The Role of Heterosocial Perception in Men's Likelihood to Sexually Harass

By

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Declaration

The research reported in this thesis was conducted while the author was a part-time

postgraduate student in the School of Psychology at the University of Kent (September 2013-

September 2019). The theoretical and empirical work herein is the independent work of the

author. The author has not been awarded a degree by this or any other university for the work

included in the thesis.

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Abstract

Sexual harassment against women represents sexually aggressive and coercive behaviour that violates women's dignity and creates an offensive environment, which threatens women's well-being and ability to prosper in day to day life (Pina, Gannon & Saunders, 2009). Understanding the perceptual characteristics of men with inclinations to sexually harass, through how they perceive women is important in delineating the reasons why some men may engage in the sexual harassment of women. Heterosocial perception is a concept of how an individual perceives another person interacting with the opposite sex. It is typically measured using the Test of Reading Affective Cues (TRAC), a tool encompassing an array of video clips showing a woman interacting with a man, whereby the woman displays a range of affective cues. The perceiver is assessed on their perceptual accuracy when judging the affective cues. Perceptual accuracies of male rapists and male child molesters have been well researched (Lipton, McDonel & McFall, 1987; Stahl & Sacco, 1995), yet male sexual harassment as a singular category has been neglected. The current thesis explores the potential heterosocial perception characteristics of a distinct group of men who are relatively high in the likelihood to engage in sexual harassment of women from scores on Pryor's (1987) Likelihood to Sexually Harass (LSH) scale focusing on their differences in performance on the TRAC in comparison to those men who are lower in the likelihood to engage in sexual harassment of women.

Five empirical studies are reported in this thesis. Study 1 presents a modernized version of the TRAC and incorporates an analysis to develop it as a research tool, enabling judgements on five affective cues displayed by a woman; friendly, romantic, neutral, bored and rejecting. The tool provides this range of affective cues that were used in later studies to measure differences in heterosocial perception. Study 2 addressed theoretical explanations taken from previous perception research with sexually aggressive men (Malamuth & Brown,

1994) to explain differences in heterosocial perception for men high in LSH. Explanations are given for potential biases evidenced by men high in LSH focusing on Error Management Theory (Haselton & Buss, 2000) arguing that an overperception bias will increase the frequency of falsely inferring a woman's sexual intent towards sexual pursuit, but considerably reduce the costs of losing a sexual opportunity by falsely inferring that a woman lacked sexual intent. Altogether, study 2 provided support for the misidentification of negative affective cues (negativeness blindness), the overperception of negative affective cues and the romantic overperception bias of friendly affective cues in the perception of men high in LSH.

Study 3 tested the established theoretical link that internal concepts of social power have within men who report sexual aggression and sexual coercion and the subsequent impact on perception. Unexpectedly, power did not exacerbate perceptual inaccuracy for negative affective cues and the romantic overperception bias of friendly affective cues. In study 4, objectification was assessed in its relationship to perception in high LSH men. Instrumental and both specific and general sexual objectification were significantly higher for men high in LSH. Specific sexual objectification was found to negatively mediate romantic categorizations of romantic affective cues, but general sexual objectification was found to positively mediate romantic categorizations of friendly affective cues for men high in LSH. Results also showed that men high in LSH showed poorest perceptual accuracy on bored and rejecting affective cues, and evidenced a greater romantic judgement of friendly affective cues overperception bias. In study 5, the impact of different mental states on perception was assessed, via the use of a cooling system to facilitate self-regulation. A cooling system is a psychological framework proposed for understanding self-control (Metcalfe & Mischel, 1999), and in this study it incorporated techniques of distraction, distancing and empathy enhancement. Results showed that the cooling system was not beneficial in making high LSH

men's perceptual judgements more accurate and in making their judgements accurate to the level of low and medium LSH men for negative affective cues. However, cooling did improve perceptual accuracy of friendly affective cues removing the overperception bias to romantic judgements in comparison to the neutral condition. The cooling system was not found to reduce instrumental and sexual objectification for high LSH men. There were differences found on empathy between men high and low and medium on LSH. Differences were found such that men high in LSH showed more state empathy, but less trait empathy than men low and medium in LSH.

"The eye sees only what the mind is prepared to comprehend."

Robertson Davies, Tempest-Tost (1951).

"If the doors of perception were cleansed every thing would appear to man as it is, Infinite. For man has closed himself up, till he sees all things thro' narrow chinks of his cavern."

William Blake, The Marriage of Heaven and Hell (1790-1793).

INTRODUCTION AND OVERVIEW OF THESIS

Background of thesis

Sexual harassment has been identified as a wide and pervasive harmful phenomenon impacting both men and women across academic, social, and work settings (Pina et al., 2009; Quick & McFadyen, 2017). Due to this prevalence and the growing awareness of it as a social problem in its different forms, as well as awareness of high profile legal cases against perpetrators of sexual harassment, much research has attempted to understand the nature, extent and causes of this behaviour (e.g.,Bondestam & Lundqvist, 2020; Fitzgerald & Cortina, 2018; Gutek, 1985; McCaughlin, Uggen & Blackstone, 2017, Stockdale, 1993; Tangri, Burt & Johnson, 1982). In terms of its definition, sexual harassment has been defined as an unwelcome sexual advance, unwelcome request for sexual favours or other unwelcome conduct of a sexual nature, which makes a person feel offended, humiliated and/or intimidated (AHRC, 2004). During the mid-1970s, sexual harassment was first declared a form of illegal sex discrimination in the United States under Title VII of the Civil Rights Act (1964). Early legal definitions focused upon the "quid pro quo" harassment, in which job-related benefits (such as promotion or pay increases), and reprisals (such as demotion or dismissal), are used by a person in authority to coerce sexual cooperation from another. In later years, legal definitions have been amended to include "hostile work environment" harassment - unwelcome social-sexual misconduct (such as sexist jokes and displays of sexually explicit materials) that occur due to the target's sex (Paetzold & O'Leary-Kelly, 1994). Definitions have also been developed to focus on the violation of dignity of the individual, enabling the individual to self-report the harassment in a manner that the harassment can be determined by the relevance of incidents to the individual. This enables what may be deemed benign incidents (such as complimenting the victim's appearance or the perpetrator standing in close proximity to the victim) to be evaluated in terms of the

perceived intention behind them and the tone of their delivery (see Pina et al.,2009, for an overview of definitions of sexual harassment).

Research has shown that although both men and women can be victims of sexual harassment (Berdahl, 2007; Stockdale, Visio, & Batra, 1999) women are overwhelmingly victims of sexual harassment. For example, a sexual harassment survey in 2020 found that of 12,131 respondents, 51 percent of women and 34 percent of men had experienced a least one form of sexual harassment in the last 12 months (Adams et al., 2020). Although men experience harassment from male and female perpetrators (McLaughlin, Uggen & Blackstone, 2012), this thesis focuses only upon the context of male-perpetrated harassment of women, due to it being statistically the most frequent pattern of sexual harassment, and the most well-established in the literature (see McDonald, 2012; Pina et al., 2009). In a U.S survey, of 2,009 people, 85% of women and 44% of men reported at least one male perpetrating sexual harassment against them. In contrast, 30% of men and 3% of women reported one female or two or more females perpetrating sexual harassment against them (Stop Street Harassment, 2018). In the UK there is also a high prevalence of male-perpetrated harassment of women. A UK survey conducted in 2018 of 1,001 women showed that 12% of women were the victims of men insistently approaching them (the most common type of sexual harassment recorded in the survey) and 11% of women were victims of staring or whistling (the next most common types of sexual harassment recorded in the survey; Statista, 2018).

Much research has focused on the characteristics of the victims of sexual harassment and their behavioural responses (Buchanan & Fitzgerald, 2008; Fitzgerald, Drasgow, Hulin, Gelfand, & Magley,1997; Gutek & Koss, 1993). A number of studies have evidenced the negative and damaging consequences of sexual harassment for victims' emotional, physical, psychological and occupational wellbeing (e.g., Chan, Chow, Lam, & Cheung, 2008;

Fitzgerald, Collinsworth, & Lawson, 2013; Herschcovis & Barling, 2010; Larsen & Fitzgerald, 2011). Researchers have also investigated people's attitudes toward sexual harassment (e.g., Kenig & Ryan, 1986; Russell & Trigg, 2004), and how individuals perceive and judge harassing situations (e.g., Bowes-Sperry & Powell, 1999; Wiener, Winter, Rogers, & Arnot, 2004; Wiener, Reiter-Palmon, Winter, Richter, & Humke, 2010).

Much less research attention has been given to understanding the perpetrators of sexual harassment. The majority of studies in this domain have identified various characteristics and traits of men who self-report a proclivity (i.e., likelihood) to harass (e.g., Begany & Milburn, 2002; Krings & Facchin, 2009; Pryor, 1987). Some studies have used social-cognitive methods to assess schematic processing in men who display harassment proclivity (Bargh, Raymond, Pryor, & Strack, 1995; Pryor & Stoller, 1994; Rudman & Borgida, 1995), as well as delineate the psychosocial mechanisms of moral disengagement that sexual harassment perpetrators use to perpetrate without incurring self-censure (Page & Pina, 2015; Page, Pina & Giner-Sorolla, 2016). Others have produced typologies of sexual harassment perpetrators (Lengnick-Hall, 1995; Lucero, Allen, & Middleton, 2006; Lucero, Middleton, Finch, & Valentine, 2003),some of which appear to target a small number of victims persistently, while others who offend whenever possible against many victims being labelled "exploitative" (Lucero et al., 2003) or "opportunistic" (Lengnick-Hall, 1995). Altogether, this research has largely identified a range of characteristics and psychological traits that may be displayed by perpetrators of sexual harassment.

As of yet, almost no empirical research has explicitly investigated perpetrator perception of women, something that is presumed to underlie sexual harassment perpetration. Research has identified gender differences in perception in general, such that both men and women misperceive the opposite gender's behaviours and intentions (Abbey, 1982; Abbey & Harnish, 1995; Fisher & Walters, 2003; Goodchilds & Zellman, 1984; Shea, 1993; Shotland

& Craig, 1988), with particular reference to sexual interest, showing that men over perceive sexual interest and women under perceive sexual interest. Further evidence shows that men read sexual intent into friendly behaviour because of a general male bias towards sexual intent (e.g., Abbey, 1982; Haselton & Buss, 2000; Saal, Johnson & Weber, 1989). Indeed, studies have shown that male misperception of sexual interest may even contribute to sexual harassment (Johnson, Stockdale, & Saal, 1991; Sigal, Gibbs, Adams, & Derfler, 1988) and misperception of sexual interest has also been shown to be the strongest predictor of a number of sexual assaults, including rape (Abbey, McAuslan & Thomson Ross, 1998), further implicating biased perception as contributing to sexual crimes. As sexual harassment is considered part of a continuum of sexual violence (Kelly, 1987), sexual violence literature will be considered in parallel in this thesis.

Biased perception can contribute to sexual crimes as it can create a psychological environment that is more conducive towards committing offences without self-censure and self-restraint. Biases allow the reformulation of moral and social values towards others to justify offending and exonerate the perpetrator from the offending (D'Urso, Petruccelli, Grilli, & Pace, 2019; Page & Pina, 2015; Petruccelli et al., 2017). For example, Petruccelli et al., (2017) found that sex offenders evidenced overall higher levels of moral disengagement in comparison to university students. This higher moral disengagement included higher moral justification, with cognitive reconstruction of detrimental behaviour as socially or morally acceptable, higher attribution of blame to the victim, higher advantageous comparison and higher dehumanization of victims. This suggests that moral disengagement is associated with sex offending. Biases can diminish psychological barriers towards offending, potentially making offending more likely through weakening a psychological conflict experienced by competing internal psychological reasoning between right actions prevailing against wrong actions (Johnston & Ward, 1996; Ward & Hudson, 1998; Yates & Kingston, 2006). In

addition to this, if biases are subconscious, they can be particularly dangerous; They can partly progress an offence chain of events, without the individual being aware of some of their actions (Bourke, Ward & Rose, 2012; Ward & Hudson, 2000), removing psychological deliberation that can prevent offending taking place. Biases also help create a personal narrative that can justify offending post the offence (Ward, 2000; Polashek & Ward, 2002), which potentially fuels re-offending as it weakens the impact of guilt and shame experienced from the wrong doing. For example, Polashek & Ward, (2002) found rapists held a range of erroneous beliefs towards women. These beliefs included that women are unknowable, which implies that women are inherently different from men and that these differences cannot be understood readily by men. They held beliefs that women are sex objects and the male sex drive is uncontrollable. They held entitlement that men should have their needs, including their sexual needs, met on demand and a dangerous world belief in that the world is inherently a hostile and uncaring place where, by default, others are out to harm, exploit, degrade and deceive in order to promote their own interests. These erroneous beliefs can help the rapist to build a narrative that they are not responsible for the sex crimes they have committed, and this creates a perception that can facilitate further offending through minimising responsibility. Research suggests that sexual misperception and biases against women are an integral part of sex offenders' psychology when interpreting women's social behaviours (Lipton et al., 1987; Malamuth & Brown, 1994; Stahl & Sacco, 1995) and in their personal accounts for offending against women (Polashek & Ward, 2002; Polaschek & Gannon, 2004), altogether suggesting that this psychology can contribute to sexual crimes being committed.

Some research has attempted to explain perception biases in men who report high sexual aggression. For example, deficits in the ability to separate seductive from friendly behaviour and hostile from assertive behaviour (Murphy, Coleman & Haynes, 1986) were

associated with more rape-supportive attitudes. Malamuth and Brown (1994) tested three explanations of why sexually aggressive men perceive women's communications differently than less aggressive men. These explanations included the overperception bias, negativeness blindness, and the suspicious schema[1]. Other research has suggested that male sexual offenders possess erroneous biases and preferences related to a female's appearance (Abbey, Cozzarelli, McLaughlin, & Harnish, 1987; Cahoon & Edmonds, 1989; Farris, Viken, Treat, & McFall, 2006).

At present no research has focused on the perceptual characteristics of men who sexually harass. Research on sexual offending and perception has mainly focused on rapists and child molesters (Lipton et al., 1987; Overholser & Beck, 1986; Segal & Marshall, 1985; Stahl & Sacco, 1995) and sexually aggressive men broadly (Farris et al., 2006; Malamuth & Brown, 1994). This research has found clear biases and deficiencies in perception in male sex offenders, which may or may not be exhibited in men who sexually harass. A greater understanding of these perceptual characteristics may reveal the underlying psychological processes of men who sexually harass and explanations around their offending.

There are also other psychological factors that may impact perception. Research has shown that concepts of power are strongly connected to male sexual harassers' behaviours towards their victims (Pryor & Stoller, 1994; Bargh et al., 1995; Bargh & Raymond, 1995). There are a number of negative attitudes and beliefs about women that have been identified in the psychology of the male sexual harasser (Begany & Milburn, 2002; Diehl, Rees & Bohner, 2012; Diehl, Rees & Bohner, 2018; Lee, Gizzarone & Ashton, 2003, Pryor, Giedd & Williams, 1995; Pryor & Stoller, 1994), with those men blaming the victims for their own sexual assault or harassment, and blaming victims when confronted about their act (De

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[1] A more detailed theoretical discussion of perceptual biases is presented in chapters one and three.

Judicibus & McCabe, 2001; Schneider, 1991). Some men may sexualize women and perceive and behave towards them as if they are sexual objects (Gruenfeld, Inesi, Magee, & Galinsky, 2008; Rudman & Borgida 1995; Vaes, Paladino, & Puvia, 2011). Furthermore, lack of empathy (Gannon, Collie, Ward, & Thakker, 2008) and difficulty in perspective taking (Driscoll, Kelly & Henderson, 1998) have been shown in men who show sexual aggression. This array of psychological components may contribute to perceptual biases, which may lead to harassing behaviour.

Research suggests that sexual harassment proclivity can fluctuate with psychological power altering Likelihood to Sexually Harass (Pryor, 1987) levels for men. Walker (2014) using a mindful priming technique where male participants had to recall as much specific detail about a prior experience in which they had power over someone else, (positive power discrepancy condition) or when someone else had power over them (negative power discrepancy condition), found that recalling high power over someone led to being more likely to sexually harass. Walker's (2014) second study assessed the impact of the traits of a positive or negative power discrepancy to influence a man's proclivity to sexually harass outside of their awareness (i.e. subliminally). The results indicated that those men primed with traits of a positive power discrepancy had a greater proclivity to sexually harass than those men primed with traits of a negative power discrepancy. This second study provides supportive evidence to the findings from the first study, confirming that the findings are not a result of demand characteristics (e.g. power recall leading to being more likely to sexually harassing) as the utilization of subliminal priming reduced the ability of participants to detect the presence of the priming. Altogether, both studies provide converging evidence suggesting that prior exposure to a power discrepancy can influence a man's LSH. A man simply thinking of a situation in which he had a positive power discrepancy over another in the past or having a subconscious influence of a positive power discrepancy may lead to an increased

likelihood to sexually harass of women in the present. These findings suggest that a continuum exists whereby if men experience different power differentials on a daily basis, then their LSH levels may daily fluctuate, giving greater scope for movement along a continuum. It may be that power is so closely intertwined with all men's LSH such that altering the influence of power on a man may change a man's LSH level, at least temporarily. In understanding men's proclivity to sexually harass and their perception, it is important to investigate the influence of power on perception, grasping it's influence on changing LSH levels and perception.

Further support of an LSH continuum comes from research showing that men can move from being high on LSH to being lower on LSH. Diehl, Glasser and Bohner (2014) identified using a perspective taking empathy measure, where male participants read either a neutral text or a description of a sexual harassment case, which was written either from the female target's or from the male perpetrator's perspective, finding that those reading the target's perspective subsequently had lower LSH than did the neutral text. No such effect was found for the perpetrator's perspective to the neutral text. Awareness of the negative consequences of sexual harassment led to men's LSH to decrease whereas getting to know the same case from the perpetrator's perspective led to higher LSH than reading a neutral report (control condition). It appears that providing male participants with information about the negative consequences of sexual harassment while at the same time inducing them to take the victim's perspective may contribute to decreased LSH.

Further to this, it needs to be established with longitudinal studies if LSH levels change naturally in some men. For instance, some men's sex goals could change as a result of being in a long-term romantic relationship with a partner from being single and seeking a partner (Andersen, Cyranowski & Espindle, 1999; Wagstaff, Sulikowski & Burke, 2015) and this

could change their LSH level. There could be life course events that change men's LSH levels naturally beyond any imposed intervention.

