding. This is an important point, and illustrates some of the potential difficulties with using community samples to learn about sexual offending.

Koralewski and Conger (1992) also point out that the reason they failed to find deficits in their sample, where deficits have been found in prison samples, may stem from a more general social skills deficit in incarcerated populations. However, as previously discussed, some forensic clinical studies using incarcerated samples have also failed to find specific deficits in rapists (e.g. Segal & Marshall, 1985, 1986; Stermac & Quinsey, 1986), further complicating the broader picture.

These mixed results and a tendency for researchers to examine the proposed deficiency in isolation rather than also assessing other levels of cognition, makes it difficult to draw any firm conclusions on the cognition of rapists, or rape prone men. A small number of studies, however, have looked at the possible cognition underlying cognitive operations, by examining relationships between offence supportive attitudes and perception of women's sexual responsivity (e.g. Bondurant & Donat, 1999; Kowalski, 1993). However, these studies are disadvantaged by the fact they use questionnaires to measure such perceptual bias, instead of more realistic approaches, such as role play, or viewing of videotapes.

Nonetheless, these studies do offer us some insight into the links between underlying cognitive architecture and cognitive operations. For example, in a social psychological study, Kowalski (1993) administered questionnaire measures of sex role stereotyping, adversarial sexual beliefs and rape myth acceptance (Burt, 1980) to a large sample of college men.[4] In addition, participants were given a list of 27 different dating behaviours, and asked to imagine a man and a woman on a date.

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[4] A female sample was also included in this study, but this is not relevant for the purposes of this thesis.

Then, for each behaviour, participants indicated the degree to which they thought the given behaviour indicated the woman was sexually responsive to her date. In a pilot study, Kowalski administered this measure to a separate sample of 348 college students, and conducted factor analysis for the female's behaviours. This yielded three factors: mundane dating behaviours (e.g. she smiles at him), romantic dating behaviours (e.g. she rests her head on his shoulder), and sexual dating behaviours (e.g. she takes her blouse off). The findings suggest that men who scored high in sex role stereotyping, adversarial sexual beliefs, and rape myth acceptance were more likely to perceive women's behaviours as more sexually connotative than men scoring low on these dimensions.

Kowalski (1993) suggests that men who hold such attitudes may be primed to perceive such behaviours in a sexual manner, and proposes that this results from a sexually laden schema. As other theorists (e.g., Ward, 2000) have postulated, Kowalski suggests that men with these sexually relevant attitudes may have a greater tendency to perceive behaviour in a schema consistent manner—therefore misperceiving women's dating behaviour as sexual. Interestingly, the tendency to over perceive sexual intentions was most pronounced with regard to the "mundane" dating behaviours. Kowalski argues that this is further evidence for a sexual schema, as it is in ambiguous situations that schema are most relied upon.

These findings were replicated in a later social psychological study of 263 college students[5] (Bondurant & Donat, 1999), giving support to the notion of a sexually based

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[5] Again, this study also included females, but the results pertaining to females are not relevant to this thesis.

schema in unincarcerated rapists. Kowalski's (1993) measure of 27 dating behaviours (The Hetersocial Perceptions Questionnaire) was administered alongside the Sexual Experiences Survey (SES; Koss et al., 1987). Findings suggested that not only are unincarcerated rapists significantly more likely to misperceive sexual intent in mundane dating behaviours, but also romantic dating behaviours. Furthermore, the authors extended Kowalski's (1993) research by examining the relative role of cognitive and affective components of rape supportive attitudes. Items from the Attitudes towards Rape Victims Scale (Ward, 1988) and the General Attitudes towards Rape Scale (Larsen & Long, 1988) were used to create two attitude scales: one containing cognitive items, and one containing affective items. Then, multivariate multiple regression analysis was conducted, with results suggesting that the cognitive, rather than affective, components of rape supportive attitudes contribute to the misperception of women's sexual intent.

However, as previously mentioned, there are difficulties with the methodology these studies employ. Using questionnaire measures of social skills or social perception reduces the ecological validity of such studies, through potential social desirability bias (Langevin, 1991; Stermac et al., 1990), or though the artificial nature of measuring social skills using a pencil and paper test (Gannon, 2009b). The use of actual interactions with confederates, or the use of videotaped interactions that earlier studies have employed, whilst still not completely realistic, are still more suited for measuring cognitive operations. Consideration of such issues must be undertaken when examining all aspects of offence supportive cognition, and this shall be discussed further in Chapter Three.

Despite these two main problems—a lack of realism in methodology, and researchers' tendency to examine one aspect of cognition in isolation—one social psychological study has examined unincarcerated rapists' perceptions of women's communications using a more realistic method, whilst acknowledging the role of cognitive structures such as schema. In fact, Malamuth and Brown (1994) specifically devised the study in order to test three explanations of mechanisms underlying an apparent deficit in reading women's cues in unincarcerated rapists. Malamuth and Brown (1994) presented videotaped scenarios of an interaction between a male actor and female actor to a large sample of community males. Participants watched four 30 second long videos that contained scenes simulating an interaction in a bar between a woman and a man. In these scenes, the man attempts to initiate a social interaction with the woman. The women responds in one of four ways, either friendly, assertively rejecting, seductive, or highly hostile. The methodology replicated an earlier study (Murphy, Coleman & Haynes, 1986) that found unincarcerated rapists have deficits in their ability to discriminate between hostile and assertive behaviour, with this deficit also associated with greater rape supportive attitudes. Malamuth and Brown (1994) generally replicated these findings, reporting that an inability to discriminate hostility from assertiveness was correlated with self reported sexual aggression (measured via the SES: Koss & Oros, 1982) and rape supportive attitudes.

Other measures were calculated in order to test three specific explanations proposed by Malamuth and Brown (1994), one of which—suspicious schema—is of most relevance to this thesis. This explanation proposes that sexually aggressive characteristics are associated with a hostile and suspicious schema, that leads to sexually aggressive men doubting the veracity of messages communicated by women.

To test this, participants were asked to indicate for each scenario the degree to which the type of behavioural reaction the woman demonstrated was the way most women would behave, and the extent to which they believed this particular woman to be honest. The authors hypothesised that a suspiciousness schema would manifest as a belief that most women are hostile and rejecting, and that the particular woman in the scenario was perceived as being dishonest, and not to be trusted. The findings suggest that unincarcerated rapists and men who held attitudes supporting sexual aggression were more likely to use these suspicious schema.

Malamuth and Brown's (1994) study is a good example of researchers examining more than one level of cognition, and the links between underlying cognitive structures and processing. However, this sort of research is quite scare, and to date the greatest amount of research has been investigating cognitive products of sexual offenders.

Research Investigating Cognitive Products

Abel et al. (1984) proposed the first theory of the offence supportive cognition of sexual offenders. Much of Abel and colleagues' work makes reference to child molesters only, and does not specifically mention those who offend against adults. However Ward, Polaschek and Beech (2006) point out that some of the research articles written by Abel and colleagues do imply that their theory of offence supportive cognition can be generalised to rapists (e.g. Abel, Becker & Skinner, 1987; Abel, Mittelman & Becker, 1985). Abel and colleagues devised the Abel and Becker Cognitions Scale (ABCS; Abel et al., 1984), thought to be the first measurement tool of the offence supportive cognition of sexual offenders. However, this scale mostly

refers to child molesters and therefore has limited use for examining the cognition of rapists. However, before this, researchers—predominantly social psychologists—were investigating attitudes and beliefs that could be considered either cognitive products, or evidence of deeper cognitive structures in rapists. For example, Burt (1980) constructed the Rape Myth Acceptance Sale (RMAS), which contains items relating to own sex-role satisfaction, sex-role stereotyping, adversarial sexual beliefs, sexual conservatism, acceptance of interpersonal violence, and rape myth acceptance. Burt's (1980) random survey of almost 600 adult men and women found that rape myths correlated with all the above constructs, bar own sex-role satisfaction. These attitudes and beliefs have been treated by the majority of researchers as evidence of cognitive structures, such as schema, and for that reason have been discussed earlier in this chapter (e.g., Check & Malamuth, 1983; Harmon et al., 1995; Sattem et al., 1984; Segal & Stermac, 1984). This again demonstrates the lack of clarity in the domain of offence supportive cognition, with definitions and terminology used varying between disciplines. Arguably, any explicit measure of attitudes and beliefs is more likely to be assessing the strength of surface level cognitions—cognitive *products*—rather than underlying cognitive *structure*. Although the presence of such cognitive products, must, in some way be indicative of underlying cognitive structures (e.g., Mann & Shingler, 2006), it is nonetheless not a direct measure of such structure (Kwon & Oei, 1994). Despite this, two self report scales of offence related cognition, demonstrating impressive reliability and validity have been developed. Bumby (1996), designed two scales to measure offence supportive cognition; the MOLEST scale for child molesters and the RAPE scale for rapists.

The Rape scale.

The Rape Scale (Bumby, 1996) consists of thirty-six statements, each followed by a 4 point Likert scale on which to rate agreement that excludes a 'neutral' response option. Bumby designed this scale (along with the Molest scale, for child molesters) to reduce socially desirable response biases, and is thus considered to be a reliable and valid scale. Many of the items are derived from other well researched instruments, such as the ABCS (Abel et al., 1989), and Burt's Rape Myth scale (Burt, 1980). Examples of statements found in the Rape scale include, "Men who commit rape are probably responding to a lot of stress in their lives, and raping helps to reduce that stress" and "Woman generally want sex no matter how they can get it". The Rape Scale has excellent psychometric properties (internal consistency $\alpha = .96$, test-retest reliability $r = .84$; Bumby, 1996). Bumby initially tested the scale on a sample of 25 rapists and reported that the scale is useful in measuring treatment progress, noting a significant decrease in reported distortions following three and 6 months of treatment. In addition, Bumby provided information on the correlations between his scales and various measures considered to address construct and convergent validity (e.g., the Rape Lie and the Child Molest Lie Scales from the Multiphasic Sex Inventory). Furthermore, Bumby reported a significant correlation between scores on the Rape Scale and number of victims in offender's offence history, further bolstering the validity of the scale. More recent evaluations of the scale however do report validity problems. For example, Arkowitz and Vess (2003) evaluated both the Molest and Rape scales with a sample of civilly committed sexual offenders (rapists and child molesters). In this study, both rapists and child molesters endorsed significantly fewer offence supportive statements than the sexual offenders in Bumby's original study. Furthermore, these scales did not adequately differentiate between rapists and

child molesters in the sample, which the authors suggest further invalidates the scale. The authors suggest that these scales are therefore too susceptible to socially desirable responses in sexual offenders who are involuntarily committed. Despite these criticisms, the Rape and Molest scales are frequently used in both research and clinical assessment of sexual offenders (e.g., California's Sex Offender Commitment Program, Canada's National Sex Offender Treatment program) and for this reason the Rape Scale has been chosen as a measure of rape supportive cognition in this thesis.

Summary

Researchers have taken different approaches when examining the cognition of sexual offenders, and those at risk of sexually offending. Initially, forensic clinical researchers' main focus was on the cognitive products verbalised by sexual offenders, which were then used to develop questionnaires (e.g., ABCS, Abel et al., 1984). Social psychological researchers however investigated the cognitive operations, primarily of unincarcerated rapists and rape prone men, through investigation of social competence or social skills.

Whilst investigation of cognitive operations is very useful, it would also be helpful to identify the types of cognitive structures that are driving these processing biases. Both forensic clinical and social psychological researchers tend to work backwards, by either measuring cognitive operations or products in an attempt to identify structures, with limited success. Generally speaking, cognitive products are measured using self report questionnaires or clinical interviews, whereas cognitive operations are examined through task performance.

There are several theoretical and methodological problems with both approaches. Self report measures of cognitive products are marred by the confusion surrounding the nature of offence supportive cognition, and whether deep level cognition can be assessed at all via such methods. This, coupled with the debate over the role played by such cognition further impacts on the interpretation of questionnaire studies.

Finally, the issue of social desirability is key in these studies, as there are many reasons why offenders might be motivated to conceal their true response, and modify their answers depending on perceived social norms. The studies of cognitive operations that use task performance as a measure of social skills or social competence are perhaps less likely to suffer from social desirability issues, but there is a risk that the artificial nature of these interactions interferes with task performance nonetheless. Furthermore, the earlier studies of cognitive operations tended to neglect the potential antecedents to biases in information processing, making it hard to put the data into context. However, with relatively recent developments in offence supportive cognition theory, such as Ward's Implicit Theory model, advances in research methodology have also been made, and promising methods are emerging which shall be discussed further in the next chapter.

Chapter Three: Investigating Cognition using Implicit Methods

Introduction

Chapter Two has outlined the available literature on the cognition of sexual offending. We have seen that generally research focuses on just one aspect of offence supportive cognition, either attempting to measure cognitive structures, cognitive operations or cognitive products, usually in isolation from other factors, with the behavioural component often ignored completely. The main difficulty with the research on cognitive structure, such as schemas, or implicit theories (ITs), is the reliance on self report methodology, which asks participants directly to report their offence supportive cognition, and is prone to social desirability bias as well as other flaws. Methods such as questionnaires and other self report measures such as interviews are known as explicit methods—that is, participants are directly, and transparently asked about their own cognition. Recently, given the problems associated with this methodology in investigating cognition, researchers are turning to less transparent measures, that assess non conscious processes—known as implicit methods. This chapter seeks to identify such implicit methodology and explain how these techniques can address the flaws associated with explicit methods. Finally, a research agenda for investigating the offence supportive cognition of rape prone men shall be proposed, that utilises both explicit and implicit methods, in order to examine this complex issue.

Key Methodological Issues Regarding Explicit Measures

Social desirability.

As discussed briefly in Chapter Two, there are several difficulties related to the use of explicit measures in the assessment of cognition. The key issue, particularly with forensic populations, is that of socially desirable responses. Explicit measures are

transparent, and therefore are open to social desirability biases, and manipulation (Gannon, 2006; Roche, O'Riordan, Ruiz & Hand, 2005; Tierney & McCabe, 2001; Ward et al., 1995). This is particularly pertinent in forensic populations who might not only wish to conceal responses that they believe are socially undesirable, but also have other motives to "fake good", such as to improve chances of parole, or to falsify treatment outcomes for example. Both these examples may explain instances where offenders appear to endorse low levels of offence supportive statements in questionnaires. However, in some instances, offenders may be motivated to actually inflate their level of agreement with such statements, in an attempt to justify or excuse their behaviour. As we have seen, some researchers and theorists argue that offence supportive statements made by offenders actually do represent an attempt at excusing or justifying their behaviour. If this is the case, then one might expect offenders to readily endorse such statements on a questionnaire, as this maintains their position of reduced responsibility for their offences. The fact that the very nature of "cognitive distortions" is under debate, and that the opposing arguments each offer reasons for potential response bias to questionnaires (either deflating or inflating endorsements of offence supportive statements), indicates that social desirability may actually be confounding investigations into the true meaning of such cognition. It is for this reason that research must try and reduce such bias, in order to fully understand the mechanics of offence supportive cognition.

This issue of social desirability has, however, not been ignored by researchers. For example, Bumby himself, and other researchers who have administered the Rape Scale also implemented measures of social desirability, such as the Marlowe-Crown Social Desirability Scale (MCSDC: Crowne & Marlowe, 1960). In three studies with

convicted child molesters and rapists, no significant correlations were revealed between the MCSDC and the Rape Scale (Bumby, 1996, Hermann et al., 2012, Pervan & Hunter, 2007) indicating that responses to the Rape and Molest scales were not being influenced by social desirability bias in these studies. Using another measure of social desirability, the Other-Deception Questionnaire (ODQ) and the Self-Deception Questionnaire (SDQ: Sackheim & Gur, 1979), Blumenthal et al. (1996) also found no evidence for child molesters or rapists responding to Bumby's Rape scale in a socially desirable manner. More novel methods of detecting "faking good" amongst child molester populations supports this view. For example, Gannon (2006) utilised the bogus pipeline procedure—essentially a fake lie detector test—to examine whether child molesters modified their responses to an offence supportive cognition questionnaire consisting of items from the Opinions Questionnaire (Offending Behaviour Programmes Unit, 2000) that represented Ward's (Ward, 2000; Ward & Keenan, 1999) *children are sexual beings* IT, when they believed themselves to be being analysed by a lie detector. In these studies, child molesters completed a pencil and paper scale of offence supportive cognition in the traditional manner, being told that their results would be completely confidential. Then, the same participants were hooked up to the bogus pipeline, and told that this machine could detect when they were responding untruthfully. Gannon's (2006) hypothesis, that under these conditions child molesters who had been "faking good" previously would show stronger endorsement of offence supportive statements, was rejected, as participants endorsed *less* offence supportive statements when hooked up to the bogus pipeline, indicating that they were not "faking good". A further study by Gannon and Polaschek (2005) in which response times to completing a computerised version of an offence supportive cognition questionnaire created from items taken from other scales

(Bumby, 1996; Hanson, Gizzarelli & Scott, 1994; Offending Behaviour Programmes Unit, 2000) also elicited similar results—child molesters did not appear to be faking good on the measure.

A consistent finding in the offence supportive cognition literature associated with child molesters is that these men typically achieve low scores on questionnaire measures, and only differ from control groups in their *degree* of disagreement, leading some researchers to suggest that they must be "faking good", otherwise they should be scoring higher. This makes Gannon and Polaschek's (Gannon, 2006; Gannon & Polaschek, 2005) rejection of the "faking good" hypothesis all the more important as, they argue, if child molesters aren't "faking good", but are still getting low scores on the scales measuring offence supportive cognition, then perhaps they simply do not hold high levels of offence supportive cognition as suggested. Of course this cannot be directly applied to the offence supportive cognition of rapists, as the picture from empirical research here is somewhat different. For example, some researchers have been unable to discriminate rapists from controls on measures of offence supportive cognition (e.g., Harmon et al., 1995; Sattem et al., 1984), or from child molesters (Bumby, 1996), but rapists' scores are not necessarily skewed towards disagreement as child molesters tend to be. Whether this is due to differences in the instruments used, or other methodological differences is unknown. It may be that the rape supportive cognitions are more pervasive in society generally, which is why rapists can not be discriminated from community controls or offender controls.

Another interesting approach that has been taken by researchers examining the endorsement of offence supportive cognitions by child molesters involves the type of

measurement being used. For example, Neidigh and Krop (1992) compared child molesters' responses to a self report questionnaire (the Pedophile Cognition Scale: Abel, Becker, Cunningham-Rathner et al., 1984), and the number of offence supportive statements reported during interviews conducted about their own offending. On average, offenders endorsed 1.8 offence supportive statements measured by the questionnaire, but reported, on average, 3.5 offence supportive statements related to their own offending during interview. This highlights a perplexing conundrum to theories of "faking good"—if offenders are "faking good" on self report measures of offence supportive cognition, then why do they not do this during interviews, that are possibly more likely to be associated with a judgemental audience than the paper test (Ward et al., 2006)? A recent study that compared three different measures of assessment of offence supportive cognition found a similar result. Keown, Gannon and Ward (2010) interviewed 33 child molesters regarding their beliefs, before administering a self report measure of offence supportive cognition (Bumby's Molest Scale), and finally a sentence reading task that used reading time as a measure of offence supportive cognitive operations. As in previous research, child molesters could be distinguished from offender controls on the basis of interview and questionnaire data (with child molesters endorsing greater numbers of offence supportive statements than controls), but the cognitive task failed to reveal such differences. Furthermore, the types of cognitions uttered by child molesters during interview, whilst similar in number to those endorsed via the questionnaire, actually differed in content, meaning each instrument elicited different results. This further demonstrates how different measurement techniques can impact on the veracity of results, through potentially introducing different artefacts (Keown et al.,

2010). It has also been suggested that it would be unwise to rely on self report questionnaires alone when investigating cognition (Gannon & Polaschek, 2006).

However, as briefly mentioned, this body of research has been conducted with child molesters only, and relates to the specific cognitions thought to be related to sexually offending against children, so although we can tentatively apply the principles and arguments to the cognitions of rapists, we must exercise caution, because differences may exist in the way these cognitions operate in child molesters compared to rapists. For example, two of the five ITs for child molesters are specifically related to the perceived acceptance of sex with children and the fact that children are sexual beings, which is likely to be more obviously socially abhorrent than some of the rape related beliefs thought to be held by rapists, particularly considering the evidence that "normal populations" have also been found to endorse rape supportive cognition (in the form of rape myth acceptance) to some extent (e.g., Gerger, Kley, Bohner & Siebler, 2007).

As this thesis aims to investigate the offence supportive cognition of rape prone men, it could be argued that the impact of social desirability bias may be lesser in an unincarcerated, community sample. Clearly, rape prone men will not have the same motivation to falsely respond as do convicted, incarcerated sexual offenders. However, some level of social desirability bias is bound to exist, as even community males may want to conceal their attitudes, desires and beliefs if they feel these are not socially acceptable responses. However, it may be possible to counteract this to some degree, by assuring participants anonymity in their responses—something that can not always be achieved in forensic populations.

The measurement of non conscious processes.

As previously discussed, using explicit measures to identify cognitive structures, or cognitive operations is limited in that most explicit measures are assessing surface level cognitions, that are likely to be cognitive products, rather than underlying structure (Gannon, 2009b). Most researchers recognise this, but argue that by measuring cognitive products, inferences can be made about the underlying cognition (e.g., Bumby, 1996). The main thrust of this argument is that although schemas may operate outside of conscious awareness, the content of the schema, such as beliefs and attitudes must reflect frequently experienced surface cognitions (Mann & Shingler, 2006). However, a second problem arises regarding the accuracy of the data produced by self report questionnaires. Cognitive products, or surface level cognitions, are defined variously as actual thoughts and images (Segal & Stermac, 1990) or "end stage" cognitions (Hollon & Kriss, 1984). One might expect that some form of interview that allows for free recall may elicit true reporting of such products, but a self report questionnaire, such as the Rape Scale (Bumby, 1996), which asks participants to report the degree to which they agree or disagree with offence supportive statements may not be accurate. For example, the items on the Rape Scale may not correspond to the participant's own offence supportive thoughts, or those he experienced at the time of his offence (Gannon, 2009b) and so the individual could potentially achieve a low score, despite holding some offence related thoughts or images.

Until Ward's (2000) ground breaking Implicit Theory proposal, there was little in the way of theoretical knowledge of the mechanisms underpinning offence supportive

cognition, with researchers often measuring such cognitions using explicit methods and ignoring the possibility that they might not actually be measuring deep level cognition. Now that we have a theoretical model for the cognition of sexual offending, including the processes that contribute to the behaviour itself, as well as the attitudes and beliefs expressed post offence, we can begin to perform more rigorous testing of the different components, using implicit measures to identify deeper levels of cognition and cognitive processing (Gannon, 2009b). Many researchers have pointed out that indirect methodologies, such as cognitive tasks, like the IAT or sentence completion tasks may be more appropriate in this domain (e.g., Gannon, 2009b; Kalmus & Beech, 2005; Langton, 2007; Mann & Shingler, 2006; Ward et al., 1997).

As briefly discussed in Chapter Two the pertinent issue with explicit measures refers to the difficulty individuals may have in attempting to identify implicit beliefs or attitudes through introspection. The fact that cognitive structures such as schema operate largely unconsciously means that even well motivated individuals will have difficulty identifying these structures themselves (Gannon, 2009b; Greenwald & Banaji, 1995; Mihailides et al., 2004; Ward et al., 2006). Researchers have attempted to circumvent this issue either by measuring cognitive operations, through tasks designed to measure social competence (e.g., Lipton et al., 1987; Malamuth, 1994; McDonel & McFall, 1991), or through the use of implicit methods borrowed from cognitive psychology, such as the Implicit Association Test (IAT; Greenwald & Banaji, 1995), or by opting instead to measure cognitive products that are assumed to reflect underlying cognitive architecture (e.g., Abel et al., 1987; Bumby, 1996). In the last decade, researchers of sexual aggression have been increasingly adapting

cognitive processing tests such as the IAT, and the lexical decision task (LDT), to identify offence supportive cognitive structure. These methods specifically measure the more unconscious automatic processes that are activated through cognitive tasks, and have proved useful in identifying information processing bias for specific stimuli in many different populations.

Implicit Measures

Given the above problematic issues involving the use of explicit measures in this domain, researchers have begun instead to adopt implicit measures to examine the cognitive structures and mechanisms that underlie offence supportive cognition (e.g., Brown et al., 2009; Gray et al., 2005; Keown, Gannon & Ward, 2008a, 2008b, 2010; Mihailides et al, 2004; Nunes et al., 2007).

Implicit measures are useful for three primary reasons. First, these measures are considered to be very difficult to fake (Steffens, 2004). Second, these measures are thought to directly measure cognitive operations, or identify the presence of cognitive structures that operate at a nonconscious level. So, not only does this reduce potential social desirability bias, but constructs that individuals are not aware of can also be assessed (Fazio & Olson, 2003; Greenwald & Banaji, 1995). Third, and perhaps most importantly, using these methods mean researchers can more fully explore the links between offence supportive cognition and offence behaviour itself, by pinning down the origins of such cognition—that is, are these cognitions held at deep level as cognitive structure, or are they surface level cognitions? As mentioned in Chapter Two, several models of sexual aggression include offence supportive cognition in the aetiology of sexual offending, but without empirical evidence it is not yet possible to

fully understand how such cognition contributes to offending behaviour. The available research evidence is currently mixed, with a lack of consensus over terminology, and issues with research methodology further complicating the issues (Gannon, 2009b). However, researchers have recognised these issues and in the last two decades new research methods and clearer conceptual models have emerged, making this domain ripe for empirical investigations.

For example, there exists a small body of research that uses implicit methods—the work of Gray et al. (2005) and Nunes et al. (2007) have used the IAT to identify whether child molesters have automatic links between the concepts of sex and children in memory, which create one shared cognitive structure. Such a cognitive structure in child molesters is thought to underlie the "*children as sexual beings*" IT proposed by Ward and colleagues (Ward, 2000; Ward & Keenan, 1999). Others have examined associated links between different concepts, such as harmony and erotic (Steffens, Yundina & Panning, 2008), sex and entitlement (Mihailides et al., 2004), and sex and power (Kamphuis et al., 2005), all in child molesters. One study (Gannon, Rose & Williams, 2009) even examines the child-sex link in female sexual offenders, a much under researched group of offenders. However, research into rapists, or rape prone men, using similar implicit methodology is much more scarce.

Several authors have advocated the use of implicit methods in research examining the cognition of sexual offending (e.g., Gannon, 2009; Gannon & Wood, 2007; Kalmus & Beech, 2005; Ward et al., 1997). Implicit measures reflect the automatic impact of cognitions on behaviour (De Houwer, 2006), and therefore present a great opportunity for furthering knowledge on the cognitions related to sexual offending. Leibold and

McConnell (2004) argue that cognitive associations between concepts such as women and hostility may exert a strong influence on sexually aggressive behaviour and believe that examining such associations is critical for understanding this behaviour. Langton (2007) also proposes that adapting implicit measures for use with sexually aggressive men has potential to reveal enhanced implicit memory, or patterns of affective association for material that relates to women and sexually coercive behaviour (Langton, 2007). This section of the chapter shall introduce two of the most widely used implicit measures, and then examples from the domain of sexual offending research shall be further described.

The Implicit Association Task (IAT).

The IAT is regarded as possibly the most well known implicit measurement technique (Fazio & Olson, 2003), and is widely used for measuring implicit attitudes, with results that correlate reliably with explicit measures (e.g., Nosek & Hansen, 2008). The effectiveness of the IAT in discrimination between groups with different known characteristics has been demonstrated via IATs that identify sexual preference (e.g., Snowden, Wichter & Gray, 2008) and—perhaps most relevant to this thesis—IATs that identify *victim* preference (Brown et al., 2009).

The IAT assesses the strength of an association between a target concept and an attribute dimension, by analysing response latency to different combinations of each construct. So, in Brown et al's. (2009) IAT that investigated age of victim preference in a sample of child molesters, the target concept of age was represented by the category labels child and adult. Then, the attribute dimension of sex was represented by category labels sex and non sex. The IAT is usually administered via a computer

program, that requires participants to categorise stimuli as they appear on the computer screen. To start with, participants categorise a target concept using two keys, with each key representing one category type (e.g., *child*, *sex*). In the next stage, participants categorise the attribute concept in the same way, with one key representing sex, and the other representing non sex. Then, in the first critical phase, each key is assigned a dual meaning, which is counterbalanced between two critical trials. In the first, for example, one key is labelled "*child* or *sex*", with the other key labelled "*adult* or *non sex*" (see Figure 3.1). Participants then characterise stimuli using this new configuration of labels. In the second critical phase, these labels are reconfigured so that child and non sex occupy one key, and adult and sex occupy the other. Response latencies to stimuli for these two critical phases are then compared. Figure 3.1 shows a representation of the computer screen during the first critical phase of the IAT. The target word in the centre represents the *child* concept, and so the participant would press button 1 (as indicated by the dashed lines).

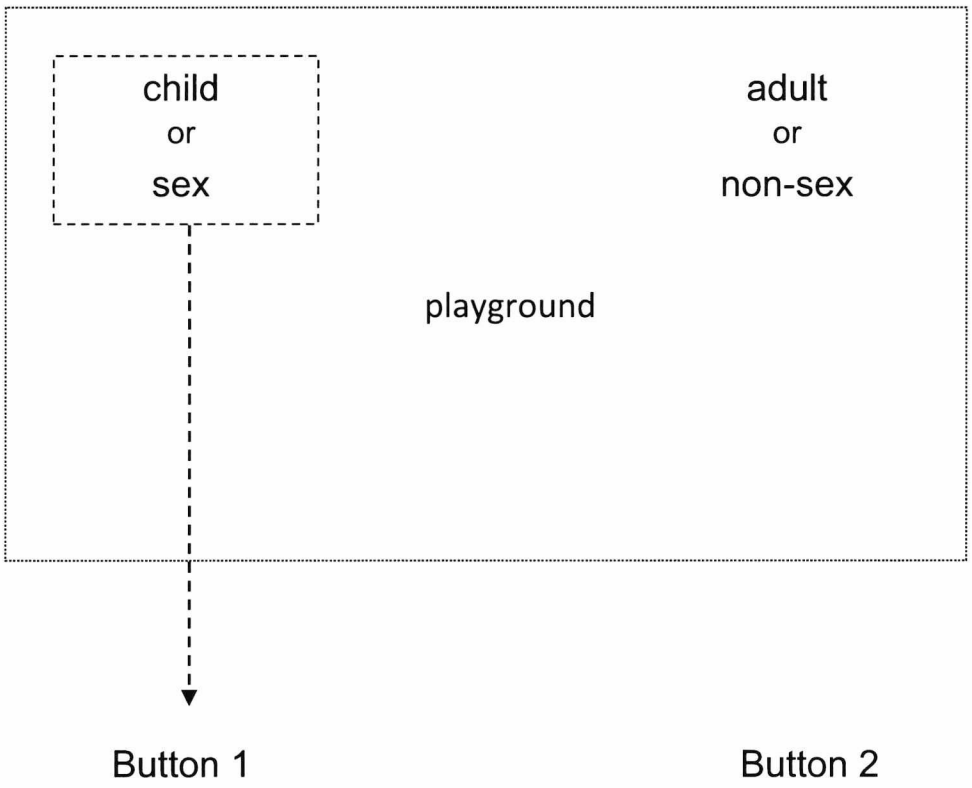

Figure 3.1. Representation of the computer screen during the child/sex, adult/non-sex phase of the IAT.

The theory underlying the IAT is that when two concepts are automatically linked in memory, participants will be faster to categorise stimuli when those two concepts share the response key. So in the Snowden et al. (2008) example, paedophilic type sex offenders (who offended against victims younger than 12 years old) were predicted to respond to the stimuli faster when child and sex occupied the same key, relative to hebephilic offenders (who offended against victims between the ages of 12 and 15). An analysis of response time provided evidence for this assertion, with paedophilic type offenders faster to respond to stimuli when child and sex shared the same key, and hebephilic type offenders faster to respond to stimuli when adult and sex shared the same key. This technique has been used to measure associations

between numerous concepts, in various domains, such as social and clinical psychology as well as forensic. The IAT is often used to determine implicit attitudes that play a role in stereotyping or prejudice (e.g., Greenwald et al., 1998), as the major appeal of such a task is the ability to indirectly measure attitudes that participants may wish to conceal from others, or that they are not aware of themselves (Fazio & Olson, 2003).

Studies investigating the reliability and validity of various IAT scoring protocols has led to the development of the *D* algorithm, which is considered to be the optimal method for scoring the IAT (Greenwald, Nosek & Banaji, 2003). This algorithm involves calculating mean reaction times (RTs) for each of the stages where two concepts occupy one response key. Then, the difference between these two scores is calculated and divided by each participant's pooled standard deviation. So, using the Brown et al. (2009) example, mean RTs to the trials in which child and sex occupied the same key were subtracted from the mean RTs to the trials in which adult and sex occupied the same key. This score would then be divided by each participant's pooled standard deviation to give *D*. A *D* value of zero then indicates no implicit association between children and sex or, more simply, no differences between reaction times to the different critical phases. A negative value for *D* indicates an implicit association between adults and sex, and finally, a positive value for *D* indicates an implicit association between children and sex. The *D* algorithm is considered to be an improvement on past scoring methods, as it outperforms alternative scoring methods in rigorously controlled studies, and is therefore

recommended by Greenwald et al. (2003) as a replacement for previously used algorithms, such as the *C* algorithm.[6]

The predictive validity of the IAT has been rigorously tested in several domains, either by comparing responses to the measure with subsequent behavioural data (e.g., Dovidio, Kawakami, Smoak, & Gaertner 2009; Wilson, Lindsey, & Schooler, 2000) or through a 'known-groups' validity approach (Fazio & Olson, 2003). In this approach, two groups of individuals respond to the implicit task in an expected way (i.e., Japanese-Americans and Korean-Americans display more positivity towards their respective ingroups; Greenwald et al., 1998). Furthermore, test re-test reliability of the IAT has been shown to reach a respectable level of .6 or higher (Bosson, Swann, & Pennebaker, 2000; Greenwald & Nosek, 2001).

The Lexical Decision Task (LDT).

The LDT works on the basis that participants are faster to respond to words that are semantically related than words that are unrelated. This paradigm then can be used to examine whether individuals hold semantic links between concepts, similar to the basis of the IAT that assesses whether an automatic link exists between concepts. The difference with the LDT is in the task that participants complete. In the LDT, participants are presented with a letter string which they must identify—as quickly as possible—as either a real word or a non word (a made up, nonsense word). Preceding these target words is some form of prime, using either words or images. In trials where the prime is semantically related to the letter string, participants will be faster

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[6] Known as the "conventional scoring procedure".

to identify that letter string as a word than they would if the prime was unrelated (Neely, 1991). Figure 3.2 shows a representation of the computer screen on which a standard LDT is implemented. The target word appears in the centre of the screen, and typically labels at the bottom denote which key should be pressed to chose whether the target is a word or nonword. As in the IAT example, the dashed line indicates the correct response in this example.

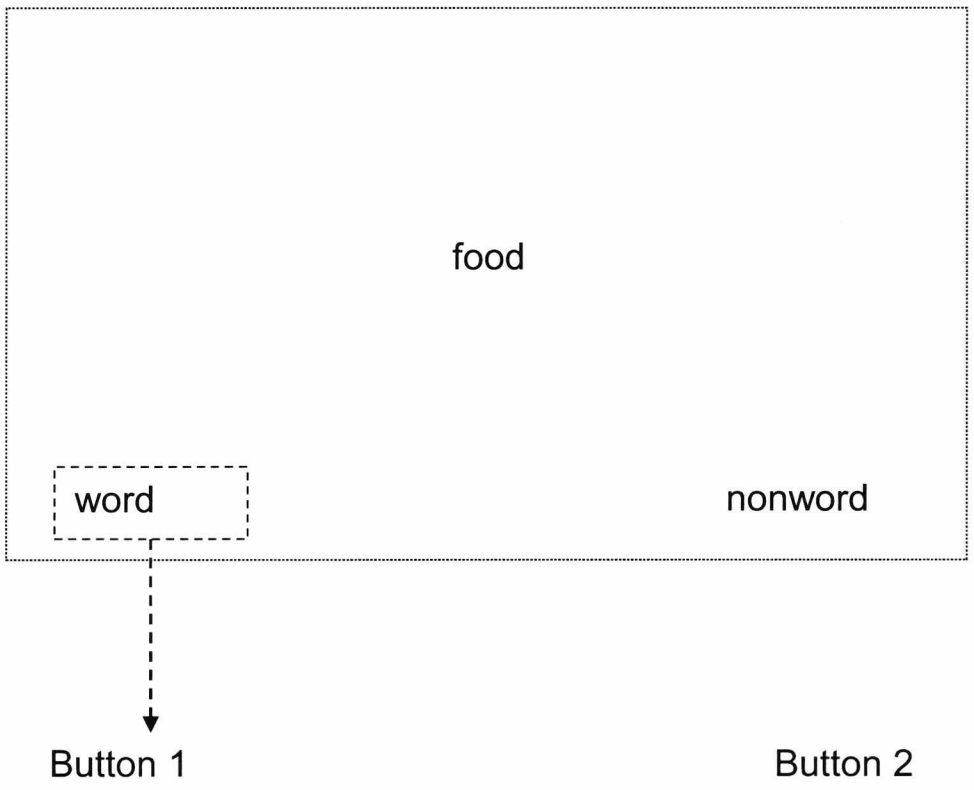

Figure 3.2. Representation of the computer screen in a standard LDT.

Many different versions of the LDT have been designed in order to examine different relationships between concepts. For example the first LDT, performed by Meyer and Schvaneveldt (1971), which demonstrates the paradigm in its most simple form, asked participants to identify whether two words—presented simultaneously—were real words or non words. Results suggested that participants were quicker to make this

decision when the words were semantically related (e.g., *bread* and *butter*) than when they were unrelated (e.g., *doctor* and *butter*). Most LDTs use the sequential priming paradigm, in which a contextual prime precedes the letter string that forms the lexical decision. Primes can be images, words, or even incomplete sentences. Slightly more complex methodologies utilise priming theory of sentence context (e.g., Forster, 1981; Schuberth, Spoehr & Lane, 1981), employing the rationale that the recognition of a word in a sentence is altered by the linguistic context of the rest of the sentence. For example, in a sentence such as "John ate the food", the target word "food" will be recognised faster than other target words, such as "foot". Food is semantically related to the meaning of the sentence, whereas foot is not appropriate to the sentence context (Forster, 1981). Researchers have utilised this effect by designing LDTs in which incomplete sentences represent the priming stage, and the target word that follows either completes the sentence in a semantically appropriate manner, a non appropriate manner, or with a non word. So in the previous example, participants would be presented with the incomplete sentence "John ate the…", before being presented with the target word—either "food", "foot", or a non word. Then, as per the usual LDT protocol, participants would indicate whether that target letter string was in fact a word or not.

This sentence priming method has been utilised by researchers assessing schematic content in several different populations, investigating factors such as attachment style (Baldwin, Fehr, Keedian, Seidel & Thomson, 1993; Mikulincer, 1998; Mikulincer, Birnbaum, Woddis, & Nachmias, 2000), stereotypes (Kay & Jost, 2003) and—most relevant to this thesis—the ITs of child molesters (Keown et al., 2008a). Interestingly, given the fact that most of the cognitive operations research has been

conducted by social psychologists investigating rape supportive cognition, most of the researchers utilising implicit tests to measure offence supportive cognition in child molesters are forensic clinical researchers. These studies, and other social psychology studies that use similar implicit methodology, shall be discussed shortly.

Measuring Automatic Links Between Concepts: Shared Cognitive Structures

Further to Gray and colleagues', and Nunes and colleagues' work investigating the link between children and sex in child molesters, and the earlier social psychological work on sexual harassment (e.g., Bargh et al., 1995; Pryor, 1987; Pryor & Stoller, 1994; Pryor et al., 1993) two recent social psychological studies have employed similar methodology to identify the automatic link between power and sex in unincarcerated rapists (Leibold & McConnell, 2004), and rape prone men (Chapleau & Oswald, 2010), with mixed results. This again highlights the differences between forensic clinical psychology research and social psychology, as forensic clinical researchers have begun to adopt similar measures to those employed by social psychologists for examining child molesters' offence supportive beliefs, but have not utilised these methods for investigating rapists' offence supportive cognitions, or indeed those cognitions of unincarcerated rapists, or rape prone men.

Leibold and McConnell (2004), in their social psychological study, employed the sequential priming paradigm as part of a LDT to determine whether unincarcerated rapists had automatic links between women and four concepts hypothesised to be related to sexual aggression: sex, hostility, suspicion, and power. The researchers theorised that a cognitive association between women and sex would manifest as

unincarcerated rapists' inability to accurately perceive women's behaviour. Furthermore, a strong link between women and hostility in memory was hypothesised to be the root cause of hostile attitudes towards women found in unincarcerated rapists. In relation to links between suspicion and women, the authors proposed such a link would provide evidence for Malamuth's "suspiciousness schema" (see Chapter Two). Finally, a link between power and women was hypothesised to demonstrate an association between need for power and sexual attraction.

In this study, a fairly large sample (n = 213) of male college students completed the Coercive Sexuality Survey (CSS; Rapaport & Burkhart, 1984), a self report questionnaire that measures the frequency and degree of past sexually aggressive behaviours. From this sample, 39 men from extreme ends of the CSS distribution were invited to take part in the LDT. Of these men, 20 reported no sexually aggressive behaviours, forming a non offending control group, and 19 reported engaging in some degree of sexually aggressive behaviours in past romantic relationships, forming a group of unincarcerated rapists.

In order to assess the strength of the associations between women, and the four concepts of sex, hostility, power, and suspicion, an LDT was implemented. In this computer based task, participants were presented with target letter strings on which they were requested to make a judgement about whether the letter string represented a word or a non word. These target words were made up of critical words—those that represented the four concepts: sex, hostility, suspicion, and power—as well as neutral words, and non words. Preceding the presentation of these words, participants were presented with an image prime, of a picture of either a man or a woman, or a neutral,

baseline prime. The hypothesis, according to the LDT paradigm is that participants will be faster to make the lexical decision judgement when they have a strong association in memory between the prime and the concept represented by the critical word. In this particular study then, the authors hypothesised that unincarcerated rapists would be faster to recognise the critical target words, after the concept of women was primed, than non sexually aggressive males.

Results indicated that unincarcerated rapists had stronger associations in memory between women and sex, and women and hostility, relative to non offending men. However, no relationship was observed between unincarcerated rapists' associations for women and suspiciousness, or women and power. The lack of relationship regarding suspiciousness and women is interesting considering Malamuth's "suspiciousness schema" hypothesis, for which research evidence has been reported (Malamuth & Brown, 1994). The failure of this study to uncover an association between women and power in unincarcerated rapists is also of interest. Leibold and McConnell (2004) point out however, that participants who had a stronger association between women and sex (regardless of their level of sexually aggressive past behaviour) also had significantly *weaker* associations between women and power. This implies that men who associate women strongly with sex also see women as less powerful, regardless of whether they have sexually offended or not. This finding is very interesting, and raises further questions about the prevalence or frequency of rape supportive cognition in non sexually aggressive males.

The most recent study that has investigated automatic links between sexual offending related concepts also employs a non offending sample, and examines the link between

power and sex concepts (Chapleau & Oswald, 2010). In this social psychological study, Chapleau and Oswald administered a Rape Proclivity measure (Chiroro, Bohner, Viki & Jarvis, 2004) to 108 male college students, alongside an implicit measure of the automatic links between power and sex (an IAT), an explicit measure of power-sex beliefs devised and tested by Chapleau & Oswald in an initial study, and a measure of rape myth acceptance (Illinois Rape Myth Acceptance Scale: Payne, Lonsway & Fitzgerald, 1999). The findings are illuminating—men who scored higher on the Rape Proclivity measure demonstrated an automatic power-sex link as measured by the IAT, as well as achieving higher scores on the explicit measure of power-sex associations compared to men who obtained low scores on the Rape Proclivity measure. This both supports the notion that more sexually aggressive men hold offence related cognitive structures in memory and offers a tantalising glimpse into the potential knowledge that could be uncovered by employing both implicit and explicit methodology.

Identifying Schema or ITs

To date, there is little research that examines the offence supportive schema, or implicit theories, of rapists using implicit measures. There have however been some innovative methodologies utilised by forensic clinical researchers for the study of implicit theories in child molesters (e.g., Gannon et al., 2006; Keown et al., 2008a). As mentioned previously, Keown et al. (2008a) utilised the LDT to measure the five ITs thought to be held by child molesters (Ward & Keenan, 1999). In this study participants were presented with incomplete sentences that were either completed by a word that created an offence supportive statement, a word that created a non offence supportive (or neutral) statement, or a non word. Participants had to indicate whether

the target word was a real word or a non word, and this reaction time was recorded. Keown et al. (2008a) predicted that child molesters, relative to offender controls and non offending community controls, would be faster to respond to words that were consistent with offence supportive contextual sentences. However, child molesters did not appear to show increased speed at recognition of offence words across all trials. When response times were examined for each IT however, it was revealed the child molesters did make the lexical decision quicker when judging words that completed the sentence reflecting the IT *uncontrollability* in an offence supportive manner. An example of such a sentence is "Sexual relations with children can not be…", followed by "helped" for the IT consistent version or "allowed" in the non IT consistent version. Given the robust reputation of the LDT, the authors argue that the lack of findings for the other four ITs may suggest that child molesters' offending behaviour is not driven by the false beliefs represented by ITs. This is an interesting study and an innovative way of using an implicit measure in this domain. This also demonstrates a gap in the literature regarding the ITs, or offence supportive schema, of rapists or rape prone men however, as to date researchers have not adapted these methodologies for use with this population. One study has however used such a method to examine the sexual fantasies of rape prone men, finding that high rape prone men hold more active fantasies than men low in Rape Proclivity (Bartels & Gannon, 2009).

Another method of assessing offence supportive schema is an interpretative bias task. Gannon and Rose (2009) utilised the implicit memory paradigm to investigate the offence supportive schemata of female child molesters. This paradigm, which had previously been used in forensic and clinical populations for similar purposes

(Copello & Tata, 1990; Eysenck, Mogg, May, Richards & Matthews, 1991), proposes that individuals will attend to, and interpret ambiguous stimuli, in a manner consistent with their schema. So, in the case of female child molesters, for whom Gannon and colleagues identified two potential ITs for (*men are dangerous,* and *the sexualisation of children*), these women would be likely to interpret ambiguous stimuli, in a manner that fits with beliefs about the dangerousness of men, for example. Furthermore, once interpreted in that manner, the ambiguous stimuli would then be subsequently recalled as representative of such a belief. To investigate this, Gannon and Rose devised 32 ambiguous sentences that could either be interpreted in an offence supportive way (reflecting two of the ITs thought to be held by female child molesters: *Men are dangerous*, *the sexualisation of children*), or a neutral, non offence supportive way. The study comprised of two phases, the encoding phase, in which participants read each ambiguous sentence, and a recognition phase. After a short filler task, participants undertook the recognition phase, where they were shown either the offence supportive or non offence supportive interpretations of each ambiguous sentence. Participants were asked to indicate whether they recognised the meaning of the sentence from those that they had seen earlier. In keeping with the memory recognition paradigm, Gannon and Rose predicted that female child molesters would be more likely to recognise the offence supportive sentences in the recognition phase, after presumably interpreting and encoding the original ambiguous sentences in this way. Results indicated that the female sexual offenders interpreted ambiguous male related information in a threatening manner—demonstrated by increased recognition for the threatening versions of the sentences designed to represent the *men are dangerous* implicit schema. This, the authors argue, provides evidence of biased social processing, and thus evidence of a *men are dangerous* type schema.

Conversely to this finding however, no corresponding pattern was observed for the sentences designed to measure *sexualisation of children.* The successful use of such an implicit measure for investigating cognition of female sexual offenders could certainly be adapted for use with sexually aggressive men, with potential for designing sentences that represent the five ITs thought to be held by rapists (Polaschek & Ward, 2002). This methodology has also been used to investigate the *children are sexual beings* IT in child molesters (Keown et al. 2008b), although in this study no significant differences were found between child molesters and non sexual offender controls in their recognition of IT consistent sentences. Again, this study is an example of forensic clinical research, and to date this method has not been used to examine the rape supportive cognition of either rapists, unincarcerated rapists, or rape prone men.

Measuring Cognitive Operations

As discussed in detail in Chapter Two, social psychological researchers measuring the cognitive operations involved in sexually aggressive behaviour have also recognised the need to use more indirect methods in this domain, rather than relying solely on self report measures (e.g., Lipton et al., 1987; Malamuth & Brown, 1994). This body of research shall not be recounted here, however it is necessary to point out that there is still potential to use implicit methods in this area, alongside the more traditional methods used by previous research (e.g., presentation of video interactions, conversations with confederates). The interpretative bias task used by Gannon and Rose (2009) in their examination of female child molesters ITs for example presents an opportunity to assess the cognitive processing skills of sexually aggressive men. Although this design is more commonly referred to as a measure of schema, in actual

fact the task itself relies on interpretation of stimuli, so in this way the task gives the researcher insight into the potential biases in processing participants may exhibit, as well as the schema driving this bias. Furthermore, despite the wealth of research investigating the cognitive operations of rapists, or rape prone men, many of these studies were conducted nearly two decades ago, before many of the current theoretical models of sexual offenders' cognition were proposed. For this reason it would be extremely useful if the issues investigated by researchers in these older studies could be revisited in light of these newer theoretical ideas, such as Ward's (2000) conceptualisation of ITs.

Thus far, this chapter has discussed both explicit and implicit methodologies for investigating sexual offender's cognition. We have seen that there are several disadvantages associated with the use of explicit measures, and it appears that implicit measures may be useful in overcoming these issues. Several different implicit measures, such as the IAT and the LDT, have been discussed and some specific relevant examples have been described. The fact that researchers in the domain of sexual offending have utilised such measures successfully demonstrates the usefulness of such methodology. However, to date it appears that most of this research focuses on the cognition of child molesters, and in addition tends to examine one aspect of cognition in isolation from other factors—as with the body of research discussed in Chapter Two. These gaps in the literature provide an opportunity to develop a research agenda for investigating the offence supportive cognition of rape prone men using implicit measures.

Different Disciplines: Different Approaches

As we have seen, researchers take different approaches to investigating this domain. In earlier studies investigating the cognitive operations thought to be involved in sexual offending, social psychologists relied predominantly on samples of unincarcerated rapists and rape prone men. Early forensic clinical research however, focussed more on cognitive structure and products, through self report questionnaires and interview studies of offence supportive cognition in child molesters and incarcerated rapists. More recently, social psychologists have adopted cognitive based methods to investigate cognitive structure in rape prone men, and men likely to sexually harass, whilst forensic clinical psychologists have adopted similar methods for investigating ITs, though almost exclusively in child molesters. As well as these two approaches being disparate, with little dialogue between the two camps, there are also gaps in the current body of literature. Most prominent is the lack of research into the ITs of either rapists, unincarcerated rapists, or rape prone men, despite the increasing amount of research conducted with child molesters. It seems then, that the social psychology approach deals mostly with unincarcerated rapists, investigating cognitive structure very similar to the ITs being investigated with child molesters by the forensic clinical approach. Furthermore, each approach conceptualises offence (or rape) supportive cognition slightly differently.

The social psychology approach, for example, conceptualises rape related cognition as automatic links between concepts, that form one cognitive structure (e.g., Bargh, et al., 1995; Pryor & Stoller, 1994). In taking this approach, researchers postulate that men who sexually harass women (or are likely to sexually harass women) and rape

prone men have an unconscious, automatic cognitive link between the concepts of sex and power in memory, and this link leads to misperceptions and misinterpretations of situations and females behaviour, through the automatic activation of one concept following exposure to the other. In this way, Pryor and Stoller (1994) describe sexuality and dominance as part of the same cognitive structure.

This contrasts with theorists in the forensic clinical literature, such as Ward and colleagues (Polaschek & Ward, 2002; Ward, 2000; Ward & Keenan, 1999), who conceptualise offence supportive cognition differently—as *offence supportive schemata*—that may facilitate or motivate sexual offending behaviour through bias that occur during information processing. As discussed in Chapter One, Ward (2000) suggests that sexual offenders, as a result of unusual experiences during childhood, build up a set of schemata that represent core beliefs relating to women, appropriate sexual behaviour, and the world in general, that differ from non offenders. These offence supportive schemata—ITs (Ward, 2000)—are accessed by sex offenders during relevant situations, and used as causal theories to help understand and interpret their environment.

Although these two approaches differ in the way they conceptualise offence supportive cognition, they actually share several key similarities; both refer to knowledge stored in cognitive structures as a result of life experiences, both postulate that the organisation of these structures facilitates, or motivates sexual offending behaviour, and both hypothesise that these cognitive structures, and the role they play—through information processing—in the offence result in cognitive products

that reflect such offence supportive cognition (i.e., offence supportive statements, attitudes or behaviour).

It is these striking similarities that highlight the potential usefulness of synthesising these approaches to improve our understanding of offence related cognition. A more in depth analysis of both bodies of literature reveals just how these two separate approaches seem more suited to become amalgamated.

A synthesis of the different approaches.

As discussed throughout this thesis, the forensic clinical approach tends to use samples of convicted offenders, and generally focuses on the offence supportive cognition of child molesters, rather than rapists. This research approach also seems to concentrate on measuring cognitive products, through the use of self report measures. More recently, there have been several attempts by forensic clinical researchers using implicit measures, to assess the strength of associations related to sexual interest in child molesters (i.e., associations between children and sex), but unlike the social psychology research into sexual harassers, in this domain there has been little attempt to measure the operations, or structures related to ITs, in rapists or rape prone men. The only study to date that has examined an automatic link between concepts thought to underlie ITs was conducted with child molesters (Mihailides et al., 2004). In contrast, the cognition of rapists has often relied on the self report measures of cognitive products, or investigated cognitive operations in the broader context of social skills (e.g. Lipton et al, 1987).

The idea that cognitive processing is involved in the offence process put forward by both these approaches provides an excellent platform for research. If, as postulated by these researchers, biases in information processing occur in sexual offenders due to the presence of cognitive structures, such as automatic links between concepts or offence related schema, then it may be possible to investigate the cognitive process that underlie these biases to help further understand the motivational processes involved in sexual offending.

While the approaches discussed use different terminology when describing offence supportive cognition, they both refer to cognitive structures that play a role during information processing. The social psychology approach concentrates on the priming effect of one concept, and how that triggers an affective state or a goal automatically, while the forensic approach is more focussed on offence related schema, that are used as knowledge stores during interactions, therefore biasing processing. The following example illustrates the operations involved in the social psychology approach, and the extent to which this shares similarities with the forensic approach.

A male finds himself in a situation where he has social power over a woman (for example, in the workplace). These feelings of power automatically activate a sexuality goal or an affective state associated with a sexual interaction. This happens automatically, and without conscious awareness, and for this reason the male misattributes these feelings to communication received from the female. He misinterprets her communication as sexual, and is likely to view her as sexually attractive due to the activation of sex concepts. According to Bargh, Pryor and colleagues, the male is also likely to perceive the women as flirtatious and sexually

receptive, which may lead him to engage in sexual behaviour with her—regardless of her actual communication.

Social psychologists such as Bargh et al. (1995) and Pryor and Stoller (1994) argue that this sequence of events explains why men who have sexually harassed females in the workplace frequently profess that they did not act inappropriately and that the female was as sexually engaged as he was. This chain of events is very similar to that proposed by forensic clinical theorists when explaining the role of offence supportive schema or ITs. In this approach, theorists, such as Ward (2000) suggest that due to the implicitly held beliefs, males misperceive or misinterpret females' behaviour, and then make sexual advances based on this inaccurate information. Furthermore, as in the previous scenario, the male may then make statements similar to that of the sexual harasser and maintain that the female was as engaged in the sexual act as he was. This scenario mirrors that of the social psychology approach, with one key difference. The sexual harasser scenario requires a particular context—a power scenario—to activate the sexual affect or goal. Although Ward's (2000) proposal of implicit schema theory does not highlight the role of context, Ward's (2009) extended mind theory of cognitive distortions in sex offenders posits that sex offenders may not demonstrate distorted thinking, or offence supportive cognition, in every situation, and instead these cognitions are likely to be context dependent. This issue lends further support for the potential of synthesising the social and forensic approaches. It is possible that ITs, or offence related schema become relevant once the sexuality concept has been activated by a power situation. In this way, it could be that an automatic power-sex link acts as a driving force for three of these ITs; *women are sex objects*, *male sex drive is uncontrollable* and *entitlement*, and that such links between

other concepts may be driving the remaining ITs (e.g. an automatic woman-dangerous link for *women are unknowable*). In this way the power-sex association and the related activation of affective states and goal driven behaviour are specific key operations that occur in specific contexts, that activate the more generalised belief system of the ITs, which in turn allows further information processing biases to occur. In fact, it is possible that these two phenomena may have a unidirectional association, with the sex power link driving ITs in some contexts, and the ITs activating the power-sex link in other situations.

The next step: Investigating the rape supportive cognition of rape prone men.

Having explored both the forensic clinical literature and the social psychological literature on the offence supportive cognition of rapists, unincarcerated rapists, and rape prone men, it is clear that some gaps exist that might be more fully explored by amalgamating both approaches. It is now important to design a research agenda that aims to utilise theory and methodology from both approaches, in order to investigate the rape supportive cognition of rape prone men. This research agenda then represents the first attempt at a systematic examination of the rape supportive cognition of rape prone men, as thus far the literature for this population is scarce. Most of the research conducted with rape prone men thus far was conducted almost two decades ago, and since then strong models of sexual offenders cognition have been proposed—such as Ward's IT model—which have not as yet been empirically tested with rape prone men.

Research Agenda

The main aim of this thesis is to conduct a systematic investigation into all levels of rape supportive cognition in rape prone men. As Chapters Two and Three have explained, the current literature on such cognition is hampered by various methodological and conceptual difficulties, and this thesis aims to address these issues by employing implicit research measures—such as those used by social psychologists to investigate sexual harassers' cognition—to examine the rape supportive cognition of rape prone men. The types of implicit measures utilised by social psychologists when examining the shared cognitive structure of power and sex concepts shall be used to investigate similar cognitive structure in rape prone men, as well as cognitive structure in the form of Ward's ITs. Finally, in order to examine all levels of cognition, the questionnaire methods traditionally used by forensic clinical psychologists shall also be utilised in order to investigate the cognitive products of rape prone men, and an innovative methodology will be performed to measure the final component of cognition, that is, behaviour. Figure 3.3 illustrates how elements of the social psychological and forensic clinical approaches have been combined. This research agenda then forms three core aims; (a) to amalgamate the theory and research methodology of social psychology and forensic clinical psychology in the area of rape supportive cognition, (b) to use these methods to investigate the rape supportive cognition of rape prone men, systematically exploring each level of cognition, and (c) to investigate the relative utility of traditional explicit measures as favoured by the forensic clinical approach, compared to the implicit methods more often used by social psychologists in this domain.

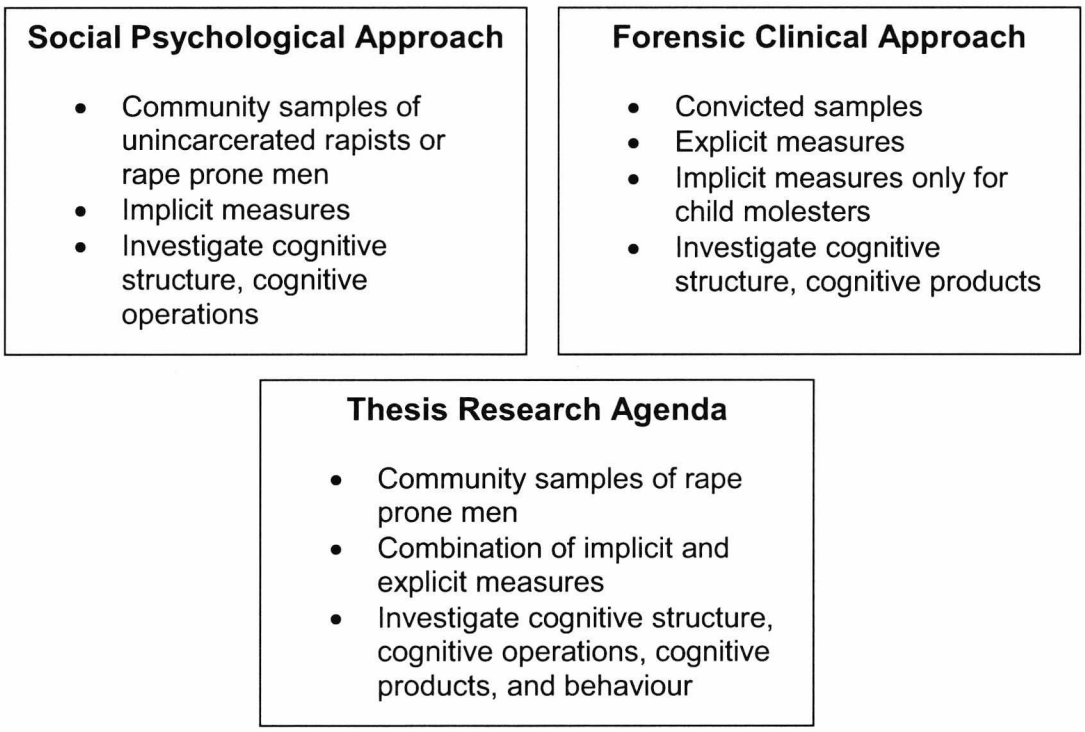

Figure 3.3. Approaches to research literature examining the offence supportive cognition of sexual offenders, and community males.

Four empirical studies have been designed to examine cognitive content, processing, products and behaviour. This research agenda closely follows Ward's ground breaking theory of rape supportive cognition, and Hollon and Kriss' framework of cognition, as well as incorporating theoretical ideas and measurement techniques from social psychology.

To date, despite the fact that much research into rape supportive cognition, such as endorsement of rape myths, has been conducted with rape prone men—men who demonstrate some likelihood, or proclivity towards rape—theories such as Ward's Implicit Theory model have yet to be applied to such a population. This is at odds with the reported usefulness of examining such issues in a non incarcerated sample.

Therefore this thesis represents the first attempt to systematically examine all levels of rape supportive cognition in a sample of rape prone men.

In the first study (Chapter Four), a proposed automatic link between power and sex concepts is examined in rape prone men using the Implicit Association Task (IAT) alongside explicit measures of the same link (Chapleau & Oswald, 2010), and rape supportive cognitive products (The Rape Scale; Bumby, 1996). The second study (Chapter Five) describes the first attempt at identifying Ward and Polaschek's five rape ITs in rape prone men, using a Lexical Decision Task. Study Three (Chapter Six) utilises an implicit memory task to examine possible interpretative bias that is thought to occur as a result of ITs, and finally Study Four (Chapter Seven) describes an interaction task designed to assess behavioural response.

Studies One-Three implement implicit tasks alongside more traditional self report measures of rape supportive cognition, in order to examine the relative utility of both methods, as well as examining links between cognitive structure (as measured by the implicit tasks) and cognitive products (as measured by the self report questionnaires). Study Four involves an interaction with a female confederate, to allow for observational data of participants' behaviour, as well as self report measures of rape supportive cognition, and anger and aggression.

Chapter Four: Investigating a Power-Sex link in Rape Prone Men

Introduction

As discussed in Chapters Two and Three, when investigating the offence related cognition of rape, researchers have taken one of two approaches in conceptualising the idea of offence related cognitive structures. Social psychologists discuss the possibility that men likely to sexually aggress have an automatic association between the mental concepts of power and sexuality and that these two concepts share one cognitive structure. Forensic, clinical theorists however propose that men who have committed sexual offences against women hold offence related schema—cognitive structures in which maladaptive beliefs about women, sexuality and the world in general are organised. Despite these disparate approaches, it is proposed that the operations involved in each of these theories share key similarities, and as such may be synthesised into one model of rape supportive cognition.

In Chapter Three existing social psychological theory and empirical evidence was used to postulate that an automatic power sex link may act as a driving force for rape supportive schema. This study attempts to find evidence for this automatic link, by measuring the strength of association between power and sex concepts in rape prone men.

Cognitive Structures and Information Processing

Automatic links between concepts.

The central tenet of social cognition is that the way information is organised in memory—as cognitive structures—has an effect on the way incoming social information is encoded, through perception and interpretation (Dodge & Frame, 1982;

Fiske & Taylor, 1991; Hollon & Kriss, 1984). In the social psychological approach to rape supportive cognition, the two concepts of power and sex are thought to be so strongly linked that they form one cognitive structure (e.g., Bargh et al., 1995; Pryor & Stoller, 1994). Research evidence suggests that in rape prone men, power and sexuality concepts are linked unidirectionally, with sexuality concepts automatically activated when an individual finds themselves in a position of power, or when power cues are perceived. This automatic activation of the sexuality concept is thought to have a non conscious influence on sexual feelings, possibly activating a sexuality related goal. Due to the non conscious element of this activation, an individual is then likely to assume that these feelings are a result of sexual context, and therefore misattribute any incoming social information as being sexuality related (Bargh et al., 1995).

To date, most of the theory underlying this automatic link has been related to sexual harassers, where the power cues that activate sexuality goals occur during an interaction with a subordinate female in a work place setting (e.g., Bargh et al., 1995; Pryor & Stoller, 1994). In this scenario, as described above, sexuality concepts will be activated automatically due to the power context, possibly leading the male protagonist to misperceive the female's communication and assume her behaviour is sexual. Furthermore, upon perceiving the situation as sexual, the male may misattribute his sexual feelings for mutual sexual attraction. This is then likely to lead to him making inappropriate sexual advances. A fundamental finding from the sexual harassment literature (e.g., Bargh et al., 1995; Pryor & Stoller, 1994) is that when such an individual is later accused of sexual harassment, he tends to appear shocked that his behaviour was deemed inappropriate, frequently making statements such as

"she was flirting with me, she wanted the attention I gave her". These kind of remarks are strikingly similar to the rape supportive statements made by rapists, which are hypothesised to represent rape supportive cognition.