Despite the clear identified perceptual deficiencies and biases shown in other male sexual offenders[2] (Lipton et al., 1987; Stahl & Sacco, 1995) and strong evidence showing the value of perception in explaining sexual offending (Abbey et al., 1998; Johnson et al., 1991; Sigal et al., 1988), it is somewhat surprising that more research has not specifically focused on perceptual characteristics of men who sexually harass. Furthermore, research showing similar psychological attitudes and beliefs in rapists and sexual harassers (Begany & Milburn, 2002; Quina, 1996) suggests that the same deficiencies and biases evidenced by rapists may be shown by sexual harassers. In addition to this, the persistence of sexual advances and high sexually aggressive behaviours displayed by male sexual harassers in the nature of their offending (Lucero et al., 2003; Lucero et al., 2006; Pryor & Whalen, 1997) suggests that perceptual biases may serve to support, reinforce and even facilitate these behaviours and to make them resistant to rebukes and rejections from the victim. Perception has received very little empirical or theoretical application to the domain of male sexual harassment.

A specific approach to studying perception is heterosocial perception (Lipton et al., 1987; Stahl & Sacco, 1995). Although heterosocial perception has not been clearly defined as such, it is generally understood as how someone may perceive a woman and man interacting in any context[3]. Heterosocial perception has largely been researched on sexual offenders (Lipton et al., 1987; Stahl & Sacco, 1995) finding that rapists and child molesters show perceptual deficits in correctly identifying female negative responses to a male (within video clips of a female and male interacting). Research has also focused on sexually aggressive men in general, showing biases towards a mistrust of women through a suspiciousness

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[2] A more detailed explanation of the perceptual deficiencies and biases in male sex offenders is given in chapter one.

[3] A discussion of the definition of heterosocial perception is given in chapter one.

schema (Malamuth & Brown, 1994). It is of interest to find if men high in LSH show perceptual inaccuracies and biases towards a female when making judgements on heterosocial perception.

Aims of thesis

The broad aim of the current thesis is to explore the theory that perceptual inaccuracies and biases exist in men who show a high likelihood to sexually harass that serve to enable and support potential offending. In order to investigate this general hypothesis, the thesis has three main objectives. First, the current research programme sets out to construct a modernized instrument of heterosocial perception[4]. An instrument needed to be constructed that provided a clear and comparable way of assessing heterosocial perception amongst participants. The instrument must be relatable to participants and reflect current fashion, languages and technologies. In this objective, a study was conducted to develop this measure. The measure is the Test of Reading Affective Cues (TRAC) and the studies within this thesis use the TRAC to explore differences in male heterosocial perception in the context of sexual harassment.

Second, following the development of the TRAC, three studies address the objective to examine the perceptual characteristics of men who are high in the likelihood to sexually harass (LSH) in comparison to those low and medium in LSH. These perceptual characteristics are explored to identify if clear biases and deficiencies already identified in the perception of sexually aggressive men, are also exhibited in men who are high in LSH. A greater understanding of these perceptual characteristics of men high in LSH could give us insight into the underlying psychological processes of men who sexually harass and the reasons why and how they offend. In addition to this, the nature of male sexual harassers'

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[4] A definition and descriptions of heterosocial perception are given in chapter one.

offending is such that they show a persistence of sexually coercive advances towards women (Lucero et al., 2003; Lucero et al., 2006; Pryor & Whalen, 1997). These behaviours could be connected to these men's perceptual biases towards women with the biases supporting and even facilitating these behaviours, thus making these men less likely to respond appropriately when rejected by women.

This suggests that it is critical to understand these perceptual characteristics and the psychology behind them. Pryor's (1987) Likelihood to Sexually Harass (LSH) scale is used as a proxy for sexual harassment offending, as there are few participants available who have been convicted of sexual harassment, and this scale has been used productively in previous research on male sexual harassment (Pryor & Stoller, 1994; Bargh et al., 1995; Bargh & Raymond, 1995). To establish biases and misperceptions, the TRAC measure was firstly applied in conjunction with the LSH scale. It was anticipated that men high in LSH will evidence more biases and less perceptual accuracy as this will serve as a justification for their harassing behaviours. Following this, different psychological factors previously associated with male sexual harassers' psychology, namely, malevolent schemas, power and objectification were investigated in three separate studies to establish the potential perceptual characteristics of men who are high in LSH.

The third objective is to establish how malleable high LSH men's perception is under different mental states, which is the focus of the final study. There is a need to investigate if there are conditions or interventions where biases are changed or at least weakened. Assessing the malleability and stability of these biases towards women can determine how hard-set these psychological characteristics are in conditions that encourage more deliberation in judgements and under other mental states. Potential malleability in biases may be identified if men high in LSH can show better affective cue identification of the female in the TRAC video clips under conditions which enable more deliberation and

distraction, as well as a mental state that encourages more empathy towards the female. Malleability in the perceptual characteristics of men high in LSH, will allow psychological interventions to be tested that improve perceptual accuracies, thus making justifications to support sexually harassing behaviours more difficult. This could potentially make a sexual harasser more likely to desist if interventions target their perceptions and justification regarding an interaction with a woman.

It is important to emphasise that prior to this thesis, no published research has examined heterosocial perception within men who report a high likelihood to sexually harass. It is anticipated that this thesis will make an important theoretical contribution to our understanding of the social-cognitive processes that facilitate and maintain sexual harassment perpetration. The research reported in this thesis is expected to advance existing knowledge of the psychological characteristics of male sexual harassers that enable them to justify their sexually harassing behaviour.

Overview of chapters

Chapter 1 reviews available literature to provide a presentation of heterosocial perception, as well as the perception of men likely to sexually harass. A definition of heterosocial perception and analysis of previous research in heterosocial perception is given. Findings from sex offenders, mainly rapists and child molesters, are used to draw major trends and patterns in perception that are considered relative and similar to men who are likely to sexually harass. Additionally, focus is given to established psychological factors in men high in LSH; namely power concepts and negative attitudes and beliefs towards women, in their relationship towards perception. Throughout the review the argument is put forward that research into the perceptions of sexual harassment perpetrators is a necessary and a vital step towards illuminating a more rounded understanding of the psychology of male sex offenders in how they interact with the opposite sex, as well as being critical to academics,

practitioners and researchers who work in the field of sexual offending, towards an improved understanding of the harmful psychological characteristics of male sexual harassment perpetrators of women.

In Chapter 2 a study was conducted to develop a modernized version of the Test of Reading Affective Cues (TRAC) to measure heterosocial perception. This measure provides a range of affective cues evidenced through a female and male interacting in different video clips and from which participant judgements are made upon. The TRAC includes an array of affective cues including romantic, friendly, neutral, bored and rejecting cues. The measure was developed using psychology students, who were female to exclude the impact of pre-existing male biases as well as represent the perceptions of women who could be potential victims of male sexual harassment. The TRAC provides a measure of heterosocial perception to be used in future studies.

There were a number of limitations in the development of the TRAC in chapter 2. The current TRAC equates only to a preliminary development of a scale as little has been done to establish the validity and reliability of this scale other than a modest participant sample size to establish an indicator of the TRAC affective cues in the video clips. Factor analysis can play a crucial role in establishing the convergent and discriminant validity of the TRAC and should be applied to the TRAC. Further to this the reliability of the measure can be improved by using the test-retest methodology. There were a number of factors in the development of the TRAC in this study that could have been controlled for and therefore improved the reliability and validity of the TRAC. The video clips were not randomized, which meant that all participants rated the video clips in the same order. Counterbalancing the order effects through randomization, would mean that across all participants completing the different orders, the total sample will not be biased by one unique order of questions. Further to this, the video clips were all presented continuously on one page as opposed to each individual

video clip being presented on a separate page. Presenting the video clips on separate pages would have reduced carryover effects. Further to this, attractiveness was not measured in this study, so it is not known if the participants found the actors attractive and if this affected their judgements.

A different methodology could have been adopted to counteract the influence of the male actor in the TRAC on participant judgements. The male actor could be atypical and arouse all sorts of emotions in the participants increasing noise and bias. Alternatively, future research could just show the female actor communicating with a male actor where the male actor is not visible to them avoiding some of the noise and bias. Further to this, young and white actors were used in the video clips, which limits the generalisability of affective cue judgements to social interactions of different ages, races and backgrounds. Outcomes from the use of this TRAC will also not be able to sufficiently explain the heterosocial perception between men and women of ethnicities other than the white ethnicity, as well as perceptions of white actors interacting with actors of other ethnicities.

In Chapter 3, the TRAC is used alongside the Likelihood to Sexually Harass (LSH) scale (Pryor, 1987) to measure differences in heterosocial perception in men who differ in their reported LSH. Identified theoretical perceptual biases in sexually aggressive men (Malamuth & Brown, 1994) are applied in the analysis of these research findings. These theoretical biases include the overperception bias (Kuntsman & Maner, 2011), negativeness blindness (McDonel & McFall, 1991) and the suspiciousness schema (Malamuth & Brown, 1994). Explanations are given to explain potential biases evidenced by men high in LSH focusing on Error Management Theory (Haselton & Buss, 2000) arguing that an overperception bias will increase the frequency of falsely inferring a woman's sexual intent towards sexual pursuit, but considerably reduce the costs of losing a sexual opportunity by falsely inferring that a woman lacked sexual intent. Results showed men high in LSH

evidencing negativeness blindness and the existence of an overperception bias, since these men are more likely to misperceive negative affective cues as positive affective cues and misperceive friendly affective cues as romantic affective cues. This perceptual bias is discussed in how it can partly explain some of a male sexual harasser's offending behaviours.

The main limitation in chapter 3 was that an international sample was used to maximise the likelihood of finding high in LSH men, however, findings suggest that the TRAC may not be culturally adequate for different ethnicities. For example, Asian participants perceived rejecting affective cues as romantic more than White participants. Perhaps rejecting affective cues are expressed in different ways culturally and that form of rejection presented to Asian men in this study may have been unfamiliar to them.

In Chapter 4, concepts of power are applied to heterosocial perception and men's LSH. Following previous research showing the detrimental effects that priming high power has on men high in LSH (Bargh & Raymond, 1995; Bargh et al.1995; Pryor, 1987; Pryor et al., 1995; Pryor, LaVite & Stoller, 1993; Pryor & Stoller, 1994 & Pryor & Whalen, 1997), it was expected that high power would exacerbate perceptual deficits on bored and rejecting affective cues and romantic judgements of friendly affective cues overperception bias. However, these hypotheses were not empirically supported. Power did not seem to increase perceptual inaccuracies in this study. Reasons considered to explain this finding include theory that power leads to judgements based on momentary subjective experiences rather than core beliefs and power enabling focus on easily accessible constructs detached from sexual motivations, as well as power being erroneously used to improve social approval management along with a freedom to execute better perceptual accuracy. This study suggests that high LSH men's psychology in response to high power may be complex and high power is not always detrimental to their perception.

In acknowledging the limitations of chapter 4, the methodology used in this study to prime power is unlikely to have activated power concepts in the same way as previous studies (Bargh et al., 1995; Pryor & Stoller, 1994), when considering that previous research with LSH men used conceptual priming and not mind set priming. Although, an established power priming technique (Galinsky, Gruenfeld & Magee, 2003) was used, asking participants to recall a memory where the participant was in a position of high power, this may be subject to extraneous variables, such as whether the memory incorporates a strong power differential between high and low, and whether the intensity of high power memorized is diluted amongst detail and other sentimental components of the memory. This is contrasted to Bargh's and Pryor's technique of priming power through combining vocabularies of different power and sexual words (Bargh et al., 1995; Pryor & Stoller, 1994). This technique may have created a different intensity of power concepts within participants' psychology, which may have primed the participants differently and consequently impacted the findings differently in this study. Using different techniques of power priming will further test how robust the findings are within this study in identifying the relationship between power and perception for high LSH men.

A critical flaw in the study was the positioning of the power tool in close timing to the LSH scale, which could have impacted LSH outcomes for participants in considering the established link between power and sex (Bargh et al., 1995; Pryor & Stoller, 1994). The results in this study could have been confounded since men who may normally score low on the LSH scale may have scored high on the LSH scale because they were influenced by high power in the power tool. An important additional limitation in this chapter was that the cut off was reduced to mark high LSH men in this study in comparison to chapter 3, and this difference may have impacted on the results. Although this decision was made to increase the sample pool numbers of high LSH men, the decision will have weakened the comparisons to

low and medium LSH men. By widening the range of score to identify high LSH men, consequently this sample may then have included men who possess weaker psychological associations between high power and sex. Further to this, differences by ethnicity in understanding the TRAC could have limited the impact of the Power tool since participants of different ethnicities finding behaviours in the TRAC unfamiliar could have been confounded with the influence of power. Such that participants of different ethnicities are showing perceptual inaccuracies because they are having difficulty in interpreting unfamiliar behaviours in the TRAC and not because of a psychological influence of high power on their sexual cognition. This is supported in this study with the finding that White ethnicity participants showed less perceptual misidentification on the rejecting affective cues than the Asian and Other/Not Disclosed participants. This trend from the analyses in both chapters 3 and 4 of ethnical differences in perceptual accuracy stresses the importance of attenuating the TRAC towards participants so that it is culturally relevant to them.

Chapter 5 provided an assessment of both instrumental and sexual objectification and their relationship to perceptual accuracy in men's LSH. A specific measure of objectification was used related to the female in the TRAC video clips, which encompassed both instrumental and sexual objectification. A measure of general sexual objectification towards women was also included. Results showed that high LSH men showed significantly worse perceptual accuracy on negative affective cues, more romantic overperception biases of friendly affective cues, as well as showing more instrumental and sexual objectification towards the female in the video clips. They also showed more general sexual objectification towards women. Results showed that specific sexual objectification negatively mediated romantic categorizations of romantic affective cues for high LSH men, such that the greater their specific sexual objectification the less romantic categorizations they made. General sexual objectification positively mediated romantic categorizations of friendly affective cues

(an overperception bias) for high LSH such that the greater their general sexual objectification the more likely they evidence this bias. The finding that general sexual objectification mediates this bias provides support for Ward's (2000) theory of male sexual aggressors' implicit theories of women as sex objects, as well as the guarding theory of core beliefs (Maner, Miller, Moss, Leo, & Plant, 2012) in explaining some of the motivation of this bias.

A limitation of chapter 5 is that the objectification measures could have primed sexual objectification and instrumental objectification when participants completed their responses on the LSH measure, potentially giving them a sex and instrumental goal, perhaps intensifying their instrumental and sexual framing of the woman when responding to the scenarios in the LSH measure, and subsequently increasing their LSH scores. In addition to this, there is also some overlap with the instrumental objectification scale and the quid pro quo nature of the LSH scale. This is likely to have primed an instrumental psychology when completing the LSH scale where questions focus on sexual bargaining often for female career development in occupational settings. The cumulative nature of using three objectification measures may have made it increasingly likely that a sex goal and instrumental goal was primed when completing the LSH. Even men who would normally score high on LSH may have had their scores become more extreme on the LSH measure where their sex and instrumental goals have been activated and intensified through inadvertent priming. Positioning the LSH measure at a separate time point to the TRAC and objectification scales, with a presentation point of a number of days after the TRAC and objectification scales may have overcome this possible confounding component in this study, minimising any sexual and instrumental priming and carryover to the LSH scale.

In Chapter 6, techniques used to facilitate self-regulation via activating a cooling system were applied to men's perception of the TRAC, with the prediction that this would

improve their perceptual accuracy and minimise their objectification. These techniques included distraction, distancing and empathy enhancement techniques to form a psychological cooling system. As a contrast both low empathy and neutral conditions were created where the cooling system techniques were not utilised. Measures of both state and trait empathy were taken, as well as both instrumental and sexual objectification. Results showed that the cooling system was not beneficial in making high LSH men's perceptual judgements more accurate and in making their judgements accurate to the level of low and medium LSH men for negative affective cues. However, cooling did improve perceptual accuracy of friendly affective cues removing the overperception bias to romantic judgements in comparison to the neutral condition. The cooling system was not found to reduce instrumental and sexual objectification for high LSH men. High LSH men showed more state empathy towards the woman in the TRAC than low and medium LSH men but showed less trait empathy than low and medium LSH men. Results are discussed in relation to how adjusting perception could improve affective cue accuracy and in how more direct and specific approaches are required to reduce objectification of women as opposed to transitory mental states. A limitation of chapter 6 is that the cooling conditions used in this study may have not been tailored accurately enough to impact the perception of men high in LSH. There is also the possibility that multiple competing influences from the cooling components overload cognition and do not create the individual intended component effect. Another limitation in this chapter, was that the cut off was reduced to mark high LSH men and this difference may have impacted on the results.

In Chapter 7, the findings of the current research programme are summarised and directions for future research are presented. The chapter begins by revisiting the background and aims of the thesis, prior to giving an overview of the findings obtained in each of the five studies. This leads to a discussion of the theoretical and practical implications of the research.

Methodological limitations are highlighted from this research programme and avenues of future research are suggested. It is emphasised that further research should be carried out to investigate whether perceptual biases and deficits are as prevalent in actual sexually harassing behaviour.

The outcomes within the limitations of the TRAC used in these studies have theoretical implications such that the inclinations and preferences evidenced in high LSH men's perception can be incorporated into existing theories of sexual harassment. The lack of accurate identification of negative affective cues by men high in LSH suggests that existing theories of sexual harassment could incorporate and account for these biases to comprehensively explain the psychology of men who sexually harass. Existing theories of sexual harassment can provide more structure in understanding this bias as well as explicate the nature of how and when the bias occurs. Further to this understanding high LSH men's psychological relationship to rejection may inform how sexual harassment occurs. The prominence of overperception biases evidenced in this programme of research shows that these biases should also be incorporated into existing theories explaining sexual harassment. Findings from men high in LSH's overperception biases may add to evolutionary theories of sexual biases and in particular the Error Management Theory (EMT) of sexual biases that proposes gender differences in benefits and costs that lead to sexual biases. The findings in this research suggests there are intra differences in sexual biases within the male gender by LSH level and the EMT only accounts for differences between genders. The EMT needs to explain these individual differences with EMT potentially combining with social cognitive psychological approaches in accommodating individual differences as well as contextual and situational factors affecting sexual biases. These biases may also seem to serve a kind of internal moral self-regulation and self-encourage sexual harassment through providing a psychological environment that is released from self-censure. The outcomes of the studies

can be incorporated into self-regulation theories such as moral disengagement theory (Page & Pina, 2015).