The use, or abuse of power is one of the key factors of interest, as the issue of power over females is relevant to sexual aggression. For decades, theorists (e.g., Brownmiller, 1975), have argued that rape is motivated by the need for power, or dominance. Furthermore, the link between dominance and sexuality in rapists and rape prone men has been demonstrated through both forensic clinical (e.g., Groth & Birnbaum, 1979) and social psychological research (e.g. Malamuth, 1986).

The strength of an automatic association between power and sex concepts and the relationship between such an association and Rape Proclivity has been investigated recently in a sample of US college men (Chapleau & Oswald, 2010), as discussed in Chapter Three. In this study, participants completed an implicit power-sex measure—an Implicit Association Task (IAT)—alongside questionnaire measures of rape proclivity, past sexually aggressive behaviour, rape myth acceptance, and an explicit measure of power-sex beliefs. As discussed in Chapter Three, the IAT assesses the strength of an automatic association between mental representations of concepts in memory. In this task participants rapidly categorise words according to concept. Easier pairings—faster responses—are interpreted as being more strongly associated in memory than more difficult pairings—slower responses—that are interpreted as being less strongly associated in memory. Findings from Chapleau and Oswald's study suggest that on average all participants demonstrated a stronger implicit association between power and sex, than weakness and sex: with participants

responding faster to trials when the concepts of strength (representing power) and sex were paired together on one response key, compared to when the concepts of weakness (representing a lack of power) and sex were paired together on one response key. Furthermore, men who reported some level of Rape Proclivity demonstrated a relatively stronger implicit power-sex association than weakness-sex association compared to men reporting no proclivity.

Of further interest in this piece of research is the examination of relationships between attitudinal measures, such as rape myth acceptance and the power-sex link. Chapleau and Oswald (2010) proposed that the implicit power-sex link (measured via the IAT), and the explicit measure of power-sex beliefs would precede rape myth acceptance and together these variables would predict Rape Proclivity. Using path analysis, the authors found some support for this hypothesis, with the power-sex link measured explicitly and implicitly appearing to underlie rape myths. However, in terms of predicting Rape Proclivity, only rape myth acceptance contributed to the variance, and neither measure of the power-sex link (either implicitly through the IAT, or explicitly through the beliefs questionnaire) contributed to this variance. In other words, the power-sex link in both forms only indirectly predicts Rape Proclivity, through rape myth acceptance. The authors attempt to explain this finding by suggesting that rape myths are part of a learned system, in which consensual sex is associated with power.

This research study and the earlier studies conducted by Bargh, Pryor and colleagues suggest that an automatic power-sex link does exist in men who are likely to sexually harass women and also in rape prone men. The first study of this thesis aims to replicate some aspects of the previously discussed research in a UK population of rape

prone men, through the investigation of the strength of an implicit power-sex link alongside a self report measure of rape supportive cognitions and the same self report power-sex beliefs measure developed by Chapleau & Oswald (2010).

Study One: Investigating Cognitive Structure

This study attempts to measure the strength of association between power and sex in a sample of rape prone men using an IAT. The IAT requires two concepts that have opposite dimensions, in order to test the relative association between these opposites. So, in order to examine a power-sex link, the IAT needs to have a category label that represents power, and also the opposite of power. In order to do this, the dimensions "strong" and "weak" were adopted as category labels for the power concept. Therefore, the presence of a stronger association between "strong" and "sex" concepts, compared to the association between "weak" and "sex" concepts, may be interpreted as evidence of a single cognitive structure that represents both power and sex. In order to examine how this cognitive structure might be related to rape supportive cognitions identified by forensic clinical researchers, this study also implements a self-report measure of rape supportive cognition, as well as an explicit, self report measure of power-sex beliefs.

Measurement of cognitive structures: The Implicit Association Task (IAT).

As discussed in Chapter Three, The IAT has been successfully utilised by researchers examining child sex offenders' sexual interest in children (Brown, 2006; Gray et al., 2003) and the offence supportive cognitions of child molesters (Mihailides et al., 2004; Nunes et al., 2007), and has proved to be a useful tool in measuring a whole

range of implicit attitudes and beliefs in all areas of psychology. The IAT assesses the strength of an automatic association between mental representations of concepts in memory. In this task participants rapidly categorise words according to concept. Initially participants categorise words into one concept (e.g. insects vs. flowers), by pressing one key for insect words and one key for flower words. In later trials, concept categories are interleaved, so two concepts share one key. For example, insect and unpleasant words are represented by one selection key and flower and pleasant words occupy the other key. When concepts are paired in this way, it is hypothesised that participants are quicker to respond when the two concepts sharing the key are also concepts that are linked in memory. So, if an individual holds a stronger association between insects and unpleasantness than they do between flowers and unpleasantness, then they will be faster to respond to trials where insect and unpleasant occupy the same key. Individuals who do not have such a strong link between these concepts however will respond slower to these trials, and may show a preference to trials where the opposite concepts share a key (such as flower and unpleasant words).

In the present study, the participants complete a power-sex IAT. In this task participants sort words into two different categories—power (strong vs. weak words) and sex (sex vs. non sex words). In this task men who hold an association between power and sex will presumably respond faster to trials in which concepts of strength and sex share the same response key, relative to their responses to trials in which concepts of weakness and sex share the same response key.

Explicit measure of rape supportive cognition.

In addition to completing the IAT, participants complete an explicit, self report measure of power-sex beliefs (Chapleau & Oswald, 2010) as well as a measure of rape supportive cognitions (The Rape Scale; Bumby, 1996). These explicit measures are included for two reasons; first, the power-sex beliefs measure is implemented in order to compare the relative utility of implicit and explicit measures of rape supportive cognitive structure, that is, the power-sex link. Second, analysing the relationships between the power-sex link and rape supportive cognition as measured by the Rape Scale, gives an opportunity to see whether such a cognitive structure might also be associated with the cognitions measured by the scale. As discussed in Chapter Three, the forensic clinical approach to cognition focuses on rape supportive cognition as belief systems such as schema, while the social psychological approach focuses more on shared cognitive structure. Therefore by implementing a forensic clinical self report measure alongside measures of shared cognitive structure, the relationship between the two can be examined.

Traditionally, the presence of rape supportive cognition has primarily utilised explicit measures, such as self report questionnaires or interviews only. As discussed in Chapters Two and Three, it is widely assumed that these methods are recording cognitive products, that whilst representative of deeper level cognitions such as cognitive operations and cognitive structures, can only indirectly measure these phenomena. Therefore, this study, by investigating these surface level cognitions at the same time as cognitive structures aims to identify the relationship between the two, whilst combining the forensic clinical, and social psychological approaches.

Rape Proclivity.

Participants all completed the Rape Proclivity measure, devised by Bohner et al. (1998) to determine their level of rape proneness. This measure creates an index of Rape Proclivity, and as such is a continuous variable.

Based upon the research evidence to-date four main predictions are made. First, it is predicted that men who score higher on the Rape Proclivity measure (rape prone men) will be quicker to categorise words when sex and power category labels occupy the same keyboard selection key, indicating a stronger association between these concepts in memory relative to low scorers (non sexually aggressive men). As discussed in Chapter Three, this strong association may be interpreted as evidence of a single cognitive structure that links these two concepts, which may also be seen as evidence for Ward's ITs that incorporate themes of sex and power (i.e., *women are sex objects*, *male sex drive is uncontrollable*, *entitlement*)

Second, it is anticipated that the hypothesised power-sex link in rape prone men will also be associated with a higher level of endorsement of rape supportive cognitive products (as measured by the Rape Scale). Such a relationship may be seen as evidence for different levels of rape supportive cognition (i.e., deep level cognitive *structure*, and end stage cognitive *products*).

Third, it is predicted that the strength of automatic link between power and sex as measured by the IAT will be related to levels of power-sex association as measured by the power-sex beliefs questionnaire (the explicit measure). It is anticipated that

men who hold this cognitive structure will be likely to endorse the statements on the questionnaire to some extent—although due to the self report nature a strong correlation between these two measures is not anticipated.

Finally, it is anticipated that scores from the IAT, and the two questionnaire measures can be used in a regression model to predict variability in rape proclivity. Within this regression model it is expected that the implicit measure of power-sex link (the IAT) shall be a better predictor than the explicit measure of power-sex beliefs, as this should not be as vulnerable to social desirability bias.

Method

Participants.

Participants were 69 males[7] aged between 18 and 37 (mean age 21.09 years, *SD* = 3.40) who volunteered to take part in a study titled "Word categorisation study". Participants were recruited through advertisements on research participant websites and on the University's student job page. Participants chose to receive either £5 for taking part, or five credits towards fulfilment of an undergraduate psychology course. Participants were primarily University students (93.5%). All participants had spent a minimum of 14 years in formal education.

Ethics.

Ethical approval was provided by the University Ethics Board. Participants were given an information sheet to read that detailed the study procedure, and explained

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[7] As stated in Chapter One, this thesis focuses on male perpetrated rape, or sexual aggression, against adult females, and as such only males shall be examined in this thesis.

that participants data would be stored anonymously in accordance with BPS ethical guidelines. Due to the sensitive nature of the data recorded in this study, participants were told that they did not have to answer any questions that they were not comfortable with, and that they could withdraw from the study without penalty. Once participants had read this information, and had directed any questions they had to the researcher, they provided informed consent to take part in the study.

On completion of the study the researcher briefly described the study aims to the participant, before giving them a written debrief. This debrief explained the study aims in more detail, and provided contact information should the participant have any concerns about the study, their participation, or the storage or handling of their data. Furthermore, telephone helplines were provided for participants who may have become distressed as a result of taking part in the study.

Materials.

Rape Proclivity measure.

The Rape Proclivity measure devised by Bohner et al. (1998) requires participants to read five realistic date rape scenarios, and asks participants to imagine themselves in the position of the male protagonist.

An example of one of the scenarios follows:

> You have gone out a few times with a woman you met recently. One weekend you go to a film together and then back to your place. You have a few beers, listen to music and do a bit of petting. At a certain point your friend realises she has had too much to drink to be able to drive home. You say she can stay over with you, no problem. You are keen to grab this opportunity and sleep

with her. She objects, saying you are rushing her and anyway she is too drunk. You don't let that put you off, you lie down on her and just do it.

Participants then answer the following three questions with respect to each scenario. "In this situation, how aroused would you be?" (1; not at all sexually aroused, to 5; very strongly sexually aroused); "In this situation, would you have done the same?" (1; would definitely not done the same, to 5; would definitely have done the same) and, "In this situation, how much would you enjoy getting your way?" (1; would not enjoy it at all, to 5; would greatly enjoy it). Scores on this scale range from 15 to 75, although Bohner and colleagues sum questions two and three across all five scenarios to create the measure of Rape Proclivity, with a range of 10 to 50. The Cronbach's alpha of the combination of these two questions is $\alpha > 80$. Bohner and colleagues have demonstrated that this measure is unaffected by social desirability $r\ (111) = .05$, $p > .61$ and in addition found that the measure correlates positively with men's self reports of past sexual aggression, $r\ (112) = .38$, $p < .001$.

Rape Scale.

The Rape Scale (Bumby, 1996)—an explicit measure of rape supportive cognition—consists of thirty-three statements, each followed by a 4 point Likert scale on which to rate agreement that excludes a 'neutral' response option. Examples of statements are "Men who commit rape are probably responding to a lot of stress in their lives, and raping helps to reduce that stress" and "Woman generally want sex no matter how they can get it". The Rape Scale has excellent psychometric properties (internal consistency $\alpha = .96$, test-retest reliability $r = .84$; Bumby, 1996). A 5 point Likert scale was used for the purpose of this study to ensure respondents had a neutral response option to rate their responses as in Gannon, Keown and Polaschek (2007).

Explicit power-sex measure.

Participants completed the explicit power–sex measure developed by Chapleau and Oswald (2010)—an explicit measure of the belief that sex is a means to achieve and express power over another person. The measure consists of 11 statements, each followed by a seven-point Likert scale ranging from 1 (not at all agree) to 7 (very much agree). Examples of statements are "Having sex means gaining possession of someone else's body" and "During sex, one person should be dominant and the other should be submissive". Chapleau and Oswald (2010) report internal consistency of α = .83, but did not report test-retest reliability.

The Implicit Association Task (IAT): A power-sex IAT.

Apparatus and task procedure.

Participants categorised 20 words in the IAT: five "strong" words (*control, influence, authority, dominant, superior*), five "weak" words (*fragile, frail, delicate, tender, insecure*), five "sex" words *(arousing, seduction, date, excite, kissing*), and five "neutral" words (*wardrobe, table, desk, cabinet, chair*[8]). These words were chosen from a list of words used for similar research purposes, and were confirmed as adequately representative of the relevant concepts by 15 postgraduate students, who were unaware of the purposes of the study. Words were rated by these participants using a five point likert scale ranging from one (not at all representative) to five (extremely representative). In order to be chosen for use in the IAT, each word had to

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[8] For the IAT to work successfully it is recommended that a neutral category contain words that form a coherent category of its own. Most researchers agree that the category "furniture" is useful for the purpose of neutral words. Therefore in this IAT, our "neutral" category was labelled "furniture".

achieve a mean score of four or above (i.e., fairly representative to extremely representative).

The IAT was created using the computer software E-Prime and was presented using E-Run. Written instructions and all sentences were presented in white, Times New Roman text on a black background. Participants made their responses using the computer keyboard and response times were recorded in milliseconds.

The E Prime programme controlled the random presentation of target words across blocks of trials. In line with previous research using the IAT procedure (e.g. Greenwald, McGhee, & Schwartz, 1998), four versions of the IAT were implemented to counterbalance stages of the IAT and presentation of category labels. Table 4.1 describes the sequence of blocks in the IAT procedure.

Table 4.1

Sequence of Trial Blocks in the Power-Sex IAT

Block	No. of trials	Function	Words assigned to left-key response	Words assigned to right-key response
1	20	Practice	Sex	Furniture
2	20	Practice	Strong	Weak
3	20	Practice	Sex + Weak	Furniture + Strong
4	40	Test	Sex + Weak	Furniture + Strong
5	20	Practice	Weak	Strong
6	20	Practice	Sex + Strong	Furniture + Weak
7	40	Test	Sex + Strong	Furniture + Weak

Note: For half the subjects, the positions of Blocks 1, 3, and 4, were switched with those of Blocks 5, 6 and 7 respectively as a counterbalancing measures. Furthermore, the order of category labels was switched for trials 3, 4, 6, and 7, for approximately half of the participants in each counterbalanced group.

Stimuli.

An ANOVA confirmed that word length (number of characters per word) did not differ significantly across category type (*strong, weak, sex, furniture words*), $F(3, 16) = 1.95, p = .16$.

Procedure.

Participants were invited to a psychology lab where they were given an information sheet to read, which explained what they would be asked to do, and informed them

that their responses would be anonymous and that they had the right to withdraw from the study at any time without penalty. Participants who were satisfied with this information signed a consent form to agree to take part and to demonstrate that they understood the procedure. Participants were tested individually. Participants were given verbal instructions on how the session was going to run (i.e., that they would complete questionnaires before the computer task or vice versa). Participants were given a unique ID code that was used to identify all their data. After completing the questionnaire portion of the study, participants sealed their questionnaire papers in a blank envelope before placing this into a box. When participants had successfully completed all stages of the experiment they were debriefed.

Results

Rape Proclivity.

Rape Proclivity was calculated by adding scores for questions two and three together across all 5 scenarios, as in Bohner et al. (1998). The final score therefore indicated the extent to which participants could imagine themselves acting in the same way as the male protagonist in the date rape scenarios, and how much they would enjoy getting their own way in such a situation. Scores could range from 10 to 50. In this sample the mean score was 17.43 (SD = 6.22) with an empirical range of 10 to 34, indicating slight floor effects, but still representing a sizable range of scores. Table 4.2 shows the descriptive statistics for the subscales of this measure. The mean, standard deviation and empirical range all closely resemble data reported by Bohner et al. (1998), cited in Chapter One. Reliability coefficient Cronbach's alpha ranged from good (α = .84) for arousal index, to acceptable (α = .72) for behavioural inclination index, to questionable (α =.67) for enjoyment index. However, for the

combined Rape Proclivity index (behavioural inclination plus enjoyment index), Cronbach's alpha was good (α = .85).

Table 4.2

Descriptive Statistics for the Rape Proclivity Measure Subscales

Variable	Mean (*SD*)	Empirical range
Arousal index	2.38 (0.80)	1.00-4.40
Behavioural inclination index	1.45 (0.50)	1.00-3.40
Enjoyment index	2.04 (0.86)	1.00-4.00

The Rape Scale.

Endorsement of rape supportive statements was calculated by adding the 33 items of the Rape Scale together. Scores could range from 33 to 165. In this sample, the mean score was 68.07 (*SD* = 14.95), with an empirical range of 44 to 135, indicating a good range of scores. Cronbach's alpha indicated excellent reliability (α = .91).

Explicit power-sex measure.

Level of power-sex beliefs was calculated by adding scores on the 11 items together. Scores could range from 11 to 77. In this sample, the mean score was 26.85 (*SD* = 10.00), with an empirical range of 13 to 51, indicating slight floor effects, but still a good range of scores. Cronbach's alpha indicated excellent reliability (α = .92).

The power-sex IAT.

On average, participants demonstrated an implicit association between power and sex (i.e., a power-sex link). That is, they responded, on average 50.03 msec faster during strong + sex trials relative to weak + sex trials (*SD* = 161.09 msec), and this was statistically different from zero, $t(68) = 2.58, p < .05$.

The implicit power-sex link was then calculated using the improved scoring algorithm by Greenwald et al., (2003)—the D algorithm—described in Chapter Three. Mean reaction times (RTs) were calculated for strong + sex trials and weak + sex trials from blocks four and seven (see Table 1. for sequence of trial blocks in the Power-Sex IAT). To calculate *D* for each participant, the mean strong + sex RT was subtracted from the mean weak + sex RT, and divided by each participants' pooled standard deviation. A *D* value of zero indicates no implicit association between power and sex. A negative value for *D* indicates an implicit association between weakness and sex, and finally, a positive value for *D* indicates an implicit association between strength and sex.

Then, using *D* as an effect size, participants' mean RTs on strong + sex trials were found to be approximately one-third of a standard deviation above zero, indicating the majority of participants had an implicit association between power and sex (*D* =.33 , *SD* = .44).[9]

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[9] Other scoring algorithms, such as effect size C, with and without removal of outliers were calculated, and each method elicited similar findings to the D algorithm.

Rape Proclivity and implicit power-sex link.

To test the first hypothesis, that rape prone men would demonstrate a power-sex link, through faster categorisation of words during the phases of the IAT in which strong and sex occupied the same selection key, correlational analyses were performed. Rape proclivity was not significantly correlated with power-sex *D* score, indicating that rape prone men did not have a stronger association between strength and sex concepts than non rape prone men (r = -.058, p < .64). Further, the direction of the relationship between these two variables was not as predicted—with higher scorers on rape proclivity more likely to demonstrate a weak-sex link rather than a strong-sex link. Table 4.3 shows descriptive statistics and correlations for Rape Proclivity, the implicit measure of power-sex (the IAT), and the Rape Scale.

Rape supportive cognition and implicit power-sex link.

To test the second hypothesis, that an implicit power-sex association would be related to endorsement of rape supportive statements, a correlational analysis was conducted. Scores on the Rape Scale (the measure of rape supportive cognition) were significantly negatively correlated with implicit power-sex *D* scores (r = -.28, p < .05), as shown in Table 4.3. This relationship indicates—contrary to the hypothesis—that the greater extent to which individuals endorsed rape supportive statements, the faster they were to react to weak + sex trials—indicating that these men had an implicit association between weakness concepts and sex.

Table 4.3

Descriptive Statistics and Correlations for Rape Proclivity, the Implicit Measure of Power-Sex (the IAT), the Explicit Measure of Power-Sex, and the Rape Scale.

Variable	*M*	*SD*	Rape Scale	Power-Sex IAT (*D*)	Power-Sex Beliefs
Rape Proclivity	17.43	6.27	.70**	-.06	.43**
Rape Scale	68.07	14.95	-	-.28*	.59**
Power-Sex IAT (*D*)	.33	.44	-	-	-.27*
Power-Sex Beliefs	26.85	10.00	-	-	-

**p <.001 *p < .05

Further correlational analyses were carried out between the explicit measure of power-sex beliefs, Rape Proclivity and the Rape Scale, and descriptive statistics and correlations can also be found in Table 4.3. A moderate, significant correlation was found between Rape Proclivity and the explicit measure of power-sex beliefs (r = .43, p < .001) and a large, significant correlation was found between endorsement of rape supportive statements, as measured by the Rape Scale, and the explicit measure of power-sex beliefs (r = .59, p <.001).

Implicit power-sex link and explicit power-sex beliefs.

Predicting Rape Proclivity.

The final hypotheses proposed that an automatic power-sex link and levels of endorsement of rape supportive statements would be predictive of Rape Proclivity.

To test this hypothesis a standard multiple regression analysis was carried out. The regression model consisted of three independent variables; the *D* score reflecting strength of power-sex association, level of endorsement of rape supportive statements as measured by the Rape Scale and the explicit measure of power-sex beliefs. In this method, all independent variables are entered into the regression equation at once. The dependent variable consisted of Rape Proclivity score. Analysis was performed using SPSS REGRESSION and SPSS EXPLORE for evaluation of assumptions. Table 4.4 displays the standardised regression coefficients (β), and adjusted R^2.

Table 4.4

Regression Coefficients of Predictors of Rape Proclivity

Variable	β	t	p
Power-Sex IAT (*D*)	.14	1.52	.13
Rape Scale	.68	6.33	.00
Explicit Power-Sex Beliefs	.12	1.07	.29

Adjusted R^2 = .50 *df* 3,67 F = 23.65, p <.001

R for regression was significantly different from zero, $F(3, 67) = 33.65$, $p < .001$, with R^2 at .53. The adjusted R^2 value of .50 indicates that a substantial amount of the variability (50%) in Rape Proclivity score is predicted by the model. However, only one regression coefficients differed significantly from zero; Rape Scale ($t = 6.33$, $p < .001$, $B = .29$).

Altogether, 50% of the variability in Rape Proclivity was predicted by the Rape Scale. The direction of the relationship indicates that men who score higher on the Rape Proclivity measure are more likely to endorse rape supportive statements as measured by the Rape Scale. In order to test the relative predictive strength of the implicit measure of power-sex link compared to the explicit measure of power-sex beliefs, these coefficients were examined. However, neither significantly contributed to the model.

Discussion

This study sought to measure the strength of an implicit power-sex link in rape prone men, and to examine the relationship between this link and level of endorsement of rape supportive statements—thought to be representative of rape supportive cognition. It was predicted that men scoring higher on a measure of Rape Proclivity (rape prone men) would demonstrate a stronger implicit power-sex link in the IAT, by categorising words quicker when the concepts of strong and sex occupied one selection key. It was also predicted that these men, as well as demonstrating this power-sex link would also endorse a higher level of rape supportive statements, providing evidence for different levels of rape supportive cognition. Further it was anticipated that men demonstrating a power-sex link measured through IAT performance would also indicate a power-sex link in the explicit, self report measure of power-sex beliefs, and that this score would be associated with increasing levels of Rape Proclivity. Finally, it was hypothesised that variability in Rape Proclivity could be predicted by the scores from the IAT and the two questionnaire measures, with the implicit power-sex measure demonstrating greater predictive utility than the self report measure of power-sex beliefs.

The first finding, that rape proclivity was not significantly correlated with the IAT response pattern associated with an implicit power-sex link was surprising, given that a previous study employing a similar IAT methodology with rape prone men did find evidence to suggest these men had such an implicit association between the concepts. As discussed in Chapter Three, and earlier in this chapter, Chapleau and Oswald (2010) administered the Rape Proclivity Measure to 106 men from a Midwestern, Catholic university, plus several questionnaires measuring rape myth acceptance, past sexually aggressive behaviour and an explicit measure of power-sex beliefs, before administering a power-sex IAT. The research uncovered links between all variables—except self reported sexual aggression—and path analysis provided evidence for a model in which power-sex beliefs precede rape myth acceptance, which predicts Rape Proclivity.

The findings from the present study are also contrary to the work by Bargh and colleagues (Bargh, et al., 1995), who also uncovered an automatic power-sex link among rape prone men.

The scoring procedure of the IAT make these contrary findings particularly interesting, due to the fact that an absence of a power-sex link would be reflected in *D* scores close to zero. Therefore, if rape prone men had no automatic link between power and sex concepts we would anticipate them achieving *D* scores of close to zero. However, in the present sample, although the correlation between Rape Proclivity and *D* score was not significant, the relationship was negative, indicating that as men scored higher on Rape Proclivity they tended to respond faster to the weak + sex trials

in comparison to the strong + sex trials—which were designed to represent a power-sex link. Thus, if anything, they appear to be demonstrating a *weak*-sex link as opposed to a strong-sex link. As stated, this relationship was not significant so no firm conclusions can be drawn from this one finding. However, a significant relationship in this direction was also uncovered when examining endorsement of rape supportive statements and performance on the IAT. Men who endorsed a higher level of these rape supportive statements also demonstrated a weak-sex link—*theoretically* the opposite to a power-sex link. The IAT was designed to measure a power-sex link, and to do this needed to treat power as a concept that was split into opposing dimensions. Therefore, to represent the powerful dimension, "strong" words were chosen and to represent the opposite of power (i.e., non-power), "weak" words were chosen. This procedure was adopted by Chapleau and Oswald (2010) in their investigation of a power-sex link in rape prone men. However, a *D* score of close to zero would reflect no power-sex association. A negative *D* score, as mentioned previously actually demonstrates an opposite effect—in this case a weak-sex link. It is proposed that by uncovering a significant relationship between Rape Scale score and a weak-sex association the IAT is still measuring a mental association between the concepts of power and sex, except here the results suggest an *absence* of power, or the *opposite* of power—which could be seen as submissive or weak. So these results may actually be seen as an indication of an association between weakness and sex, instead of power and sex. However, there are several possible confounds to this hypothesis, which primarily concern the stimuli used to represent the concept of "non-power", or weakness.

The five words used for the "weak" category were *fragile, frail, delicate, tender,* and *insecure*. These words were chosen as representative of the concept "weak" from a list of words used for similar purposes in previous research (e.g. Gray, et al., 2005), and were confirmed as adequately related to the concept by 15 postgraduate students. However, it is quite possible that these words were perceived by participants as being representative of the concept of a traditional female role. Past research has suggested that rape prone men and convicted rapists tend to hold strong traditional views about women's role in society (e.g., Check & Malamuth, 1983; Howells & Wright, 1978). These types of views tend to categorise women as being submissive to men, with the traditional view of femininity as women being delicate, soft, and "the weaker sex". If participants think of females or femininity in these terms, when they view the "weak" words in the IAT they may associate these words with women, and therefore be demonstrating an automatic association between *women* and sex, rather than *weak* and sex.

A second possibility relating to the stimuli, is that the "weak" words, may, for some men represent attributes that they look for in a sexual partner. As past research suggests (e.g., Bargh et al., 1995; Chapleau & Oswald, 2010; Malamuth, 1986), men who report some likelihood towards sexual aggression, or Rape Proclivity tend to either report power or dominance motivations for sexual behaviour, or demonstrate an automatic link between power and sex concepts. The fact that power and sexuality seem to be particularly intertwined in these men may also indicate a preference for dominating sexual behaviour. To be the dominant partner in a sexual interaction, your partner must be submissive. It could be suggested that the "weak" words in the IAT reflect the submissiveness or weakness that these men require in their sexual partners,

and in this way associate these words with sexuality, thus responding faster to the weak + sex category pairings. This view is bolstered by the significant negative correlation found between the implicit power-sex measure (the IAT), and the explicit measure of power-sex beliefs. Such a relationship—although in the opposite direction to predicted—indicates that men who endorse the power-sex beliefs on the questionnaire to a greater extent are also demonstrating a weak-sex link in the IAT. One explanation for this is that the explicit measure is more likely to be tapping into an interest in sexual dominance—with men scoring higher on this measure indicating a preference to be sexually dominant over partners—rather than simply a power-sex association. This may explain why these potentially sexually dominant men have demonstrate an automatic weak-sex link—because they associate weakness with the traits of their preferred sexual partner. This explanation however, is not supported by past research findings. When Chapleau and Oswald found evidence for an automatic power-sex link in rape prone men, they also found a significant correlation between the explicit measure of power-sex beliefs and performance on the IAT despite the fact that their "weak" stimuli—like those used in the present study—could be interpreted as traditional view of femininity (i.e., *weak, soft, flower, fragile*).

These specific issues with the stimuli of the IAT mean we cannot draw any firm conclusions from this data, because the ambiguity of the stimuli is a major confound. Participants may have perceived or interpreted the stimuli in several different ways, meaning the true nature of the automatic link uncovered can not be determined. Furthermore, there was no significant relationship between Rape Proclivity and the apparent weak-sex link, which further compounds the difficulties in interpreting this data. However, despite not finding evidence of the hypothesised power-sex cognitive

structure in rape prone men, this data has uncovered a strong relationship between Rape Proclivity, and level of endorsement of rape supportive statements as measured by the Rape Scale (Bumby, 1996). A Pearson's correlation of .70, indicates a very large proportion of covariance. This suggests quite convincingly that rape prone men do tend to hold more rape supportive cognition—or at least tend to endorse these statements more than non rape prone men.

A further difference was discovered between the results from this study and Chapleau and Oswald's (2010) previous investigation—the mean score of the present sample on the explicit measure was slightly higher than that reported by Chapleau and Oswald. The present sample, on average, scored 2.49 (SD = 1.00), on the explicit power-sex measure items, compared to 1.78 (SD = .73) in the original study by Chapleau and Oswald (2010). Furthermore, the present study found a stronger relationship between Rape Proclivity and the explicit power-sex measure than did Chapleau and Oswald, although this may be due in part to their different scoring methods.[10]

Despite the problems associated with self report methodology, the large correlation between Rape Proclivity and Rape Scale scores is still useful in this investigation of rape supportive cognition. When using an analogue sample (participants with characteristics of interest and resemble forensic or clinical populations), some of the social desirability issues surrounding the measurement of these beliefs may be slightly reduced, if only because the participant has no overwhelming reason to conceal their

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[10] Chapleau and Oswald (2010) used the mean item score on the explicit power-sex measure, and also used took used a mean score of the Rape Proclivity Measure. The present study, however, used sum totals, in order to retain variance between items.

true responses. Convicted rapists frequently express concern that their answers will be used to monitor their treatment progress, or the that the information may be used by authorities making decisions about their sentence. This sample of university students, however, do not have the same concerns, and so may be more comfortable with answering honestly. Also, in the present study steps were taken to ensure participants were confident that their data would remain anonymous: they were given a unique code to identify each piece of data, and they placed their completed questionnaires into a sealed envelope and posted it into a box to further guarantee anonymity.

Finally, the results from the regression analysis are illuminating when the relationships between questionnaire variables are considered. The regression model suggests that scores on the Rape Scale (measuring rape supportive cognition), are more useful for predicting Rape Proclivity than the power-sex beliefs questionnaire measure, despite the fact that Rape Proclivity and power-sex beliefs were moderately correlated. This is interesting because it suggests that theories of sexual dominance as motivating factors for sexual aggression may not be as relevant in non convicted populations such as rape prone men. Finally, against predictions the implicit measure—the IAT—did not demonstrate any greater predictive validity than the explicit measure, with neither measure significantly contributing to the model. However, given that neither measures could predict Rape Proclivity this finding can not be used to examine the relative utility of these measures.

Summary

In this study no evidence that men scoring higher on Rape Proclivity have one cognitive structure that links the concepts of power and sex automatically was found. This finding is contrary to the hypothesis, and also the findings of past researchers, who have uncovered evidence for such a structure. Despite not finding any relationship between Rape Proclivity and an automatic power-sex link however, significant positive correlations between Rape Proclivity and endorsement of rape supportive statements and the explicit measure of power-sex *beliefs* were uncovered. These results indicate that the higher scores on Rape Proclivity also endorse rape supportive statements to a greater extent than low scorers, and tend to endorse more power-sex beliefs than low scores of Rape Proclivity. These findings certainly suggest that rape prone men differ from non rape prone men in their rape related attitudes, but given the null findings of the IAT, it is not possible to make any inferences about the cognitive structures that these men hold. In Chapter Three it was hypothesised that a power-sex link drives rape related schema, and in this way influences offending behaviour. As no evidence for this power-sex link in rape prone men was found, but these men did endorse higher levels of rape supportive statements—thought to be cognitive products of an underlying belief system—then perhaps these men hold rape related schema in the form of ITs that are unrelated to the power-sex link (i.e., *women are unknowable*, *dangerous world*). Conversely, if a weak-sex link is instead representative of rape supportive cognitive structure, then it is possible that the ITs that have power-sex origins (i.e., *women are sex objects*, *male sex drive is uncontrollable*, and *entitlement*) are driven by this weak-sex link rather than a strong-sex link, and therefore may be found in rape prone men. The next study

shall examine whether these any of the five ITs themselves can be identified in rape prone men.

Chapter Five: Investigating the Implicit Theories of Rape Prone Men[11]

Introduction

The previous study investigated the possibility that rape prone men hold a cognitive structure that represents an automatic link between power and sex concepts. Previous research by both social and forensic psychologists had indicated that such a structure was held by both men likely to sexually harass women, and men who were likely to sexually offend against women. However, no evidence for such a structure could be found amongst the rape prone men in Study One, despite the fact that an explicit measure developed to assess such a relationship between power and sex was significantly correlated with Rape Proclivity. Furthermore, an explicit measure of rape supportive statements—Bumby's (1996) Rape Scale—designed to measure rape supportive cognitions was also associated with Rape Proclivity and the explicit measure of power sex associations. These results were rather surprising as it was thought that explicit measures would not be successful in capturing cognitions due to social desirability concerns, and the unconscious nature of the theorised power-sex link. The results then suggest that to some extent rape prone men do hold power-sex beliefs, but this is not necessarily an unconscious, automatic power-sex link. Furthermore, the relationship between scores on the Rape Scale and Rape Proclivity indicate that rape prone men hold some level of rape related cognition, although the exact nature of this cognition is still unknown. Given the self report, explicit nature of the Rape Scale, it is difficult to identify whether the scale is measuring deep level

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[11] This study has been published; Blake,. E., & Gannon, T. A. (2009). The implicit theories of rape-prone men: An information-processing investigation. International Journal of Offender Therapy and Comparative Criminology, 54, 895-914.

cognitive structure, such as schemas, or surface level cognitive products, which may have no underlying cognitive element.

Implicit Theories

Ward (2000) proposed that schema-theory might shed some light on the confused concept of offence supportive cognition. Information processing theory postulates that differences between individuals' experiences and behaviour results from differences in information that is stored and organised in long term memory. This stored information biases an individual's attention, encoding and retrieval of information and therefore affects subsequent behaviour. Despite the fact that challenging offence supportive cognition now appears to be obligatory for therapists who treat rapists, researchers have neglected to examine the underlying content and organisation of rapists' cognition. Ward sought to rectify this deficit, by suggesting that schemata should be considered as causal theories that interact with personal experiences to form coherent structures that help to both explain and predict our own and others' behaviour. Terming these theories "implicit theories" (ITs), Ward and his colleagues began to examine the possibility that sexual offenders hold schemas that may explain their offending behaviour (Polaschek & Ward, 2002; Ward & Keenan, 1999).

As noted in Chapter Two, Polaschek and Ward (2002) proposed five ITs for rapists; "*Women are unknowable/dangerous*" (beliefs that women are different from men, and in that way men can not understand how a woman's mind works), "*Women are sex objects*" (beliefs that the purpose of a woman is to please a man sexually), "*Male sex drive is uncontrollable*" (beliefs that men can not control when they become aroused,

and need to be satisfied when this happens), "*Entitlement*" (beliefs that all men are entitled to sex) and "*Dangerous world*" (beliefs that the world is full of dangerous and hostile individuals). Polaschek and Gannon (2004) analysed the offence accounts of 37 convicted rapists and found strong evidence for all five implicit theories, the most prevalent being *"women are sexual objects"*, *"entitlement"* and *"women are unknowable/dangerous"* occurring in 70%, 68% and 65% of interview transcripts respectively. *"Male sex drive is uncontrollable"* and *"dangerous world"* also occurred in a minority of cases. This study represents a good starting point to the investigations of ITs. However, in order to argue that rape supportive cognition plays an aetiological role in rape, it is necessary to demonstrate identifiable differences between rapists and *non-rapists* regarding their rape-supportive cognition (Gannon, Polaschek, & Ward, 2005). Employing information processing methods might be one useful method of demonstrating identifiable differences since such methods circumvent attempts at social desirability bias. However, no studies of this nature have yet been adopted to examine the ITs of rapists or rape prone men.

The majority of studies that have attempted to examine rapists' beliefs were designed before the advent of ITs. Such studies typically ask rapists to rate their agreement with a range of beliefs deemed to be rape supportive. Unfortunately, however, research using this method has been disappointing (Harmon et al., 1995; Sattem et al., 1984; Segal & Stermac, 1984). For example, Segal and Stermac (1984) found that rapists could not be differentiated from other offenders and community controls using the *Attitudes Towards Women Scale; Short Version* (Spence et al., 1973); a finding that is somewhat surprising given the hypothesised existence of the "*women are unknowable/dangerous*" IT described by Polaschek and Ward (2002). More recently,

Bumby (1996) developed a more generic scale of rape supportive cognition (The Rape Scale) and found that rapists' responses on this scale did differentiate them from offenders who had not sexually offended. This scale, however, has only been employed with convicted rapists, and not been used with non convicted populations.

As mentioned previously, although some studies have begun to examine rapists' ITs using self report measures (e.g., Polaschek & Gannon, 2004), there has been no attempt to investigate the presence of these ITs using implicit, cognitive experimental methodology. However, some promising methods have been used to examine ITs in child molesters, such as utilisation of the lexical decision task paradigm (Kamphuis et al., 2005; Keown et al., 2008) and use of Implicit Association Tests (Mihailides et al., 2004; Gray et al., 2005). It is believed that these cognitive methods are preferable to the self report measures previously employed to investigate rape supportive cognitions as they are not open to social desirability biases. Therefore it is useful to use such techniques to investigate the cognitions and motivations of rape prone men, as we may be able generalise these findings to convicted rapists who can be a difficult sample population to obtain. In addition, more may be learnt about the aetiology of rape, as rape prone men in the community are more likely to be representative of all rapists, and not just those who have been reported and convicted. ITs have never been investigated in rape prone men, either through explicit self report measures or implicit methods, despite the apparent usefulness of examining such a sample, as explained above.

Study Two: Investigating the ITs of Rape Prone Men Using an Implicit Task

The present study utilises the lexical decision task paradigm (as in Kamphuis et al., 2005; Keown et al., 2008) to examine the ITs of rape prone men implicitly. The lexical decision task (LDT) measures how quickly participants classify stimuli as either words or non words. As noted in Chapter Three, this paradigm is based on the premise that, when a person has a strong mental representation of a concept, or a particular group of words, they will be able to more quickly identify it than other words, or non words. In the present LDT study, participants are primed with unfinished sentences that are designed to tap ITs. The unfinished sentence appears word by word on a computer screen. After the last word of the unfinished sentence disappears, there is a short pause before the target letter string (or word ending) is presented. The participant then decides—by pressing one of two keys—whether the target word is a word or a nonword. In this study, target words were taken from three groups; (1) rape supportive words – words that finish the sentence in a rape supportive manner, (2) non rape supportive words – words that finish the sentence in a non rape supportive manner, and (3) nonwords – words without any meaning that complete the sentence in a nonsensical manner. Reaction time is measured. The participants in the present study also completed an explicit self report measure of rape supportive cognition (Bumby's Rape Scale).

Based upon the research evidence to-date two main predictions are made. First, it is predicted that men who score higher on the Rape Proclivity measure will endorse more rape supportive statements on the Rape Scale relative to those who score lower on Rape Proclivity. Second, it is predicted that men who score higher on the Rape

Proclivity measure will show a pattern of faster reaction times to rape supportive target words than non rape supportive target words relative to those obtaining lower scores on the Rape Proclivity measure. Finally, in order to compare explicit and implicit measures of rape supportive cognitions, a regression model consisting of each participants' performance on the lexical decision task and Rape Scale score will be created to assess the relative contribution of implicit and explicit measures for predicting Rape Proclivity score.

Method

Participants.

Participants were 80 males aged between 18 and 42 (mean age 22.57 years, *SD* = 4.23) who volunteered to take part in a study titled "Attitudes towards sex and relationships". Participants could choose to receive either £5 for taking part, or two credits towards fulfilment of an undergraduate psychology course. Participants were primarily University students. All participants had spent a minimum of 11 years in formal education (mean 16.8 years, *SD* = 2.52).

Ethics.

Ethics approval was provided by the University Ethics Board. The same ethical procedures outlined in Study One were again implemented in the present study.

Materials.

Rape Proclivity Scale.

The Rape Proclivity measure was taken from Bohner et al. (1998), which was used and fully described in Chapter Four. As part of this test, participants were instructed

to imagine themselves in the position of a male protagonist, and to answer three questions regarding level of sexual arousal, likelihood of acting in the same way, and enjoyment. Bohner and colleagues sum questions two and three across all five scenarios to create the measure of Rape Proclivity, with a range of 10 to 50. The internal validity of the combination of these two questions, forming a 10 item index of Rape Proclivity, has been reported as good by Bohner et al. ($\alpha > 80$).

Rape Scale.

Bumby's (1996) Rape Scale was administered as in Chapter Four. The Rape Scale (Bumby, 1996) consists of thirty-three statements, each followed by a 5 point Likert scale (1; strongly disagree, to 5; strongly agree). The Rape Scale has excellent psychometric properties (internal consistency $\alpha = .96$, test-retest reliability $r = .84$; Bumby, 1996).

Lexical Decision Task.

Additionally, the participants completed a computerised lexical decision task (LDT). The computer task was designed to present participants with 80 incomplete sentences (sentence stems) that appeared word by word on the screen. Each of these sentences was followed by one of three different types of target letter strings (or word endings); (1) rape supportive words (words that ended the sentence in a rape supportive manner), (2) non rape supportive words (words that ended the sentence in a neutral manner), or (3) nonwords (made up words that are not in the English dictionary). The participants' task was to decide whether the presented word was either a word or a nonword by pressing the key corresponding to their decision. The reaction time to the key press was measured.

Stimuli.

A total of 40 incomplete sentence stems were created, designed to represent the five ITs, all of which were assigned three different letter string endings. Rape supportive sentences were rated by seven independent community-based raters who decided how much a sentence represented a description of the ITs. Sentences were rated using a five point likert scale ranging from one (very poor fit) to five (very good fit). Mean ratings for each IT indicated that each sentence received a mean score of four or above (i.e. quite a good fit through to a very good fit). Nonwords were created by changing one letter of common nouns or verbs (e.g., cottage becomes tottage, branch becomes boanch). Nonwords were matched for number of characters with real words. See Table 5.1 for mean word lengths for each IT and each word category.

Table 5.1

Mean Word Lengths for LDT Stimuli

IT	Mean length of rape supportive words	Mean length of non rape supportive words	Mean length of nonwords
Women are unknowable	8.50	7.75	7.50
Women are sex objects	7.88	9.38	7.88
Male sex drive is uncontrollable	6.25	6.88	6.50
Entitlement	7.38	6.75	6.88
Dangerous world	3.75	4.75	5.75
Total (all 5 ITs)	7.15	7.10	6.90

An ANOVA confirmed that target word length did not differ significantly across completion word type (rape supportive, non rape supportive, and nonword), $F(2, 117) = 0.108$, $p = .898$. In addition ANOVAs were performed individually for each IT.

The ANOVAs confirmed that target word length did not differ significantly across completion type for *women are unknowable*, $F(2, 21) = .322$, $p = .729$, *women as sex objects*, $F(2, 21) = .902$, $p = .421$, *male sex drive is uncontrollable*, $F(2, 21) = .169$, $p = .846$, *entitlement*, $F(2, 21) = .155$, $p = .857$, nor *dangerous world*, $F(2, 21) = .842$, $p = .445$. A t-test confirmed that rape supportive and non rape supportive target words did not differ according to Kucera and Francis word frequency counts, $t(78) = -.070$, $p = .945$. Table 5.2 shows frequency counts for all target words used in the LDT. A series of t-tests also confirmed that rape supportive and non rape supportive target words did not differ when word types were grouped by IT (*women are unknowable*, $t(14) = .508$, $p = .619$, *woman as sex objects*, $t(14) = .906$, $p = .380$, *male sex drive is uncontrollable*, $t(14) = 1.137$, $p = .275$, *entitlement*, $t(14) = .311$, $p = .761$, *dangerous world*, $t(14) = -.280$, $p = .784$).

Each incomplete sentence was presented to participants twice, meaning each participant saw 80 incomplete sentences. The second presentation of a sentence was followed by a different word type from the first presentation, ensuring no participant saw the same combination of sentence stem and word ending more than once. The pattern of presentation of sentence stem and word ending combinations ensured that each participant saw 27 sentences ending in rape supportive words, 27 sentences that ended in non rape supportive words, and 26 sentences that ended in nonwords. Table 5.2 shows examples of sentence stems for each IT and their associated target letter strings (or word endings). A full list of stimuli can be found in Appendix One.

Table 5.2

Examples of Sentence Stems and the Target Letter Strings Assigned to them for each IT

IT	Sentence stem	Target letter strings		
		Rape supportive	Non rape supportive	Non word
Women are unknowable	Women who say no are usually…	lying	assertive	pamera
Women are sex objects	A woman should dress…	attractively	comfortably	sulstantial
Male sex drive is uncontrollable	A man's sexual arousal is difficult to…	control	describe	greason
Entitlement	If a woman rejects a man's advances she is…	misbehaving	uninterested	comference
Dangerous world	On the whole, people are…	mean	nice	rull

The computer task was created so that each participant saw a different combination of sentence stem and target letter string. Within each LDT version, the five IT categories identified by Polaschek and Ward (2002) were represented evenly among the 40 sentence stems that were presented (i.e., eight sentences representing each IT were shown).

Apparatus.

The LDT was created using the computer software E-Prime. Written instructions and sentence stems were presented in white, Times New Roman text. Target letter strings were presented in light grey Times New Roman text. Participants made their responses using the computer keyboard. Two labels were placed on the Z and M keys; placement of labels was counterbalanced across participants.

The E Prime programme controlled the random presentation of sentence stems and target letter strings in the LDT, and recorded the reaction time (RT) and type of response (correct / incorrect) made. Each word in the sentence stem was presented for 600ms. When the final word of the sentence stem disappeared there was a 1000ms pause before the target letter string was presented.

Procedure

Participants were recruited through advertisements on research participant websites and on the University's student webpage. Participants were then invited to a psychology lab where they were given an information sheet to read, which explained what they would be asked to do, and informed them that their responses would be anonymous and that they had the right to withdraw from the study at any time without penalty. Participants who were satisfied with this information signed a consent form

to agree to take part and to demonstrate that they understood the procedure. Participants were tested individually. Participants were given verbal instructions on how the session was going to run (i.e., that they would complete questionnaires before the computer task or visa versa). When participants had successfully completed both stages of the experiment they were debriefed.

Results

Rape Proclivity.

Rape Proclivity was calculated by adding scores for questions two and three together across all five scenarios, as in Bohner et al. (1998), and Chapter Four. Scores could range from 10 to 50. In this sample the mean score was 17.01 (SD = 5.83) with a range of 10 to 35, indicating slight floor effects, but still representing a sizable range of scores. Table 5.3 shows the descriptive statistics for the subscales of this measure. The mean, standard deviation and empirical range all closely resemble data reported by Bohner et al. (1998), cited in Chapter One, and data from Chapter Four of this thesis. Reliability coefficient Cronbach's alpha ranged from good (α = .81) for arousal index and (α =.80) for enjoyment index, to questionable (α = .65) for behavioural inclination index. However, for the combined Rape Proclivity index (behavioural inclination plus enjoyment index), Cronbach's alpha was good (α = .83).

Table 5.3

Descriptive Statistics for Rape Proclivity Measure Subscales

Variable	Mean (*SD*)	Empirical range
Arousal index	2.31 (0.85)	1.00-4.20
Behavioural inclination index	1.43 (0.48)	1.00-3.20
Enjoyment index	2.00 (0.81)	1.00-4.00

The Rape Scale.

Endorsement of rape supportive statements was calculated by adding the 33 items of the Rape Scale together. Scores could range from 33 to 165. In this sample, the mean score was 66.38 (*SD* = 14.85), with an empirical range of 44 to 113, indicating a good range of scores. These statistics are very similar to those obtained in Study One of this thesis (reported in Chapter Four). Cronbach's alpha indicated excellent reliability (α = .90).

The LDT.

Preliminary analysis.

Several of the LDT variables were transformed to reduce the number of outliers, and improve the normality and linearity of residuals as recommended by Tabachnick and Fidell (2007). RT data is prone to extreme cases that do not relate to the hypothesis but instead represent outside influences, such as a lapse in the participant's concentration, or a delayed motor response. An evaluation of the scores for each IT revealed several such extreme values. In accordance with previous research (e.g., Cumming, Graham & Patterson, 2006; Ratcliffe, 1993; Welford, 1981) steps were

taken to reduce the impact of these outliers. Extreme values were identified by SPSS as those extending further than three box lengths from the edge of the box in a box plot. These extremely high values were modified to the value of the next non extreme highest score. Additionally, extremely low scores as identified by SPSS were modified to reflect the next non extreme lowest score. Each of the ITs had extreme values that were Windsorised in this way (6% of total scores were Windsorised).[12] No multicollinearity was detected.

Main analysis of reaction times.

Each participant's reaction times were summed and averaged to calculate mean reaction times (RTs). Twelve RTs were calculated in total as follows: Mean RT to all rape supportive words; mean RT to all non-rape supportive words; Mean RT to all rape supportive words for each of the five individual IT categories; and mean RT to all non rape supportive words for each of the five individual IT categories.

To calculate each participant's shift in reaction time between the two word types, mean RTs to all rape supportive words were subtracted from mean RTs to all non rape supportive words. This generated an overall mean difference in RTs, with positive scores indicating faster responding to rape supportive content relative to non rape supportive content (i.e., responses are rape supportive). Negative scores, on the other hand, indicate faster responding to non rape supportive content relative to rape supportive content (i.e., responses are non rape supportive). Only RTs from correct responses were analysed. Incorrect responses accounted for 2% of total responses.

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[12] Non windsorised data produced the same results as the final analysis.

Rape Proclivity and Rape Scale score.

To test the first hypothesis, that participants who score higher on the Rape Proclivity measure will score higher on the Rape Scale relative to lower scorers on the Rape Proclivity measure, a correlational analysis was conducted. As predicted, the two variables were significantly correlated, $r = .419$, $p < .001$, as shown in Table 5.4 along with descriptive statistics and correlations for Rape Proclivity and all independent variables.

Table 5.4

Descriptive Statistics and Correlations for Dependent Variable and all Independent Variables

Variables	Mean	*SD*	Rape Scale	Women are unknowable	Women as sex objects	Male sex drive is uncontrollable	Entitlement	Dangerous world
Rape Proclivity	17.01	5.83	.42**	.06	.03	.12	-.14	-.16
Rape Scale	66.38	14.85		.06	.06	.17	-.16	-.15*
Women are unknowable	-57.50	339.41			-.19*	-.11*	.06	.16
Women as sex objects	-38.05	200.51				.25*	-.09	-.19**
Male sex drive is uncontrollable	222.59	530.37					-.18	-.36
Entitlement	46.06	371.14						.10
Dangerous world	-199.2	1300.79						

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

Rape Proclivity and the LDT.

It was predicted that men who obtained higher scores on the Rape Proclivity measure would show a pattern of faster RTs to rape supportive target words than non rape supportive target words relative to those obtaining lower scores on the Rape Proclivity measure. There was no significant correlation between mean RTs for each rape supportive IT and Rape Proclivity. However, the pattern of responding to rape supportive words was as predicted (i.e., men scoring higher on Rape Proclivity responded faster to rape supportive words compared to non rape-supportive words) for three out of the five ITs (*women are unknowable*, *women as sex objects*, *male sex drive is uncontrollable*). Men scoring higher on Rape Proclivity responded in the opposite way for the remaining two ITs (*entitlement*, *dangerous world*) – they responded faster to the non rape-supportive words relative to rape supportive words.

A standard multiple regression was performed between Rape Proclivity score as the dependent variable and RT to each IT and score on the Rape Scale to determine the relative contributions of responses on the LDT (the implicit measure) and Rape Scale (the explicit measure) at predicting Rape Proclivity scores. The regression model consisted of six independent variables; RT score for each IT – *women are unknowable, women as sex objects*, *male sex drive is uncontrollable*, *entitlement* and *dangerous world* plus the score of rape supportive cognitions as measured by the Rape Scale.[13] In this method, all independent variables are entered into the regression equation at once. The dependent variable consisted of Rape Proclivity score.

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[13] The regression analysis was run again with the addition of RTs for non-words as a predictor in order to account for individual differences in RTs regardless of content. The analysis showed that RTs to non-words had no effect on the predictive value of the model.

Analysis was performed using SPSS REGRESSION and SPSS EXPLORE for evaluation of assumptions.[14] Table 5.5 displays the standardised regression coefficients (β), and adjusted R^2.

Table 5.5

Variables Predicting Rape Proclivity Score

Variable	β	t	p
Rape Scale	.399	3.652	<.001
Women are unknowable	.109	.995	.323
Women as sex objects	.003	.027	.979
Male sex drive is uncontrollable	.017	.141	.888
Entitlement	-.065	-.596	.553
Dangerous world	-.100	-.863	.391

Adjusted R^2 = .132 df 6,77 F = 2.955, p < .05

R for regression was significantly different from zero, $F(6, 77) = 2.955$, $p < .05$, with R^2 at .20 and 95% confidence limits from .06 to .34. The adjusted R^2 value of .132 indicates that only a very small amount of the variability (13%) in Rape Proclivity score is predicted by the five ITs (as measured by LDT) and scores on the Rape Scale. For the only regression coefficient that differed significantly from zero (Rape Scale), 95% confidence limits were calculated. The 95% confidence limits for Rape Scale

[14] As described earlier, some of the LDT variables were transformed.

score were 0.71 to .242. Thus, only one of the independent variables, Rape Scale score, contributed significantly to the model, $t = 3.652$, $p < .001$ ($B = .157$).[15]

Altogether, 45% (13% adjusted) of the variability in Rape Proclivity was predicted by knowing the score on the Rape Scale only. The direction of the relationship indicates that men who score higher on the Rape Proclivity measure are more likely to endorse rape supportive statements as measured by the Rape Scale.

Discussion

It was predicted that men scoring higher on Rape Proclivity would also score higher on the Rape Scale relative to men who obtained lower scores on the Rape Proclivity measure. The significant correlation between these variables confirms that this is the case, indicating that men with a higher proclivity towards committing rape endorse more rape supportive statements as measured by the Rape Scale. This result is in line with previous research indicating that rape prone men endorse rape supportive statements on questionnaires (Bohner et al., 1998; Malamuth & Check, 1985), and also the previous study of this thesis.

Further, it was predicted that men who obtained higher scores on the Rape Proclivity measure would show a pattern of faster RTs to rape supportive target words than non rape supportive target words relative to those obtaining lower scores on the Rape Proclivity measure. However, although the direction of the correlations were

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[15] A separate multiple regression model whereby the lexical decision measures were entered as predictor variables for predicting Rape Scale score was also conducted. However, this model was non significant.

consistent with the hypothesis that higher scorers on Rape Proclivity would respond faster to rape supportive versions of sentences in the LDT for three ITs none of these correlations were statistically significant.

The regression model was designed to examine whether implicit RT scores to each individual IT in the LDT together with the questionnaire measure of rape supportive beliefs could be used to predict an individual's Rape Proclivity score. Although the model did significantly predict 13% of the variance, this is still a rather disappointing result, not least because the Rape Scale was the only independent variable to significantly contribute to the model. This means that although overall the model does help to predict a small amount of the variance in Rape Proclivity scores, the five individual ITs (as measured via the LDT) did not significantly contribute to this variance. Not only were these variables insignificant in their contribution, they also only displayed small correlations with both the dependent variable, and each other.

It is interesting that the self report measure of rape supportive conditions was the only significant predicator variable, accounting for the highest proportion of variance, considering that we anticipated the implicit measure of the LDT to be a more robust measure of men's beliefs. There are several possible explanations for these results. First, perhaps men who score higher on the Rape Proclivity measure hold less "rapist specific" rape supportive cognitions, as measured by the Rape Scale, compared to the more generalised ITs (as measured via the LDT). For example, the following sentence from the LDT represents the IT "*male sex drive is uncontrollable*": "A man's sexual arousal is difficult to control". This refers, very broadly, to all men. In contrast, the Rape Scale contains such statements as; "Most of the men who rape have

stronger sexual urges than other men.". This statement clearly describes the difference between "normal" men and a rapist. The individuals in this study who scored higher on the Rape Proclivity Scale may endorse the more specific view that rapists have difficulty in controlling their sexual arousal, but do not believe that men, such as themselves, also have such a difficulty, which may go someway to explain the discrepancies in these scores. In other words, they do not see themselves as rapists and so judge themselves differently from rapists. The only difficulty with this explanation, however, is explaining why low scorers on the Rape Proclivity measure do not make similar judgments. It is possible, perhaps, that males low in Rape Proclivity hold different cognitive representations of rapists and so judge rapists in different ways, perceiving the rapist as having more control over his actions.

The second explanation for the overall results of this study may be due to the LDT methodology employed in this research. It is possible that the LDT method just does not measure forensic related cognition as accurately as first thought. It is worth noting that Keown et al. (2008) did not find any confirmation of the overall presence of ITs in child molesters using this method, although they did find evidence for the presence of one specific IT – "*uncontrollability*", in child molesters. A further potential problem with the LDT is that the stimuli constructed may not have accurately represented the five ITs (see Appendix One). It may be that some of the sentences were too subtle, or ambiguous and therefore were not congruent with the beliefs held by rape prone men, meaning that these men would not respond any faster to these sentences than those ending in a non rape-supportive way. For example, an individual who scored high on the Rape Proclivity measure may hold the cognition that women are sex objects, but a statement such as "A woman might please her

partner… *sexually*" versus "A woman might please her partner… *intellectually*" does not adequately represent such a belief, causing the individual to react just as quickly to the so called rape supportive version as the non rape supportive version. However, analysis of the pattern of LDT RT correlations may offer some support for the LDT method used. *Women are sex objects* and *male sex drive is uncontrollable* were moderately positively correlated, (r = .247, p < .05), indicating a pattern of responding that would not exist if the LDT was not accurately measuring the endorsement of ITs. Interestingly, several of the ITs were actually negatively correlated with each other. *Women are unknowable* and *Women are sex objects* were negatively correlated (r = -.187, p < .05), as were *Women are sex objects* and *Dangerous world* (r = -.192, p < .05). These results suggest that the LDT measurement method is having some success, as these variables would not correlate if they weren't reflecting a pattern of variance in RTs.

So, if the LDT is measuring ITs to some degree then perhaps rape prone men simply do not hold ITs to the same extent that it has been theorised rapists hold ITs. This may be due to the fact that these men have not been convicted of any sexual offences, and perhaps never will, which arguably differentiates them quite dramatically from rapists. Conversely, it is possible that neither rape prone men or rapists hold ITs as originally conceptualised by Ward and colleagues. To date, there have been no studies undertaken that examine the ITs of convicted rapists using implicit methods. The only knowledge we have in this area comes from interviews with rapists and self report questionnaires, which may be tainted with social desirability bias. Therefore it would be useful to use information processing methods like the LDT to examine

rapists' ITs, to examine whether these belief systems really are present at a subconscious level.

The final explanation for these results involves the sample population. The sample used in this study was reasonably small (n = 80), so perhaps a larger sample size would have elicited different results. Also, the sample predominantly consisted of university students. It is possible that this group of men who are primarily from a middle class background have had stable upbringings which have not involved any experiences regarding sexualised or malicious female behaviour which reduces the likelihood of them developing several of the ITs (e.g., *women are sex objects* or *women are unknowable/dangerous*). Also, the campus environment of the university promotes daily interpersonal interactions with members of both sexes, so perhaps these men have had many positive experiences with women in their daily life, encouraging them to have well rounded views of women and their behaviour.

Summary

An absence of significant results regarding the contribution of the five ITs to the regression model means that we can not draw any firm conclusions from these data. The fact that Rape Proclivity was significantly correlated with the Rape Scale supports existing research showing that rape prone men are likely to hold rape supportive cognition (Bohner et al., 1998; Malamuth & Check, 1985), but the absence of any firm correlations between the five ITs and Rape Proclivity suggest that the presence (or absence) of ITs in sexually aggressive men is not quite as straightforward as first thought.

Chapter Six: Investigating the Implicit Theories of Rape Prone Men Using an Interpretative Bias Task[16]

Introduction

The results from Study Two were surprising because the explicit measure of rape supportive cognition (The Rape Scale) performed better than the implicit measure of rape supportive cognitive structure in the form of Ward's Implicit Theories (ITs). In fact, the lexical decision task designed to measure the ITs did not produce any evidence of these structures in rape prone men. As discussed in Chapter Five, there are several different explanations for these surprising results, one of which involves the LDT itself. It was suggested that either the stimuli were not accurately representative of the ITs, or the methodology of the task meant such ITs were not being activated in rape prone men. The fact that three of the ITs were associated with rape proclivity in the expected manner—that is faster responding to IT consistent stimuli was associated with greater levels of Rape Proclivity—may indicate that these particular ITs are more likely to be held by rape prone men, although no firm conclusions can be drawn given the non significant results. Due to the fact these three ITs—*women are unknowable/dangerous*, *women are sex objects*, and *male sex drive is uncontrollable*—were the only ones to illicit this pattern of responding, it was decided that the focus of the next investigation should concentrate on these ITs only.

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[16] This study is press; Blake, E., & Gannon, T. A. (in press). Investigating the implicit theories of rape-prone men using an interpretative bias task. Legal and Criminological Psychology. doi: 10.1111/j.2044-8333.2012.02056.x

The Information Processing Perspective to Sexual Offenders' Cognition

As discussed in the preceding chapters, researchers in the field of sexual offenders' cognition have adopted an information processing perspective to formulate theories of how offence related cognitions may play a role in the facilitation and maintenance of offending behaviour (e.g., Ward, 2000). Information processing theory postulates that differences in the way information is stored and organised in individuals' long term memory (as schemata) biases attention, encoding, and retrieval of new information, therefore affecting subsequent behaviour (Fiske & Taylor, 1991). The way that information is stored and organised in memory depends on early life experiences, and will vary between individuals. Ward (2000) suggested that schemata should be regarded as causal theories that interact with information from personal experiences to form coherent cognitive structures that are used to both explain and predict our own behaviour, and that of others. Ward termed these theories 'implicit theories" (ITs), and with colleagues, began to examine the possibility that offenders hold specific offence supportive schemata that may facilitate and reinforce offending behaviour (Polaschek & Ward, 2002; Ward & Keenan, 1999).

According to Ward, these ITs may create processing biases when an individual encounters a scenario that is inconsistent with the stored knowledge of the schemata—or is outside of their own previous experience. In these situations it is suggested that the information is encoded, processed and interpreted in accordance with the schemata, and not the actual events. Polaschek and Ward (2002) propose that individuals holding these beliefs may be prone to misattributing sexual intent to non-sexual behaviour. For example, a woman may be seen as dressing in a particular

way specifically to attract sexual invitations, creating a dangerous situation in terms of potential sexual offending. The study described in this chapter attempts to investigate whether rape prone men interpret stimuli in a manner consistent with three of Ward's ITs—*women are dangerous/unknowable*, *women are sex objects*, and *male sex drive is uncontrollable.*

Study Three: Investigating The Implicit Theories of Rape Prone Men using an Interpretative Bias Task

The present study utilises the interpretative task paradigm (see Gannon & Rose, 2009) to examine three of the ITs thought to be held by rapists in rape prone men. The interpretative task is an adaptation of a memory recognition task that has been used previously in clinical and forensic populations (Copello & Tata, 1990; Eysenck et al., 1991; Gannon & Rose, 2009). The main assumption of this paradigm is that ambiguous stimuli will be interpreted and therefore subsequently recognised in a manner consistent with schemata. Thus in this particular task, participants view stimuli that may either be interpreted in a rape supportive or non rape supportive manner. Then, participants' interpretations of the stimuli are examined through participants' recall of the stimuli. In line with information processing theory, and Ward's IT theory, it is predicted that men scoring high on Rape Proclivity will interpret the original stimuli in a rape supportive manner, due to the ITs that they hold. As in Studies One and Two, participants also complete an explicit self report measure of rape supportive cognition (Bumby's Rape Scale).

Based upon the research evidence to-date, it is predicted that men who score higher on the Rape Proclivity measure will endorse more rape supportive statements on the

Rape Scale relative to those who score lower on Rape Proclivity. Furthermore, it is predicted that men who score higher on the Rape Proclivity measure will show a pattern of greater recognition for rape supportive stimuli than non rape supportive target stimuli relative to men obtaining lower scores on the Rape Proclivity measure, and would be faster to make these rape supportive recognitions. Finally, to compare explicit and implicit measures of rape supportive cognitions, a regression model consisting of each participants' performance on the interpretative bias task and Rape Scale score will be conducted, to assess the relative contribution of implicit and explicit measures for predicting Rape Proclivity score.

Method

Participants.

Participants were 70 males aged between 18 and 37 (mean age 21.09 years, *SD* = 3.40) who volunteered to take part in a study titled "Memory recall study". Participants were recruited through advertisements on research participant websites and on the University's student job page. Participants could choose to receive either £5 for taking part, or five credits towards fulfilment of an undergraduate psychology course. Participants were primarily University students (93.5%). All participants had spent a minimum of 14 years in formal education.

Ethics.

Ethical approval was provided by the University Ethics Board. The same ethical procedures outlined in Study One were again implemented in the present study.

Materials.

Rape Proclivity Scale.