One of the studies showed that power did not impact negatively on perceptual accuracy. This is contrary to existing research between sexual cognition and power that shows that high power is detrimental to sexual cognition (Pryor & Stoller, 1994; Bargh et al., 1995; Bargh & Raymond, 1995). Existing social cognitive theories of power and sex may need to account for why the perceptual accuracy of men high in LSH may not be hindered when power concepts are activated perhaps making perceptual biases unnecessary, whilst accounting for why power still negatively changes other behaviours.

It was apparent from the studies that men high in LSH evidence high sexual and instrumental objectification and this suggests that an integrated theory of sexual harassment must incorporate both instrumental and sexual objectification in explaining the motivations and behaviours of sexual harassers, as well as their appraisals of women. Further to this, the prominence of sexual objectification of women by men high in LSH shows support for the *women as sex objects* implicit theory (Ward, 2000). There may also be other implicit theories in the psychology of men high in LSH such as *women are unknowable* and *entitlement*, which may explain these men's biases towards women in social situations. Finally, consideration is given to improving perceptual accuracy offering techniques to achieve this, whilst covering the psychology around rejection even if it is perceived correctly.

The outcomes from these studies also have important practical implications for potential educational workshops that enable people to understand and act on the biases that some men may use in misinterpreting the behaviours of women and this may co-exist if evidenced with the sexual harassment of women. Within these workshops a demonstration of some of the TRAC video clips may improve clarity of understanding of perceptual biases such as negativeness blindness and overperception biases, through enabling visual TRAC

scenarios to then relate to the audience's real-life experiences. Audiences to be targeted are those where sexual harassment is known to be highly prevalent including workplaces such as hospitals, the military and the police, as well office-based jobs where there is a high number of female and male workers. Audiences to be targeted should also include staff in nightclubs and restaurants, as well as students at universities. Whilst the assessment of men who sexually harass and who evidence perceptual inaccuracies will need to be conducted by an expert, these workshops could enable audience members to flag these signs to a supervisor or support network including family and friends to then act on and refer to an expert. Intervention and treatment programmes can be developed to advance techniques to tackle perceptual inaccuracies, specifically focusing in improving perpetrator's identification and responses to female negative affective cues and overperception biases of friendly affective cues. Specific psychological interventions that could remove negativeness blindness and overperception biases include interpretation bias modification, 'nudging' (changing the information presentation or the manner by which judgments and decisions are elicited), changing incentives by reframing some of the judgements and long-term individualized training. Perception in high LSH men is intricately complex in its biases and relationship to power and objectification, and strategies to improve the perceptual accuracy in these men is needed. The thesis concludes with a discussion of theoretical implications of the findings, practical implications, methodological limitations, and suggestions of future research avenues.

CHAPTER ONE

A Review of the Literature on Heterosocial Perception in Male Sexual Harassment

Sexual harassment is a prevalent problem in most societies across the world (Barak; 2005, Hadi, 2018; Nielsen, Bjorkelo, Notelaers, & Einarsen, 2010; Chan, Tang & Chan, 1999; Marsh, et al., 2009, Ostergren, Canivet & Agardh, 2022). A European Union Agency for Fundamental Rights survey in 2014 found that 55 percent of women had been sexually harassed based on interviews with 42,000 women across Europe (European Union for Fundamental Rights, 2015). In 2013, two large scale surveys and reports portray the global scale of sexual harassment; the International Centre Research for Women (ICRW) and United Nations (UN) Women Survey found that in the USA in 2013, there were 7,256 charges filed for sexual harassment (U.S. Equal Employment Opportunity Commission, 2013) and the survey found that 95 percent of women and girls feel unsafe from unwanted sexual harassment in public spaces in the city of Delhi (UN Women & ICRW, 2013). In Egypt a UN Report found that 99.3% of Egyptian women have experienced some form of sexual harassment (United Nations Entity for Gender Equality and the Empowerment of Women, 2013). Potential perpetrators are varied and can include spouses and partners, parents, other family members, peers, colleagues and those in positions of power or influence (Pina et al., 2009). With the global frequency of perpetration and the range of potential perpetrators it is vital that the psychological mechanisms at the core of the perpetrator are identified and detailed. This will go some way to inform treatment methodologies and possible prevention strategies within the workplace and in other social settings.

The focus of this review will be sexual harassment as an offence, and how it is affected by heterosocial perception. Heterosocial perception will be defined and detailed,

before exploring existing research to date on the psychology of sexual offending and perception. In addition to considering how sexual harasser perception fits with other sexual offences, the main aim of the current review paper is to review the sexual offending literature focusing on heterosocial perception as an important component in order to understand how and why men sexually harass. Significant areas of research that only focus on sexual harasser perception will also be critiqued to provide a rounded portrayal of sexual harassers' heterosocial perception.

Heterosocial Perception – Context and Definition

The widespread proclivity of sexual harassment necessitates understanding the psychological processes that lead to its perpetration. Many studies have identified the significance of the actual visual representation of a female to sexual offence perpetrator's perception (Letourneau, 2002, Keown, Ward & Gannon, 2008; Crooks, Rostill-Brookes, Beech, & Bickley, 2009). This has stimulated interest into perpetrator perception when the perpetrator makes decisions and judgements of the female in their sight. Often this approach is a step towards tapping into the psychology of perpetrator perception, whilst replicating actual perpetrator social experiences within safe boundaries. Tapping into real experiences, or closely resembled real experiences, enables a more precise testing of theories applied to explain perpetrator perception and subsequent behaviours towards women. It is significant to identify from a theory and treatment perspective, that perpetrators are likely to distort or hold a biased perception of the victim when she is visually represented. This distortion or bias of the victim, whether intentional or not, may potentially serve the perpetrator through their own psychosexual, power seeking or other malevolent need.

Previous research on perception and sexual offending has focused on different ways of measuring perception in how the perpetrator may interact with the victim (Bensimon, 2007; Gordon & Grubin, 2004; Hall, Hogue & Guo, 2014, Fromberger et al., 2012, Seto, Hanson & Babchishin, 2011, Kelly, Richardson, Hunter, & Knapp, 2002, Marshall, Barbaree & Christophe, 1986). This research has included different measures of perception such as the visual gaze, eye tracking, attention measures and target behaviours. These measures have incorporated both covert and overt tests of perception. They are associated with image exploration and are used as a sensitive index of a person's attention, motivation and preference. Fixations, longer viewing times and analysis of local image salience are used to measure perceptions. The general aim of this body of research is to find perceptual differences in sexual offenders in comparison to a non-offending population of people. This may then enable the isolation of factors that impact sexual offending and may account for why perception is integral to the offender's justification of their own behaviours. This research may also reveal naturally occurring attentional and perceptual differences that may shed light on potential deviant sexual preferences for particular perpetrators. Indeed, tapping into a perpetrator's perception in a dynamic way may unravel the perpetrator's own underlying needs and intentions. Understanding perception may be a powerful insight into the psychological make-up of a sexual perpetrator.

Despite existing research on heterosocial perception (Lipton et al., 1987; Stahl & Sacco, 1995), it has not been clearly defined as such, although there have been past attempts to delineate it as a concept, which will be introduced shortly. Perception is generally defined as an awareness of one's surroundings that is produced by the operation of the senses (Attneave, 1962; Hochberg, 1956). Perceptions are the first element in the interactive process and are likely to play a primary role in activating and shaping other aspects of social cognition (Fiske & Taylor, 1991). The word heterosocial incorporates at least one female and

one male interacting with each other in any setting. This situation incorporates a woman and man interacting in some way whether this be in close proximity to each other or a direction of focus or conversation with each other. In layman's terms heterosocial perception can be conceived as how someone may perceive a woman and man interacting in any context. Examples of interactions include perceiving a man and a woman on a date, a man and a woman working together in a work setting and a man and woman conversing on public transport, amongst many others. Even a simple incident of a man and woman walking past each other in an open space, can involve heterosocial perception. This psychological concept is strongly relevant to modern living with an increased capacity of women and men to meet in public spaces, in addition to an increased presence of women in the workplace (see Office for National Statistics – Women in the Labour Market, 2021) and increased technology for social communications that bring people together. These social settings are likely to provide ample opportunity to study heterosocial perception. Recognising the relevance and significance of heterosocial perception to psychology there have been some attempts to explain it, as outlined below.

Lipton et al., (1987) use McFall's (1982) information-processing model of social competence to break heterosocial perception into three component parts. These three component parts are decoding skills, decision skills, and execution skills. They argue that observable task performance is a product of firstly decoding skills; the afferent processes involved in accurately receiving, perceiving, and interpreting incoming sensory information. Secondly, decision skills; encompassing the central processes involved in generating response options, matching these to the task demands, selecting the best option, searching for that option in the behavioural repertoire, and evaluating the subjective utility of that option's predicted outcomes. Finally, execution skills; the efferent processes involved in smoothly executing a response, monitoring its impact on the environment, and making necessary

adjustments to achieve the intended impact. The authors provide a three-step process to broadly encompass the cognitive mechanisms that may exist when someone views a male and female interacting. The clear strength of this explanation is that it identifies the complexity of the perceptual process and recognizes that there must be focus given to each substage to fully grasp heterosocial perception in all accuracy. This explanation is also a good starting point to detail perceptual behaviours and to aid in strengthening experimental research by isolating specific substages of perception. Although, it must be identified that this three-step process could be applied to any situation, such as someone learning a new skill or performing a task, and therefore the explanation does not necessarily solely reflect or explain heterosocial perception. The cognitive processes identified may be relevant to perception without a male and female impacting upon them, and the theory encompasses perception of a whole range of potential other behaviours not relevant to heterosocial perception. The explanation is not necessarily concept specific to heterosocial perception.

McFall (1990) focused on heterosocial behaviour rather than heterosocial perception. McFall breaks heterosocial behaviour into two measurement factors; heterosocial skills and heterosocial competence. Heterosocial skills and heterosocial competence both assess a person's ability to successfully interact with members of the other sex. However, McFall distinguishes social competence from social skills in that competence is the evaluation of a person's performance of a particular task, while skills are the underlying processes that enable a person to perform that task competently. Thus, based on McFall's (1990) definition, heterosocial competence could be conceptualized as the evaluation of a person's performance in heterosocial interactions, while heterosocial skills could be defined as the underlying processes that enable a person to successfully interact with members of the other sex. Both of these measurement categories provide two avenues of research to understand heterosocial perception as a concept in men and women.

Some of the value of heterosocial perception as a measure of perceptual differences is realized in research on gender perception showing how judgements are formed from perception. Studies of gender perception typically find that compared to women, men perceive both men and women to have more sexual interest (Abbey, 1982; Abbey, 1987; Abbey & Harnish, 1995; Fisher & Walters, 2003; Goodchilds & Zellman, 1984; Shea, 1993; Shotland & Craig, 1988). Researchers usually interpret these findings as resulting from men's, rather than from women's misperceptions (e.g., Abbey, 1982; Haselton & Buss, 2000; Saal et al., 1989), and they argue that men read sexual intent into friendly behaviour because of a general male bias. It has been suggested that this sexual overperception bias could facilitate the satisfaction of mating goals (Kuntsman & Maner, 2011). This may be best understood from an evolutionary perspective, whereby it is argued that men are more motivated towards mating with multiple partners to ultimately maximise chances for gene survival (Schmitt, 2003). Perceiving a person as displaying a high degree of sexual interest increases the likelihood that one might initiate a romantic encounter with that person and maximise gene proliferation through sexual intercourse. Biases in male perception may serve to improve success in making sexual intercourse more likely with multiple women. It is important to identify that men in general possess biases towards sexual relationships, and that this is not just specific to subsets or typologies of men. These biases are likely to be integral to male perceptions of women in social situations and subsequent judgements made of their behaviour.

There are also identified gender perception differences with regards to judgements of sexual offending. Women have been found to perceive a broader range of social-sexual behaviours as harassing (Rotundo, Nguyen & Sackett, 2001). The poorer male ability to identify behaviour as sexual harassment was most notable for behaviours that involved hostile work environment harassment, derogatory attitudes towards women, dating pressure,

and physical sexual contact (Rotundo et al., 2001). Men seem to be less aware of sexually

harassing behaviours against women when considering male behaviour towards women. Men

were also less likely to identify sexual harassment when a woman was the harasser and the

victim was a woman (Katz, Hannon & Whitten, 1996), again suggesting a bias towards the

harasser engaging in a sexual relationship with a woman. Indeed, studies have shown that

male misperception of sexual interest may contribute to sexual harassment (Johnson et al.,

1991; Sigal et al., 1988). When viewing a video clip of a professor interacting with a cross-

sex student, results indicated that men perceived the female target as behaving in a "sexier"

manner regardless of her status, the level of harassment or the victim's response (Johnson et

al., 1991), suggesting that men may have less awareness of sexually harassing behaviours and

they are more likely to perceive harassing behaviours as socially acceptable or romantically

acceptable behaviours. Misperception of sexual interest has also been shown to be the

strongest predictor of a number of sexual assaults, including rape (Abbey et al., 1998; Abbey,

Zawacki, & Buck, 2005), further implicating perception as contributing to sexual crimes. In

sum, this research suggests that men make more erroneous judgements of sexually harassing

behaviours than women in general, but that only some men may then engage in sexual

crimes.

Heterosocial perception is most clearly operationalised in the visual presence of a

man and a woman together in close proximity, in conversation with each other. Although

potentially subjective in identifying the presence of a heterosocial situation, in most

psychological studies using heterosocial perception, it is clearly identified and portrayed for

experimental rigour (Lipton et al., 1987; Stahl & Sacco, 1995). This operationalization

centres upon judgements of a man or woman interacting with each other in a hypothetical or

real situation. Although heterosocial perception can encompass all the human senses, a large

body of research has focused on visual perception (Lipton et al., 1987; Stahl & Sacco, 1995).

Visual perception may be the most naturally occurring of the senses and the most ecologically relevant. Specifically, many studies have used videotaping of a male and female interacting, which focuses on the visual aspect of perception with variations in the appearance, body language, proximity of those interacting and settings of those interacting (Lipton et al., 1987; Stahl & Sacco, 1995). Undoubtedly, there is also an auditory aspect to this videotaping as well, with variations in the content of what is said between those interacting, further resembling real life social interactions. In sum, heterosocial perception is arguably most clearly portrayed by the visual and audible presentation of a man and a woman interacting.

In terms of combining sexual harassment with the concept of heterosocial perception; the measurement of heterosocial perception can extend to male sexual harassers' perception of males and females interacting with and without the female being a victim. There may be a general distorted perception which exists with and without the female being a target, and this is why research must not only focus on perception towards a victim. Similarly, whilst research has focused on underlying reasons why men may sexually harass women (Diehl et al., 2012; Gutek, 1985; Gruber, 1992), less research has focused on how perpetrators may perceive women differently on a perceptual level in comparison to non-offenders. The visual and audible nature of the female's behaviour may be distorted and manipulated by the male perpetrator and it is this perceptual process and outlook that is of interest to this thesis. Heterosocial perception may pre-empt the perpetrator's own attempts to befriend a woman or even act as a template for future choices or decisions that the perpetrator makes towards that woman or women in general, which are forerunners for behaviours such as victim selection, victim acquisition and even as far as the nature of the harassment or assault. There is a logical argument that heterosocial perception is a key component to understanding sexual offending, and thus, this deserves further analysis and study.

Heterosocial Perception – Past Research

Generally, research in heterosocial perception has mainly focused on male child molesters and rapists. Clinical psychologists (e.g., Abel, Blanchard & Becker, 1976) have found that many of the male sex offenders they treated had poor heterosocial skills. That is, they lacked the social skills necessary to function around women (Barlow, Abel, Blanchard, Barlow, & Young, 1977). The male sex offenders performed poorly at behaviours related to initiating a heterosocial relationship, initiating sexual behaviour and maintaining the heterosocial relationship over a period of time (Barlow et al., 1977). These observations have spawned a large body of research examining the social competence and heterosocial competence of rapists and child molesters (Bumby & Hansen, 1997; Farris et al., 2006; Hudson & Ward, 1997; Katz, 1990; Koralewski & Conger, 1992; Lipton et al., 1987; Lisak & Ivan, 1995; Malamuth & Brown, 1994; Muehlenhard & Falcon, 1990; Murphy et al., 1986; Overholser & Beck, 1986; Segal & Marshall, 1985, 1986; Stahl & Sacco, 1995; Ward, Hudson & Marshall, 1996). This research has supported in part, Barlow et al., (1977) original observations that rape and child sexual abusers may evidence difficulties in establishing and maintaining normal relationships with women because of their poor heterosocial skills. They argue that in some instances, these individuals use sexual coercion to compensate for their inability to achieve intimacy. Poor heterosocial skills and inadequate heterosocial perception are likely to receive negative feedback when these men make sexual advances towards women, which may explain, in part, some of the sexual frustration and anxiety that some male rapists and child molesters experience (Kanin, 1983; Langton & Marshall, 2001, Beauregard, Lussier, & Proulx, 2005).

One of the first and seminal studies that explicitly measured heterosocial perception in rapists was that of Lipton, McDonel and McFall, (1987) who carried out a measure of heterosocial cue reading accuracy with three groups of white male prison inmates; rapists,

violent non-rapists and non-violent non-rapists. They found that rapists were significantly less accurate than inmates in the violent non-rapists and non-violent non-rapists groups when reading cues in simulated first-date interactions. Violent non-rapists in turn, were less accurate than non-violent non-rapists when reading these cues. In the main, they found that rapists were especially deficient in reading women's cues, using their own designed cue-reading research tool.

Lipton et al., (1987) used the Test of Reading Affective Cues (TRAC) measure, which assesses the heterosocial cue reading accuracy of young adults and consists of 72 thirty second videotaped vignettes of heterosocial couples interacting. Forty of these depict couples on a first date and thirty-two depict more intimate couples talking in an apartment. Most persons portrayed in these videoed interactions are white students, 18 to 21 years of age. The participant's task was to guess which of five affective cues – romantic, positive, neutral, negative, or bad mood was being conveyed by each party in each interaction. One person, the non-target always displays a positive affect; the other person, the target, may display any of the five affects. Participant's responses were scored for cue reading accuracy by awarding 2 points for each correct response, 1 point for each second-best guess, and 0 points for all other responses (Lipton et al., 1987).