The Rape Proclivity measure devised by Bohner et al. (1998) implemented in Studies One and Two was used again in this study. Scores on this scale range from 15 to 75, although Bohner and colleagues sum questions two and three across all five scenarios to create the measure of Rape Proclivity, with a range of 10 to 50. The Cronbach's alpha of the combination of these two questions is $\alpha > 80$.

Rape Scale.

The Rape Scale (Bumby, 1996) implemented in Studies One and Two was used again in this study. The Rape Scale consists of thirty-three statements, each followed by a 4 point Likert scale on which to rate agreement that excludes a 'neutral' response option. The Rape Scale has excellent psychometric properties (internal consistency $\alpha = .96$, test-retest reliability $r = .84$; Bumby, 1996). A 5 point Likert scale was used for the purpose of this study to ensure respondents had a neutral response option to rate their responses (as requested by the Ethics Board).

The interpretative bias task.

The computerised interpretative bias task presented participants with 18 sentences and corresponding sentence derivatives in the recognition phase that were designed to represent three of the five ITs identified by Ward and Polaschek (*women are dangerous*, *women are sex objects,* and *male sex drive is uncontrollable*). These three ITs were chosen for investigation following the LDT study in Chapter Five, in which the findings (though non significant) suggested that rape prone men might be more likely to hold these ITs. Participants were also presented with 10 control sentences,

taken from Gannon and Rose (2009), that were designed to assess generally negative social interpretations, and a further 10 ambiguous filler sentences (also taken from Gannon & Rose, 2009) designed to disguise the true aims of the task.

Of the 18 sentences designed to assess interpretation of rape supportive schemata, six represented the *women are unknowable* IT, six represented the *women are sex objects* IT, and six represented the *male sex drive is uncontrollable* IT. The full list of stimuli can be found in Appendix Two.

During the encoding phase the presented sentences remained on the screen until the participant pressed the space bar to move on to the next sentence. In the recognition phase, participants were given instructions to read the sentences presented to them and decide whether they recognised the meaning of the sentence from those they had been shown previously.

Stimuli.

An ANOVA confirmed that sentence length (number of characters per sentence) did not differ significantly across sentence type (original ambiguous sentence, rape supportive sentence derivative and non rape supportive sentence derivative), $F(2, 81) = .017$, $p = .98$. In addition ANOVAs were performed individually for each IT and the control sentences. The ANOVAs confirmed that sentence length did not differ significantly across sentence type for all three ITs. Table 6.1 shows mean sentence length for all sentence types used in the interpretative bias task.

Two versions of the interpretative bias task were implemented—in line with previous research using this procedure (e.g. Copello & Tata, 1990; Gannon & Rose, 2009)—so that participants only saw one derivative of each original sentence. For example, of the six original sentences representing *women are unknowable*, each participant would see three rape supportive interpretations and three non rape supportive interpretations in the recognition phase.

Table 6.1.

Mean Number of Characters per Sentence Type

Sentence type	Mean characters per encoding sentences	Mean characters per rape supportive sentences	Mean characters per non rape supportive sentences
Women are unknowable	33.67	32.00	34.00
Women as sex objects	32.17	33.17	34.50
Male sex drive is uncontrollable	50.00	50.83	47.83
Control sentences	49.50	50.90	50.60

Apparatus.

The interpretative task was created using the computer software E-Prime. Written instructions and all sentences were presented in black, Times New Roman text on a white background. Participants made their responses using the computer keyboard and response times were recorded in milliseconds.

The E Prime programme controlled the random presentation of original ambiguous sentences in the encoding phase, and the sentence remained on the screen until the

participant pressed a key to move on to the next sentence. In the recognition phase the e prime programme controlled the random presentation of an even number of rape supportive, and non-rape supportive sentence derivatives. Participants responded to the stimuli by pressing one key if they recognised the sentence meaning, or another key if they did not recognise the sentence meaning. Participants were told to respond as quickly as possible. The type of response made (recognised / not recognised) and response time (in milliseconds) was recorded by the programme.

Procedure

Participants were invited to a psychology lab where they were given an information sheet to read, which explained what they would be asked to do, and informed them that their responses would be anonymous and that they had the right to withdraw from the study at any time without penalty. Participants who were satisfied with this information signed a consent form to agree to take part and to demonstrate that they understood the procedure. Participants were tested individually. Participants were given verbal instructions on how the session was going to run (i.e., that they would complete questionnaires before the computer task or vice versa, due to counterbalancing procedure). When participants had successfully completed all stages of the experiment they were debriefed.

Results

Rape Proclivity.

Rape Proclivity was calculated by adding scores for questions 2 and 3 together across all 5 scenarios, as in Bohner et al. (1998). The final score therefore indicated the

extent to which participants could imagine themselves acting in the same way as the male protagonist in the date rape scenarios, and how much they would enjoy getting their own way in such a situation. Scores could range from 10 to 50. In this sample the mean score was 17.43 (*SD* = 6.22) with a range of 10 to 34, indicating slight floor effects, but still representing a sizable range of scores.

Table 6.2 shows the descriptive statistics for the subscales of this measure. The mean, standard deviation and empirical range all closely resemble data reported by Bohner et al. (1998), cited in Chapter One, and data from Studies One and Two. Reliability coefficient Cronbach's alpha ranged from good (α = .84) for arousal index, acceptable (α =.72) for enjoyment index, to questionable (α = .67) for behavioural inclination index. However, for the combined Rape Proclivity index (behavioural inclination plus enjoyment index), Cronbach's alpha was good (α = .85).

Table 6.2

Descriptive Statistics for the Rape Proclivity Subscales

Variable	Mean (*SD*)	Empirical range
Arousal index	2.38 (0.80)	1.00-4.40
Behavioural inclination index	1.45 (0.50)	1.00-3.40
Enjoyment index	2.04 (0.87)	1.00-4.00

The Rape Scale.

Endorsement of rape supportive statements was calculated by adding the 33 items of the Rape Scale together. Scores could range from 33 to 165. In this sample, the mean score was 68.00 (*SD* = 14.86), with an empirical range of 44 to 113, indicating a good

range of scores. Cronbach's alpha indicated excellent reliability ($\alpha = .91$). These data also closely resemble those found in Studies One and Two.

Table 6.3 shows descriptive statistics and correlations for the dependent variable (Rape Proclivity score) and all independent variables.

Table 6.3.

Descriptive Statistics and Correlations for Dependent and Independent Variables

Variables	Mean	SD	Rape Scale	Women are unknowable	Women are sex objects	Male sex drive is uncontrollable
Rape Proclivity	17.43	6.22	.70**	-.11	.29*	-.16
Rape Scale	68.00	14.86		-.22	.21	.00
Women are unknowable	-.39	1.03			-.01	.00
Women are sex objects	-.37	1.08				.01
Male sex drive is uncontrollable	-.33	1.11				

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

Interpretative bias task recognition analysis.

The difference between number of rape supportive sentences and number of non rape supportive sentences was calculated to create one score that reflected recognition of rape supportive sentences over and above recognition of non rape supportive sentences. This score was calculated for each IT, meaning each participant had three

such scores (plus one score for control sentences). Positive scores represent greater recognition of rape supportive stimuli, and negative scores represent greater recognition of non rape supportive stimuli.

The mean recognition scores of -.39 (*SD* = 1.03) for *women are unknowable*, -.37 (*SD* = 1.08) for *women are sex objects*, and -.33 (*SD* = 1.11) for *male sex drive is uncontrollable* sentences indicates a general response bias to non rape supportive stimuli.

Rape Proclivity and Rape Scale.

To test the first hypothesis, that participants who score higher on the Rape Proclivity measure will endorse a greater level of rape supportive statements on the Rape Scale, relative to lower scorers on the Rape Proclivity measure, a correlational analysis was conducted. As predicted, the two variables were significantly correlated, $r = .70$, $p < .001$, demonstrating a large effect size (49% shared variance).

Rape Proclivity and interpretative bias task.

To test the second hypothesis, that participants who score higher on the Rape Proclivity measure will recognise more rape supportive sentences than non rape supportive sentences, correlational analyses were performed. As shown in Table 6.3, only the *women are sex objects* IT was positively correlated with Rape Proclivity ($r = .29$, $p < .05$). Neither *women are unknowable* or *male sex drive is uncontrollable* were significantly correlated with Rape Proclivity ($r = -.11$, $p = .37$ and $r = -.16$, $p = .18$ respectively. Furthermore the direction of the relationship between these two variables was contrary to predictions—the pattern of responding suggests that higher

scores on Rape Proclivity was related to more non rape supportive recognitions than rape supportive recognitions.

Finally, to determine the relative contributions of responses on the interpretative bias task (the implicit measure) and Rape Scale (the explicit measure) in predicting Rape Proclivity scores, a standard multiple regression was performed. The regression model consisted of four independent variables; recognition score for each IT plus the score of rape supportive cognitions as measured by the Rape Scale. In this method, all independent variables are entered into the regression equation at once. The dependent variable consisted of Rape Proclivity score. Analysis and evaluations of assumptions were performed using SPSS 17. No assumptions were violated, and none of the variables were transformed.

Table 6.4.

Variables Predicting Rape Proclivity Score

Variable	β	t	p
Women are unknowable	.04	.44	.66
Women as sex objects	.19	2.30	.03
Male sex drive is uncontrollable	-.16	-1.93	.06
Rape Scale	.68	7.83	.00
Adjusted R^2 = .52 df 4,69		F = 19.81, p < .01	

Table 6.4 displays the standardised regression coefficients (β), and adjusted R^2. R for regression was significantly different from zero, $F(4, 69) = 19.81$, $p < .001$, with R^2 at

.74. The adjusted R^2 value of .52 indicates that a substantial amount of the variability (52%) in Rape Proclivity score is predicted by the three ITs (as measured by the interpretative bias task) and scores on the Rape Scale. However, only two regression coefficients differed significantly from zero; Rape Scale ($t = 7.83$, $p < .001$, $B = .28$) and recognition for *women are sex objects* sentences ($t = 2.30$, $p < .05$, $B = 1.12$).

Altogether, 52% of the variability in Rape Proclivity was predicted by knowing the score on the Rape Scale and recognition of rape supportive sentences representing the three ITs. The direction of the relationship indicates that men who score higher on the Rape Proclivity measure are more likely to endorse rape supportive statements as measured by the Rape Scale and interpret ambiguous stimuli as consistent with the *women are sex objects* IT. Scores on the Rape Scale were the best predictor of Rape Proclivity, with these scores accounting for 44% of the variance in Rape Proclivity compared to the 3.7% accounted for by *women are sex objects* IT. For the two regression coefficients that significantly differed from zero, 95% confidence limits were calculated. The confidence limits for Rape Scale were 0.203 to 0.342, and those for *women are sex objects* were 0.292 to 2.139.

Response time analysis.

Response times (RTs) were windsorised so that outlier RTs falling ±two standard deviations from the grand mean were modified to the next most extreme value (Ratcliff, 1993).

The difference between RTs to rape supportive sentence recognitions and RTs to non rape supportive sentence recognitions was not correlated with rape proclivity score for

any of the three ITs. Thus, contrary to predictions, rape prone men did not demonstrate accelerated RTs relative to non rape prone men for their recognition of rape supportive sentences.

Discussion

It was predicted that men scoring higher on Rape Proclivity would also score higher on the Rape Scale relative to men who obtained lower scores on the Rape Proclivity measure. The significant correlation between these variables confirms that this is the case, indicating that men reporting a higher proclivity towards committing rape endorse more rape supportive statements as measured by the Rape Scale. This result is in line with previous research indicating that rape prone men tend to endorse rape supportive statements on questionnaires of rape supportive beliefs compared to non rape prone men (Bohner et al., 1998; Malamuth & Check, 1985), and the results obtained in Studies One and Two of this thesis.

Further, it was predicted that men who obtained higher scores on the Rape Proclivity measure would show a pattern of greater recognition for rape supportive sentences than non rape supportive sentences relative to those obtaining lower scores on the Rape Proclivity measure. However, a significant positive correlation between IT recognition patterns and Rape Proclivity was found for only one of the ITs measured—*women are sex objects* ($p < .05$). The pattern of responding to the other two ITs was contrary to predictions, with high scorers on Rape Proclivity more likely to make positive recognitions of non rape supportive sentences, although these correlations were not significant.

The regression model was designed to examine whether implicit recognition scores to each individual IT in the interpretative bias task together with the explicit questionnaire measure of rape supportive beliefs could be used to predict an individual's Rape Proclivity score. Although the model did significantly predict 52% of the variance in Rape Proclivity scores, the fact that the Rape Scale and recognition of the *women are sex objects* consistent sentences were the only two independent variables to significantly contribute to the model is slightly disappointing. This means that although overall the model does help to predict a large amount of the variance in Rape Proclivity scores, two of the three individual ITs (as measured via the interpretative bias task) did not significantly contribute to this variance.

Although other researchers have successfully identified ITs in child molesters using implicit methods (e.g. Kamphuis et al., 2005; Keown et al., 2008; Mihailides et al., 2004), these methods have yet to be used with rapists, and the previous investigation of the ITs in rape prone men in this thesis (Study Two) was unsuccessful in identifying ITs using cognitive methods. There are several possible explanations for these findings; rape prone men may not hold the same ITs as rapists, or the interpretative bias task may be failing to tap in to the ITs. Furthermore, it is possible that different individuals hold different combinations of these three ITs. First, individuals may not hold all three schema studied, and instead may hold only one, or two of the proposed schema. Thus, when results are averaged across individuals, this variance may be lost.

It is interesting that the self report measure of rape supportive cognitions was one of only two significant predictor variables, accounting for the highest proportion of

variance, when it was anticipated that the implicit measure of interpretative bias to be a more robust measure of men's beliefs. As in Study Two, it could be suggested that this may be because rape prone men hold more specific rapist related rape supportive cognitions—as measured by the Rape Scale—compared to the more general offence related beliefs described by ITs. For example, sentences used in the interpretative bias task to describe the IT *male sex drive is uncontrollable* included "If a man fancies a woman, he won't be able to control his urges", which refers, very broadly, to all men. In contrast, the Rape Scale contains such statements as; "Most of the men who rape have stronger sexual urges than other men.", which clearly describes how a rapist differs in his desires from other men. As the present sample of rape prone men are unlikely to consider themselves as rapists, it may be that they hold views about rapists that they are willing to endorse via the Rape Scale, but do not hold similar views about men in general. It appears therefore that the Rape Scale is measuring different rape supportive beliefs from those beliefs represented by Ward and colleagues five ITs.

This difference in the type of beliefs endorsed by rape prone men and convicted rapists may be linked to protective factors that inhibit sexually aggressive behaviour. Rape prone men are considered to demonstrate a proclivity towards sexual aggression, but, to our knowledge have not been convicted of such offences. As it has been postulated that offence supportive schema can facilitate sexual offending, then a lack of all five ITs in rape prone men may be inhibiting sexual offending. The fact that this study found evidence for *women as sex objects*, but not *male sex drive is uncontrollable*, nor *women are unknowable*, may indicate that an ability to control sex drive and an absence of negative beliefs about women are protective factors against

sexual offending. Clearly the differences between these populations need to be examined more thoroughly in order to draw stronger conclusions.

A further limitation concerns the contextual environment of the study. Ward's (2009) extended mind theory of cognitive distortions in sex offenders posits that sex offenders may not demonstrate distorted thinking, or offence supportive beliefs, in every situation, and instead these beliefs are likely to be context dependent. Extended theory of mind proposes that individuals utilise both internal and external cognitive resources when engaged in cognitive processing (Menary, 2007), and therefore a number of these resources will be situational, or contextually dependent. Therefore, in the present study, when engaged in the cognitive processing required by the recognition task, or responding to the Rape Proclivity Measure scenarios, participants may not demonstrate the same cognitive operations that may exist during an actual interaction with a female, or when engaged in sexual activity.

As mentioned earlier, another possibility for the non significant results of this study may be due, in part, to the methodology employed. The effectiveness of interpretative bias task relies on strong stimuli that accurately represent the belief systems of interest. It is possible that the stimuli were not representative enough of the rape supportive beliefs. This does not however explain the predictive utility of the *women are sex objects* IT. The fact that this IT has significant predictive power for Rape Proclivity demonstrates that the interpretative bias task and stimuli may have some validity. It is possible however, that the *women are sex objects* stimuli were more accurately representative of this IT, relative to the other two stimuli sets, resulting in successful identification of this IT only.

Summary

These findings suggest that an explicit measure of rape supportive beliefs and the implicit measure of the IT *women are sex objects,* could significantly predict Rape Proclivity score. However, because the implicit measure of the two other ITs—*women are unknowable*, and *male sex drive is uncontrollable*—did not contribute significantly towards the prediction of Rape Proclivity, it is difficult to draw any firm conclusions about the nature of ITs in rape prone men. It could be that rape prone men do only hold one of the ITs proposed to be held by rapists, or as discussed it may be possible that the interpretative bias task is not accurately identifying the presence of all ITs. The explicit measure is substantially correlated with Rape Proclivity, indicating that men scoring higher on Rape Proclivity certainly do endorse rape supportive statements, however due to the self report methodology it is not possible to make any inferences about the rape supportive cognition that may underlie these statements.

Chapter Seven: Investigating the Social Competence of Rape Prone Men

Introduction

Thus far, this thesis has investigated the cognitive structures and cognitive processing stages of the theoretical model of offence related cognition discussed in Chapter Two (Figure 2.1). The results of these studies so far have been mixed. All three studies have revealed strong evidence of rape supportive cognitive products in rape prone men, that is, rape prone men appear to endorse higher levels of rape related statements—measured through self report methods—than non rape prone men. However, the implicit investigations of rape supportive cognitive structures have been less successful, with Study One failing to find evidence of a power-sex link in rape prone men, and Study Two failing to find evidence of rape supportive schema—implicit theories (ITs)—in rape prone men. The results of Study Three however (Chapter Six), suggest that rape prone men do tend to interpret some ambiguous stimuli in a manner consistent with one of the ITs hypothesised to be held by rapists—"*women are sex objects*". This suggests that rape prone men possibly hold this implicit theory and are therefore likely to experience interpretation bias as a result of this cognitive structure. This final chapter examines whether this "*women are sex objects*" cognitive structure and subsequent interpretation bias may influence behaviour, in a study involving a female confederate.

Social Skills and Social Competence

Initial research studies in to the social competence of sexually aggressive men tended to use clinical information, or anecdotal evidence to draw the assumption that sexually aggressive men lack the appropriate social skills required for effective social

and sexual relationships with women (e.g., Barlow, Abel, Blanchard, Bristow & Young, 1997; Clark & Lewis, 1977; Laws & Serber, 1975). Since then, research has focused on the assessment of the social interaction abilities of these men, often focussing on their ability to accurately perceive and interpret nonverbal communication.

Nonverbal Communication

Every social interaction includes the nonverbal communication of thoughts, feelings and attitudes. Scholars Riggio and Feldman (2005, p. xi) state that "Nonverbal communication is pervasive, ongoing, and is part of virtually every human endevor". Therefore, being competent in both perceiving and interpreting others' nonverbal communication and being able to effectively communicate in this way is crucial for successful social interactions. In fact, researchers postulate that failure to adequately communicate one's emotional or motivational state, and to accurately perceive the same constructs in others, is likely to result in interpersonal problems (Philipot, Douilliez, Pham, Foisy & Kornreich, 2005). A wide body of empirical evidence supports this notion, with studies suggesting strong links between nonverbal social skills, general social competence, and even psychopathology (e.g., Perez & Riggio, 2003).

The most obvious problem that can arise from a deficit in decoding of nonverbal behaviour is the difficulty in identifying the internal states of others—including their desires, emotions and intentions. This information is essential for the understanding of others, and the meaning of their behaviour in general, as well as during social interactions. Such a decoding deficit may make the occurrence of interpretation bias

more likely—resulting in attributing a given emotion to someone erroneously (Philipot et al., 2005). This type of interpretation bias has been consistently highlighted in the literature regarding the aetiology of sexual offences (e.g., Lipton, et al., 1987; McDonel & McFall, 1987; Malamuth & Brown, 1994), as discussed in Chapter Two.

Rapists' and Rape Prone Men's Social Perception Deficits

Several researchers have examined rapists' and rape prone men's social perception skills and discovered that rapists seem to be specifically deficient in processing social information that they receive from women (Lipton et al., 1987, Stahl & Sacco, 1995). A common method of investigating these deficits is to ask the participant to watch a video of an interaction between a male and female before asking the participant to make decisions about the woman's motivation and behaviour. Despite there being a wide body of research in this area, the research findings are varied. Several studies have found that rapists and rape prone men tend to present greater deficits in their ability to process women's interpersonal cues compared to non offending or non rape prone men controls (e.g., Lipton et al., 1987; McDonel & McFall, 1991, Malamuth & Brown, 1994) and others have found that rape prone men tend to misperceive the sexual intent of women (Bondurant & Donat, 1999; Treat et al., 2001), all of which clearly have implications for sexual offending behaviour. However, other studies have failed to replicate such effects, finding that rapists either performed no worse than other offender groups (e.g., Stahl & Sacco, 1995), or no worse than control groups of low socioeconomic status men (Segal & Marshall, 1985; 1986). Further to these inconsistent findings, a lot of this research suffers from methodological weaknesses, such as very small sample sizes, and the tendency to use stimuli such as

audio tapes and videotapes which lack ecological validity. Although using these methods has been useful in developing a theory of offenders' social perception abilities, a more naturalistic method would also be very beneficial to this research area. Therefore, the present study aims to examine rape prone men's naturalistic interactions with a female confederate, in order to examine social perception skills.

In this study, rape prone men's behaviour is examined through the measurement of verbal responses, as well as facial affect and non verbal gestures. This study then, examines the cognitive *operations* of rape prone men, and also the final part of the social cognition model—behaviour itself. As discussed in Chapter Two, the link between cognition and behaviour, although extremely important, is one that has been neglected thus far by researchers, possibly due to the difficulty of developing research methodology to examine this relationship.

Study Four: Investigating the Social Perception Deficits of Rape Prone Men

Designing an interaction task to measure social perception deficits

To investigate whether rape prone men have difficulties interpreting the behaviour of females, a study was designed in which the male participant interacted with a female confederate, while being filmed unobtrusively. In order to provide a context for the interaction between participant and female confederate, a computer game was set up, putting participant and confederate in competition with each other. Many social studies of cooperation and competition utilise a similar laboratory set up, with participants either working together on a game type task, or working against each other (e.g., prisoners dilemma tasks, game theory; e.g., Dawes, 1980; Goehring & Kahan, 1976; Kelley & Stahelski, 1970a; Sermat & Gregovich, 1966). Other studies

investigating aggressive behaviour have also employed confederates posing as fellow participants, who provoke the participant in some way, so levels of aggression can be assessed (e.g., Rohensow & Bachorowski, 1984; Wheeler & Caggiula, 1966). The present study utilised both these approaches, by employing a female confederate to pose as another participant in the study. Then both during and after the computer game, the female confederate was trained to make several 'teasing' remarks to the participant whilst employing body language cues and signals associated with such teasing (for example, smiling, laughing). These teasing remarks made reference to the male participants' performance on the computer game task. During these interactions video cameras observed the participants' reactions to such teasing and his response. Facial affect, body language, and verbal responses of both the participant and confederate were coded and analysed, in order to analyse the participants' ability to communicate, and interact with a female, in a situation where her nonverbal cues may be interpreted ambiguously. This study therefore is perhaps one of the first to analyse rape prone men's actual behaviour during a social interaction, in order to examine the link between rape supportive cognition and actual behaviour.

The nature of the communication.

Teasing is defined as a direct communication between a protagonist and a target that combines intentional provocation with humour or playfulness (Shapiro, Baumeister & Kessler, 1991). It is the humour or playfulness that distinguishes the teasing from ridicule, bullying, and harassment both conceptually (Keltner et al., 2001) and experientially (Land, 2003). Due to the complexity of teasing—the apparent negative appraisal coupled with friendly or playful cues such as tone of voice, or body language—the intent of the teasing is open to interpretation. It is this interpretation of

the teasing that is key to the study. Most socially competent people process the verbal tease as well as the cues that accompany it, and decide that they tease is intended in a playful and non threatening manner. However, if an individual is deficient in decoding nonverbal cues, then they may be more likely to interpret teasing as an attack. In this way the interpretation of teasing is utilised as a measure of social competence. It is predicted that rape prone men will have difficulty processing the nonverbal cues of the female confederate, due to a hypothesised deficit in cue reading ability, and will therefore tend to interpret her teasing as a threatening or an insulting attack on him.

It is hypothesised that this negative interpretation of the confederate's behaviour will result in measurable difference in mood, feelings towards the female confederate, and the participant's own behaviour. It is predicted that rape prone men will report a greater increase in negative mood, and will also be more likely to make negative judgements about the confederate, relative to non rape prone men. Furthermore, it is anticipated that the associated increase in negative mood will be presented through a greater use of negative nonverbal behaviour and verbalisations towards the confederate.

Method

Participants.

Participants were 40 males aged between 18 and 53 (mean age 21.85 years, *SD* = 6.33) who volunteered to take part in a study titled "Computer game study". Participants were recruited through advertisements on research participant websites and on the University's student job page. Participants could choose to receive either

£5 for taking part, or five credits towards fulfilment of an undergraduate psychology course.

Ethics.

The ethical procedures used in Studies One-Three were also implemented in this study, with one exception concerning debriefing. Participants were debriefed via email once all the data had been collected, in order to conceal the study aims from potential participants, rather than debriefing immediately after participation.

There were also several other ethical issues associated with this final study, that were not encountered in the previous three studies. First, this study required some level of deception in order to successfully measure naturalistic behaviours. Therefore, participants were led to believe that the female confederate they were interacting with was also a participant in the study. This deception was necessary to measure the male participants' responses, and so was approved by the ethics board. Second, participants were not informed that they were being video recorded, for the same reason. Again, the ethics board approved this aspect of the study design. Finally, due to the provoking nature of the first computer game, where the male participants were teased by the female confederate, possibly triggering a negative mood state, it was essential that participants did not leave the study in such an emotional state. Therefore, steps were taken to ensure that any negative affect brought about by that first game was neutralised in a second computer game, as described in the study procedure.

Apparatus.

The laboratory was set up with two computers on desks situated so that the participant and confederate were facing each other, and could see each other above their computer screens. The laboratory set up can be seen in Figures 7.1 and 7.2. The laboratory was furnished with two ceiling mounted concealed video cameras and microphones, each focussed on either the participant or confederate. The live stream from both video cameras was watched by the researcher in an adjacent room, and both feeds were recorded.

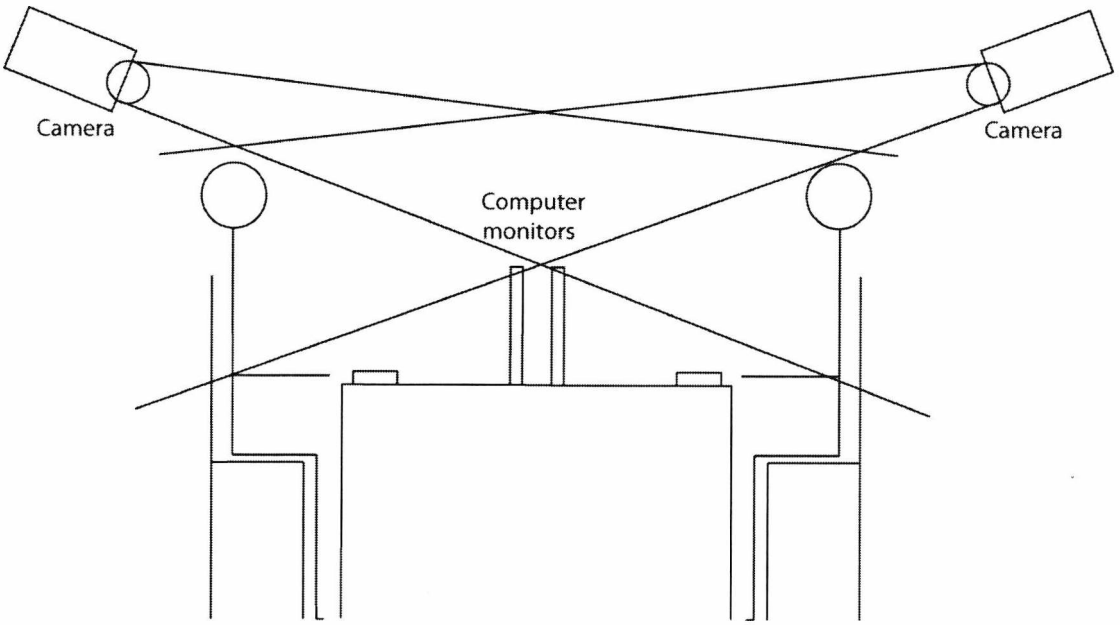

Figure 7.1. Laboratory set up.

Confederate characteristics.

The same female confederate was used throughout the study to ensure consistency. Furthermore, the confederate wore similar clothing and make up, and wore her hair in a similar manner throughout each session. The confederate was a Forensic Psychology Masters student, who received training in how to behave during the

interactions. The researcher explained the nature of the role the confederate was to play but did not divulge the exact hypotheses of the study. The confederate was given a script of the types of teasing remarks she was to make to the participant, and told when it was appropriate to use each one. Then, the researcher and the confederate conducted approximately 15 role plays, using the computer game, in which the researcher acted as a participant. As well as giving the confederate opportunity to practise the teasing remarks and her non verbal behaviour, some of the role plays included instances where a participant either got upset, angry, or aggressive during the game. The confederate was trained in de-escalation techniques should these situations arise, and was reassured that the researcher (who would be viewing the laboratory from an observation suite) would intervene if necessary. Although the confederate had a script of appropriate teasing remarks to make, she was trained to make these remarks only when appropriate to the game play (i.e., when the participant was doing badly), so as to appear natural. Furthermore, she could chose which type of teasing remark to make at her own discretion, in order to create a natural exchange with the male participant. Finally, the confederate was trained to make between six to eight teasing remarks, in whichever combination she deemed most appropriate. Throughout the study the confederate was treated as a normal participant by the researcher, and remained in this role throughout each session. The confederate teasing remarks can be seen in Figure 7.3.

Computer game.

Both the participant and the confederate played the game of *battleships* on desktop Personal Computers. *Battleships* is a simple, turn by turn strategy game, in which participants aim to seek out and "sink" each others ships. Unbeknownst to the male

participant, the female confederates' computer screen allowed her to see information from his computer, meaning she could essentially "cheat" when playing against him. This meant that she could control the outcome of the game, allowing her to appear skilled at the game, whilst the participant struggled to do well. This allowed the confederate to make the teasing remarks about the male participants' performance on the game.

To ensure that the game play appeared natural, the female confederate did not begin to cheat in the game until the male participant had undertaken one successful turn. Furthermore, she still maintained a natural game playing style (i.e., did not use her knowledge to beat the participant unfeasibly quickly), so as not to arouse suspicion.

The confederate ensured that she won the first game, after which there was short break, before a second game was played. In this game the confederate allowed the participant to win, and afterwards warmly congratulated the player. This second game was included in order to counteract any adverse effects the first game may have had on the participant.

Figure 7.2. Photograph of laboratory.

Confederate teasing remarks

All the following teasing remarks were accompanied by positive non verbal cues, such as smiles, laughter etc.
The confederate was free to choose which teasing remark to make at times she felt were appropriate, and was instructed to make between six and eight remarks per game.

Before game starts
I have a feeling this is going to be easy!
How will you feel being beaten by a girl?
I've got a good feeling about this!

When participant is losing
I knew this would be easy!
I bet even my little sister could beat you at this!
Don't worry, I won't tell anyone that you lost to a girl!
Come on, you can do better than that!
Sorry, I just can't help being good at this!
Do you need any tips?

When participant makes a successful move
That's just beginners luck.
I'm just letting you win so you don't feel bad.
You are only doing well because you are lucky.
You won't be so lucky next time.
Its good to see that you are finally making an effort!
I thought I better give you a chance!

When the game is over
Oh dear, looks like you lost!
Better luck next time!
How does it feel to lose to a girl?

Figure 7.3. Confederate teasing remarks for game one.

Measures.

In order to measure the social competence of the participant—that is, his ability to accurately decode the nonverbal cues of the female confederate—several different measures were implemented.

Self report questionnaires.

Several self report questionnaires were administered as part of this study. Three questionnaires measured Rape Proclivity, endorsement of rape supportive statements, and trait aggression respectively. Two further questionnaires were designed to measure change in mood, and perceptions of the female confederate, in relation to the interaction task.

The Rape Proclivity Measure.

As in studies one to three, the Rape Proclivity measure devised by Bohner et al., (1997) was administered to participants in this study, and the same scoring methods were applied as in the previous three studies.

The Rape Scale.

As above, the Rape Scale (Bumby, 1996) that was previously administered to participants in studies one to three was again used in this study to measure endorsement of rape supportive statements, with the same scoring method implemented. Despite the fact that this study does not utilise implicit tests for measuring rape supportive cognition as Studies One-Three have, it was not thought necessary to administer a social desirability questionnaire alongside the Rape Scale for two reasons. First, the items in the Rape Scale were designed specifically to reduce social desirability bias, which has been demonstrated in studies one-three, with participants reporting a wide range of scores, with no apparent social desirability bias (i.e., no ceiling effects). Second, because the implicit tests implemented in Studies One-Three appeared less successful in measuring rape supportive cognition than the

Rape Scale, it was thought that using this self report measure alone would be sufficient in this study.

The Aggression Questionnaire.

The Aggression Questionnaire (Buss & Perry, 1992) contains 29 items measuring aggression across four subscales; *Physical Aggression* (nine items), *Verbal Aggression* (five items), *Anger* (seven items), and *Hostility* (eight items). Each item is followed by a five point likert scale. Examples of items are "Once in a while I can't control the urge to strike another person" and "I often find myself disagreeing with people". The Aggression Scale has excellent psychometric properties (internal consistency α = .89, test-retest reliability r = .80; Buss & Perry, 1992). In their original study, Buss and Perry administered the Aggression Scale to both men (n = 612), and women (n = 641). Mean total score in their sample was 77.8[17] (SD = 16.5) for men, and 68.2 (SD = 17.00) for women. Table 7.1 shows descriptive statistics for each subscale for Buss and Perry's sample of 641 men.

Table 7.1

Descriptive Statistics for the Aggression Questionnaire Subscales

Variable	Mean	*SD*
Physical Aggression	24.3	7.7
Verbal Aggression	15.2	3.9
Anger	17.0	5.6
Hostility	77.8	16.5

[17] Statistics are only reported to one decimal place here as that is how they were reported in Buss & Perry (1992).

This questionnaire was implemented solely in this final study because of the nature of the interaction with the female confederate. Due to the fact that the teasing remarks made by the female confederate, coupled with losing the first computer game may induce anger or aggression in participants, it was thought useful to examine whether trait aggressiveness or anger may be associated with Rape Proclivity more generally, rather than solely in the specific context of the interaction (e.g., DeGue & DiLillo, 2006).

Change in mood.

A self report measure was designed to assess participants' affect before their interaction with the female confederate, and afterwards, so any change in mood could be calculated. The questionnaire contained eight items that measured a combination of negative and positive affect (confidence, happiness, anger, anxiety, depression, tension, tiredness, and pride). Participants were asked to indicate the extent to which they were currently experiencing each affect using a seven point likert scale. This questionnaire was administered immediately prior to the computer game, and immediately after the first game. Cronbach's alpha for scores collected at Time One (before the game) was close to acceptable (α = .65), and acceptable (α = .75) at Time Two (after the game). This questionnaire can be found in Appendix Three.

Perceptions of confederate.

Included in the self report questionnaire administered immediately after the computer game were items relating to the participants' perceptions and feelings relating to the female confederate. Ten items were included, each followed by a five point Likert

scale on which to rate agreement. Items were, "How competitive was your opponent?", "How likeable was your opponent?", "How much did you think your opponent was showing off?", "How attractive was your opponent?", "How annoying was your opponent?", "How much did you get on with your opponent?", "Do you think your opponent was deliberately trying to annoy you?" "How friendly was your opponent?", "How flirtatious was your opponent?", and "How hostile was your opponent?". Cronbach's alpha was close to acceptable ($\alpha = .66$). This measure can also be found in Appendix Three.

Observational data of behaviour.

The entire study session was recorded by concealed video cameras and microphones. The two cameras were positioned so that each focussed on either the participant or confederate, so the behaviour of both could be analysed. Two independent raters viewed the video data for the first computer game, and coded behaviour of both the participant and confederate.[18] Each rater used a behaviour checklist to code specific behaviours. This checklist can be found in Appendix Four. The checklist was constructed after five random videos had been viewed by the researcher, who listed all behaviours displayed by both the male participant and female confederate. These behaviours were then categorised as either facial expressions, non verbal behaviour, or verbalisations and compiled as a checklist. Examples of facial expressions include "smile", "grin" and "frown". Examples of non verbal behaviour include "rub eyes", "chew lip", "slam hand on table", and "shake head".

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[18] Rater two coded only 75% of the data. Coding the entire data set required approximately 80 hours of work, and unfortunately rater two could not commit to these hours and left after coding 75% of the data. Due to time constraints it was not possible to replace this rater.

Observational data of verbalisations.

In addition to coding the nonverbal behaviour of the participant and confederate, the same two independent raters also coded verbalisations made by both players. Examples of verbalisations include, "swearing", "tutting", "congratulating opponent", and "making a self deprecating comment".

Rater training.

The two independent raters viewed each video individually, and indicated on the checklist each time they observed a listed behaviour for both the male participant, and separately for the female confederate. The raters were also instructed to make notes of any behaviours that were not listed. Both raters were trained on how to use the coding sheets effectively, and were both blind to the aims of the study. In order to train the raters, the researcher observed one video with each rater, and pointed out examples of behaviours that should be recoded. Each rater then completed a portion of the video under supervision, until the researcher was happy with their progress. Then, each rater coded three videos without supervision, and the researcher compared their observations to their own, to ensure they were similar.

Procedure

Participants were invited to a psychology lab where they were given an information sheet to read, which explained what they would be asked to do, and informed them that their responses would be anonymous and that they had the right to withdraw from the study at any time without penalty. Participants who were satisfied with this

information signed a consent form to agree to take part and to demonstrate that they understood the procedure.

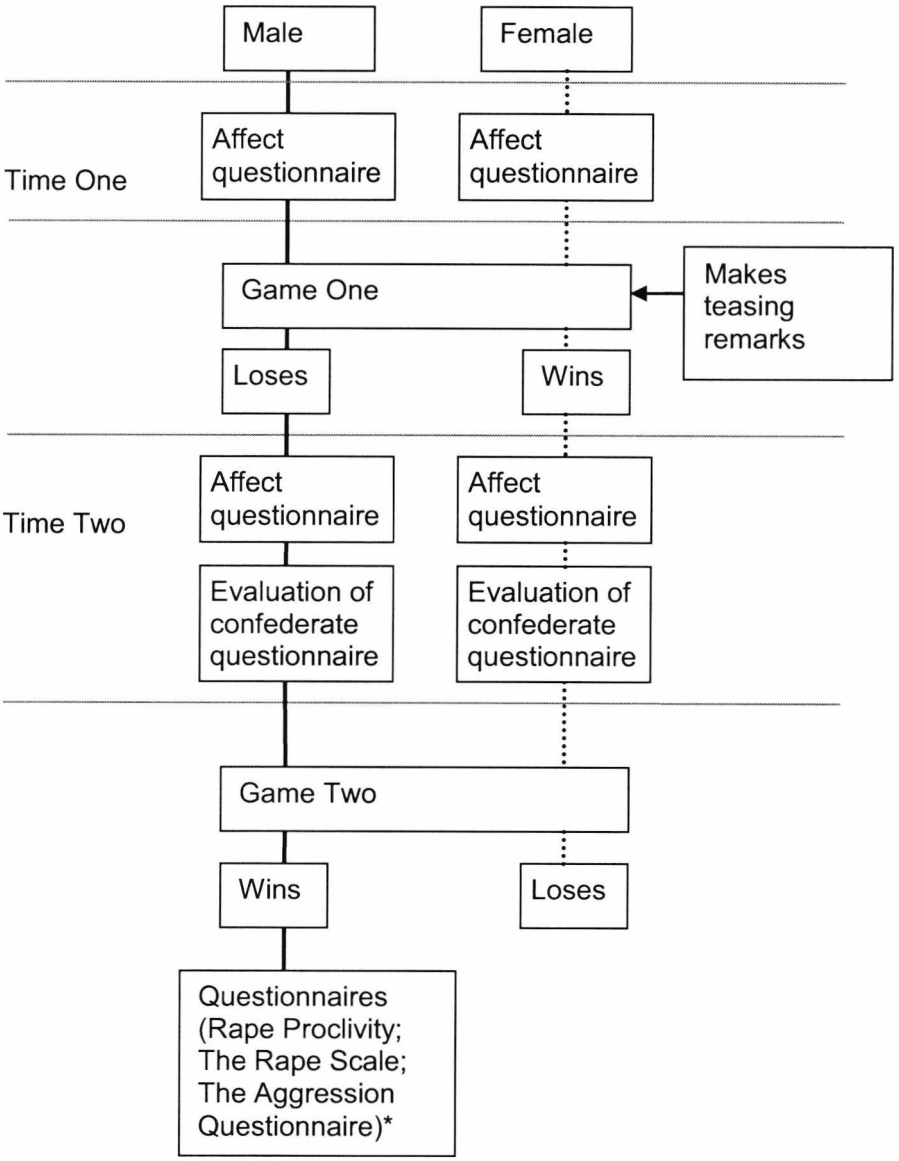
Participants were introduced to the female confederate, and told that she was another participant who would be working with them in the study. To avoid raising suspicion that the confederate was not a genuine participant, she was given a different name in each session, and alternated between arriving at the laboratory before or after the male participant.

Both the participant and confederate then completed the initial questionnaire measuring their current affect. Each participant sat at tables on opposite sides of the laboratory with their backs to each other. When they had completed the questionnaires they posted them into individual sealed boxes.

After completing the questionnaire, participant and confederate took their places at individual computers (see Figures 7.1 and 7.2 for configuration). The rules of the game were explained, and the researcher remained in the room whilst both players placed their ships on the battleships grid. Once this was complete, the researcher informed the players that the game would take between five and 10 minutes. The researcher then left the laboratory, and viewed the video camera feed from a control room, to ensure safety of both the participant and confederate (this was unknown to the participant, who was not aware that the session was being video recorded). Once the game had finished the researcher re-entered the laboratory, and inquired about the outcome of the game. On being told that the confederate had won, the researcher congratulated her, and administered a small prize of a chocolate bar.

The participant and confederate then returned to their writing tables, where they completed the post-game questionnaire that contained items relating to their mood after playing the game, and their evaluation of the confederate. Again upon completion, these questionnaires were posted into the sealed boxes on their tables.

The participants then played a second round of the battleships game. Again, the researcher left the laboratory during the game. This time however, the confederate allowed the participant to win the game, and did not make any teasing comments—instead engaged in flattery of the participant, and made self critical comments. As the game finished, the researcher returned and again inquired about the outcome. On being told the male participant had won, the researcher congratulated him and administered a small prize of a chocolate bar. At this point the confederate also offered warm congratulations. The male participant was then told that the final part of the study was for male participants only, and consisted of several different questionnaires (The Rape Proclivity Measure, The Rape Scale, and The Aggression Questionnaire). The confederate was taken to another room to be "debriefed", and the researcher returned to the laboratory once the male participant had completed the questionnaires. A schematic of the study procedure is displayed in Figure 7.4.



* Due to counterbalancing procedure, approximately half of the male participants completed these questionnaires before Time One.

Figure 7.4. Schematic of study procedure.

Results

Preliminary analysis.

Inter-rater reliability analysis.

To determine the degree of agreement between raters of observational data, two types of inter-rater reliability analysis were conducted; Pearson's correlations between raters and intra class coefficient calculations. Table 7.2 displays these statistics. For every variable except "negative gestures", raters' observations were significantly positively correlated, as measured by Pearson's correlation coefficient. However, coefficients did not exceed .66, indicating a reasonable degree of variance between raters. Inter-class correlation coefficients gave a similar picture, with only two variables—positive verbalisations and negative verbalisations—achieving strong agreement between raters (i.e. scores of .70 or above). The intra-class coefficient is a descriptive statistic that describes how strongly groups of units resemble each other. It is a type of correlation, but operates on data that is structured as groups rather than pairs, and is frequently used for the assessment of consistency of measurements made by different observers (Shrout & Fisher, 1979). The intra-class correlations therefore reveal that there were not strong levels of agreement between raters for all behavioural variables. Due to these imperfect levels of agreement, and because rater two only coded 75% of the data set, it was decided that only rater one's full data set be used for analysis in this study.

Table 7.2

Inter-rater Reliability for Observational Data

Variable	Pearson's correlation coefficient	Intra-class coefficient
Negative facial expressions	.53**	.61
Positive facial expressions	.56**	.53
Negative gestures	.27	.46
Negative verbalisations	.58**	.80
Positive verbalisations	.66**	.70
Facial expressions composite	.41*	.41
Verbalisations composite	.45*	.61

**p < .001 *p < .05

Female confederate behaviour.

In order to ensure that the behaviour of the female confederate was consistent with the research aims, the number of teasing remarks she made were calculated, along with the number of positive nonverbal cues that should accompany a teasing remark. If the female confederate did not employ at least as many positive nonverbal cues as verbal teasing remarks, the data for the participant in question was omitted. Two such cases were identified and removed from analysis. In these two sessions, the confederate had made teasing remarks (as coded by the independent raters) more frequently than

she demonstrated positive nonverbal cues, which could alter the participants' interpretations of her behaviour.

Rape Proclivity.

Rape Proclivity was calculated by adding scores for questions two and three together across all five scenarios, as in Bohner et al. (1998). The final score therefore indicated the extent to which participants could imagine themselves acting in the same way as the male protagonist in the date rape scenarios, and how much they would enjoy getting their own way in such a situation. Scores could range from 10 to 50. In this sample the mean score was 16.13 (SD = 4.43) with a range of 10 to 28, indicating slight floor effects, but still representing a sizable range of scores. The mean, standard deviation and empirical range all closely resemble data reported by Bohner et al., (1998), cited in Chapter One, and furthermore are similar to data from Studies One to Three of this thesis (reported in Chapters Four-Six). Table 7.3 shows descriptive statistics for the three subscales of the Rape Proclivity measure.

Reliability coefficient Cronbach's alpha ranged from acceptable (α =.70) for arousal index, to questionable (α = .61) for enjoyment inclination index, and poor (α = .53) for behavioural inclination. These scores are rather lower than in the previous studies of this thesis, and Bohner et al.'s original study. However, for the combined Rape Proclivity index (behavioural inclination plus enjoyment index), Cronbach's alpha was acceptable (α = .76).

Table 7.3

Descriptive Statistics for the Rape Proclivity Subscales

Variable	Mean (*SD*)	Empirical range
Arousal index	2.16 (0.73)	1.00-4.00
Behavioural inclination index	1.46 (0.43)	1.00-2.60
Enjoyment index	1.76 (.55)	1.00-3.20

Rape Scale.

Endorsement of rape supportive statements was calculated by adding the 33 items of the Rape Scale together. Scores could range from 33 to 165. In this sample, the mean score was 67.38 (*SD* = 15.57), with an empirical range of 40 to 119, indicating a good range of scores. Cronbach's alpha indicated excellent reliability (α = .93). These results closely resemble the findings from Studies One to Three.

The Aggression Questionnaire.

The Aggression Questionnaire (Buss & Perry, 1992) scores were summed for each subscale; *Physical Aggression* (nine items), *Verbal Aggression* (five items), *Anger* (seven items), and *Hostility* (eight items). Each item is followed by a five point likert scale. The Aggression Scale has excellent psychometric properties (internal consistency α = .89, test-retest reliability *r* = .80; Buss & Perry, 1992).

The mean total score (all four subscales combined) in the present sample was 72.08 (*SD* = 17.59) which is reasonably similar to the statistics reported by Buss and Perry for their male sample (*M* = 77.08, *SD* = 16.5). Table 7.4 shows descriptive statistics

for each subscale for both Buss & Perry's (1992) sample, and the present sample, demonstrating their similarity.

Table 7.4

Descriptive Statistics for the Aggression Questionnaire Subscales

Variable	Buss & Perry (1992) Sample Mean (*SD*) [19]	The Present Sample Mean *(SD)*
Physical Aggression	24.3 (7.7)	22.76 (7.12)
Verbal Aggression	15.2 (3.9)	14.00 (4.05)
Anger	17.0 (5.6)	16.16 (4.33)
Hostility	77.8 (16.5)	19.18 (5.92)

Mood.

Level of positive and negative affect at the start of the study session (Time One) were calculated by finding the mean score of positive and negative affect items. Scores could range from one to five. In this sample the positive affect mean score at Time One was 3.20 (*SD* = .73), with a range of 1.67-5.00, indicating that participants generally arrived in the laboratory in a fairly positive affective state. The negative affect mean score at Time One was 1.84, with a range of 1.00-2.80, indicating that generally participants experienced low levels of negative affect at the start of the session.

Positive and negative affect after the first computer game (Time Two) was calculated in the same way. The mean positive affect score at Time Two was 2.91 (*SD* = .77),

[19] Statistics are reported to one decimal place here as they is how they were reported in Buss & Perry (1992).

indicating a slight decrease in positive mood across the sample. A paired sample *t* test revealed that this decrease was significant, $t(37) = 2.37$, $p < .05$, $r = .36$. The mean negative affect score at time two was 1.83 ($SD = .66$), indicating little change in negative affect after the computer game. This was confirmed by a paired sample *t* test, $t(37) = .09$, $p = .93$, $r = .01$. Table 7.5 shows descriptive statistics and correlations for all questionnaire measures.

Table 7.5

Descriptive Statistics and Correlations for Questionnaire Measures

Variable	*M*	*SD*	Rape Scale	Physical Aggression	Verbal Aggression	Anger	Hostility	Change in positive mood	Change in negative mood	Evaluation of confederate
Rape Proclivity	16.13	4.43	.45**	-.001	.37*	.27	.120	.03	-.33*	-.37*
Rape Scale	67.48	18.09		-.06	.22	.34*	.16	-.09	-.24	-.08
Physical Aggression	22.45	7.07			.58**	.57**	.49**	-.21	.13	.12
Verbal Aggression	13.85	4.06				.73**	.42**	-.36	.05	.00
Anger	15.95	4.32					.64*	-.31	-.04	-.16
Hostility	19.12	5.84						-.19	.15	-.11
Change in positive mood	-.29	.76							-.56**	-.46**
Change in negative mood	-0.01	.75								.62**
Evaluation of confederate	3.42	4.00								

**p < .01 *p <.05

Rape Proclivity and change in mood.

In order to test whether rape prone men reported an increase in negative affect, or a decrease in positive affect after playing the first game, the difference in mood at Time One and Time Two was calculated separately for positive and negative mood items, creating one score for change in positive affect, and one score for change in negative affect. Because it was predicted that rape prone men would experience a decrease in positive affect and increase in negative affect, scores from Time One were subtracted from Time Two scores. This means that for positive affect, a negative score indicates a decrease in positive affect, and for negative affect, a positive score indicates an increase in negative affect. Table 7.5 shows descriptive statistics and correlations for all questionnaire measures.

The mean score for change in positive affect was -.29 (SD = .76), indicating that, on average, participants reported a very slight decrease in positive affect. The mean change in negative affect was -.01 (SD = .75), indicating that, on average, participants reported no change in negative affect.

To determine whether Rape Proclivity was associated with a change in affect, correlational analyses were run between Rape Proclivity score and change in negative and positive affect. Rape Proclivity score was significantly positively correlated with change in negative affect (r =.33, p = .04), indicating that those scoring higher on Rape Proclivity were more likely to experience a greater increase in negative affect compared to low scorers. However, Rape Proclivity score was not significantly associated with change in positive affect (r = -.03, p = .87), indicating that rape prone men did not experience any change in positive affect following the computer game.

Perceptions of the confederate.

To assess participants' perceptions of the confederate, positive items from the confederate evaluation portion of the post-game questionnaire where combined to form one score representing positive evaluation of the confederate, and likewise for negative items. The positive evaluation of confederate variable consisted of three items (judgements of how friendly the confederate was, how much the participant liked her, and how much they got on with her). The negative evaluation of the confederate also included three items (judgements of how annoying and how hostile the confederate was, and also the extent to which the participant believed the confederate was being deliberately annoying). Finally, to create a composite score reflecting perceptions of the confederate, the negative evaluation score was subtracted from positive evaluation score. Positive scores indicate greater positive feelings regarding the confederate, whilst negative scores indicate great negative feelings regarding the confederate. The mean score for the sample was 7.18 (SD = 4.09), with a potential range of -12 to 12, indicating that generally, participants held a positive view of the confederate. Participants completed their evaluations of the confederate after their first computer game interaction with her, in order to examine how they felt about her following the interaction.

Rape Proclivity and perceptions of the confederate.

To determine whether level of Rape Proclivity was associated with greater negative feelings regarding the confederate, a correlational analysis was performed. Results suggest that as Rape Proclivity score increased, negative feelings regarding the confederate increased, in line with predictions (r = -.37, p < .05). As can be seen from

Table 7.5, this variable was also correlated with change in negative mood ($r = .62$, $p < .001$) and negatively correlated with change in positive mood ($r = .-46$, $p < .001$), indicating that those participants who experienced increases in negative affect and decreases in positive affect also tended to view the confederate negatively regardless of Rape Proclivity level.

Mediation analysis.

Due to the significant associations between Rape Proclivity, change in negative mood, and evaluation of the female confederate, a mediation analysis was conducted to determine whether the effect of Rape Proclivity on evaluation of the confederate was mediated by change in negative mood. Figure 7.5 shows the mediation model. The relationship between Rape Proclivity and evaluation of the confederate was mediated by change in negative mood. As Figure 7.5 illustrates, the standardized regression coefficient between Rape Proclivity and evaluation of the confederate decreased substantially when controlling for change in negative mood. The other conditions of mediation were also met: Rape Proclivity was a significant predictor of evaluation of the confederate and of change in positive mood, and change in negative mood was a significant predictor of evaluation of the confederate while controlling for Rape Proclivity, as per Baron and Kenny (1986).

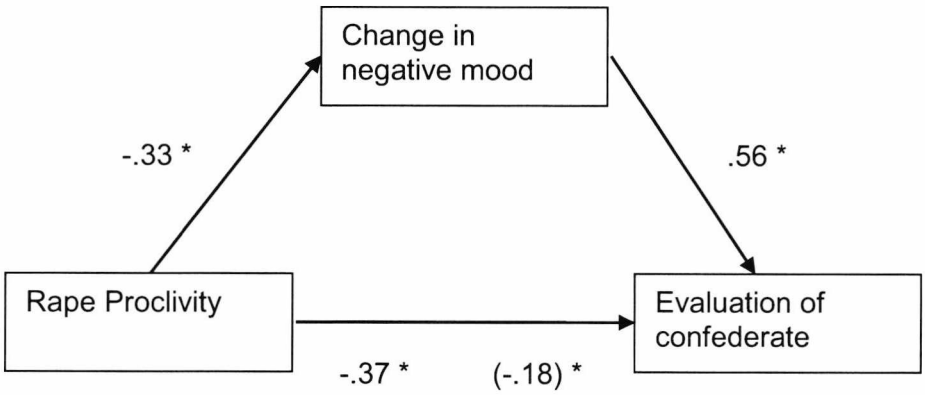


Figure 7.5. Standardised regression coefficients for the relationship between Rape Proclivity and evaluation of confederate as mediated by change in negative mood. The standardised regression coefficient between Rape Proclivity and evaluation of confederate controlling for change in negative mood is shown in parentheses.

Table 7.6

Descriptive Statistics and Correlations for Behavioural and Questionnaire Measures

Variable	*M*	*SD*	Rape Proclivity	Rape Scale	Physical Aggression	Verbal Aggression	Anger	Hostility
Positive facial expressions	11.55	5.68	-.29	-.28	-.11	-.26	-.18	.03
Negative facial expressions	2.34	2.62	.03	-.10	.07	-.20	.08	.17
Facial expressions composite	4.21	6.73	-.30	-.24	-.14	-.25	.19	-.05
Positive verbalisations	9.24	5.93	.09	.15	-.10	-.03	.22	.80
Negative verbalisations	7.34	4.52	.16	.06	.04	.15	.31	.16
Verbalisations composite	1.9	5.46	-.04	.12	-.14	-.15	-.02	-.05
Negative gestures	24.71	9.44	.00	-.03	.13	.22	.32	-.09

Participants' behaviour.

The researcher examined the behavioural checklist, and identified those behaviours that could be categorised into positive or negative behaviours. Then, the number of positive and negative facial expressions and negative gestures made by the participant were summed, as were number of positive and negative verbalisations made. In the case of facial expressions and verbalisations, a composite score of positive behaviours minus negative behaviours was also calculated. Behaviours thought to be neither positive or negative were not included in the analysis (e.g., touch face, or spin around in chair). Table 7.6 shows descriptive statistics for coded measures of both nonverbal and verbal behaviour, as well as correlations between these measures and questionnaire measures.

Nonverbal behaviour.

On average, participants displayed two negative facial expressions and 12 positive facial expressions during the course of the game. In general, participants displayed more positive facial expressions than negative, $t(37) = 10.05$, $p < .001$, r = .86, and this is reflected in the positive mean of the facial expressions composite score (M = 4.21, SD = 6.73). Participants tended to make around 25 negative gestures on average during the game, including folding his arms, tapping fingers on the desk, and slamming a hand down on the desk.

Verbalisations.

In general, participants uttered more positive verbalisations than negative, $t(37)$ = 2.14, $p < .05$, $r = .33$, and again this is reflected in the positive mean of the verbalisations composite score (M = 1.9, SD = 9.44). Participants tended, on average,

to utter around nine positive verbalisations, and seven negative verbalisations throughout the game.

To determine whether level of rape proclivity was associated with greater negative behaviours during the game, correlational analyses were conducted between these behavioural variables and rape proclivity. These correlations are reported in Table 7.6.

Converse to predictions, there were no significant correlations between Rape Proclivity score and behavioural measures.

To investigate whether other psychological measures were associated with behaviour during the game, correlational analyses were run between scores on The Rape Scale and The Aggression Questionnaire. Again, there were no significant correlations between these variables. However, the relationship between number of negative gestures and the Anger subscale of the Aggression Questionnaire approached significance ($r = .32, p = .054$), as did the relationship between negative verbalisations and Anger ($r = .31, p = .056$).

Regression models.

In order to examine whether a combination of scores on the Rape Proclivity Measure, The Rape Scale and The Aggression Questionnaire could predict how an individual would react during the adversarial computer game with the confederate, several regression models were computed. Rape proclivity, Rape Scale Score and the subscales of The Aggression Questionnaire were entered as predictor variables into a

standard multiple regression model. Six different models were computed, representing the six dependent variables: change in negative mood, change in positive mood, evaluation of confederate, facial expression composite, verbalisation composite, and negative gestures composite.[20] However, none of these regression models were significant, and in only one regression model (predicting evaluation of confederate), were any of the predictor variables significantly contributing to the model (Rape Proclivity, $\beta = -.42, p < .05$).

The only regression model to reveal a significant predictor consisted of three independent variables predicting evaluation of confederate; Rape Proclivity score, Rape Scale score, and the Aggression Questionnaire score. In this method, all independent variables are entered into the regression equation at once. The dependent variable consisted of evaluation of confederate score. Analysis and evaluations of assumptions were performed using SPSS 20. Several violations were violated. For example, change in positive and negative mood, and evaluation of confederate were skewed. However, due to the nature of the interaction task, it was expected that these variables would be negatively skewed in this way, so these variables were not transformed. Furthermore, due to the fact that correlational analysis revealed little relationship between many of the variables, it is unlikely that these violations would have had an effect on the regression model.

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[20] Regression models computed in this study differ from those in previous studies in which Rape Proclivity was entered into the model as the dependent variable. This is because the hypothesis being tested was that Rape Proclivity along with the other measures would predict behaviour.

Table 7.7 displays the standardised regression coefficients (β), and adjusted R^2. R for regression was not significantly different from zero, $F(3, 37) = 1.90$, $p = .15$, with R^2 at .38. Adjusted R^2 was .07.

Table 7.7.

Variables Predicting Evaluation of Confederate

Variable	***β***	***t***	***p***
Rape Proclivity	-.42	-2.33	.03
Rape Scale	.10	.57	.57
Aggression Questionnaire	.03	.21	.84
Adjusted $R^2 = .07$ df 3,37		$F = 1.90, p = .15$	

Regression models therefore were unsuccessful in predicting either behaviour, affect, or evaluation of the confederate.[21]

Discussion

The results of this study are somewhat mixed, with partial support for the hypotheses coming from the questionnaire data, but not from the observational data. It would seem that the computer game scenario did have an impact on rape prone men's affect, and perceptions of the confederate, but these findings were not altogether consistent with the behaviour of these men—that is, they did not appear to demonstrate any more negative behaviours than non rape prone men. These findings may be explained

[21] Due to the fact that these analyses were all computed on data from one independent rater, analyses were run again on the 75% of data coded by rater two. Results from these analyses closely resembled the results reported here.

by flaws in the methodology such as the coding of the behavioural data and the associated pitfalls of using such data, or may represent more complex social cognition in these men than originally hypothesised. For example, one explanation for an apparent lack of behavioural reaction to the situation the participants found themselves in, may be due to a conscious effort to conceal true thoughts and emotions. Regulating the expression of emotion in this way may be an attempt at impression management, or as a defence mechanism whilst in a hostile environment. This notion shall be discussed in more detail as the different variables measured in this study are examined.

In general, the whole sample reported a slight decrease in positive affect and a decrease in negative affect, which is to be expected when an individual has just lost a computer game. At the point that the participant completes the second affect questionnaire, he has just witnessed his computer game opponent beat him, apparently though a greater skill level than himself, and seen her be congratulated and given a prize by the researcher. These events alone—regardless of the confederate's teasing behaviour—are expected to have a moderate impact on levels of affect for all participants. Furthermore, as predicted, Rape Proclivity was associated with greater increases in negative mood, indicating that as individuals' level of Rape Proclivity increased, so did the extent to which their negative affect increased. It was postulated that this pattern would occur due to rape prone men inaccurately decoding the confederate's positive non verbal cues, and therefore only processing her apparently negative teasing remarks. This result, therefore could be seen as supporting evidence for the general hypothesis. It appears that the level of rape proclivity is associated with increased levels of negative feelings during this computer game task, but it can

not be said for certain that this is solely due to an inability to decode non verbal cues, or whether other factors, such as losing the game also contribute to this. It was also predicted that rape prone men would show greater decreases in positive affect as a result of the computer game session. However, there was no significant relationship between change in positive affect and Rape Proclivity. This finding is interesting, because this differs from the pattern experienced by the whole sample—in which negative affect increased as positive affect decreased—suggesting that rape prone men experienced a different pattern of emotion. This could possibly be explained by differences in emotion regulation. Rape prone men, on experiencing greater negative emotions, may be motivated to conceal these feelings by reporting greater levels of positive affect, either in an attempt at impression management, or an attempt at self preservation. This shall be discussed in further detail after considering the behavioural indicators of negative affect as well as evaluation of the confederate.

Evaluation of the confederate.

It was predicted that by interpreting the female confederate's teasing behaviour as threatening or hostile, male participants scoring higher on Rape Proclivity would make greater negative judgements about the confederate. The significant correlation found between Rape Proclivity and evaluation of the confederate supports this hypothesis. This affect could be due to inaccurate decoding of the female confederate's non verbal cues, or because rape prone men were more negatively affected by losing the computer game against the female confederate. However, the specific association uncovered between Rape Proclivity and dislike of the confederate would imply a more interpersonal explanation. If an individual was upset to have lost the game, you may expect to see an increase in negative emotion, but not necessarily

see that negative affect directed at the game opponent. However, if the individual—through miscommunication—felt that they were being targeted, or picked on, by their opponent, we can assume they would be more likely to have negative feelings about this specific person—as measured by the questionnaire items.

Finally, because significant correlations were observed between increase in negative affect, evaluation of confederate and Rape Proclivity, mediation analysis was performed to further understand these relationships. The result suggests that part of the relationship between Rape Proclivity and evaluation of the confederate can be explained by the increase in negative mood, but this is not full mediation, so Rape Proclivity also independently predicts evaluation of the confederate, suggesting that rape prone men do view the confederate negatively to some extent, regardless of level of negative affect.

Game behaviour.

The observational data of the participants' behaviour during the game did not support the hypothesis that rape prone men would display greater negative behaviours compared to non rape prone men, as a result of the perceived hostility of the female confederate. This is a puzzling result, when taking into consideration the above findings related to negative affect, and evaluation of confederate. It was predicted that increased negative affect, and negative feelings towards to the confederate would manifest themselves as increased displays of negative facial expressions, gestures and verbalisations, however the data does not support this. There are several possible explanations for this null finding. Given the findings from the self report data, it is possible that upon experiencing negative affect, rape prone men employed emotion

regulation techniques to mask their true feelings, either to present themselves favourably to the confederate (impression management), or unconsciously, in an attempt to alleviate the negative feelings (self deception).

Both impression management and self deception are seen as factors relating to social desirability—that is, the tendency to portray oneself in an unrealistically favourable light (Paulhus, 1984). Impression management refers to the conscious decision to inflate the social desirability of an one's behaviours and beliefs (or cognitions). While self-deception is a tendency to deny the existence of one's socially unfavourable qualities to oneself. Therefore unconsciously presenting a more favourable view to others. As discussed in earlier chapters, social desirability issues are very relevant to the examination of offence related cognitions in sexual offenders. In fact, one of the main aims of this thesis is to examine the presence of these cognitions while minimising the effects of social desirability bias. However, as we have seen, utilising a sample of rape prone men—who having not been convicted of an offence—presumably have less motivation to conceal such beliefs, the self report questionnaires administered in Studies One to Four have proved to be quite robust, in contrast with the implicit measures designed to reduce bias. This is interesting, because it was anticipated that participants would endorse rape supportive statements less strongly for social desirability reasons—as has been demonstrated in offender samples. For example, convicted sexual offenders completing the Rape Scale (Bumby, 1996), tend to endorse such statements at very low levels (Arkowitz & Vess, 2003; Bumby, 1996). Furthermore, Arkowitz and Vess reported a positively skewed distribution, with the preponderance of scores in the lower range. In the current sample however, a normal distribution with a wide range of scores was observed. Of

course, some of this variance may be explained by the fact the current sample was a community sample of rape prone, rather than unincarcerated rapists, or convicted rapists. Even so, the fact that no skewness was observed indicates that participants were not reluctant to use the full range of scores on the likert scale, a possible indictor that social desirability biases were not apparent. It could be argued that a community sample such as this does not have the same motivation to deny socially unfavourable beliefs as a convicted sample, and so may respond more honestly to such a self report measure such as the Rape Scale.