Their results showed that rapists were no less accurate than violent non-rapists and non-violent non-rapists when reading either men's or women's cues in the intimate situations. However, rapists displayed a significant deficit when reading women's cues in first date interactions. This suggests that rapists may have specific heterosocial perceptual deficits in more public settings as opposed to private and physical settings. It may be argued that it is the lead up or pre-cursor to the sexual act, in a public setting, specifically where rapists may display perceptual deficits. There is some mixed evidence to support this where men who self-reported rape engaged in more sexual behaviour at a bar when meeting a female

confederate, although they did not recall more confederate positive behaviours towards them than negative (evidencing an overperception bias) in comparison to men who had not committed sexual assault (Abbey et al., 2005). Importantly, it has to be noted regarding the Lipton et al., (1987) study that the control participants (violent non-rapists and non-violent non-rapists) all had criminal convictions so just by the criminal nature of the participants they may have had poorer heterosocial perception than participants without a criminal history. The findings from the Lipton et al., (1987) study, should be considered cautiously as participants without criminal convictions were not used as a control group in that study. This means it is unclear of the extent of the rapists' perceptual inaccuracies and biases, as they were only compared against prisoners who may have a very specific background in contrast to being compared to non-offending men from a general population who would likely have broader backgrounds.

Rapists can be differentiated from control participants most clearly by their poorer performance when identifying female responses involving negative or bad mood cues (Lipton et al., 1987; Malamuth & Brown, 1994). Reproach or dismissive responses from women may not be correctly perceived by rapists and avoidance behaviours from women towards them may be misinterpreted by rapists. Rapist's dangerousness is partly evidenced when their seduction techniques or sexual advances do not have their desired effects, since they are not correctly identifying that these behaviours are not wanted. Whether this extends to sexual harassment is of interest as negative responses from women are bound to be a natural response to continued sexual advances and sexual pressure from sexual harassers. The finding that rapists are particularly deficient in perceiving negative moods is central to understanding the potential persistent nature of rape and may go some way to understanding the persistent nature of sexual harassment with further research.

Rapists tended to misinterpret women's negative affective cues in dating situations, perceiving their cues as more positive than they actually are (Lipton et al., 1987), and showing a bias towards more positive behaviours (Maner et al., 2005; Kunstman & Maner, 2011). Rapists scored significantly higher on perceptual accuracy when judging female targets than with male targets in the intimate situation. This suggests that rapists themselves may be intimately awkward and difficult to interact with, through possessing erroneous thinking in how men should behave in intimate situations. Perhaps this situation exists by the rapist focusing on the wrong scripts of behaviour in intimate situations (Bartels & Gannon, 2011; Gagnon & Simon, 1973; Gagnon, 1990; Jackson, 1978; Ryan, 2004; Ryan 2011). They also found that rapists were significantly better at reading cues from female targets in the intimate situation than in the date situation (Lipton et al., 1987), suggesting that rapists may express social awkwardness in open spaces with women as they are misperceiving the women's behaviours. Furthermore, rapists may also struggle to show competence in courtship behaviours with women (Muehlenhard & Linton, 1987), which shows that they have both deficits in intimate (miscommunication about sex and interpersonal violence) and date (initiating the date, paying expenses) situations. This may be partly determined by their point of focus in a dating situation (Krahe, 2012; Ryan, 2011), which may not be for seeking a long term companion or relationship, instead favouring a short-term sexual relationship, making their motives underlying the date different (Marx, Van Wie & Gross, 1996) and impacting the biases, which they evidence towards the woman they are dating.

Stahl and Sacco (1995) measured heterosocial perception in child molesters and rapists. They measured child molesters' and rapists' perceptions of women's affect and sexual desire in first-date situations using videotaped presentations of heterosexual couples in first-date situations. For each videotaped segment, participants categorized the woman's affect as rejecting, bored, neutral, friendly, or romantic and estimated how much sexual

activity she desired after the date. Heterosexual child molesters reported lower estimates of sexual desire and exhibited poorer categorization of affect relative to violent non-sex offenders when the women displayed romantic affect. This suggests child molesters may have a poor understanding of what romance entails and in identifying when a female is being romantic. Rapists did not show predicted affect-categorization deficits and did not report higher estimates of women's sexual desire relative to their control group of non-sexual offenders. This indicates that rapists do not necessarily have perceptual deficits in comparison to other offenders, although once again comparisons were not made with non-offenders. As there is psychological similarity between sexual harassers and rapists (Begany & Milburn, 2002; Quina, 1996) in rape myth beliefs, sexual promiscuity, aggressive tendencies and empathy deficits (DeGue, DiLillo & Scalora, 2010), it is useful to understand the relation of rapist's perception to other types of sexual offending, in discerning how sexual harassment may fit into the wider realm of sexual offending.

Stahl and Sacco (1995) found in contrast to prior research (Lipton et al., 1987; Malamuth & Brown, 1994) that relative to violent non-sex offenders, rapists were no less accurate in interpreting negative affective cues. They also found that rapists accurately interpreted women's positive affective responses and did not perceive greater sexual desire than violent non-sex offenders. They argue that these findings are consistent with the argument that there may not be social skills deficits unique to rapists (Segal & Marshall, 1985; Stermac & Quinsey, 1986). This argument is interesting in that it may extend to sexual harassment having shared characteristics whereby those with higher perceptual functioning may participate in more deceptive, manipulative and covert sexual offending that may apply to both rapists and sexual harassers (DeGue et al., 2010), as opposed to child molesters. The potential similarities between rapists and sexual harassers may suggest that the perceptual functioning of sexual harassers is higher than that of child molesters. Research has shown

that child molesters evidenced the largest discrepancy scores when making perceptual judgements on women (Lipton et al., 1987; Segal & Marshall, 1985, 1986; Stahl & Sacco, 1995). Furthermore, child molesters have shown less adaptability in their perceptions and when adjusting to situations. Their perceptions have been characterized by stereotypes of sex role behaviour (Overholser & Beck, 1986) and they have shown to feel less assertive in accepting positive feedback from others (Segal & Marshall, 1985). As well as evidencing more restricted perceptions, child molesters have shown less self-confidence and much tension in social situations (Bumby & Hansen, 1997). They have shown more social anxiety and feel more threatened by heterosocial interactions, as well as being more likely to perceive themselves as socially inadequate (Segal & Marshall, 1985). In sum, Stahl & Sacco (1995) showed that rapists do not necessarily evidence worse perceptual accuracy in comparison to prison non-sex offending groups, which perhaps suggests with rapists' psychological similarity to sexual harassers that sexual harassers may not evidence poor perceptual inaccuracies in comparison to these groups, although evidence suggests the perceptual functioning of both rapists and sexual harassers is likely to be better than child molesters.

A range of studies have attempted to measure heterosocial perception within sex offenders in a number of different ways, as well as using videotaped techniques (Lipton et al., 1987; Stahl & Sacco, 1995). Heterosocial perception has been measured using self- ratings of social skills and anxiety (Katz, 1990; Koralewski & Conger, 1992; Muelenhard & Falcon, 1990; Segal & Marshall, 1985, 1986; Twentyman, Boland & McFall, 1981; Ward et al., 1996), confederates' ratings of anxiety and social skills of sex offenders (Segal & Marshall, 1985) and judge's ratings of anxiety and social skills of sex offenders (Overholser & Beck, 1986). A number of checklists and indexes have also been created to measure heterosocial perception (Barlow et al., 1977; Malamuth & Brown, 1994; Murphy et al., 1986). Barlow et al. (1977) created a Heterosocial Skills Behaviour Checklist using videotaping of hospital

patients interacting with a female and found that behaviours fell in three categories; form of conversation, affect and voice, that discriminated the heterosocially competent from incompetent males. Murphy et al., (1986) created the Hostility Discrimination Index, which found that personality traits and individual differences on social perception are related to coercive sexual behaviour. Other studies have used self-report relationship measures such as the Relationship Questionnaire Fearful attachment (Ward, et al., 1996) and the Survey of Heterosexual Interactions (Katz, 1990; Koralewski & Conger, 1992; Muelenhard & Falcon, 1990; Segal & Marshall, 1985; Twentyman et al., 1981), whilst others have used different categorization techniques such as the Seduction Discrimination Index (Murphy et al., 1986; Malamuth & Brown, 1994) and the Timed Behaviour Checklist for Anxiety (Kern, 1982). Other ways of testing heterosocial perception have included Facial Affect Recognition (Lisak & Ivan, 1995) to measure intimacy and empathy deficits. All measures have attempted to capture heterosocial perception in a number of different ways with largely the finding that child molesters showed poorer heterosocial perception than rapists (Lipton et al., 1987; Stahl & Sacco, 1995; Segal & Marshall, 1985, 1986; Ward et al., 1996). It pays recognition to the nature of heterosocial perception in that similar findings are found across the different ways of measuring it. There are a number of ways of capturing heterosocial perception, with some perhaps more vague than others, but they all suggest that heterosocial perception is quite a broad and versatile concept that can be explored in many different ways.

In terms of a more holistic review of findings, focusing on the relationship between heterosocial perception and sexual offending, Dreznick (2003) performed a meta-analysis of heterosocial competence of child molesters and rapists. The meta-analysis consisted of 119 effect sizes from 14 papers (Bumby & Hansen, 1997; Hudson & Ward, 1997; Katz, 1990; Koralewski & Conger, 1992; Lipton et al., 1987; Lisak & Ivan, 1995; Malamuth & Brown, 1994; Muehlenhard & Falcon, 1990; Murphy et al., 1986; Overholser & Beck, 1986; Segal &

Marshall, 1985, 1986; Stahl & Sacco, 1995; Ward et al., 1996) examining the heterosocial competence of sex offenders. Dreznick (2003) found that rapists had significantly lower heterosocial competence than non-sex offenders, but this effect was relatively small, suggesting that only some rapists may be deficient in heterosocial competence. Interestingly, rapists in prison differed from non-sex offenders who were not in prison with rapists showing worse heterosocial competence; however, they did not differ from non-sex offending prisoners. This further suggests that there may be a detrimental effect of institutionalization on heterosocial competence. Perhaps imprisonment acts to exacerbate existing perceptual deficits through removing interaction with women and allowing existing negative attitudes towards women to ruminate. Dreznick (2003) also found that across papers the difference in heterosocial competence between child molesters and non-sex offenders was larger than the difference between rapists and non-sex offenders further suggesting that child molesters have worser perceptual functioning than rapists and potentially sexual harassers. Importantly, this meta-analysis study suggests that the effect of the prison environment may contribute to worsening heterosocial perception, and imprisoned sex offenders will benefit from heterosocial skills training to counteract the prison environment. This is interesting in that men who sexually harass are unlikely to experience imprisonment (Pina et al., 2009), and perhaps life outside of prison may give more room for perception to improve, and that a fairer comparison between sexual harassers and other sex offenders, is when measuring heterosocial perception at a time point when other sex offenders have been outside of prison for a substantial period of time.

Since the reviews completed by Blake and Gannon (2008) and Gannon (2009) on social perception and sex offender's social cognition, little research has focused experimentally upon the TRAC and sexual offender's social perception. Some research has tested priming with pictures on visual processing in sex offenders (Keown et al., 2008),

finding that primed child sex offenders did not show a memory bias for sexualized sentences, but most research has focused upon attitude based measurements of perception in sexual aggression in recent years (Bouffard & Bouffard, 2011; Diehl et al., 2012), as opposed to visual measures. Other research has focused on the early development of maladaptive schemas in sex offenders (Carvalho & Nobre, 2014), attachment and the perception of the self and others in child sex offenders (Reich, Amit & Siegel, 2009; Wood & Riggs, 2009), or script-based behaviour in sex offenders (Deslauriers-Varin & Beauregard, 2010). Whilst this research contributes to the depth of understanding of the social cognition of men who sexually offend, research has still yet to grasp heterosocial perception of sexual harassment, focusing on men who show a likelihood to sexually harass, which this programme of research will attempt to address. Experimentation using visual measures enables social perception to be directly measured as opposed to self-report data, which is often gathered with the participant retrospectively recalling information, which can be prone to recall errors and at times may be questionable in how it accurately applies to social perception in actual social situations. Visual measures of social perception within sexual offending are particularly important in the knowledge that sexual offending exists substantially in visual settings such as dense public spaces, diverse occupational settings, and on the internet (Beauregard, Rossmo & Proulx, 2007; Elliott, Beech & Mandeville-Norden, 2013). A visual measure of perception will be used to understand heterosocial perception in men likely to sexually harass in this programme of research.

Heterosocial Perception – Biases in Perception

Three prominent biases that are identified as key to understanding men's sexual perception are the overperception bias, negativeness blindness and the suspiciousness schema

(Abbey, 1982; Abbey & Harnish, 1995, Lipton et al., 1987; Malamuth & Brown, 1994)[5]. The overperception bias encompasses a tendency to overestimate sexual interest in another person. Importantly, this bias needs to be understood in that it is evidenced by men in general providing support from an evolutionary perspective for a mating bias schema in men (Fisher & Walters, 2003; Goodchilds & Zellman, 1984; Shea, 1993; Shotland & Craig, 1988). The bias of negativeness blindness refers to the failure to recognize a woman's negative reactions (McDonel & McFall, 1991), but being able to identify the positive reactions. The theory for this bias supports an inability to detect female negative behaviours and negative emotional responses from women as opposed to an intentional manipulation when deciding or evaluating on the behaviours or emotions that she is displaying. Finally, the suspiciousness schema implies that women's communications about romantic or sexual interest cannot be trusted as veridical (i.e., women don't tell the truth when it comes to sex). This suspicion schema has particular relevance to male sexual aggressors (Malamuth & Brown, 1994) with the schema guiding perception so that hostile behaviours are seen as seductive and seductive behaviours are seen as hostile. This schema influences male sexual aggressors to perceive communication as having the opposite meaning of that intended.

Research has evidenced sexual aggression characteristics that are closely aligned to biases in perception. For example, deficits in the ability to separate seductive from friendly behaviour and hostile from assertive behaviour were associated with more rape-supportive attitudes (Murphy et al., 1986). Malamuth and Brown (1994) argue that this may be due to men's overperception of sexuality and hostility. Maner et al. (2005) suggest that activation of a particular goal can lead to biases in social perception, such that perceivers view others in ways that help them satisfy their goals. Perceiving a woman as sexually accessible and as displaying a high degree of sexual interest increases the likelihood that one might initiate a

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[5] For a more extensive overview of these biases please see pages 101 to 107.

romantic encounter with that person. Thus, a sexual overperception bias could facilitate the satisfaction of mating goals. Hostile sexual overperception towards women can exist through hostile sexist attitudes towards women (Diehl et al., 2012) that serves to maintain and reinforce men's social and economic dominance by disparaging women and discriminating against them (Samuels, 2004).

From an evolutionary perspective overperception biases in men may be partly explained by theoretical proposals such as Parental investment theory (Trivers, 1972) and by extension to more recent developments such as Sexual Strategies Theory (Buss & Schmitt, 1993) and Error Management Theory (Haselton & Buss, 2000). Parental investment theory posits that a parent's investment in an individual offspring increases that offspring's chances of surviving at the cost of the parent's ability to invest in other offspring. According to this theory, individuals who can reproduce in a numerous, inexpensive and mobile way are better able to increase their reproductive success through multi-partner mating because they are not limited by the number of individuals that they can mate with. In contrast, those who reproduce in an expensive and immobile way often have a greater minimum obligatory investment in offspring compared to the other sex, decreasing the value of multi-partner mating (Mogilski, 2021). These biological differences and parental investment may in part influence a psychology supportive of these factors.

In connection to the above, Sexual Strategies Theory (Buss & Schmitt, 1993) argues that through a fundamental asymmetry between the sexes in minimum levels of parental investment, men tend to devote their mating effort more to short-term mating than women. This theory argues that there may be specific adaptations that have evolved in the sexual psychology of men in gaining sexual access to a number of women. Men may have evolved a powerful desire for sexual access to a large number of women (Schmitt, 2003) with there being lower parental investment in this motivation for them in comparison to women who

have a larger biological commitment to raising offspring. To this point, a study by Clark and Hatfield, (1989), showed that 75 percent of men agreed to go to bed with an attractive woman confederate when they were approached on college campus and asked "would you go to bed with me tonight?" in contrast to none of the women agreeing to do the same with an attractive male confederate when they were approached on campus and asked the same question. This shows that men, in comparison to women, are more willing to engage in casual sex with a virtual stranger, as well as imposing minimum time constraints in knowing a prospective mate before seeking and consenting to sexual intercourse. Men also evidence a relaxation of standards imposed for acceptable short-term partners to a wide range of mate characteristics, including standards for age, intelligence, personality traits, and personal circumstances (e.g., whether a woman is already involved with someone else (Buss & Schmitt, 1993; Schmitt, 2003). Specifically, men value cues to immediately available sex and signs of sexual accessibility, such as promiscuity, which would be undesirable in long-term mates, but might be a desirable trait of short-term mates because they signal accessibility (Buss & Schmitt, 1993; Schmitt, 2003). Altogether, these sexual strategies are a consequence of a psychology that is attentive to sexual opportunity and perceptions that favour that. Biases that overperceive sexual opportunity may form a part of these strategies and associated behaviours.

Further to the sexual strategies outlined above, there may be an evolutionary adaptive basis specifically to the male overperception bias, according to Error Management Theory (EMT; Haselton & Buss, 2000). EMT proposes that cognitive errors result from adaptive biases that exist in the present because they led to survival and reproductive advantages for humans in the past. According to EMT, decision making adaptations have evolved through natural or sexual selection to commit predictable errors. These errors according to EMT are either false-positive (where an individual may do something that does not produce the

anticipated benefit) or false-negative (where an individual may fail to do something that, if done, would have provided a benefit). Whenever there exists a recurrent cost asymmetry between these two types of errors, decision making should be biased toward committing errors that are less costly. Selection will favour biased decision rules that produce more beneficial or less costly outcomes (relative to alternative decision rules), even if those biased rules produce more frequent errors. In this way, men may possess intention-reading adaptations designed to minimize the cost of missed sexual opportunities, by over inferring women's sexual intent. Ancestral men who tended to falsely infer a prospective mate's sexual intent (a false-positive error) paid the fairly low costs of failed sexual pursuit: perhaps some lost time and wasted courtship effort. In contrast, men who tended to falsely infer that a woman lacked sexual intent (a false-negative error) paid the costs of losing a sexual opportunity and hence a reproductive opportunity. In the currency of sexual selection, the replicative success of one design relative to other designs (Dawkins, 1989), the latter error was more costly.