This suggests that perhaps the traditional notion of social desirability in research—that is modifying responses to questionnaires based on what social qualities are perceived as desirable—may not necessarily be the issue here, and instead more relevant might be an examination of how these men are selecting what responses they feel as appropriate in different domains. Here, for example, the high scorers of Rape Proclivity do not appear to be holding back on level of endorsement of rape supportive cognition, levels of negative affect, or their evaluation of the confederate. If these men were attempting to provide socially desirable responses, we would expect lower levels of endorsement of the items in the Rape Scale, and perhaps more positive affect items and evaluation of the confederate. Thus far, these questionnaire measure responses are consistent with each other, suggesting truthful responses. However, the behavioural responses of the participant are not consistent with this. There was no association between rape proclivity and number of positive or negative non verbal behaviours, verbalisations or negative gestures. Neither was there any association between self reported affect and behaviour. This inconsistency between self report measures and actual observed behaviour may be due to rape prone men

employing some form of strategy—whether conscious or unconscious—to modify their responses either to the questionnaire, the behavioural responses to the confederate, or both.

An impression management explanation for this finding revolves around the rape prone men's desire to present a favourable picture of themselves to the female confederate. If, as the self report data suggests, these men found the confederate to be annoying, hostile or unlikable, they may have felt the need to express—through their non verbal and verbal behaviour—a lack of concern for the situation they found themselves in. As these men were losing a computer game to a woman, who they possibly felt was being insulting or offensive, they may have felt they wanted to "save face", by appearing untroubled by such a predicament. This motivation to conceal true emotions, may only be deemed necessary for the interaction between participant and confederate, with the participant willing to divulge his true emotional state in a self report questionnaire, because this is anonymous and therefore not information shared with anyone else. One difficulty with this explanation, however, is that there is a wide body of literature that argues that as well as being deficient in social competence, sexual offenders also have emotion regulation difficulties (Howells, Day & Wright, 2004; Ward & Gannon, 2006; Ward & Hudson, 2000; Ward, Hudson & Keenan, 1998). If it is assumed that rape prone men share similar characteristics with convicted offenders, one might expect them to also have difficulties with emotion regulation to some extent, making the above proposal less likely. This highlights one limitation of the present study, that a measure of social competence was not administered to the participants. Without knowledge of the participants' normal

ability to socially interact with others, it is hard to make draw any firm conclusions about their behaviour during the interaction.

A further explanation for the unusual results from this study is that these rape prone participants may be attempting to use self deception as a coping mechanism, in what they perceive as a hostile, face threatening situation. Self deception involves the denial of socially unfavourable qualities (Paulhus, 1984). It may be that when experiencing negative emotion during the computer game, rape prone men may seek to reduce their discomfort—likely unconsciously—by not expressing their true emotion, and even masking this emotion by displaying contradictory behaviours. Such concealment of their true, negative emotion, known as expressive suppression, may be undertaken in order to reduce negative affect, although this strategy is not often successful (Gross, 2001). This theory is also consistent with the contradictory findings results that although rape prone men reported greater increases in negative affect, they did not demonstrate a greater number of negative behaviours than non rape prone men.

Another explanation concerns possible methodological issues related to the coding of observational data. In order to analyse the participants' behaviour independent raters had to watch the video footage of the computer game session, and count each instance of verbal and non verbal behaviour. First, this is a very subjective procedure, with identifying and categorising behaviour accurately a difficult task. Each rater was trained in the types of behaviour they were to observe and record, but the chance of human error in this task is still high, considering the raters had over 40 hours of video footage to process. In an attempt to reduce the subjectivity of the coding process, two

independent raters were employed in order to conduct inter-rater reliability. Two reliability analyses were conducted; Pearson's correlations between raters and intra class coefficient calculations. Unfortunately, agreement between raters on behavioural variables was not as strong as hoped. Pearson's correlations indicated that for all variables except negative gestures, raters did agree to some extent, as each rater's score for these variables were positively correlated. However, the highest correlation value was $r = .66$, which indicates agreement on approximately two thirds of observations, with many correlations around .5 or lower, demonstrating questionable levels of agreement and further pointing to the subjectivity of the coding data. It was decided that the data from just one rater would be used for analysis, due to the differences in agreement between raters, and the fact that the second rater only coded 75% of the data. However, to ensure both sets of data gave similar results, all analyses were also run with the data from the second rater, and similar results were obtained.

Other more general methodological issues could account for the lack of findings in the observational data. For example, the artificial nature of an interaction as part of a psychological study may have impacted on participants behaviour. Although the participant was not aware that they were being filmed, there are numerous other reasons why someone might not behave naturally in such a situation, or may display demand characteristics. Other methodological weakness relates to the performance of the female confederate. Although the confederate was trained how and when to make teasing remarks, in some scenarios the confederate did not necessarily meet all the requirements. This tended to happen when the male participant was not very responsive, as the confederate found it harder to make teasing remarks in these

circumstances. In these instances it would have been useful to have implemented a measure of social competence, as it is likely that men who reacted in such a manner may have had a competence deficit unrelated to Rape Proclivity, thus affecting results further.

Finally, the Rape Proclivity measure did not appear to perform as well in this study compared to the previous studies, with internal validity determined poor for behavioural inclination (α = .53), and questionable for enjoyment index (α = .61). Internal validity when these subscales were summed to form the Rape Proclivity index however was deemed acceptable (α = .76), but these findings are still of concern, and may have had an impact on results. Furthermore, this study had a markedly smaller sample size than previous studies, which may have affected statistical power.

Summary

Although these findings suggest that rape prone men experienced greater negative emotions during the interaction task, and furthermore were more likely to feel negatively towards the confederate compared to non rape prone men, due to methodological issues it is not possible to determine if these effects result from deficits in decoding ability. Furthermore, no behavioural differences between those scoring high on rape proclivity and those obtaining low scores were observed, contrary to hypotheses.

As in the previous three studies (Chapters Five-Seven) however, a substantial correlation between Rape Proclivity and the Rape Scale was found, indicating that

men scoring higher on Rape Proclivity do tend to endorse more rape supportive statements than low Rape Proclivity scorers. The fact that the interaction task had some effect on rape prone men's level of negative affect, and their feelings about the confederate is promising, and may be indicative of a communication problem between the participant and the confederate as discussed earlier. These relationships were significant and certainly indicate a difference in the way rape prone men felt after the game, and felt about the confederate compared to non rape prone men—even if there were no discernable behavioural differences. It would be very useful to extend this research to include more robust measures of coding behavioural data in order to fully understand the nature of this miscommunication, the associated cognition, and behavioural response. Advances in technology have meant that computer programmes are capable of identifying different emotional expressions in human participants which would be very useful to employ instead of human coders who are subject to bias and error. At present it is difficult to be sure whether the null findings regarding the behaviour of rape prone men stem from problems with the methodology or whether they represent some form of impression management or emotion regulation. However, these results represent a starting point for further behavioural research that can be undertaken by addressing the methodological issues associated with this study.

Chapter Eight: The Rape Supportive Cognition of Rape Prone Men: Final Conclusions

Introduction

This thesis began by examining the use of community samples in forensic psychology—specifically for investigating the aetiology of sexual offending. An examination of the literature indicated that men in the community who either self report some likelihood towards committing acts of sexual aggression, or self reported having committed such acts in the past, share certain characteristics with men convicted of such offences (e.g., DeGue & DiLillo, 2003; Lisak & Roth, 1990; Malamuth, 1981; Malamuth et al., 1980, Malamuth et al., 1986). These findings led researchers using these community populations to study various factors thought to play a role in sexual offending. One of the most frequently investigated factors is that of offence supportive cognition. Various studies on rape myth acceptance, attitudes towards women and attitudes towards interpersonal relationships with women have been conducted with community populations, with results suggesting that rape prone men, and those who admit to having committed sexual offences in the past, appear to hold some level of offence supportive cognition. However, a wider review of the literature of both convicted and community samples revealed several gaps in both the theoretical and empirical literature.

The primary aim of this thesis has been to examine the rape supportive cognition of rape prone men in a controlled and systematic manner. Four different empirical methods, adapted from other areas of psychological research, were chosen in order to examine each stage of the social cognition framework proposed by Hollon and Kriss (1984; i.e., structure, operations and products/behaviour). Results varied across each

method, with implicit measures generally not identifying evidence of rape supportive cognition. However, one result that has been consistent across all four studies is the relationship between Rape Proclivity and rape supportive cognition measured explicitly, through Bumby's Rape Scale (1996). The variously moderate to large correlation between these two variables found in all four studies suggests that the more rape prone an individual, the greater number of rape supportive statements he endorses, which although consistent with theory in this area, is nonetheless surprising given the social desirability issues often cited in relation to self report measures.[22] A summary of results from each study shall now be examined before the relevance of these findings for theory are discussed.

Cognitive Structure: Sex-Power Association

In Chapter Four, an implicit measure was developed to assess the strength of a proposed automatic association between sex and power concepts in rape prone men. The implicit measure used—the Implicit Association Task (IAT)—involves rapid categorisation of words using a computer keyboard, with response times from these categorisations recorded and analysed. A sample of 69 men—primarily university students—completed the IAT, as well as a measure of Rape Proclivity (Bohner et al., 1998), an explicit, self report measure of power-sex beliefs (Chapleau & Oswald,

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[22] Despite the focus on social desirability bias in the thesis, a social desirability measure was not implemented in any of the three studies. This is because both the Rape Scale itself was designed to reduce such a bias, and previous research has reported no correlation between responses to the Rape Scale and social desirability scales (Bumby, 1996; Blumenthal et al., 1996; Hermann et al., 2012; Pervan & Hunter, 2007). Therefore it was deemed unnecessary to administer a separate measure of social desirability.

2010) and a measure of rape supportive cognition (The Rape Scale; Bumby, 1996). Contrary to predictions, Rape Proclivity was not related to a power-sex link as measured by the IAT. However, higher scores on Rape Proclivity were associated with greater scores on the explicit, pen and paper measure of sex-power beliefs. Also of interest was the large correlation between Rape Proclivity score and level of endorsement of rape supportive statements, as measured by the Rape Scale. This finding provides evidence for some level of rape supportive cognition in rape prone men. However, given that the Rape Scale is an explicit measure, as explained in Chapters Two and Three, it is not certain whether this indicates rape supportive cognitive structure or cognitive products, such as justifications or excuses. These results are interesting because it was anticipated that the implicit measure would be more robust than explicit measure, given the associated problems with social desirability bias. The absence of an automatic power-sex link in rape prone men suggests a lack of relevant rape supportive cognitive structure in rape prone men, contrary to theoretical predictions. This finding led to the development of an implicit test for measuring implicit theories in rape prone men, in order to investigate other forms of rape supportive cognitive structure.

Cognitive Structure: Implicit Theories

Although no evidence for a cognitive structure representing a power-sex link was found in Chapter Four, it was thought that other structure such as Ward's ITs may instead be present in rape prone men. Therefore, in Chapter Five, a lexical decision task (LDT) was developed to examine the five ITs thought to be held by rapists in a new sample of rape prone men. This implicit measure primed participants with an unfinished sentence, which was followed by a target letter string. This letter string

was either a word that completed the sentence prime in an IT consistent manner, a word that completed the primed sentence in a neutral manner, or a non-word. The participants' task was to respond to the target letter string by deciding whether that letter string represented a word, or a non-word. Their selection was made by a key press—similar to in the IAT—and again, the response time was recorded and analysed. The LDT paradigm proposes that participants will be quicker to make that decision when the letter string is a word that is semantically related to a preceding prime, so in this case, when the word completed the preceding unfinished sentence in a manner expected by the participant. In this particular LDT then, it was predicted that rape prone men would be faster to make the decision when the target word completed the sentence in an IT consistent manner. Sentences were designed to measure all five ITs. As in Study One, participants also completed a measure of Rape Proclivity (Bohner et al., 1998) and rape supportive cognition (Bumby, 1996). Analysis of the reaction time data to IT consistent target words, and non IT consistent target words failed to find any difference between responses to words types and Rape Proclivity. Furthermore, although the results were not significant, Rape Proclivity was negatively correlated with reaction times for the ITs *entitlement* and *dangerous world*, suggesting that in fact, rape prone men were responding faster to non IT consistent target words—the opposite pattern to predicted. Despite the null finding of the implicit measure, as in Study One, Rape Proclivity was associated with rape supportive cognitions as measured by the Rape Scale, again indicating some level of rape supportive cognition in rape prone men. Due to the fact that the LDT did not provide any evidence for the five ITs, and in the case of two ITs demonstrated a trend for rape prone men having an opposite reaction (i.e., Rape Proclivity was associated with faster responses to non IT consistent words), a new method was chosen to

investigate the three other ITs: *women are unknowable/dangerous*, *women are sex objects* and, *male sex drive is uncontrollable*.

Cognitive Operations: Interpretative Bias

In Chapter Six, a memory recall paradigm was used to develop a task that assessed the potential interpretative bias of ambiguous stimuli as a result of ITs held by rape prone men. In this implicit task, participants read specially developed ambiguous sentences that could be interpreted in either an IT consistent, or neutral manner. Participants were told that they were taking part in a memory recall task, and that their memory for the content of the statements would be tested. After a short filler task, participants were presented with new statements that they read one at a time. After reading each sentence the participants indicated (via computer keyboard press) whether or not they recognised the content of these new statements from the ones they read earlier. These new statements were a mixture of the IT consistent interpretations of the original sentences, and neutral interpretations of the original sentences. The number of IT consistent sentences recognised by participants in relation to the number of neutral sentences recognised was compared as a measure of cognitive processing bias. It was predicted that rape prone men would recognise more IT consistent sentences compared to neutral sentences, relative to men who scored low on the Rape Proclivity Measure. This was the case for sentences representing the IT *women as sex objects*, but no such pattern was apparent for the other two ITs. As in Studies One and Two, Rape Proclivity was also associated with rape supportive cognition measured by the Rape Scale. This study is the first in this thesis to successfully identify the presence of an IT using an implicit method.

Behaviour: The Interaction Task

In Chapter Seven, the final study of this thesis was presented. The aim of this study was to examine the last stage of the social cognition framework—behaviour—and associations between rape supportive cognition and behaviour, by staging an interaction between male participants and a female confederate. This interaction was designed to measure participants' nonverbal cue reading skills. In addition to this task participants completed the Rape Proclivity Measure (Bohner et al., 1998), the Rape Scale (Bumby, 1996) and the Aggression Questionnaire (Buss & Perry, 1992). In the interaction task, participants played a computer game with a female confederate who was posing as a fellow research participant. The computer game served as a platform for the female confederate to make teasing remarks towards the participant, in order to assess his ability to decode the non verbal cues that typically accompany such remarks. The hypothesis was that if unable to accurately decode the positive non verbal cues, the participant would interpret the confederate's teasing behaviour as a serious insult or hostility rather than the jovial manner it was meant in. The prediction therefore was that rape prone men, who are hypothesised to be deficient in social skills including cue reading ability, would interpret the confederate's teasing as hostile, and therefore react in an appropriate manner to such a threat. This cue reading deficit is proposed to arise as a result of cognitive structure such as ITs, that biases social information received from women. Given that Study Three found evidence for the *women are sex objects* IT in rape prone men, it was hypothesised that this IT may impact on cognitive operations associated with social competence and reading cues from women specifically. Results from this study were mixed. Questionnaire data revealed that rape prone men were more likely to report increases in negative mood following the computer game, which could be indicative of

decreased accuracy in cue reading ability, due to negatively interpretation of the confederate's teasing behaviour. Furthermore, Rape Proclivity was associated with increased negative evaluations of the confederate, suggesting that men scoring higher in Rape Proclivity were more likely to have negative feelings about the confederate. This finding was thought to further provide evidence for a cue reading deficit in rape prone men, as it was hypothesised that by interpreting the female confederate's behaviour as negative or hostile—by inaccurately decoding her non verbal cues—these men would then harbour more negative feelings about her, as well as reporting greater negative affect. The relationship between these three variables—Rape Proclivity, negative affect, and evaluation of the confederate—was explored further through a mediation analysis. Results indicated that feelings about the confederate were partly explained by the increase in negative affect in rape prone men, but level of Rape Proclivity itself also had a direct effect on these negative feelings.

However, despite these findings from the questionnaire data, the behavioural response of rape prone men could not be statistically differentiated from non rape prone men, which might either indicate a concealment of emotion and behavioural response, or suggest that these men were not troubled by the teasing remarks any more than non rape prone men. Finally, as in Studies One-Three, a significant correlation was revealed between Rape Proclivity and Rape Scale score, indicating that men scoring higher on Rape Proclivity also endorsed a greater number of rape supportive statements, which has been a consistent finding throughout this thesis.

Cognitive Products: Studies One-Four

In each of the four studies, as well as completing other tasks, participants also completed the same measure of rape supportive cognition—Bumby's Rape Scale (1996). As discussed in Chapter Two, although this scale was designed as a measure of rape supportive cognition, this measure is actually assessing *cognitive products*, which may be indicative of rape supportive *cognitive structure*, such as ITs, or may instead represent post-hoc justifications or excuses in convicted offenders. This reiterates one of the key debates amongst researchers, theorists and clinicians in this area. Are the offence supportive statements made, or endorsed, by offenders indicative of an underlying belief system, or are they justifications, excuses, or rationalisations for their behaviour (see Maruna & Mann, 2006)? Given that the implicit methods used in this thesis were generally unsuccessful in revealing the cognitive structures thought to underlie offence supportive cognition, when in contrast the Rape Scale—an explicit measure—was successful, it could be suggested that the results of this thesis provide some evidence for the excuses and justifications argument (e.g., Gannon & Polaschek, 2006; Maruna & Mann, 2006). In essence, the fact there is evidence for cognitive *products* but not for cognitive *structure* in studies one and two might indicate that the *products*—the rape supportive statements endorsed on the Rape Scale—are being deliberately endorsed for motivational reasons. This explanation however—while relevant for convicted sexual offenders—may not be applicable to rape prone men, for whom we have no data regarding past sexually aggressive behaviour. These men, particularly in a laboratory setting where their data is both anonymous and confidential arguably do not share the same motivations as convicted offenders have for making excuses or justifications about rape.

Together, these findings suggest that the rape prone men tested in this thesis hold some level of rape supportive cognition, although it is not possible to determine exactly the depth of such cognition. This thesis does provide limited evidence for rape supportive cognitive structure—in the form of the *women are sex objects* IT—measured directly through an implicit methods in Study Three, but Studies One and Two revealed no such structure. Despite this, all four studies provided evidence for cognitive products in rape prone men, as measured by the Rape Scale. According to Bumby (1996), who developed this scale, endorsement of these statements that represent cognitive products actually provides evidence of underlying rape supportive structure and content. So citing the moderate to large relationship between Rape Proclivity and Rape Scale score alone theoretically provides strong evidence for rape supportive cognition in rape prone men. However, given earlier discussions about the nature of such cognition and the ability to assess it through self report methods such as the Rape Scale, it would be unwise to take these questionnaire findings as hard evidence for rape supportive cognition. These findings then raise some interesting questions about the nature of rape supportive cognition and the theory underlying such cognition.

The Nature of Rape Supportive Cognition

In Chapter Three, theoretical elements from forensic and social psychology were combined, to form a research agenda consistent with Hollon and Kriss's framework of cognition. To date, the most important theoretical progress in sexual offenders' offence supportive cognition theory has been made by Ward and colleagues (Ward, 2000; Ward & Keenan, 1999; Polaschek & Ward, 2002) in Ward's Implicit Theory

(IT) model. As discussed throughout this thesis, this pivotal theory combines information processing and schema theory to provide a thorough explanation of offence supportive cognition, including the content and structure of such cognition, and how these function, through cognitive operations, to facilitate and maintain offending behaviour. Ward's theory also explains how cognitive products are generated, and reflected in the statements made by sexual offenders, when discussing the behaviour of themselves and their victims. Ward's theory is useful for several reasons. First, it is the first attempt at describing how offence supportive cognition contributes to offending behaviour, and explains how during development implicit theories relating to relevant factors such as attitudes towards women, and appropriateness of sexual behaviour are generated. Furthermore, not only does the theory describe the framework of offence supportive cognition, it also helps to address one of the key debates in the literature that centre around the term and definition of "cognitive distortions". As discussed in Chapters One-Three, the researchers in this area broadly fit into two camps. The first, like Ward, argue that the offence supportive statements made by convicted offenders are cognitive products that are reflective of underlying offence supportive cognition, and are therefore an integral part of offence aetiology. The opposing argument (e.g. Beech & Mann, 2002; Gannon & Polaschek, 2006; Maruna & Mann, 2006), proposes that these offence supportive cognitive products are justifications or rationalisations that offenders make post hoc, either to excuse their behaviour, or for impression management reasons.[23] These researchers argue therefore that offence supportive statements are not

[23] The two approaches to offence supportive cognition here represent the two extremes of the argument, in order to illustrate the differing opinions. Research literature cited as representative of each argument actually tend to be less polarised than presented here.

representative of underlying cognition and do not play a role in the offence process itself. This thesis has attempted to investigate the cognitions of rape prone men, by examining ITs and other cognitive structure (i.e. power-sex link) alongside a measure of cognitive products. The findings from these studies shall now be discussed in terms of the existing theoretical literature and the framework of cognition presented in Chapter Two, which is reproduced in Figure 8.1.

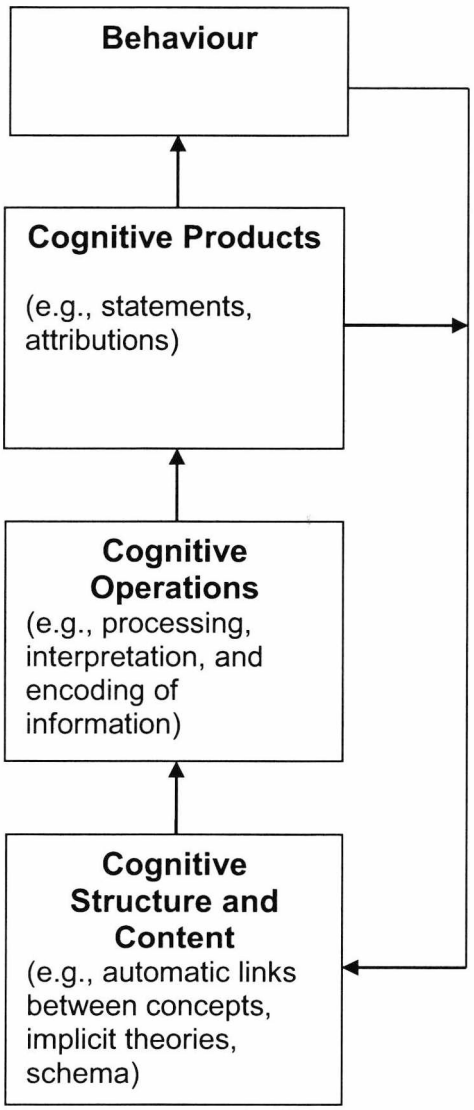

Figure 8.1. Framework of rape supportive cognition.

The one consistent result obtained by this thesis provides evidence for just one portion of the final stage of the model; cognitive products. This evidence comes from the moderate to large correlation between Rape Proclivity and scores on Bumby's Rape Scale. This, proponents for offence supportive cognition (e.g., Abel et al., 1984; Polaschek & Ward, 20021 Ward, 2000; Ward & Keenan, 1999) would argue, provides evidence of cognitive structure and content (represented in the first stage of the above model) *as well* as cognitive products. However, given that alongside this finding, two studies failed to find evidence of cognitive structure (Studies One and Two), and Study Three only found evidence for one of three ITs, it is difficult to fully support the view that the Rape Scale is indicative of cognitive structure as well as cognitive products. Taken together, these results might be more likely to suggest that in fact, the Rape Scale is measuring cognitive products different to the cognitive structure represented by ITs. Further evidence from this argument comes from the relationships (or lack thereof) between Rape Scale score and the two implicit methods used to measure ITs. For example, in Study Two, the reaction times to sentence stimuli representing each of the five ITs were not statistically correlated with Rape Proclivity or Rape Scale score. The fact that neither of these scores was related to ITs could either be due to problems with the LDT methodology, or a genuine lack of ITs in rape prone men. However, there were significant correlations between several of the IT scores, which would indicate the methodology was successful to some extent. What is most interesting however is the possibility that rape prone men could endorse rape supportive cognition on the Rape Scale, but apparently not hold and any of Ward and Polaschek's (2002) rapist ITs as measured by the LDT.

Results from Study Three differ slightly. In this study, evidence for one of the ITs in rape prone men was revealed. However, as in Study Two, Rape Scale scores were not related to these ITs, not even *women are sex objects*—the only IT to be statistically related to Rape Proclivity as measured by the interpretative bias task. This is a puzzling finding, given the Rape Scale score was strongly related to Rape Proclivity, and one would expect an explicit measure of rape supportive cognition to be associated to some degree with an implicit measure of rape supportive cognition. In summary, it appears rape prone men are likely to endorse items on the Rape Scale, but do not appear to hold the five ITs proposed by Polaschek and Ward (2002), other than *women are sex objects*. What is curious though, is that one would expect this one IT to be related somehow to the Rape Scale score. That is, if cognitive products measured by the Rape Scale are indeed indicative of underlying cognitive structure, then one would expect a relationship between cognitive structure identified (*women are sex objects* IT), and the endorsement of cognitive products on the Rape Scale.

However, the possibility that cognitive structure underlies the types of cognitive products measured by the Rape Scale is evidenced by the results from Study One. Despite the fact that a power-sex link was not found in rape prone men, a surprising relationship emerged between Rape Scale score and the *D* score generated by the IAT, making this the only study in the thesis that has uncovered a relationship between the Rape Scale and the implicit measures used to assess cognitive structure. In this unique finding, a statistically significant *negative* correlation was uncovered between these two variables. This meant that men who scored higher on the Rape Scale—who more strongly endorsed the rape supportive statements—demonstrated an automatic link between weakness and sex as opposed to power and sex. This is an unusual

finding, not only because the relationship was in the opposite direction to predicted, but also because Rape Proclivity was not significantly related to scores on the IAT in either direction, despite its association with Rape Scale score.

This significant relationship may indicate that the Rape Scale is measuring more than surface cognitions (cognitive products), or at least is measuring something that is *related* to deeper cognition. Remember that Rape Scale score alone was associated with the sex-weak link, and that Rape Proclivity had no such relationship. This raises an important point—can men in the community, who have no proclivity towards rape, still hold rape supportive cognition, or endorse rape supportive statements? It is possible that some of the items on the Rape Scale are actually representative of beliefs held by members of the general population. If this is the case, then the role of rape supportive cognition in sexual offending is further complicated. These results suggest it is important to examine many factors simultaneously to fully explore the differences between men who rape, men who demonstrate some proclivity towards rape, and men and even women in general. After all, many of the items on the Rape Scale share similarities with classic rape myths, that have been reported in both male and female participants (Bohner & Lampridis, 2004; Gerger et al., 2007; Lonsway & Fitzgerald, 1994, 1995). This raises further questions about the items on the Rape Scale, and what other attitudes or constructs these might be related to.

The Rape Supportive Cognition of Rape Prone Men

This thesis then, has examined three different aspects of rape supportive cognition, including cognitive structures, cognitive operations, and cognitive products and behaviour. Two main themes have emerged. First, in every study, Rape Proclivity

was either moderately, or strongly correlated with Bumby's Rape Scale. Furthermore, against predictions, this scale performed consistently better than any implicit measure of rape supportive cognitive structure. Second, evidence was found for the *women are sex objects* IT in rape prone men, who appeared to interpret ambiguous stimuli in a manner consistent with the IT, demonstrating rape supportive cognitive structure, content and operations. Furthermore, the interaction task study (Study Four), indicated that rape prone men are affected differently during an interaction with a female, although their behaviour did not differ from that of non rape prone men. There are several possible explanations for these results. First, the strong evidence of an association between Rape Proclivity and the Rape Scale may be interpreted as evidence for rape supportive cognitions in rape prone men. However, if the Rape scale is reflecting underlying rape supportive cognition, then there should be evidence of related cognitive structure—such as Ward's IT, or other schema. This thesis however, not only failed to find evidence for four of Ward's ITs, but also failed to find a relationship between the *women are sex objects* IT and the Rape Scale score. This may be interpreted in one of two ways. Either the Rape Scale is reflective of cognitive structure different from ITs, or the Rape Scale is measuring surface level cognitions that are not supported by cognitive architecture. Alternatively, there may be methodological flaws that could account for these results, such as problems with the implicit tests implemented, or not enough statistical power due to relatively small sample sizes (see "Limitations").

The Rape Scale as a measure of rape supportive cognition.

The main argument justifying the interpretation that the Rape Scale is measuring deep level rape supportive cognition as opposed to surface level, comes from research

studies that have utilised the measure with offender populations (e.g., Arkowitz & Vess, 2003; Bumby, 1996. Furthermore, Bumby designed the instrument specifically to measure cognition and did not foresee the self report nature of the measure as problematic. Bumby reports excellent psychometric properties (test re-test reliability = .84, internal consistency over .96), and the scale has been validated through correlations with other measures, such as the Cognitive distortions/Immaturity scale of the Multiphasic Sex Inventory (MSI: Nichols & Molinder, 1984), and the Justification scale of the MSI.

The issue of social desirability has been addressed by Bumby, and other researchers who have administered the Rape Scale alongside measures of social desirability, such as the Marlowe-Crown Social Desirability Scale (MCSDC: Crowne & Marlowe, 1960), and found no correlations between the MCSDC and the Rape Scale (Bumby, 1996, Hermann et al., 2012, Pervan & Hunter, 2007). Using another measure of social desirability, the Other-Deception Questionnaire (ODQ) and the Self-Deception Questionnaire (SDQ: Sackheim & Gur, 1979), Blumenthal et al., (1996), also found no evidence for sex offenders responding to Bumby's Rape scale in a socially desirable manner.

So, given that the Rape Scale does not appear to suffer from problems with socially desirable responding, it is now important to address the second main issue that relates to its validity as a measure of deep level rape supportive cognitive structure rather than surface level cognition (cognitive products). As discussed in Chapters Two and Three, researchers and theorists have argued that implicit cognitive structures, such as schema, and ITs, are unlikely to be readily accessible to even the most motivated

individual (e.g., Gannon, 2009b; Greenwald & Banaji, 1995; Mihailides et al., 2004; Ward et al., 2006). That is, even when asked, most individuals would not be able to identify the schema, or the content of other cognitive structures accurately. This then casts an element of doubt on the type of information assessed by self report measures such as the Rape Scale. The finding in this thesis that scores on the Rape Scale were not correlated to scores on the interpretative bias task that revealed the presence of the *women are sex objects* IT, could be seen as indication that cognitive structure does not underlie the statements on the Rape Scale. Of course, this thesis only found evidence for that one IT, so this findings can not be seen as conclusive by any means, particularly as the null finding of all five ITs in Study Two is inconsistent with the finding of one of those ITs in Study Three. This suggests a methodological problem in Study Two, which makes the data difficult to interpret. Despite not finding a relationship between ITs and the Rape Scale however, in Study One the power-sex link as measured by the IAT was correlated with the Rape Scale, albeit a different relationship to predicted (i.e., a *weak*-sex link correlated with Rape Scale, and not a *strong*-sex link). These results are suggestive of differences in the type of information organised in Ward's ITs and that measured by Bumby's Rape Scale. For example, as discussed in Chapters Five and Six, an examination of the statements on the Rape Scale, and the types of beliefs thought to be represented by Ward and Polaschek's ITs for rapists, differences do emerge. For example, the stimuli used to represent the *male sex drive is uncontrollable* IT in both Study Two and Study Three referred to beliefs pertaining to all men (not just sexual offenders), such as "A man's sexual arousal is difficult to control" (Study Two) and "If a man fancies a woman, he won't be able to control his urges" (Study Three). A contrasting item on the Rape Scale however, "Most of the men who rape have stronger sexual urges than other men.",

refers solely to sexual offenders and how these offenders differ in their control or level of sexual arousal compared to non offending males. Therefore it is possible that rape prone men in these studies had differing views regarding the sexual arousal of rapists, and "normal" men, of which they presumably identify themselves.

This effect may stem from the fact that rape prone men have not committed sexual offences. It is possible that rape prone men would be more likely to hold ITs or rape supportive cognition that relate to sexual offenders specifically, where as convicted rapists might hold ITs that relate to males in general. This explanation however does not help explain how such an IT might play a role in the offence process, and instead perhaps indicates that such a belief is more likely to be used as a rationalisation or excuse for sexual offending behaviour. For instance, perhaps someone who has sexually offended may feel "its not my fault, because I have stronger urges to other men", where as a rape prone man who has not offended may feel "rapists can not be blamed because they have stronger urges than other men". It appears then, to some extent, that the Rape Scale is measuring something conceptually different from the stimuli chosen to represent the ITs in Studies Two and Three.

Interestingly a recent factor analysis of the Rape Scale revealed that items fall into two broad categories; those that *excuse* rape, and those that *justify* rape (Hermann et al., 2012). The excusing rape items tended to mitigate rapists' responsibility or guilt for their actions, by attributing the responsibility for the offences to other factors such as high sex drive, or childhood sexual victimisation. Furthermore, the items in this factor focussing on the credibility of the victims' accusations, and their possible complicity in the rape. Hermann et al. argue that one of the central themes in this

factor—the notion that rapists' responsibility is mitigated by the creditability of the victim—reflects Ward and Polaschek's (2002) *women are sex objects* IT, through sentiments such as her clothing invites sex. The justifying rape items however tended to mitigate the perceived wrongfulness or harmfulness of rape. These items reflect the sort of attitudes and beliefs described in Ward and Polaschek's (2002) rapists ITs, such as sexual entitlement, an adversarial approach to sexual relationships, hostility towards women, and the tendency to minimise harm caused by rape. This study is extremely interesting, because it is the first to point out the similarities in the Rape Scale to the ITs of Ward's Implicit Theory model. However, it does appear that only several of the 33 items of Bumby's Rape Scale used in this thesis represent these ITs, and as discussed above, there are subtle differences in the way these are presented (i.e., ITs refer to men or women in general, the Rape Scale refers to rapists and rape victims specifically). It would be hugely beneficial to conduct a more in depth analysis of the responding patterns of rape prone and rapists on the Rape Scale, to examine exactly which items are endorsed more strongly than others.[24]

At present the Rape Scale is used in a unidimensional manner, but Hermann et al. (2010) argue that in light of their factor analysis it should be considered as a multidimensional tool. Such an analysis might reveal key differences between rape prone men and rapists in their responses, and therefore might be able to answer questions about the relative role such cognition might play in the offence process itself. For example, if rapists tend to endorse the excusing rape items more than rape

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[24] An analysis of responses across all four studies of this thesis reveals that the most strongly endorsed statements tend to fall into the "excusing rape" factor, but this is unrelated to Rape Proclivity level.

prone men, who conversely endorse more of the justifying rape items, then these differences in cognition might be what distinguish the two populations.

The Rape Scale as a measure of surface level cognition.

The possibility that the Rape Scale is not measuring deep level cognition such as schemas and ITs is consistent with theorists who argue that so called "cognitive distortions" are merely justifications or excuses made by offenders after the fact, that do not represent deep cognition. This theory could be used to interpret this thesis's lack of evidence for all five ITs, and the lack of relationship between the one IT Study Three found evidence for and the Rape Scale. However, the fact that this thesis investigated the rape supportive cognition of rape prone men and not incarcerated rapists confuses matters. One could ask why rape prone men would need to make justifications for sexual aggression, if they are at risk for such behaviour rather than having been convicted of acts of sexual aggression. It could be argued that amongst the rape prone men who took part in this research a proportion may actually have sexually offended, but that is not something that can not be substantiated. Alternatively the results found in this thesis may be due to the prevalence of attitudes measured by the Rape Scale in Western society. As mentioned previously, endorsement of rape myths—which include themes very similar to the rape supportive statements measured by the Rape Scale—have been found in both men and woman community samples, as well as in rape prone men and incarcerated rapists (e.g., Gerber et al., 2007). Another explanation refers to a set of beliefs thought to represent "rape tolerance".

Rape tolerance.

Hall, Howard and Boezio (1986) define "rape tolerance" as the extent to which people minimise the seriousness of sexual assault through denial of victim trauma and victim blaming. This tolerance towards sexual aggression has been associated with a number of factors such as traditional perceptions of women's societal roles, general attitudes toward women, and acceptance of rape myths (Stermac et al., 1990). The Rape Attitude Scale was developed by Hall et al. (1986) to measure this tolerance, and was administered to university students, sexual offenders, non-sexual offenders and community controls along side other measures. Rape tolerance was found to be associated with a sexist attitude towards heterosexual relationships, with those tolerating rape more likely to perceive women as sex objects and to condone male dominance of women. This is particularly interesting because Study Three of this thesis provided tentative evidence of the IT *women are sex objects* in rape prone men.

Social norms.

A further explanation for the findings of this thesis, involve social norms relating to rape supportive cognition. Social norms are defined as "rules and standards that are understood by members of a group, and that guide and/or constrain behaviour" (Cialdini & Trost, 1998, p.152). Berkowitz (2003), adds that individuals behave in a manner that they perceive to be consistent with a norm of behaviour. The idea that social norm theory can be applied to sexual behaviour was proposed by Malamuth et al. (1991), who argue that men who belong to groups that advocate male dominance may be more comfortable, or more likely, to commit such acts of sexual aggression, compared to men who do not belong in such a peer group. In American colleges, fraternities have been argued to foster rape supportive attitudes, by promoting male

dominance and brotherhood (Loh, Gidycz, Lobo & Luthra, 2005), and research evidence appears to support this proposal. For example, Lackie and De Man (1997), using retrospective analyses, found that fraternity affiliation was a significant predictor of sexually aggressive behaviour. Several studies have specifically examined the impact of social norms on the relationship between rape myth acceptance and Rape Proclivity (e.g., Bohner et al., 2010; Bohner et al., 2006; Eyssel, Bohner & Siebler, 2006), hypothesising that Rape Proclivity may be influenced not only by individual's own endorsement of rape myths, but also by the perceived rape myth acceptance of others. In this way, rape myth acceptance is pitched as a social norm, which is in keeping with feminist theory that sexual violence against women is perpetuated by rape myths that are prevalent in society (e.g., Brownmiller 1975).

Bohner et al.'s (2006) study revealed that participants were more likely to report higher levels or Rape Proclivity when told their peers scored high on rape myth acceptance, and their own level of rape myth acceptance was also high. Bohner et al. argue that this demonstrates that the effect of the perceived social norm of rape myth acceptance is amplified by a high level of self report rape myth acceptance. This, they continue, makes sense if one assumes that social norms are particularly effective if they reinforce existing attitudes—in this case pre-existing endorsement of rape beliefs. Conversely the perceived social norm of rape myth acceptance is unlikely to have much effect on Rape Proclivity if an individual rejected the rape myths to begin with. This is a very interesting finding, and has important implications for treatment and prevention, or educational programmes.

Extended Mind Theory.

Another approach that considers the broader societal and cultural context of offence supportive cognition was recently proposed by Ward and colleagues (Ward, 2009; Ward & Casey, 2010), called the Extended Mind Theory (EMT) of sexual offending. In this new approach, Ward et al. state that previous theories of offence supportive cognition—including Ward's own Implicit Theory model—concentrate on the functional role of distorted cognition, and fail to include any theoretical account of the normative components involved. This, Ward and Casey (2010) term the "internalist approach", in which what is going on in the offenders head is the only aspect of interest, with external social and cultural factors and the norms of human conduct neglected. In order to combine both approaches, Ward and colleagues developed the EMT of sexual offending.

According to the EMT, human beings do not rely on their individual cognitive systems alone, but instead have hybrid cognitive systems that extend into the world around them. Attitudes and beliefs for example, may be encoded in material vehicles that exist outside the brain, such as notebooks, diagrams, or other physical records (Ward & Casey, 2010). Related to the above discussion on social norms and peer groups, Ward and colleagues argue that social and cultural institutions or social networks involving other people might even function as surrogate cognitive devices that can perform information analysis for us. Therefore, because these external vehicles provide a functional role, they can be viewed as part of an individual's problem solving system. So in order to examine offenders' cognitive functioning, it is essential to examine both internal and external components in order to view the full picture.

This new approach also highlights the dynamic state of offence supportive cognition, arguing that these distorted cognitions are embedded in cognitive practices, and are context dependent, involving both internal and external components. This has serious implications for both research into sexual offenders' cognition, and treatment programmes. For example, the dynamic nature of such systems means that offence supportive cognitions are not necessarily stable, and may not even necessarily endure beyond a particular cognitive task. Whether or not these distorted cognitions persist is dependent on several factors, such as the nature of the task, the environment and the stability of the individual's routines and life patterns (Sterelny, 2003). Those life patterns and routines are what bring individuals into contact with specific resources, which will then influence the cognitive strategies they utilise. Ward et al. (2006) given a salient example, that beliefs about women may be shaped in a distorted manner in a social environment that is particularly "macho", or hostile and conflict ridden. This is consistent with the research described earlier that found associations between US college men's fraternity affiliation and level of rape myth acceptance. The research in this thesis only investigated the internal components of rape supportive cognition, and therefore may be missing key external aspects that Ward et al. argue are also an important part of the full range of such cognition in sexual offenders. This, and other limitations of the research conducted in this thesis shall be more fully discussed later in this chapter.

Implicit versus explicit measures.

A final possible explanation for the results of this thesis concerns the types of measures used to identify rape supportive cognition. One of the main aims of this

thesis was to compare the relative utility of implicit and explicit measures. Due to the problems associated with explicit measures, such as social desirability concerns, and the fact self report measures may not be able to detect nonconscious processes, it was hypothesised that implicit measures would be more successful in identifying deeper level cognitions such as structure and content. However, the explicit measure of rape supportive cognition—the Rape Scale—consistently outperformed the implicit measures across all studies. In the regression models in Studies One-Three, the Rape Scale was either the only independent variable that significantly contributed to the variance in Rape Proclivity, or explained the greatest proportion of variance. Recall that in Study Three, although the interpretative bias task successfully identified the women are sex objects IT, this variable only contributed to 3.7% of the variance in Rape Proclivity, compared to the Rape Scale that contributed to 44% of the variance. Therefore it would appear that the explicit measure in these four studies is actually a more robust method for detecting rape supportive cognition, even if it may only be measuring surface level cognitions. This may indicate that some methodological weakness associated with the three types of implicit test utilised in this thesis, or at least the two that were not successful at all; the IAT and the LDT. There were some specific concerns with the stimuli used in the IAT, and its possible that the LDT suffered from the same problem. As the literature review on Chapter Three reports, other researchers have been successful in their utilisation of implicit measures (e.g., Brown et al., 2009; Nunes et al., 2007; Snowden et al., 2007) which suggests that under the right circumstances, these measures can be useful in identifying offence supportive cognition, but still others have been unsuccessful in their endeavours (e.g., Keown et al., 2010), or only partially successful (Keown et al., 2008; Leibold & McConnell, 2004) making it hard to determine whether the measures themselves are

at fault, or that the cognition being searched for is genuinely absent in sample populations.

Limitations

This thesis represents one of the first systematic and controlled attempts to investigate rape supportive cognition in rape prone men using both implicit and explicit methodology. However, there are several general limitations to this body of research, as well as the more specific methodological limitations discussed within each empirical chapter.

Rape Proclivity.

The fundamental difficulty with the Rape Proclivity Measure is that it only assesses the strength of a tendency towards sexual aggression. It is not possible to determine whether individuals who obtain higher scores on this measure are actually more likely to commit such acts, or indeed if they ever will. In fact, results from Study Four suggest that cognition does not always translate to behaviour, or at least cognition as measured by the Rape Scale does not influence behaviour. Having said that, the fact that in each study in this thesis, relationships between Rape Proclivity score and other variables, such as the Rape Scale exist, indicates that there are observable differences between individuals who obtain who score high on the Rape Proclivity Measure, and those who do not. Furthermore, other researchers have reported medium sized positive correlations between Rape Proclivity Measure score and self reports of previous acts of sexual coercion (Bohner et al., 1995; Eyssel, Bohner, Süssenbach & Shrieber, 2009), and moderate to high correlations with men's self predictions of engaging in sexual coercion in the future (Eyssel et al., 2009).

Second, as with all the explicit measures used in this research, the Rape Proclivity Measure is also open to social desirability bias—perhaps more so than the other measures, given the sensitive nature of the subject. It is logical that while individuals may be motivated to conceal their endorsement of rape supportive attitudes as measured by the Rape Scale, they will be even more motivated to conceal their own desires regarding sexual aggression. However, the distribution of scores on the Rape Proclivity Measure across all four studies does suggest a sizeable range of scores, despite slight floor effects, and these scores are reasonably similar to those reported by Bohner et al. as shown in Table 8.2. The mean scores obtained for behavioural inclination index in Studies One-Four are a little lower than those reported in Bohner et al. however, which may indicate socially desirable responding in the present samples. Bohner et al. (1998) report that scores on the measure do not correlated with measures of social desirable responding, but in the studies of this thesis measures of social desirability were not implemented, and it is therefore possible that participants were responding in a socially desirable manner.

Table 8.2

Rape Proclivity Means Across Studies

Variable	Bohner et al. mean (*SD*)	Study 1 mean (*SD*)	Study 2 mean (*SD*)	Study 3 mean (*SD*)	Study 4 mean (*SD*)
Arousal index	2.64 (0.83)	2.38 (0.80)	2.31 (0.85)	2.38 (0.80)	2.16 (0.73)
Behavioural inclination index	1.72 (0.65)	1.45 (0.50)	1.43 (0.48)	1.45 (0.50)	1.46 (0.43)
Enjoyment index	1.99 (0.73)	2.04 (0.87)	2.00 (0.81)	2.04 (0.87)	1.76 (0.55)

Sample characteristics.

The samples used for all four studies were convenience samples that consisted primarily of students. This meant that most participants were aged between 18 and 21, which reduces the generalisability of findings. Furthermore, participants were predominantly white and—given the majority were students—had attained higher level education, which could further distort applicability of findings, particularly in comparison to offender populations.

Sample size.

Another methodological issue concerns the sample size, and the statistical power achieved in each study of this thesis. The sample sizes were relatively small, and therefore there may have not been enough statistical power to catch a medium or small effect. For example, in a multiple regression model consisting of three independent variables (as in Study One, for example), an approximate sample of 119 would be required to catch a medium effect, and over 800 to catch a small effect. Likewise, a multiple regression model consisting of six independent variables (as in

Study Two, for example), an approximate sample of 150 would be required to catch a medium effect, and over 1000 to catch a small effect. In Studies One-Three, power calculations indicate that the sample sizes should be enough to catch a large effect, but in Study Four the sample was potentially too small to catch even a large effect. Therefore the relatively small samples sizes of all studies may partly explain the apparent failure of implicit tests to identify rape supportive cognitive structure.

The laboratory setting.

There are several issues that affect the ecological validity of research conducted in a laboratory setting generally, such as potential for demand characteristics, experimenter bias, or the fact it is such an unnatural setting. However, there are some more thesis specific drawbacks to the methods of data collection chosen for this particular research. The main issue involves the "cold" setting of the laboratory—that is it does not recreate conditions of normal life, and more specifically does not present a context in which rape supportive cognition is most accessible. As previously discussed, researchers and theorists propose that such cognition is likely to be dynamic, and become activated in specific situations, or trigged by certain cues (Gannon & Polaschek, 2006; Ward, 2009; Ward & Casey, 2010; Ward & Hudson, 2000). Ward and colleague's (Ward, 2009; Ward & Casey, 2010) EMT of sexual offending specifically points out the difficulty of assessing such cognitions in the laboratory. Comparing laboratory based research to offence narratives collected from offenders during interviews, they suggest the lack of findings of cognitive structure such as implicit theories in the laboratory based research may be due to the lack of contextual cues in such an environment. They point out that a study using experimental methods in a controlled setting lacks the external and internal cues that

may be necessary for the activation of offence related cognition. The EMT approach focuses on the context dependent nature of offence supportive cognition and therefore Ward and Casey (2010) argue that laboratory based experiments may fail to find evidence of such cognition. Offence based narrative methods however, in which the offender is asked to talk about his own offences are thought to be more likely to illicit results. In fact, this quite accurately sums up the current literature on rapists and rape prone men's cognitive distortions. As discussed in Chapter Two, several qualitative studies that use in depth interviews with participants about their offences, have been successful in identifying implicit theories, and other offence supportive schema (e.g., Beech et al., 2006; Polaschek & Gannon, 2004; Mann & Hollin, 2001), whereas the laboratory based studies of rape prone in this thesis only found evidence for one implicit theory across two studies. However Ward and Casey point out that perhaps experimental methods to date (referring predominantly to the literature on child molester's cognition) have not been able to prime or activate offence supportive cognition in the laboratory yet, but concede that this may still be possible in future research. It is possible then, that the laboratory setting of the research in this thesis hampered the successful assessment of implicit theories in rape prone men. However, because these men have not been convicted of an offence, techniques such as offence narrative interviews are not appropriate for this population, which perhaps suggests that future research should attempt to improve upon priming techniques. It appears that although in this thesis attempts were made to improve on past methodology—by implementing implicit techniques rather than relying on self report questionnaires—there are still other methodological issues to overcome in order to accurately assess the rape supportive cognition of rape prone men and indeed incarcerated sexual offenders. For example, in Chapter Four it was postulated that problems with the

stimuli used in the IAT—the fact that the words representing weakness may be seen as representative of traditional female gender roles—may have confounded results. Similar concerns were raised in Chapter Five, regarding the strength of the IT consistent sentences used in the LDT.

Future Research

The findings of this thesis appear to have thrown up many questions relating to the social cognition of rape prone men. Whilst some evidence of rape supportive cognitive structure was uncovered using implicit methods, the strongest evidence actually came from the explicit, self report measure, against all predictions. This unexpected finding may mean that the Rape Scale is a more robust measure in unincarcerated samples than implicit measures. Such an explicit measure is thought to be hampered by social desirability bias, but it is possible that such bias is reduced in a non convicted sample, who presumably do not share the same motivations to conceal their responses. Also, if the participants are unlikely to feel that endorsing the items on the Rape Scale are social undesirable—and in fact represent social norms—then they are unlikely to modify their responses. Conversely though, a perceived social norm of rape supportive beliefs may actually encourage social desirable responses in the opposite direction—with men more strongly endorsing items than their true beliefs. The other issue that was predicted to effect performance of the Rape Scale related to the scale's ability to tap into deep level cognition, as opposed to surface level cognition. The results from this thesis have not been able to clarify this position. Although rape prone men consistently scored higher on the Rape Scale, none of the measure of cognitive structure (the implicit measures) appeared to correlate with the Rape Scale, which may indicate that the Rape Scale really is only

measuring cognitive products, that are possibly generated by cognitive structure different from Ward and Polaschek's ITs. As discussed previously, the lack of relationship between cognitions measured by the Rape Scale, and those assessed via the implicit measures may be due to the fact these methods are actually looking at different types of cognitive structure. For example, the Rape Scale contains statements that refer specifically to sexual offenders. The cognitions contained within Ward and Polaschek's rapist ITs however tend to refer more broadly to all men; such as male sex drive and male entitlement. It would therefore be useful to implement implicit measures that use stimuli more representative of the items on the Rape Scale (e.g., sentences that refer to sexual offenders' sex drive), alongside the Rape Scale, to examine whether Rape Prone men hold these more specific rape related cognitions at a deeper, implicit level. Furthermore, it would be useful to design a self report questionnaire—similar to the Rape Scale—that consists of the more general ideas about male sex drive and entitlement as represented by the ITs. Then, the hypothesis that rape prone men endorse more statements about sex offenders relative to men in general could be tested.

It would be very beneficial if the research conducted in this thesis could be extended to include a sample of incarcerated rapists, to see whether the interpretative bias task is successful in measuring ITs in men known to have committed offences. This would help to both test the validity of the different tasks used, and also learn more about the differences between rape prone men and rapists. To explore these differences further it would also be useful to examine a wider community control sample, as the participants in the present study were primarily university students, which reduces the generalisability of our findings. For example, this type of sample is

not very diverse, as university students may have not been exposed to overtly sexual or hostile female figures leading to development of these ITs. Indeed, campus life lends itself to positive interpersonal interactions between sexes, which could also account for a lack of IT consistent schema. Finally, the lack of a consensus between the self report measure of rape supportive cognitions and ITs could be further examined through research. As discussed previously, the self report measure, the Rape Scale, appears to be measuring very different cognitions than those described by Ward and colleagues ITs, and yet, despite potential social desirability problems still remains a valid and reliable measure, outperforming the implicit measure in the present research. This unexpected result throws up many questions regarding the types of rape supportive beliefs held by rape prone men, and also the utility and validity of implicit measures.

The fact that recent research (Hermann et al., 2012) indicates that the Rape Scale measures two different factors is something that could really benefit from further research with both rapists and rape prone men. Given the previous discussions about the similarities between rape myths and rape tolerance and the Rape Scale, it would be very useful to determine whether rape prone men tended to endorse the *justifying rape*, rather than the *excusing rape* factor, given that these are non convicted offenders.

Another aspect that would benefit from further research is the relationship between cognition and behaviour. As discussed in Chapters Two and Three, this final part of the cognition framework is rarely investigated, despite the great potential for furthering knowledge in this area. The interaction task study presented in Chapter

Seven, represents a starting point for future research, but the methodology used requires several modifications. For example, due to the study procedure it was not possible to determine whether rape prone men were affected solely by the teasing remarks made by the female confederate—thus indicating a possible non verbal cue reading deficit—or whether losing the computer game itself added to their negative affect and feelings about the confederate. It would be useful therefore to conduct a similar study, in which participants would be randomly assigned to four conditions; losing the game whilst being teased, losing the game without being teased, winning the game whilst being teased, and winning the game without being teased. Other modifications could also be made to improve the coding of behaviour, such as the use of emotion recognition software, in order to more accurately identify positive and negative facial expressions.

It would also be useful to explore the social norm and extended mind theory perspectives of rape myths and offence related cognition. As briefly mentioned, several studies have reported interesting relationships between participants perceived social norms relating to rape myth acceptance, and how this has an impact on their own level of rape myth acceptance and also Rape Proclivity. This evidence compliments Ward and colleagues ideas (Ward, 2009; Ward & Casey, 2010), that offence related cognition is not constrained to the individual's mind alone, and external factors including peer's beliefs and contextual cues all interact. To date it does not appear that these ideas have been empirically explored with measures such as the Rape Scale, or implicit measures of offence related cognition, although this would be an interesting avenue of research.

Final Comments

The primary aim of this thesis was to investigate the social cognition of rape prone men, to determine whether these men, like convicted rapists, hold rape supportive attitudes and beliefs, that impact on information processing and behaviour. The results overall are somewhat inconclusive, with Studies One and Two failing to find evidence of deep level cognitive structure, Study Three finding evidence for one IT only, and Study Four providing evidence to suggest rape prone men have some cue reading impairment that may result from such cognition. However, one thing that is clear from this thesis is that there are some demonstrable differences between men who demonstrate higher levels of Rape Proclivity and those who do not as evidenced by the consistently strong correlations between the Rape Proclivity Measure and the self report measure of rape supportive cognition (The Rape Scale). Although only minimal evidence was found for only one of Polaschek and Ward's (2002) rapists' ITs, Ward's (2000) Implicit Theory Model is still the most comprehensive information processing model of the cognitions involved in sexual offending, and merits further research in order to gain further insight into the mechanics involved in such a system. The fact that rape prone men appear to endorse the statements on the Rape Scale to a higher degree than non rape prone men is indicative of some difference in cognition. Whether this represents deep level cognitive structures such as schemas or ITs in these men that differ from Polaschek and Ward's conceptualisation of rapists' ITs or merely surface level cognitions remains to be seen.

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Appendix One: Lexical Decision Task Stimuli

Group 1. Women are unknowable

Sentence stem	Offence supportive word	Non offence supportive	Non word
Women who say no are usually	lying	assertive	pamera
Relationships with women can be	dangerous	fulfilling	basipally
Having a conversation with a woman can be	confusing	rewarding	adpenture
Trying to work out what a woman is thinking is	hard	fun	reud
In a relationship, women can be	unpredictable	independent	conspilious
Trying to talk to a woman can be	challenging	simple	struffle
A discussion with a woman can lead to	fighting	learning	yustle
When a woman disagrees with a man she is being	difficult	honest	behicle

Group 2. Women are sex objects

Sentence stem	Offence supportive	Non-offence supportive	Non word
A woman should dress	attractively	comfortably	sulstantial
When women are noticed by men it makes them feel	attractive	superior	uferstand
A woman might please her partner	sexually	intellectually	referpence
A woman should try and please her	partner	employer	brinter
If a woman says that she doesn't feel like having sex she is	lying	truthful	traen
Most women want to be	dominated	independent	lramework
Women are good at	seducing	everything	prapbook
Women should be	sexy	smart	hock

Group 3. Male sex drive is uncontrollable

Sentence stem	Offence supportive	Non offence supportive	Non word
A man's behaviour is ruled by his	penis	brain	lainch
If a man gets aroused he will want to be	satisfied	desirable	tottage
Once a man starts to get aroused he can not	stop	sleep	fream
A man's sexual arousal is difficult to	control	describe	greason
If a man sees a vulnerable woman he will be	excited	indifferent	oblervable
When men get sexually excited it is difficult for them to	think	walk	lonkey
If a man is aroused by a woman but denied sex he will be	angry	fine	lamd
Giving in to all your sexual urges is	natural	avoidable	sukgest

Group 4. Entitlement

Sentence stem	Offence supportive	Non offence supportive	Non word
If a woman rejects a man he may feel she is being	bad	fair	yable
A man deserves to get what he	wants	needs	laphe
If a woman rejects a man's advances she is	misbehaving	uninterested	comfretence
If a women doesn't want to please her man she should be	punished	accepted	coiking
Demanding sex with a woman will get you	somewhere	nowhere	froblem
A woman who doesn't do what a man asks her should be	controlled	proud	chomney
Always putting yourself first is	normal	selfish	lesting
The idea that men are better than women is	correct	untrue	ftaple

Group 5. Dangerous world

Sentence stem	Offence supportive	Non offence supportive	Non word
On the whole, people are	mean	nice	vull
Most of us are really seeking	power	love	umile
The world is full of	danger	people	tipsoe
Most people want to do	damage	good	hinger
People who trust others are	strange	normal	snither
People look out for	themselves	others	ungerstand
If you don't strike first you are	weak	slow	brab
Other people are usually up to no	good	harm	roif

Appendix Two: Interpretative Bias Task Stimuli

Implicit Theory	Ambiguous Sentence	IT consistent sentence	Non IT consistent sentence
Women are unknowable	John practiced mind reading with Sarah	John tried to read Sarah's mind	John rehearsed magic tricks with Sarah
	Sometimes having a relationship with a woman can be intriguing	Sometimes having a relationship with a woman can be dangerous	Sometimes having a relationship with a woman can be fun
	Julie decided that she and Mike should take a break	Julie decided that she and Mike should break up	Julie decided that she and Mike should take a tea break
	Tom was driven from his home by Anne	Tom was pushed out of his home by Anne	Tom was driven in Anne's car from his home
	Mike thought Jane was funny	Mike thought Jane was weird.	Mike thought Jane was amusing
	Jen came across as cunning	Jen came across as sneaky	Jen came across as clever
Women are sex objects	Sue was always prepared for anything	Sue was always ready to have sex	Sue was always ready for problems
	Mary always liked fooling around with Tim	Mary liked to have sex with Tim	Mary liked to have fun with Tim
	Luke noticed that Jenny was looking hot today	Luke noticed that Jenny was looking sexy today	Luke noticed that Jenny was feeling the hot weather
	When Sally went to the bar she was looking for a good time	When Sally went to the bar she was planning on having sex	When Sally went to the bar she was planning on enjoying the evening
	Ruth was always up for anything	Ruth was always willing to do anything sexually	Ruth was always willing to try new things
	Some women are dirty	Some women are promiscuous	Some women are unhygienic
Male sex drive is uncontrollable	Mike couldn't help but be excited at the thought of meeting Laura	Mike couldn't help being turned on at the thought of meeting Laura	Mike couldn't help but look forward to meeting up with Laura
	David was embarrassed at his response to the underwear model	David was embarrassed that he got aroused when he saw the underwear model	David was embarrassed about what he said to the underwear model
	John found it difficult to control his feelings towards Kate.	John found it difficult to control his sexual urges towards Kate	John found it difficult to control his emotions about Kate
	If a man fancies a woman he won't be able to control his behaviour	If a man fancies a woman he won't be able to control his urges	If a man fancies a woman he won't be able to control his emotions
	If a man is attracted to a woman he wants to get her attention	If a man is attracted to a woman he wants to get her in to bed	If a man is attracted to a woman he wants to get to know her
	A man's sexual behaviour is ruled by his thoughts	A man's sexual behaviour is ruled by his desire	A man's sexual behaviour is ruled by his head

Appendix Three: Interaction Task Questionnaires:

Time 1 Questionnaire

ID:

Please answer the following questions as honestly as possible. When you have finished, fold this paper in half and post it into the box marked QUESTIONNAIRES.

1. How angry do you currently feel?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

2. How tense do you currently feel?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

3. How happy do you currently feel?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

4. How anxious do you currently feel?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

5. How confident do you currently feel?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

6. How proud do you currently feel?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

7. How tired do you currently feel?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

8. How depressed do you currently feel?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

Time 2 Questionnaire

During the game
These questions relate to how you felt whilst you were playing the game with your partner.

1. When you were playing the game, how angry did you feel?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

2. When you were playing the game how tense did you feel?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

3. When you were playing the game how happy did you feel?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

4. When you were playing at the game how anxious did you feel?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

5. When you were playing the game how confident did you feel?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

6. When you were playing the game how proud did you feel?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

7. When you were playing the game how tired did you feel?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

8. When you were playing the game, how depressed did you feel?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

9. How much did you enjoy the game?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

10. How much did you like your opponent?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

Present

These questions relate to how you feel right now.

11. How angry do you currently feel?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

12. How tense do you currently feel?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

13. How happy do you currently feel?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

14. How anxious do you currently feel?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

15. How confident do you currently feel?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

16. How proud do you currently feel?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

17. How tired do you currently feel?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

18. How depressed do you currently feel?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

Your opponent

These questions relate to how you feel about your opponent

19. How friendly was your opponent?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

20. How competitive was your opponent?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

21. How likeable was your opponent?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

22. How much did you think your opponent was showing off?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

23. How attractive was your opponent?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

24. How flirtatious was your opponent?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

26. How annoying was your opponent?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

27. How hostile was your opponent?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

28. How much did you get on with your opponent?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

29. Do you think your opponent was deliberately trying to annoy you?

1	2	3	4	5
Not at all	A little bit	Some	Quite a lot	A lot

Appendix Four: Behaviour Checklist used by the Independent Raters

Expressions/gestures

Smile ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Laugh ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Grin ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Frown ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Confused expression ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Look of concentration/focus ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Scratch nose/face/chin ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Touch/play with hair ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Gesticulate with hands ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Touch face ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Rest head on arm/hand ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Shift in seat ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Cover face with hand/s ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Frustrated/annoyed gesture ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Rub eyes ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Slam hand on table ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Slam computer mouse on table ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Chew lip ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Slouch ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Fiddle with chin ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Cover mouth with hand ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Fold arms ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Tap fingers on desk or mouse ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Pursed lips ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Mouth "thinking expression" ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Hold chin in hands ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Play with mouth/lips ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Punch air in victory ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Point at screen ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Move closer to screen ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Spin around in chair ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Lean forward ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Rub hands together ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Shake head ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Eye contact ☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Verbalisations

Victory comment	☐☐☐☐☐☐☐☐☐☐
Losing comment	☐☐☐☐☐☐☐☐☐☐
Response to opponents comment (neutral)	☐☐☐☐☐☐☐☐☐☐
(positive)	☐☐☐☐☐☐☐☐☐☐
(negative)	☐☐☐☐☐☐☐☐☐☐
Frustrated noise	☐☐☐☐☐☐☐☐☐☐
Spontaneous remark	☐☐☐☐☐☐☐☐☐☐
Comment about their move	☐☐☐☐☐☐☐☐☐☐
Tutting noise	☐☐☐☐☐☐☐☐☐☐
Teasing comment	☐☐☐☐☐☐☐☐☐☐
Response to opponents teasing comment	☐☐☐☐☐☐☐☐☐☐
Comment about the game (neutral)	☐☐☐☐☐☐☐☐☐☐
(Negative)	☐☐☐☐☐☐☐☐☐☐
(positive)	☐☐☐☐☐☐☐☐☐☐
Ask for help in a joking way	☐☐☐☐☐☐☐☐☐☐
Offer help in a joking way	☐☐☐☐☐☐☐☐☐☐
Thinking noises	☐☐☐☐☐☐☐☐☐☐
Surprise noise	☐☐☐☐☐☐☐☐☐☐
Swear	☐☐☐☐☐☐☐☐☐☐
Congratulatory comment to other player	☐☐☐☐☐☐☐☐☐☐
Self-deprecating comment	☐☐☐☐☐☐☐☐☐☐
Flattering to self comment	☐☐☐☐☐☐☐☐☐☐
Critical comment to other player	☐☐☐☐☐☐☐☐☐☐
Flattering comment to other player	☐☐☐☐☐☐☐☐☐☐
Clears throat	☐☐☐☐☐☐☐☐☐☐
Yawns	☐☐☐☐☐☐☐☐☐☐