EMT predicts that men have a sexual overperception bias: they often misread sexual interest from a woman. EMT proposes that the costs of a missed sexual opportunity for men (potentially a missed reproductive opportunity) were greater than the costs of pursuing a disinterested woman (wasted investment of time and energy, loss of opportunities for mating, or social embarrassment). EMT predicts specific contexts in which the bias will disappear, such as when the target woman is genetically related to the man in question (Haselton & Buss, 2000) or low in reproductive value (Kohl & Robertson, 2014). When the target represents a class of individuals who are not reproductively appropriate sex partners, such as sisters, men will perceive no sexual intent in sisters as opposed to unrelated women (Haselton & Buss, 2000). This shows that men appear to correct their perceptions for their relatives, showing that men do not overperceive the sexual intent of all women and that they show

protection towards women that are genetically related to them. Also, men may perceive less sexual intent in older women who have lower reproductive value (Kohl & Robertson, 2014). This altogether suggests that men's sexual overperception bias is an adaptive bias towards achieving reproduction with non-genetically related women and protecting the interests of their kin. Further to this it is likely that when identifying men's overperception biases that the focus is on decisions and judgements they make on non-genetically related younger women.

There is some correlational research that suggests that the misperception of sexual interest predicts rape (Abbey et al., 1998). Using structural equation modelling, a model was created that suggests that more dating and sexual experience in parallel to endorsing rape myths for men, was linked to more frequent misperceptions of women's intentions as being sexual, greater alcohol consumption and more sexual assault perpetrations. In understanding this relationship, frequent dating may provide a greater number of opportunities for sexual assault to occur. Extensive sexual experiences may predict the likelihood of sexual assault perpetration; some men with high sexual interest and motivation (Kanin, 1985; Malamuth, Sockloskie, Koss & Tanaka, 1991) may hold attitudes of a "no-holds-barred contest", where if a date was unwilling to engage in sex, these men may be willing to use any available strategy verbal or physical to obtain sex. Beliefs in rape myths may be viewed as an indicator of men's behavioural intentions (Fishbein & Ajzen, 1975); with men who express a willingness to commit rape being likely to act on this belief when the opportunity arises. Furthermore, misperceptions of sexual interest may be used as a function to support these attitudes towards women, since misperceiving women as giving sexual cues to the rapist may be linked to more willingness to engage in sexual pursuit and pressure. Crucially, it is argued that alcohol consumption disrupts higher-order cognitive processes such as abstraction, conceptualization, and interpretation of complex stimuli (Leonard, 1989; Steele & Southwick, 1985) leading to people having a narrower perceptual field when under the

influence of alcohol and being less able to attend to multiple cues. This results in sexual misperception becoming more likely, with the authors finding that the misperception of sexual intent was significantly related to the number of sexual assaults perpetrated. The more often men misperceived women's sexual intentions, the more frequently they committed sexual assault. In sum this model suggests that misperception of sexual interest predicts rape and that the misperception is facilitated by increased dating and sexual experiences, beliefs in rape myths and alcohol consumption.

Furthermore, Abbey et al., (2005) conducted an experiment on the effects of past sexual assault perpetration and alcohol consumption on men's reactions to a 20-minute talk with a female confederate who was generally friendly, but also provided mixed signals for interest and disinterest. The authors argue that sexual assault perpetrators engage in selective attention processes, responding only to cues that support their preconceptions of a woman. Further to this, intoxicated participants perceived themselves and their partner as acting more sexually than did sober or placebo participants and they recalled relatively more of the partner's positive than negative behaviours. The authors argue that although survey data cannot demonstrate causality, findings support the hypothesis that alcohol increases the probability that a man who has misperceived a woman's level of sexual interest may feel entitled to force sex because he will have focused only on aspects of the situation that support this belief. This study all together suggests that alcohol consumption increases men's selective attention processes towards sex in women's social cues, which already exist when sober. For some men the combination of alcohol consumption and expectations towards misperceiving sexual interest in women's social cues could be conducive towards sexual assault perpetration. Many men may possess sexual interest biases towards women, but alcohol consumption could exacerbate these biases and for some men this could contribute towards them committing sexual assault. In understanding the relationship of these biases

towards men's sexual offending it is important to consider the impact of alcohol consumption.

Explanations of perceptual deficits between sexually aggressive men and non-aggressive men have been offered by Malamuth and Brown (1994). They tested three theoretical explanations of why sexually aggressive men perceive women's communications differently than less aggressive men. These explanations included the overperception bias, negativeness blindness and suspiciousness schema[6]. Negativeness blindness results in failing to recognize a woman's negative reactions (McDonel & McFall, 1991), but being able to identify the positive reactions. The suspiciousness schema implies that women's communications about romantic or sexual interest cannot be trusted as true (i.e.., women don't tell the truth when it comes to sex). The explanation with most support in the study, is the theory that sexual aggressors use a suspicious schema and therefore discount the veracity of a woman's communication. This theory implies that perceptual differences are due to different decision rules or judgemental heuristics underlying social information processing and not just an inability to detect an emotion. The theory stems from hostile masculinity; a desire to be in control, to be dominating, particularly in relations with women, coupled with an insecure, defensive and suspicious or adversarial orientation to them (Malamuth, 1986). This suspicion schema guides perception so that hostile behaviours are seen as seductive and seductive behaviours are seen as hostile. Sexual aggressors perceive communication as having the opposite meaning of that intended. Malamuth and Brown, (1994) argue that the schema is most apparent when the woman communicates more intense, ostensibly clear messages, where aggressors question why her reactions are so strong (e.g., "She protests too much" or "Why is she being so nice"). Overt communication may alert aggressors to respond through a biased misinterpretation favouring suspicion of the woman's actions. Furthermore,

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[6] Theoretical explanations and detail on these biases are presented in chapter three.

support for the mediating role of a suspicious schema was found when the above researchers asked aggressive men about the highly hostile behaviour of a woman, with the men describing the behaviour as typical of women and dishonest communication (Malamuth & Brown, 1994). They argue that the suspiciousness schema can be dangerous, as these men when sexually interested in a woman, are relatively primed to seize the moment by using pressure and coercion when a woman appears to react favourably, because they are less likely to trust that her positive overt reactions at this stage are predictive of continued favourable responses on later occasions. Altogether, a suspiciousness schema explanation predicts that the differences between more and less sexually aggressive men would be revealed in comparisons of perceptions of what the woman actually feels and the emotions she is attempting to convey, which sexual aggressors would perceive to be less congruent, as sexual aggressors can detect the emotion, but question the underlying motives behind the emotion.

Explanations for sex offenders' misinterpretations of women's social cues and the source of this deficit include offense supportive beliefs, supporting the idea that errors occur from a bias of perception caused by distorted beliefs held by offenders. One prominent theory that can provide an explanation as to these beliefs is that developed by Ward (2000), arguing that distorted beliefs are driven by underlying implicit theories held by offenders. Ward (2000) sees schemas as implicit theories, which are used rather like hypotheses that are used to explain, predict, and interpret interpersonal phenomena. These implicit theories contain a number of distinct ideas and mental constructs, including propositions about a victims' beliefs and their desires. These ideas are organized in the form of implicit theories in which entities (e.g., women or children) are represented. An offender's theory or model of women, for example, contains a representation of the women's desires, and this guides the processing of information that is relevant to the implicit theory's truth or falsity. Information that does

not comply with the theory's basic assumptions or predictions is either rejected or modified to fit better with the implicit theory's core assumptions.

Ward (2000) argues that sexual offenders' implicit theories about their victims are structured around two core sets of mental constructs, beliefs and desires. These constructs underlie the offender's interpretation of social information or 'evidence'. For example, a woman's friendly behaviour toward an offender could be interpreted to mean that she wants sex or that she is being friendly. Their 'real' mental state (e.g., sexual interest) can be inferred from evidence rendered salient by the offender's implicit theory. Being friendly to men can all be viewed as evidence supporting the implicit theory; namely that the woman is revealing her real intentions and wants the man to discern these underlying desires and beliefs. Implicit theories dictate what counts as evidence and how it is to be interpreted. If there is a discrepancy between an offender's implicit theory and evidence, the evidence may be reinterpreted, rejected, or rarely, the theory may be modified. Offenders explain away anomalous evidence by dismissing it as mistaken and unreliable, or reinterpreting it. Offenders also select environments (other child molesters, sexual harassers, men with similar attitudes and beliefs, etc.) that support their lifestyles and implicit theories, allowing reinforcement and protection of malevolent attitudes and beliefs from exposure to criticism and disapproval. These implicit theories are clearly false and function to permit and legitimize the sexual abuse of women and children.

Polashek and Ward (2002) outlined five core implicit theories from rape-related attitudinal scales with rapists; women are *unknowable* (women are inherently different to men and should be treated with suspicion; later revised as women are *dangerous* by Polaschek & Gannon, 2004), women are *sex objects* (women are created to service the sexual needs of men), the male sex drive is *uncontrollable* (offending behaviour is outside the offender's control), *entitlement* (the offender's needs or wants supersede those of others), and *dangerous*

world (the world is s hostile and dangerous place where no one can be trusted). The majority of these implicit theories serve to make women responsible for sexual acts against them (women are unknowable, women are sex objects, the male sex drive is uncontrollable and entitlement). For example, one of these implicit theories is women as sexual objects – viewing women as being constantly sexually receptive and believing that women cannot be injured by sexual activity unless they are physically damaged. These implicit theories function as a template to interpret women's behaviour such that information that does not agree with this template is rejected or modified to fit this template. For example, with regards to judging women's negative responses in social situations, with women as a sexual object implicit theory in action, the offender may reframe these negative cues in the view that these responses cannot be accurate or true and that they must be different in some way, with a sexual motive underlying them, such that for instance they are deemed as sexual provocation or teasing (women as sexual objects). Biases in perception are constructed around central theories about women's role in relation to the offender.

Biases may have an automatic nature to them when interpreting social information. This can be demonstrated through the naive scientist approach to social information, where individuals are often motivated to behave as cognitive misers; they perceive their complex world in a more manageable way by relying on information that is already available to them, such as schemata (Fiske & Taylor, 1991). Judgements and decisions are frequently made without much cognitive effort and the offender simply "sees" victims' actions in ways that promote sexual offenses in a seamless, rapid and automatic process. Sex offenders may misinterpret women's behaviour automatically by using the "shortcut" of recalling what they think they already know about women and their behaviours. This is in contrast to a deliberative approach whereby information is evaluated and measured in a more objective manner. This kind of approach may have to be evoked by experimental or therapeutic

techniques that can counteract schemas that are strong and hardened against alternative interpretations of social information (Martin & Young, 2010).

Other research has suggested that male sexual offenders possess erroneous biases and preferences related to a female's appearance. Farris et al. (2006) varied the stimulus presentation times of an identification task of a number of undergraduate female photographs on a computer screen, where participants had to select the category that best represented the target; friendly, sexually interested, sad or rejecting. Men at risk for perpetrating sexual aggression were less sensitive to women's affect than low-risk men were and sensitivity to sadness, rejection, and friendliness declined when women were dressed provocatively, whereas sensitivity to sexual interest increased (Abbey et al., 1987; Cahoon & Edmonds, 1989), showing that men at high risk have sexually motivated perceptions erroneously drawn from the females clothing, which may interfere with and prevail over their better accuracy of judging female emotions. They were also more likely than low-risk men to associate provocative clothing with sexual interest, and conservative clothing with friendliness, showing an overperception bias towards perceiving the female as being romantically or sexually available and the female being motivated by relationships and sex. Although men in general evidence a bias towards rating females wearing revealing clothing than those wearing nonrevealing clothing (Abbey et al., 1987; Cahoon & Edmonds, 1989), this bias tends to be more pronounced and impactful in men likely to sexually offend. Altogether, these findings suggest that appearance may be an important control factor when researching perceptual differences in men prone to sexual offending.

Perceptual outcomes in men prone to sexual aggression have been shown to be affected by the presentation times and response times of the stimulus. Farris et al. (2006) showed that the observed reduction in the accuracy of perception among sexually aggressive men compared with non-sexually aggressive men was greatest at the shortest presentation

time and diminished with longer presentation times. The time to focus and comprehend information has a significant impact on the perceptual processing of men likely to sexually aggress. With the shorter times providing more instinctive, undeliberated responses, with less capacity for self-alteration (Bargh, Lombardi & Higgins, 1988; VanRullen & Koch, 2003; VanRullen & Thorpe, 2001) and ultimately producing less accurate perceptual outcomes for high-risk men. Perhaps biased perceptions are less adjustable under shorter presentation times and consequentially have a more dominant impact on judgements. Appearance can also interact with the presentation times and affect perceptual outcomes. Provocative clothing was particularly distracting to sexually aggressive men when judgements had to be made quickly and more sexual interest was associated with provocative clothing (Farris et al., 2006). Biases may be more prominent and less available for concealment or disguise when given a shorter duration for exposure. Duration of presentation times of the stimulus and duration of response times are important factors for evaluation when attempting to delineate heterosocial perception.

Heterosocial Perception and Men who Sexually Harass

Altogether, research on heterosocial perception and sex offenders has largely focused on child molesters and rapists (Bumby & Hansen, 1997; Hudson & Ward, 1997; Katz, 1990; Lipton et al., 1987; Overholser & Beck, 1986; Segal & Marshall, 1985; Segal & Marshall, 1986; Stahl & Sacco, 1995 & Ward et al., 1996). Little research has focused on heterosocial perception in men who sexually harass (Farris et al., 2006) and none has explicitly focused on sexual harassment as an individual category. Often sexual harassment may be incorporated in, or predate sexual coercion, which is likely to incorporate physical sexual assaults such as rape. Wide reaching categorizations such as this may miss subtle differences in the psychology of sexual harassment and that of physical sexual assaults as well. There is limited

research to compare male sexual harasser's heterosocial perception and that of sexual aggressors such as rapists. Clearly comparisons of whether there are any similarities or differences will be of great value to understanding sexual offending. It is often considered that sexual harassment exists on a continuum of sexual offences with the most serious form of sexual coercion, rape, at the most extreme end (Quina, 1996; Cann, Friendship & Gozna, 2007). Research suggests that there is significant overlap between sexual harassment and rape behaviour (Pryor, 1987; Rivers, 1978). In some cases, sexual harassment may be a natural escalation to rape (Bargh et al., 1995), where the perpetrator is evidencing an increased motivation to sexually offend and a decreased inhibition for risk taking. Therefore, it is crucial that comparisons of the behaviours of both types of offenders are performed to disentangle the underlying psychology of both offenders. With regards to sexual harassment and heterosocial perception it is relatively unknown if there are any unique perceptual features to these offenders. It can be argued that the heterosocial perception of sexual harassers is both unclear and untested and it has not received the same attention as heterosocial perception in child molesters and rapists.

Sexual harassers are a specific and distinct group of offenders in contrast to other sex offenders. Firstly, sexual harassers may evidence more self-control and self-restraint in their sexual motivations through using non-physical sexual coercion towards the victim (Begany & Milburn, 2002) causing psychological harm, in comparison to other sex offenders such as child molesters and rapists who evidence sexual aggression through physical and psychological harm towards the victim. Secondly, sexual harassers can show closer adherence and awareness to legislative rules and socially expected norms in their interactions with their victims claiming and reinterpreting their actions as banter, flirting or as just part of a normal romantic relationship all within legal boundaries and social acceptability (Pina et al., 2009). By contrast rape and child molestation entail a physical violation of a vulnerable

victim that doesn't have the capacity or power to consent, clearly breaks legislative rules and is considered abhorrent by society. Thirdly, the persistent nature of sexual harassment offending, which often occurs against the same victim on multiple occasions or against multiple victims (Pina & Gannon, 2012) in comparison to other sexual offences such as child molestation and rape, which might be singular incidents against the victim, suggests there are behavioural differences between sexual harassers and other sex offenders. Fourthly, the finding that a large proportion of sexual harassment occurs in public spaces such as the workplace (McDonald 2012), as well as in discrete settings, contrasts to child molestation and rape, which occurs mainly in discrete settings (Beauregard, Proulx & Rossmo, 2005; Underwood, Patch, Cappelletty & Wolfe, 1999) further showing that there are different behavioural characteristics for sexual harassers. Fifthly, as sexual harassers' offending occurs more often in public spaces their communications with their victims can potentially be different and more augmented towards public settings with the harassers' language intentionally ambiguous and sanitised, accounting for surrounding people who could overhear and react to the communication. Altogether, these identified sexual harasser behavioural differences to other types of sexual offenders, suggest potential differences in their heterosocial perception and how they interact with women.

Whilst there are behavioural differences that separate sexual harassers from other sexual offenders, there also appear to be some psychological differences that separate them when considering that sexual harasser's may be more likely to use sexual coercion (a person requiring sexual contact or sexual favours as a condition of giving rewards or benefits) than sexual aggression (a person engaging in sexual behaviour with someone who does not or cannot consent to engage in that behaviour). DeGue et al. (2010) findings indicated that whether offenders engaged in only sexual coercion or also used more violent sexually aggressive tactics depended on the presence of two sets of traits unique to these forms of

perpetration. Specifically, sexual coercers tended to possess traits that facilitated the use of verbal tactics (i.e., ability to manipulate others and to imagine others' emotional reactions). In contrast, sexual aggressors had characteristics that could increase their willingness to "cross the line" and resort to more violent means to obtain sex from an unwilling partner (i.e., hostility toward women, egocentricity, an impulsive disregard for sociolegal proscriptions, and childhood emotional abuse). In addition to this, Bargh et al., (1995) distinguished between sexual aggressors and sexual harassers and found that men who engage in sexual coercion as measured by the LSH do not demonstrate the same effect of power on sexual attraction as the men who engage in sexual aggression as measured by the Attractiveness to Sexual Aggression scale (ASA; Malamuth 1989). More specifically, high LSH participants showed a bidirectional power– sex connection, whereas high ASA participants demonstrated a unidirectional power-then-sex association. The latter indicate that it is the power then-sex association that is the critical factor for men who sexually aggress against females (Bargh et al., 1995). These findings altogether suggest that whilst there are psychological similarities between men high in LSH and sexual aggressors in characteristics such as beliefs in rape myths, sexual promiscuity, adversarial attitudes towards women and empathic deficits (Begany & Milburn, 2002; DeGue & Dilillo, 2004; DeGue et al., 2010; DeJucibus & McCabe, 2001; Pryor, 1987), there are important psychological differences for men high in LSH and sexual aggressors, which adds support to the importance of categorizing sexual harassers as distinct from other sexual offenders.

Considering the behavioural and psychological characteristics that separate sexual harassers and their subsequent perceptions as part of these characteristics, there is a great call for research into heterosocial perception in sexual harassment. Heterosocial perception must be explored to understand how sexual harassment stands in comparison to other sexual offences. It must also be explored to find whether there is a predictive nature to heterosocial

perception, in that heterosocial perception may predict future outcomes in sexual harassment. Does heterosocial perception provide a treatment pathway for sexual harassers and what are its limitations into the access and augmentation of other established psychological characteristics of men who sexually harass? A deeper insight into heterosocial perception in sexual harassment may provide a richer understanding of sexual offending and improve confidence in existing concepts and theories of sexual harassment.

Concepts of Power and Heterosocial Perception

There are other areas of research in sexual harasser psychology that may shed light on how heterosocial perception works. A component of sexual offending that may cross types of sexual offending and alter the psychology of all sexual offenders is the concept of power (Bargh et al., 1995; McCabe & Wauchope, 2005; Pardue & Arrigo, 2008). Research has shown that power is strongly connected to male sexual harasser's behaviours towards their victims (Pryor & Stoller, 1994; Bargh et al., 1995; Bargh & Raymond, 1995). It is also highly likely that power is related to heterosocial perception whether this is intentionally or subliminally related. Power may be an important component in understanding male sexual harasser's heterosocial perception and it is of interest to detail the role that power may play in sexual harasser's heterosocial perception.

Power is strongly interrelated with sexually motivated perception in men who measure high on the likelihood of sexual harassment. Pryor and Stoller (1994) using the Likelihood to Sexually Harass (LSH) scale showed that men high on LSH perceived a frequent but otherwise illusory correlation between sex and power related words when they asked participants (high and low on LSH) to view and memorize various word pairings of neutral, sexual, and power-related words. Power may automatically activate sexual concepts

that are heuristically connected in the cognition of some men. Social dominance may be cognitively linked to sexuality, biasing the processing of social information (Pryor et al., 1993; Pryor & Stoller, 1994). As sexual conquest is the ultimate objective of the sexual harasser, and sex is related to power within the psychology of the sexual harasser, it is likely that the impact of power will influence the judgements and motivations of sexual harasser's making them more sexually tinged, when perceiving situations involving women.

Power may change the sexual harasser's appraisal and approach towards a female. Bargh et al. (1995) found that men low and high on LSH showed no baseline difference in their sexual attraction towards a female confederate, but when high LSH men were primed by power words, high LSH men found the female confederate more attractive and if given the opportunity, they would like to become more familiar with her. Priming power affected high LSH men's appraisal of the female confederate, making her seem more appealing and desirable towards them. Men high on LSH did not appear to be aware of the underlying reason for their attractiveness to the female confederate, instead stating that the female's attractiveness was the underlying cause or that the female confederate was more their "type", suggesting that power may influence perception through subliminal means, without the harasser being aware that their sexual motives have been influenced by experiencing high power. Power may stimulate a greater focus on the sexual availability of a woman and a greater concentration on sexual opportunities with the woman, within the cognition of the sexual harasser. This is clearly evidenced by the behaviours of these men towards women when primed with power. There may be a greater orientation towards women and more closer touching of women in certain situations (e.g., in order to illustrate a golfing technique; Pryor, 1987) and men high in LSH engage in more attempts of sexual touching relative to low LSH men (Driscoll et al., 1998; Pryor, 1987; Pryor et al., 1995). Possessing greater power may make the sexual harasser more inclined to approach their victim and persist in their sexual

advances towards her, with the harasser unaware of the influence of power on their perception and subsequent behaviour.

Power may lead individuals to see others in functional or instrumental terms. Gruenfeld et al. (2008) found that individuals in power saw others in ways that were functionally related to achieving their goals (i.e.., perceived subordinates or others as means to suit their own ends). For example, in a study in which sexual goals were primed in all men, men in power (compared to subordinate men) were more likely to prefer an attractive but otherwise unqualified female subordinate in an employment task. The combination of power and primed sexual goals led men to overlook the woman's qualifications and focus instead on how she could be instrumental to achieving their sexual goals. Even in the absence of an explicit sexual goal prime, power could promote heightened perceptions of sexual interest. Kunstman and Maner (2011) found that sexual overperception mediated power's effect on increased sexual behaviour in a general population of men, arguing that power activates mating motives that bias expectations and perceptions of members of the opposite sex. Power sexualizes social interactions in part because it biases the perceived intentions and desires of the power holder. Altogether, power may serve to change perception so that it is functionally and instrumentally focused, as well as sexualising this perception or increasing existing sexual perception.

In sum, power is deeply intertwined with sexual harasser's perceptions of their victims and how they perceive and respond to women in general. The nature of the power within the perceiver when judging the heterosocial situation must not be ignored in order to understand why male sexual harassers offend. Power is likely to have a significant impact on the perception of sexual harassers, heightening their sexual motivations and orientations towards women. The impact of power within the perceiver must be unravelled to fully

understand the variables that effect the sexual harasser's inclinations and responses to heterosocial situations.

Attitudes, Beliefs and Heterosocial Perception

There are a number of negative attitudes and beliefs about women that have been identified in the psychology of the male sexual harasser and male sex offenders in general. The likelihood to sexually harass is correlated to rape related attitudes and adverse sexual attitudes (Begany & Milburn, 2002; Lee et al., 2003, Pryor et al., 1995; Pryor & Stoller, 1994) in addition to hostile sexism attitudes that predict male sexual harassment (Diehl et al., 2012). There is a recognised link between the likelihood to sexually harass and self-reported acceptance of rape myths (Begany & Milburn, 2002; Pryor, 1987), with those men blaming the victims for their own sexual assault or harassment and blaming victims when confronted about their act (DeJudicibus & McCabe, 2001; Schneider, 1991). Furthermore, lack of empathy (Gannon et al., 2008) and difficulty in perspective taking (Driscoll et al., 1998) has been captured in men who show sexual aggression. It is likely that this medley of erroneous negativity towards women and toxic interpretation of women's role in daily life and as victims of sexual offending, is likely to impact male sexual harassers at the perceptual level. Indeed, these attitudes and beliefs integrally form their harassment-supportive cognitive content which is likely to bias these men's cognitive processing when perceiving situations involving women. The measure of the effect of these negative attitudes and beliefs and their harmful influence on perceptual biases, will outline core constructs that ultimately explain the harasser at the behavioural level.

These attitudes and beliefs purvey a woman as an object for the perpetrator's own needs. The perspective of a woman as an object treats her as an instrument of subjugation

whereby her needs, interests, and experiences are subordinated to those of the powerful, and this facilitates using her as a means to an end (Frederickson & Roberts, 1997). In the same line of thought, and poignant to male sexual harassers, a female may be conceived as a sexual object. Sexual objectification is described as the valuing of another person, typically a woman on the basis of the utility of her sexual parts or sexual functions, "which are separated out from the rest of her personality and reduced to the status of mere instruments or else regarded as if they were capable of representing her" (Bartky, 1990, p.26). This tendency to sexually objectify is tied to the likelihood to sexually harass and rape myth acceptance (Cikara, Eberhardt, & Fiske, 2011; Rudman & Mescher, 2012) through processes such as animalisation and dehumanization, reducing a woman's complexity of mind, independence, volition and casting inferiority upon her. Men who implicitly dehumanize women (as either animals or objects) are likely to sexually victimize them (Rudman & Mescher, 2012). Sexual objectification is likely to be a distinguishing feature of male sexual harassers, who possess high sexual motivation and high sexual aggression towards women. Perceiving and valuing women based upon their sexual utility and worth is likely to colour the harasser's perception of women across different contexts in everyday life. Judgements of a woman are likely to be framed against the setting of her role as a sexual object and potentially the simplification of her emotions and behaviours are determined by her appeal and relevance as a sexual object.

Although sexual objectification has not been explicitly assessed upon sexual harasser's heterosocial perception, it has been researched in artificial settings. Yao, Mahood and Linz (2010) examined the short term cognitive effects on male players when playing a sexually explicit video game with female objectification. Players in the sexually oriented video games reported a significantly greater tendency to sexually harass. Playing the sexually charged video game for merely 25 minutes, increased a self-reported tendency to engage in inappropriate sexual advances as well. Other research has shown that men are more tolerant

of sexual harassment and evidence greater rape myth acceptance, following long-term use of sexually objectifying video games (Beck, Boys & Rose, 2012; Dill, Brown & Collins, 2008). Although video games are artificial environments, this research suggests that when pre-existing sexually objectifying attitudes and beliefs are stimulated in a visual and audible manner, sexually harassing behaviours may be activated by this sexual objectification. Sexual objectification is not implanted by the video games, but likely pre-existing negative attitudes and beliefs towards women are self-aroused through heterosocial perception of the sexually oriented video games. This self-arousal and potential self-confirmation of viewing women as sexual objects may then intensify negative attitudes towards women removing inhibitions to carry out sexually aggressive behaviours towards women. Although pre-existing sexual objectification was not controlled for in these studies, there is a likely direct relationship between sexual objectification and sexual harassment, as sexually harassing behaviours were not brought about in participants not primed in sexual objectification. Heterosocial perception may act as the gateway for which pre-existing sexual objectifying attitudes and beliefs are self-confirmed and through, which sexually harassing behaviours can be exonerated and fostered.

Summary

Heterosocial perception has much context and relevance to understanding sexual harassment. Heterosocial perception is generally understood as a man's perception of a female interacting with another male in any context. However, heterosocial perception is yet to be clearly defined, with different components that include decoding skills, decision skills and execution skills, as well as dividing heterosocial perception into heterosocial skills and heterosocial competence. Research has mainly focused on the heterosocial perception of rapists and child molesters with the common finding that both types of these sex offenders have heterosocial perception deficits, but that the deficits are poorer and more pronounced

with child molesters. One of the first and seminal studies that explicitly measured heterosocial perception was that of Lipton et al., (1987) who identified perceptual deficits in both rapists and child molesters using the Test of Reading Affective Cues (TRAC), which consists of videotaped vignettes of heterosocial couples interacting. Despite all the valuable research on rapists, child molesters and men who sexually coerce as a broad category, no research has specifically identified sexual harassers as a single category and detailed the nature of their heterosocial perception. The heterosocial perception of sexual harassers to a large extent remains unknown and is under researched.

Biases in perception have been identified in men high in sexual aggression including the overperception bias, negativeness blindness and the suspiciousness schema (Malamuth & Brown, 1994). These biases serve men high in sexual aggression and may account for their sexual aggression towards women. Overperception biases may be rooted in EMT evolutionary reasoning that explains these biases in men in general. Implicit theories may explain how biases are applied to social information. Research has also shown that concepts of power may have an important role to play in the heterosocial perception of men who sexually harass (Bargh et al., 1995; Pryor et al., 1993; Pryor & Stoller, 1994). Studies have shown that power may stimulate men high in LSH to evidence a greater focus on sex and sexual opportunities, as well as sexualise interactions with women. Power is an integral part of the male sexual harasser's psychology and it would be wrong to explicate heterosocial perception without considering the impact of power on their psychology. Men high in LSH also evidence a range of attitudes and beliefs that are adversarial towards women, which are likely to be a significant component in contributing to their heterosocial perception judgements. The perception of a woman as a sexual object is likely to reconfigure a woman's behaviour against this psychological setting. The combination of high power and negative

attitudes towards women is likely to be most detrimental to the perpetrator's perceptual judgements.

In sum, heterosocial perception is a vital field of research to understand the psychology of the male sexual harasser. It is without question that sexual harasser's heterosocial perception is under researched and has taken a less prominent position within the field of heterosocial perception research than research with male rapists and child molesters. However, existing research on heterosocial perception, power psychology and attitudes and beliefs in male sexual aggression strongly suggests that it is neglectful to not further explore the nature of male sexual harasser's heterosocial perception. Heterosocial perception is the "optical lens" into understanding why and how male sexual harassers offend and it is this lens, which must be the focus of future advances in understanding male sexual harasser's offending. This lens will elucidate the complexities of sexual harassment and reveal ways in which to intervene and prevent this intrusive and manipulative sexual offence.

CHAPTER TWO

The Development of the Test of Reading Affective Cues to measure Heterosocial Perception

Previous research on sexual offending has used behavioural observations to measure heterosocial perception (Overholser & Beck, 1986; Segal & Marshall, 1985, 1986). Whilst this enables research on actual social interactions, this measure is limited by the subjective nature of the judgements made by confederates, judges, and other raters (Overholser & Beck, 1986; Segal & Marshall, 1985, 1986). Although this measure incorporates adjustments for inter-rater reliability, importantly, the measure does not allow or even trust the judgements of heterosocial perception made by the participant. The resulting ratings are inevitably prone to being exposed to the rater's own biases, whilst removing the independence that participants' have in making their own perception judgements. Another obvious criticism of this measure is that research involving confederates interacting with participants does not replicate real life scenarios (Overholser & Beck, 1986; Segal & Marshall, 1985, 1986) with participants being videotaped whilst interacting with confederates. The interactions can occur in unusual clinical environments, which can make the participant feel uncomfortable. The scenarios used in the interactions are also prone to the confederate interacting with different participants in different ways in each encounter depending on the participant's reactions, and this ultimately reduces experimental rigour. In sum, behavioural observations to measure heterosocial perception are prone to the subjectivity of raters, they do not replicate real life scenarios and they are prone to inconsistencies in how the confederate interacts with participants.

Many checklists and questionnaires have been applied to understanding sexual offender heterosocial perception (Barlow et al., 1977; Descutner & Thelen, 1991; Twentyman

et al., 1981; Katz, 1990; Koralewski & Conger, 1992; Muehlenhard &Falcon, 1990). Whilst these measures can provide data rich findings, they can be limited in terms of their application to understanding heterosocial perception. These checklists and questionnaires are largely paper and pencil tasks, which do not capture crucial instinctive biases, reactions and responses that participants may evidence when interacting with other people, or even may evidence when making judgements made on visual methodology that may be adapted to be more time sensitive. Deliberation may allow participants to make their answers acquiesce to what may be deemed to be more socially acceptable responses. The checklist and questionnaire measures are also limited to the educational comprehension of participants, particularly when considering a high amount of illiteracy amongst prisoners (Creese, 2016; Davis, Bozick, Steele, Saunders, & Miles, 2013). Measures of heterosocial perception involving visual methodology, particularly when simplified in the language that is applied to it, can be more likely to negate differences in comprehension abilities amongst participants. In sum, checklists and questionnaires for heterosocial perception may not fully capture participant biases, reactions and responses and are limited by participant comprehension and possible illiteracy.

One of the most influential ways of measuring heterosocial perception was that developed by Lipton et al., (1987). They developed the Test of Reading Affective Cues (TRAC) measure, which fundamentally is a number of video clips of a female and male interacting, which was then shown to male sex offenders to make affect judgements upon. This was the first form of video tape used in the field of heterosocial perception and sexual offending, and Stahl and Sacco (1995) later used the same research framework in their research on sex offenders' affect judgements and sexual interest judgements in first date scenarios. Both studies have shown that using the TRAC or a version of the TRAC has

produced interesting and reliable results. Both studies have shown that developing and using the TRAC is a useful way of measuring heterosocial perception.

Video recording methodology not only provides a more accurate test of heterosocial perception in real life scenarios, but it may serve to minimise uncertainty about whether heterosocial perception is actually being measured. Many self-report measures may incorporate a lack of understanding introspectively by the perpetrator of what is being assessed and thus lead to inaccuracy in the results. With the visual scenarios, at the very least, the perpetrator can respond to the visual stimulus in front of them, rather than misinterpret heterosocial situations with their own understanding of what this concept is. With research suggesting that the majority of people are visual learners, the visual stimulus is likely to be more conceivable, comprehensible and potentially easier to understand (Horn, 1998), thereby possessing several advantages. For instance, evidence suggests that a visual stimulus reduces cognitive load (Klinger, Tversky & Hanrahan, 2011). In addition, visual stimuli motivate participants to engage and respond in activities and re-create the experience in their mind (Pylyshyn, 1973; Teufel, Fletcher & Davis, 2010). Furthermore, it is the most ecologically valid interpretation of heterosocial perception with most people's experiences and recollections of social situations being visual. It also provides a framework to enable heterosocial perception to be objectively assessed by providing a statistical consensus on whether a particular affective behaviour is evidenced in a video clip. In sum, there are many advantages to using a visual measure of heterosocial perception including improved participant understanding of the concept measured, the measure being easier to understand through less cognitive load, as well as being motivating for participants to engage and respond to the measure, in addition to good ecological validity of the measure and objectivity in the development of the scale.

Following the approach adopted by Lipton et al., (1987) and Stahl and Sacco (1995) it was decided to use a student sample to develop the TRAC. In developing their TRAC, Lipton et al., (1987) used 20 male students and Stahl and Sacco (1995) used two groups of 10 male graduate psychology students to rate the woman's affective cue for each of the videos. It was decided that 20 students would not be enough to establish a relatively clear pattern or trend in which affective cues were ranked first for each video clip and that having at least 100 participants would enable this trend to be detected more easily. A small sample size of 20 participants may provide ranking scores for video clips that are more vulnerable to the impact of outliers, anomalies, as well as individual participant effect characteristics such as individual attitudes or biases towards women. These individual participant effect characteristics will be more likely to be minimised as an impact on overall result outcomes amongst a larger sample size[7]. Furthermore, obtaining a larger number of participants will be more representative of students as a group as students are a large population.

In contrast to Lipton et al., (1987) and Stahl and Sacco (1995) who used only male participants to develop their TRAC, female participants were used to develop this TRAC. The advantage of a female only sample population is that the affect judgements given are more likely to represent female affect behaviours identified and recognised by other females, strengthening future studies in exploring if men with different psychological characteristics identify female affect behaviours differently to females. Females are overwhelmingly the victims of male sexual harassment (McDonald, 2012; Pina et al., 2009), and so it is critical that their perceptions are represented without being weakened by mixing them with male perceptions, when determining a baseline of female perceptions of affective cue judgements. Crucially, the TRAC designed and used in this study has a significant advantage from

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[7] On reflection at least 200 to 300 participants would have been a good sample size, particularly if factor analysis was to be used. This sample size is recommended for factor identification (Comrey & Lee, 1992).

previous TRACs designed in previous studies (Lipton et al., 1987; Stahl & Sacco, 1995).

Both female and male participants were used in these previous developments of the TRAC

measure which weakens their TRAC measure, as including men incorporates the risk that

some men may exhibit sexual biases or other attitudinal biases against females. These male

biases will likely distort some of the perceptual judgements, which are used to determine the

affective cues when validating the TRAC. This ultimately is detrimental to the integrity and

validity of the TRAC as a tool. The results in this programme of research will not be skewed

by existing distortions in male heterosocial perception in the design of the TRAC, which

potentially impacted previous validations of the TRAC and their subsequent research findings

(Lipton at al., 1987; Stahl & Sacco, 1995).

Evidence supports the argument that some men may possess sexual biases that impact

their perception of women, and that these male sexual biases would need to be controlled for

in developing a TRAC. Malamuth and Brown (1994) identified using a self- report measure

of sexual aggression that sexually aggressive men evidence a suspiciousness schema. This

could be problematic when validating the TRAC as a tool, since using a participant sample to

validate the TRAC that contains a lot of men who hold suspiciousness schemas would mean

that some video clips are determined to be positive affective cues when, in fact, they are

negative affective cues and vice versa. The problem with this is that the TRAC cannot then

be trusted to then identify men who hold suspiciousness schemas in future studies. Men who

do not hold this bias will be correctly identifying positive and negative cues, but the tool will

be erroneously determining these judgements as incorrect, and further to this, the tool will

show these men as holding this bias when in truth they do not. Similarly, Farris et al., (2006)

identified that men who self- report high sexual aggression were less accurate in identifying

women's affect from photographs of women than men who report low sexual aggression.

Those men high in sexual aggression were also more likely to associate conservative clothing

with friendliness, possibly evidencing an overperception bias. If men high in sexual aggression are included in a sample to develop the TRAC they could hold overperception biases and suspiciousness schemas that impact their judgements and may be more likely to overperceive female friendly affective cues as romantic or even misperceive female negative affective cues as positive cues or vice versa. Without knowing if men in a sample used to develop a TRAC, are high in propensity towards sexually aggression, then it cannot be minimised or ruled out that some of these sexual biases are influencing their judgements. Further to this, the findings that men high in LSHs behaviour changes negatively towards women when effected by high power (Bargh et al., 1995) suggests that there may be an underlying psychology towards women for high LSH men that is different to men low in LSH. Although high power can be controlled for before men make TRAC judgements, these findings suggest that their underlying psychology towards women may be different, and caution must be exercised by identifying men high in LSH if using men to develop the TRAC. Additionally, research suggests that women are better at judging emotions from facial expressions and body posture (Hall & Schmid Mast, 2008; Kleinsmith, De Silva & Bianchi-Berthouze, 2006; Manstead, 1992) strengthening the argument that it is better to use women only to validate the TRAC measure. In sum, using men to develop a TRAC carries risk with research showing that some men's judgements may be subject to sexual biases, and this ultimately will reduce integrity in determining affective cues for the video clips in the TRAC.

Similarly, to the development of the TRAC by Lipton et al., (1987) and Stahl and Sacco (1995), the ethnicity of participants is not controlled for in the design of this measure. It is assumed that as participants were all English speaking and living in the UK that ethnicity would not be a strong influence on participant judgements made when determining affective cues. Also, including different ethnicities in developing the TRAC is more reflective of the victims of male sexual harassment. Importantly, victims of sexual harassment occur across

ethnicities with the prevalence of sexual harassment occurring in different settings (Pina et al., 2009) and across nations (Barak; 2005, Wyatt & Riederle, 1995; Nielsenet al., 2010; Chan et al., 1999; Marsh, et al., 2009). Victims are represented across ethnicities within nations. For example, almost half of a sample of a total of 248 black African American and white American women reported sexual harassment in work and social environments (Wyatt & Rierderle, 1995). Similarly of 129 Asian American women 67 percent reported at least one sexual harassment experience (Buchanan, Settles, Wu & Hayashino, 2018). Therefore, a strength of the development of this TRAC measure is that it includes judgements from women of different ethnicities, which is more representative of female victims of sexual harassment that range in ethnicity. This study develops a modernised version of the TRAC to enable a measurement of heterosocial perception for use in subsequent studies in this programme of research. Analysis is incorporated to develop the TRAC, enabling judgements on five affective cues displayed by a woman; friendly, romantic, neutral, bored and rejecting.

Method

Materials

The original TRAC measure was developed in the 1980s (Lipton et al., 1987) and so would be limited by fashion and video quality if the original material was used today. With this in mind, a modernised version of the TRAC was created using a current video recording camera and confederates who follow current fashion trends. Also, video recording for the new version of the TRAC took place in a neutral setting, so as to not distract the viewer by other people or surroundings that may evoke certain feelings or responses. This is another reason why the original TRAC was updated, as surroundings other than the confederates such as furniture or lighting providing context to the first-date and intimate video clips may appear

outdated. Scripts for the video clips were designed to reflect current language nuances and references to modern interests, technologies and trends.

The current study used an adaptation of the TRAC from the original study of Lipton et al., (1987). Instead of using 72 video clips as was used in their study, only 10 video clips were used. The original measure consists of 72 thirty second videotaped vignettes of heterosexual couples interacting. Forty of these depict couples on a first date and 32 depict more intimate couples talking in an apartment. This change in the volume of video clips was made to reduce participant boredom and fatigue, which are well established with tasks with long durations (Bruursema, Kessler & Spector, 2011; Gonzalez, Best, Healy, Kole, & Bourne, 2011). Indeed, Stahl and Sacco (1995) reduced the number of video clips to sixteen[8] and found strong outcomes with sex offenders in the use of their version of the TRAC differentiating male child molesters as having poorer affective cue categorization than male rapists and other studies have used fewer video clips on perception measures and produced significant findings (Malamuth & Brown, 1994; Murphy et al., 1986), showing supporting effectiveness with using small volumes of visual stimuli. Murphy et al., (1986) found using four video clips a stronger associated relationship between men's ratings of women's seductiveness and friendliness together with greater rape-supportive attitudes and Malamuth & Brown (1994) found support for the suspiciousness schema using four video clips with men reporting sexual aggression. This provides some confidence that in reducing the volume of visual stimuli.in the current research can lead to detection of relationships between men's judgements towards women on video clips and their sexual attitudes towards women. It is crucial that participants are able to fully concentrate and focus on each video clip, so a long

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[8] -Ten video clips were used as opposed to sixteen because it was decided that ten video clips would be better when combining the TRAC with other measures in future research designs. This decision should reduce the duration of overall studies. Admittedly, the difference between sixteen and ten video clips has not been measured in terms of the impact of fatigue and boredom and sixteen video clips could easily provide a similar impact on fatigue and boredom as ten video clips.

study duration will create the greater likelihood of errors and other repetition effects. Future studies in this programme of research, will use the TRAC in combination with experimental conditions and other psychological measures. Therefore, it is important that these future studies did not become too long in duration, as this is likely to be less palatable for participants and further increase the chances of boredom and fatigue effects.

Ten video recorded vignettes, which have a duration of 40 seconds to 1 minute each, were used in this study. The vignettes were created by the author reviewing social interactions that incorporated conversations that displayed the five affective cues from sources such as published books, academic articles, TV drama programme scripts, etc. Inevitably, there was some minor deviation by the actors in the videos from the actual vignette to enable a more natural conversation, but any video clips where there were large deviations were re-done. First meeting examples were used for this study as opposed to first date and intimate examples, as was used in the original Lipton et al., (1987) study. Focusing on the perception of heterosocial interactions in public spaces may be more useful in providing greater differences in perceptual performance between those men differing in their sexual aggression (Lipton et al., 1987; Malamuth & Brown, 1994; McDonel & McFall, 1991; Murphy et al., 1986), in comparison to intimate and private scenarios (Lipton, et al., 1987; Stahl & Sacco, 1995). Combined findings of men high in sexual aggression showing poorer perceptual performance when judging heterosocial interactions in public spaces (Malamuth & Brown, 1994; McDonel & McFall, 1991; Murphy et al., 1986) and psychological similarities between sexual harassers and rapists (Quina, 1996), with rapist's poorer performance on the perception of interactions in public spaces (Lipton et al., 1987), suggests that focusing on public spaces will more likely expose perceptual deficiencies that male sexual harassers potentially possess. Whilst not dismissing that sexual harassers have perceptual malfunctions when judging private situations between men and women, it is important to focus sex

offender research where it is more beneficial in terms of illuminating where deficits in social functioning are likely to be most prevalent. This approach will enhance academic knowledge of sex offenders and assist in using this knowledge for selecting where interventions are to be most effective.

The participants' task is to guess which of five affective cues – romantic, friendly, neutral, bored or rejecting is being conveyed by each female in each interaction. One person, the male non-target always displays a friendly affect; the other person, the female target may display any of the five affects. Participants rated each video clip on the five-affect choices. The five choices are identical to the Stahl and Sacco (1995) study but use the range from established positive to negative affective cues with a neutral option in between as was in the original Lipton et al., (1987) study. This allowed a judgement of affect across a spectrum of affective cues. Participants were requested to select two of the five affective cues by rank from what is perceived to be most accurate to the second most accurate judgement. This is because the top choice is that which is most relevant and the second choice allows the participant to express their choice if they perceive two affective cues that are relevant to the video clip, weighting one more than the other. Ranking the third to fifth choices would just be an unnecessary completion task, with the remaining affective cues being unlikely to be relevant to the individual video clip (Lipton et al., 1987).

For each item, the first answer is the affect chosen most often by participants in this study; the second-best answer is the one chosen next most often. To account for first and second choices in an overall score, the ratings were weighted so that the first choice received a score of 1 and the second choice received a score of 0.5. This enabled a stronger measure of each video clip in that both first and second choices are factored into a score that measures the strongest affective cue displayed by the female in each video clip (Lipton et al., 1987). No scores were given for third, fourth and fifth choices. The results of weighted scores allowed

the TRAC to be used as a normative sample to compare against particular populations such as

men likely to sexually harass in this research and can be used to compare against sexual

offenders and other types of offender.

Two undergraduate students from the university psychology department took the role

of actors in the video clips. They are of white British ethnicity and 18 to 21 years of age.

Both actors were specifically chosen because of their characteristics (e.g., white and young).

These characteristics were most likely to reflect the demographics of the majority population

of students at the author's institution and therefore less likely to produce an unnatural

response from the participants, who may be distracted by other characteristics of the actors.

Participants were casually clothed with no offensive or provocative clothing worn or gestures

made in the video clips so as to reduce extraneous variables. It may be advisable that if other

researchers wish to use a TRAC, that they develop a measure, which reflects the

demographics and norms of the population that they are generalising their findings towards.

This can make it easier to control for extraneous variables such as cultural, fashion and

language differences.

The male's role in the video clips is to act as the non-target where the female is the

target to be judged on their affective cues towards the male. The female initiates a

conversation with the male through which she expresses her affective cues. The male always

displays a friendly affect towards the female and that was kept constant in order for the

participant to focus more on the female's behaviour and not introduce any interference with

judgements. The conversation between the male and female can enable an affective cue to be

expressed more clearly and potentially enable a more natural interaction in some instances.

For example, one of the rejecting affective cues builds up steadily to the female changing her

vocal tone and volume in displaying rejection in response to the male's continual requests

asking if the female is going to a party. Importantly, the non-target cannot be female as that

would influence sexual perception such that if the participant has sexual biases towards women then they may conflate sexual biases towards the non-target with the target, augmenting the participants affective cue judgement. The target was always female and the male was always the non-target that the female was responding to.

Participants

One hundred and forty-one female participants completed the study in a laboratory setting[9]. Participants' ages ranged from 18 to 52 ($M = 19.7$, $SD = 4.08$). The sample reported their ethnic origin as White/Caucasian (56%, $n = 79$), Black (8.5%, $n = 12$), Mixed Race (5%, $n = 7$), Asian (4.2%, $n = 6$) and did not disclose (26.3%, $n = 37$). Participants reported being African (6.4%, $n = 9$), British (44%, $n = 62$), Caribbean (2.1%, $n = 3$), Chinese (3.6%, $n = 5$), Greek (2.8%, $n = 4$), Indian (2.8%, $n = 4$), and other (15.6%, $n = 22$), or did not disclose (22.7%, $n = 32$). All participants were given two course research credits for completing the study.

Procedure

Participants attended a laboratory room in the School of Psychology to complete the study. Participants were asked to play and watch 10 video clips with headphones, and simultaneously listen to the conversation between the actors. The video clips were presented identically to all participants in the same order of friendly, romantic, neutral, bored and rejecting affective cues in two sets. After each video clip the participants were asked to rank the affect from 1, 2 or no ranking in terms of the affect that they thought the female in the video was primarily displaying the most in each video clip, with 1 being the most accurate

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[9] Twelve men were removed from the sample, so that the sample was all female. The advantage of a female sample population is that the affect judgements given are more likely to represent female affect behaviours identified and recognised by other females, strengthening future studies in exploring if men with different psychological characteristics identify female affect behaviours differently to females.

affective cue, 2 being the next most accurate affective cue and no ranking beyond the top two selections. Participants were debriefed and thanked for their participation.

Results

The mean ranked scores were reversed in the results section, as it is logical for the highest mean number to be the most accurate, with a number closest to two being the most accurate, although the frequency and standard deviation must be considered as well in analysis. The frequencies of rank, mean and standard deviation and combined rank (weighted) scores per affective cue judgement are shown in Table 1.

Table 1

The Frequency of Rank selections, Mean, Standard Deviation and Combined Rank (Weighted) scores per Affective Cue Judgement Options for the TRAC (n = 141). *denotes the most accurate affective cue chosen per question.

Video Clip	Affective Cue Judgement Q = Question	1 – Most accurate option Frequency	2 - Next most accurate option Frequency	No rank or other	Mean(Scores reversed so the closer to two the more accurate the judgement)	Standard Deviation	Combination Rank Score (First & Second choices combined)
Friendly Clip 1	Q1– 1 – Friendly	136	3	2	1.95	.28	137.5*
	Q1-2 – Romantic	1	15	125	.12	.35	8.5
	Q1-3 – Neutral	3	121	17	.90	.37	63.5
	Q1-4 – Bored	1	2	138	.03	.21	2
	Q1-5 – Rejecting	0	0	141	0	0	0
Romantic Clip 1	Q2-1 – Friendly	4	136	1	1.02	.19	72
	Q2-2 – Romantic	137	4	0	1.97	.17	139*
	Q2-3 – Neutral	0	1	140	.01	.08	0.5
	Q2-4-Bored	0	0	141	0	0	0
	Q2-5-Rejecting	0	0	141	0	0	0
Neutral Clip 1	Q3-1-Friendly	11	40	90	.44	.64	31
	Q3-2-Romantic	0	0	141	0	0	0
	Q3-3-Neutral	89	34	18	1.50	.71	106*
	Q3-4-Bored	41	67	33	1.06	.73	74.5
	Q3-5-Rejecting	0	0	141	0	0	0

continued

Video Clip	Affective Cue Judgement Q = Question	1 – Most accurate option Frequency	2 - Next most accurate option Frequency	No rank or other	Mean(Scores reversed so the closer to two the more accurate the judgement)	Standard Deviation	Combination Rank Score (First & Second choices combined)
Bored Clip 1	Q4-1-Friendly	0	0	141	0	0	0
	Q4-2-Romantic	0	0	141	0	0	0
	Q4-3-Neutral	2	47	92	.36	.51	25.5
	Q4-4-Bored	119	22	0	1.84	.36	130*
	Q4-5-Rejecting	21	72	48	.81	.68	57
Rejecting Clip 1	Q5-1 Friendly	0	0	141	0	0	0
	Q5-2-Romantic	0	0	141	0	0	0
	Q5-3-Neutral	0	25	116	.18	.38	12.5
	Q5-4-Bored	1	115	25	.83	.40	58.5
	Q5-5-Rejecting	140	1	0	1.99	.84	140.5*
Friendly Clip 2	Q6-1-Friendly	137	4	0	1.97	.17	139*
	Q6-2-Romantic	4	49	88	.40	.55	28.5
	Q6-3-Neutral	0	88	53	.62	.49	44
	Q6-4-Bored	0	0	141	0	0	0
	Q6-5-Rejecting	0	0	141	0	0	0
Romantic Clip 2	Q7-1-Friendly	6	131	4	1.01	.27	71.5
	Q7-2-Romantic	135	6	0	1.96	.20	138*
	Q7-3-Neutral	0	4	137	.03	.17	2
	Q7-4-Bored	0	0	141	0	0	0
	Q7-5-Rejecting	0	0	141	0	0	0

continued

Video Clip	Affective Cue Judgement Q = Question	1 – Most accurate option Frequency	2 - Next most accurate option Frequency	No rank or other	Mean(Scores reversed so the closer to two the more accurate the judgement)	Standard Deviation	Combination Rank Score (First & Second choices combined)
Neutral Clip 2	Q8-1-Friendly	36	68	37	.99	.72	70
	Q8-2-Romantic	0	0	141	0	0	0
	Q8-3-Neutral	97	26	18	1.56	.71	110*
	Q8-4-Bored	9	46	86	.45	.62	32
	Q8-5-Rejecting	0	0	141	0	0	0
Bored Clip 2	Q9-1-Friendly	1	2	138	.03	.21	2
	Q9-2-Romantic	0	0	141	0	0	0
	Q9-3-Neutral	4	49	88	.40	.55	28.5
	Q9-4-Bored	125	15	1	1.88	.35	132.5*
	Q9-5-Rejecting	11	75	55	.69	.61	48.5
Rejecting Clip 2	Q10-1-Friendly	0	0	141	0	0	0
	Q10-2-Romantic	0	0	141	0	0	0
	Q10-3-Neutral	0	39	102	.28	.45	19.5
	Q10-4-Bored	0	102	39	.72	.45	51
	Q10-5-Rejecting	141	0	0	2.00	0	141*

Each video clip is statistically analysed individually below with Friedman tests. Friedman tests were chosen as they account for non-parametric data, detecting differences when groups are ranked[10].

Friendly video clip 1

There was significant difference in the affect judgements for this friendly video, Friedman χ^2 ($n=141$) = 482.73, $p<.001$. More specifically, participants tended to indicate that the woman expressed friendly rather than neutral affect, Wilcoxon z ($n=141$) = -10.58, two-tailed, $p<.001$. Friendly ratings produced the greater overall combined rank scores.

Romantic video clip 1

There was significant difference in the affect judgements for this romantic video, Friedman χ^2 ($n=141$) = 556.09, $p<.001$. More specifically, participants tended to indicate that the woman expressed romantic rather than friendly affect, Wilcoxon z ($n=141$) = -11.17, two-tailed, $p<.001$. Romantic ratings produced the greater overall combined rank scores.

Neutral video clip 1

There was significant difference in the affect judgements for this neutral video, Friedman χ^2 ($n=141$) = 324.96, $p<.001$. More specifically, participants tended to indicate that

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[10] Ethnicity was analysed to determine if ethnicity influenced judgements given for each affective cue video clip. Ethnicity was entered as a covariate on judgements for the same intended affective cue video clips. Ethnicity was found to not influence the affective cue video clips, Friendly, $F(5, 135) = .81$, $p = .543$, $\eta^2 = .03$, Romantic, $F(4, 136) = .63$, $p = .643$, $\eta^2 = .02$, Neutral, $F(5, 135) = .57$, $p = .723$, $\eta^2 = .02$, Bored, $F(6, 134) = .71$, $p = .646$, $\eta^2 = .03$ and Rejecting, $F(3, 137) = .54$, $p = .656$, $\eta^2 = .01$.

the woman expressed neutral rather than bored affect, Wilcoxon z ($n=141$) = -3.90, two-

tailed, $p<.001$. Neutral ratings produced the greater overall combined rank scores.

Bored video clip 1

There was significant difference in the affect judgements for this bored video,

Friedman χ^2 ($n=141$) = 401.91, $p<.001$. More specifically, participants tended to indicate that

the woman expressed bored rather than rejecting affect, Wilcoxon z ($n=141$) = -8.66, two-

tailed, $p<.001$. Bored ratings produced the greater overall combined rank scores.

Rejecting video clip 1

There was significant difference in the affect judgements for this rejecting video,

Friedman χ^2 ($n=141$) = 480.38, $p<.001$. More specifically, participants tended to indicate that

the woman expressed rejecting rather than bored affect, Wilcoxon z ($n=141$) = -10.97, two

tailed, $p<.001$. Rejecting ratings produced the greater overall combined rank scores.

Friendly video clip 2

There was a significant difference in the affect judgements for this friendly video,

Friedman χ^2 ($n=141$) = 422.81, $p<.001$. More specifically, participants tended to indicate that

the woman expressed friendly rather than neutral affect, Wilcoxon z ($n=141$) = -10.74, two

tailed, $p<.001$. Friendly ratings produced the greater overall combined rank scores.

Romantic video clip 2

There was a significant difference in the affect judgements for this romantic video,

Friedman χ^2 ($n=141$) = 542.37, $p<.001$. More specifically, participants tended to indicate that

the woman expressed romantic rather than friendly affect, Wilcoxon z ($n=141$) = -10.75, two

tailed, $p<.001$. Romantic ratings produced the greater overall combined rank scores.

Neutral video clip 2

There was a significant difference in the affect judgements for this neutral video, Friedman χ^2 ($n=141$) = 324.10, $p<.001$. More specifically, participants tended to indicate that the woman expressed neutral rather than friendly affect, Wilcoxon z ($n=141$) = -4.67, two tailed, $p<.001$. Neutral ratings produced the greater overall combined rank scores.

Bored video clip 2

There was a significant difference in the affect judgements for this bored video, Friedman χ^2 ($n=141$) = 390.99, $p<.001$. More specifically, participants tended to indicate that the woman expressed bored rather than rejecting affect, Wilcoxon z ($n=141$) = -9.50, two tailed, $p<.001$. Bored ratings produced the greater overall combined rank scores.

Rejecting video clip 2

There was a significant difference in the affect judgements for this rejecting video, Friedman χ^2 ($n=141$) = 451.15, $p<.001$. More specifically, participants tended to indicate that the woman expressed rejecting rather than bored affect, Wilcoxon z ($n=141$) = -10.85, two-tailed, $p<.001$. Rejecting ratings produced the greater overall combined rank scores.

Discussion

The aim of this study was to develop a modernised version of the TRAC to enable a measurement of heterosocial perception for use in subsequent studies in this programme of research. The results from this study show that this performance measure will be suitable for measuring heterosocial perception. Ten affective cues were found to be statistically significantly different in each respective video clip. This has produced 2 video clips for friendly, 2 video clips for romantic, 2 video clips for neutral, 2 video clips for bored and 2

video clips for rejecting affective cues. The results for each affective cue support each intended affective cue in all 10 of the video clips. This outcome provides two sets of the heterosocial perception measure ranging from romantic, friendly, neutral, bored and rejecting behaviours. The measure provides a way of assessing heterosocial perception in a full and dynamic way in that the measure clearly evidences a range and diversity of affective cues to measure perceptual judgements on. There is a range of what may be deemed positive and negative affective cues with a neutral behaviour in between that provides a balanced and proportionate assessment of heterosocial perception. The scenarios designed have been shown to evidence the intended affective cues in the videos amongst a large sample of participants, which altogether provides support that the TRAC measure displays a range of statistically supported affective cues.

It is apparent from assessing the results that there was a one hundred percent success with all intended affective cues being statistically supported. This could suggest that the scenarios were strong examples, which were clear and distinct to detect. Counterbalancing of the video clips may have been beneficial to counteract order effects of the video clips, although adjusting the order of the video clips may have introduced variables such as the influence of the pattern of video clips or potential priming effects. Random presentation of the video clips may have overcome these factors. It was noticeable that the affective cue video clips to have the least statistical difference from the next affective cue option chosen when comparing combination scores was the neutral affective cue video clips. This may be because this is the most ambiguous affective cue with some overlap with bored affective cues (Neutral video clip 1) and friendly affective cues (Neutral video clip 2). The other affective cue video clips may have been clearer and more distinct to detect and have intuitively less overlap with other affective cues. Neutral affective behaviours may not be easily recognisable to describe affective behaviour in others as friendly, romantic, bored and rejecting behaviours

can be. Nevertheless, neutral was the first choice in combined scores and had a substantial score difference from the next option chosen in the neutral video clips. Importantly, the provision of neutral affective cue video clips, in addition to the other affective cue video clips provides a useful range and spectrum of affective cues to measure heterosocial perception.

This study was designed as a pilot measurement to be used for later studies. Future designed studies will use this tool to measure differences in men high and low in the likelihood to sexually harass, as well as being used as a measure to consider the relationship between heterosocial perception and other psychological concepts such as power and objectification. This measure further builds upon the work of Lipton, et al., (1987) who first designed the TRAC and will hopefully go some way to reignite research into heterosocial perception. Additionally, this research included standardized social encounters and not first date scenarios, which adds to the applicability and capability of video recordings as a measure of heterosocial perception, avoiding social anxiety (Hanby, Fales, Nangle, Serwik & Hedrich, 2012; Mathes 1975; McNamara & Grossman, 1991) and uncertainty (Solomon & Knobloch, 2001, 2003) that may come with judging dating scenarios. This updated and modernized version of the Test of Reading Affective (TRAC) measure will be applicable to future studies measuring differences in heterosocial perception performance.

The current TRAC equates only to a preliminary development of a scale as little has been done to establish the validity and reliability of this scale other than a modest participant sample size to establish an indicator of the TRAC affective cues in the video clips. Factor analysis can play a crucial role in establishing the discriminant validity of a new measure and should be applied to the TRAC. To establish a more accurate identification of whether this scale shows the affective cues it intends to show, factor analysis should be used including an initial pool item that covers a range of items to make judgements on and to subsequently identify the factors from the video clips. This range should include both closely related

constructs to the intended affective cue and unrelated constructs to the intended affective cue. If closely related constructs correlate well to the intended item, then this may be indicative that this item shows good construct validity. For example, the affective cue of friendly may include other affective cue judgement options that are similar to this affective cue such as affable, amicable, cordial judgement options etc. If a friendly affective cue correlates well with these options, this will improve confidence in the item showing what it is intended to show as the friendly judgement correlates well on similar judgements that may show aspects of the same factor. Similarly, if the friendly affective cue does not correlate well with judgement options that are dissimilar to this affective cue, such as aloof, averse, disinterested etc., then this suggests the friendly affective cue does not convey other cues unrelated to what may be a typical understanding of friendly behaviours, which improves confidence in the affective cue showing what it is intended to show. The item pool range should encompass unrelated constructs to articulate the conceptual boundaries of the target construct, such as that unrelated items, will be shown hopefully to represent other factors. For example, it would be hoped that judgement options such as courtship, flirtation, etc., would correlate substantially to romantic affective cues and not to friendly affective cues. This approach all together will show the convergent and discriminant correlational pattern of the items.

When creating the item pool, it is necessary to ensure that each content area is well represented in the initial item pool. If only one or two items are written to cover a particular content area, then the chances of that content being represented in the final TRAC is much reduced. For example, only having two items such as ordinary and commonplace for an intended affective cue of neutral may run the risk that a factor is missed if only two items do not correlate well, and the items could even be misdirected to other affective cues such as friendly or bored. In contrast increasing the number of alternatives may reduce validity if respondents are unable to make the more subtle distinctions that are required. That is, having

too many alternatives can introduce an element of random responding that renders scores less valid. In awareness of this and whilst an unlimited number of items for factor analysis can be used, 3 to 10 items per expected factor is a good recommendation (Marsh, Hau, Balla, & Grayson, 1998) to both enable participant's a range of item choice and for subtle distinctions to be made when judging video clips. Incorporating an 'other' option allows an indicator if items offered are not representative of the video clip. Also, using a Likert scale response will allow for clear differentiation between items scored for each video clip as scores can be determined by standardized measurement differences.

In addition to removal of video clips if similar items do not correlate well on them, factor items can be assessed for removal through inspection of item maps (Pallant & Tennant, 2007). An item map provides information about the relative difficulty of each item with items listed at the same location on the map being of similar difficulty. If a factor has similar items ranging in difficulty then the factor is a potential candidate for removal as this may suggest similar items are difficult to decipher when judging the video clips. This will improve internal validity by removal of a factor with a poor structure that may overall lack clarity when interpreting the video clip. Further to this probability curves can also be assessed to look at the likelihood of response options for very highly correlated similar items for a factor. Within a well-fitting factor you would ideally expect that across the whole range of the factor items being measured, each similar item should equally take turns showing the highest probability of endorsement. This will show that similar items are interchangeable in the factor as opposed to one item being the dominant item. Items with the lowest probability could potentially be removed from the factor and if they are a key item such as for example a measurement of friendliness explicitly for an intended friendly factor then the factor may have to be relabelled or the video clip removed.

The study reduced confounding variables by creating video clips with the same settings, actors and actor appearance. The actors were provided with scripts of what to say and how to behave minimising errors from their own interpretation of the situation. Further to this, participants undertook the study in a laboratory to enable concentration and focus on the video clips minimising distractions. There was good control of content validity with factors controlled such as that participants were only English speaking in the study, other affective cue options for the TRAC were given with a ranking decision to minimise the force choice option when judging the video clips and the time length of the video clips was at least 40 seconds to allow for enough time to interpret and attune to the video clips with resultant judgements reflecting this. The temporal validity of the study was reasonable as the TRAC was modernized and the original TRAC that was limited by the outdated settings from the 1980s, was not used.

The external validity of the study is reasonable in that undergraduate women were used as the sample to develop the measure when considering that female students are likely victims of sexual harassment (Hill & Silva, 2005; Huerta, Cortina, Pang, Torges, & Magley, 2006; Thomas, 2004). Nevertheless, it is important to note the TRAC is not representative of women who are not undergraduates and the sample would benefit from a wider pool of women. Recruiting women from work settings would be an improvement as much sexual harassment happens in the workplace (McDonald, 2012; Schneider, Swan & Fitzgerald, 1997); although undergraduate women may also have been in work environments or currently in work as well as being students. The test was limited to one university institution and diversifying the intake of participants from different institutions may have enhanced the reliability of the measure. In sum, diversifying the participant pool to include women in work and women from other universities would have improved the external validity of the scale.

The reliability of the measure could be improved by using a test-retest methodology as the judgements were made on just one test. In considering this, previous studies have not used test-retest reliability (Lipton et al., 1987; Stahl & Sacco, 1995) and arguably perception may be more revealing if judged instantly and not impacted by over-thought and rumination by repeating the test on the measure., Although this could be counteracted by carefully placing the timing of the repeat test. Should the TRAC be a reliable scale it would produce similar results if used again in similar circumstances. Test-retest reliability in this setting would involve re-administering the TRAC two to four weeks later from the initial test, assessing whether there is a significant difference between each time in terms of participant responses. Significant differences would be assessed by viewing correlational similarities and significance of t value outcomes between test one and test two. For this TRAC, Likert scale questions for each of the video clips can be administered at the same time two to four weeks after the first administration to participants. In ensuring the effectiveness of the test-retest methodology, three potential problems must be addressed when applying it: recall, time, and reactivity (Nunnally, 1978). A recall problem may arise when participants are administered the instrument within too short an interval. Participants may recall their responses and respond based on their recall; recalled responses will not test the instrument's ability to produce consistent results as responses will be based on memory. This is why the time of the measure is important, with two-to-four-week interval needed, enabling memory of the scale responses to diminish sufficiently. Similarly, the maximum of four weeks is encouraged as a time problem may arise if the participants are administered the instrument within too long an interval; resulting in differing participant responses may be attributed to changes in the participants themselves and not inconsistencies in the instrument. Lastly, a problem with reactivity can occur when participants are administered the instrument multiple times with participants becoming sensitized to the instrument and "learn" to respond as they perceive they are expected to respond. Therefore, it is important that the instrument is administered

only two or three times to avoid practice effects. If significant differences are found between test one and test two, then the video clips where there are differences will need to be revised in the factor analysis or discarded if there is no clear factor. In sum, the reliability of the TRAC measure will be improved by using test-retest methodology, and carefully placing the re-test considering recall, time and reactivity.

There may be particular external influences that impact responses to the TRAC that can be determined as an unknown variable by using test-retest reliability. For example, if there is a particular media focus or campaign on women being harassed or assaulted then this could influence participant's responses to the TRAC at one point in time as it could evoke certain emotions or make participants hypersensitive to detecting the woman's affective cues. There is also the possibility that recent participant personal experiences such as attending social events where men and women have been interacting at the social event, the night before the study, could influence the participant's perceptions on the TRAC, although data was collected on different days on different weeks in this study, which to some extent may have reduced the impact of for example, people attending social events at the weekend and then completing the study at the start of the new week. However, if test scores are the same when re-tested then this shows the strength of the measure being resistant to external influences and that test scores are unlikely to be a result of external influences. This goes to improve confidence that the measure is measuring what it intends to measure with it being less vulnerable to changes in participant mindset.

Discriminant validity can also be assessed with other similar measures of perception, such as introspection and subliminal measures of social perception (Ramsoy & Overgaard, 2004), which will establish independence of the TRAC measure. Consideration should also be given to filler items to avoid social desirability (Kestenbaum & Hammersla, 1976) and faking-good biases (Vautier, Raufaste & Cariou, 2003). Other measures were seen to be too

different from the TRAC in the way the participant is assessed, for convergent validity, such as the Fear of Intimacy scale (Descutner & Thelen, 1991) that asks the participant to imagine being in a close dating relationship instead of making actual judgements on visual stimulus, or ratings from judge raters as in the Hostility Discrimination Index (Murphy et al, 1986), that does not measure the participants volitional choices as in the TRAC. Internal reliability was not calculated as the TRAC provides dichotomous and not continuous items.

Young Caucasian university actors were used in the video clips as they were the predominant group at the setting where the TRAC was devised (e.g., southeastern UK University). This inadvertently limits the generalisability of affective cue judgements to social interactions of different ages, ethnicities, races and backgrounds. Although with an average age of participants between 19 to 20 and the age of the actors in their early twenties, there is likely to be some relatability in that the participants are familiar with the social behaviours of this age group. This potentially could make it easier for them to identify their affective cues as they are exposed to these cues more frequently, as opposed to guessing the affective cues of a less familiar age group. In this way the developed TRAC may be more representative of young white men and women. However, outcomes from the use of this TRAC will not be able to sufficiently explain the heterosocial perception of men and women in age groups other than adults in ages of their late teens or twenties. For example, it is suspected that men's heterosocial perception of women will change with women of an older age, as in line with EMT men may perceive less sexual intent in older women who have lower reproductive value (Kohl & Robertson, 2014) suggesting that men's sexual overperception bias is an adaptive bias towards achieving reproduction. This TRAC will not explain if men's heterosocial perception changes with age such that they may potentially evidence less overperception biases towards older women. Outcomes from the use of this TRAC will also not be able to sufficiently explain the heterosocial perception between men

and women of other ethnicities, in addition to perceptions of white actors interacting with actors of other ethnicities. Comparisons in ethnicity could be established by including more diversity in actor ethnicity in the TRAC. This can also include different female and male ethnicities in the TRAC video clips with the male and female being of different ethnicity and video clips with the male and female being the same ethnicity. This approach could produce a more robust TRAC measure, such that any judgements significantly affected by ethnicity are identified and adjusted for by including a range of actor ethnicities within the TRAC. In sum, using white and young university actors in the TRAC limits generalisability to other ethnicities, races, ages and backgrounds, and a more robust TRAC should include more diversity in these factors.

Furthermore, using a predominantly Caucasian participant sample reduces the generalizability of the TRAC to other ethnicities and races, and there could be potential prejudices and stereotypes across different ethnicities and races that influence study outcomes. For instance, some research suggests that black male targets are perceived as more sexually available than were white male targets in a study where the ethnicity of both the male and the female target was manipulated (black vs. white) in a first date vignette (Stephens and George, 2002). Further to this, there was an interaction effect between the male target's race and participants' race showing that compared to European Americans, Asian Americans perceived more sexual availability in black male targets than white male targets. Another study on sexual arousal, found that white participants rated pictures of black female targets as more sexually aroused than white female targets (Maner et al., 2005). Although ethnicity and race biases are not always prevalent (Sydell & Nelson, 1998), and are not always controlled for (Lipton et al., 1987; Stahl & Sacco, 1995), these findings provide evidence that ethnicity and race are important factors in sexual perception research and that they must be controlled for within-samples of male and female participants. Whilst research

in this study focuses on affective cue judgements, as opposed to sexual perceptions explicitly, some of the potential ethnicity and race biases may have been circumvented by white Caucasian female participants making judgements on actors who were also both white Caucasian. However, a proportion of the sample (18%) were other ethnicities, and a quarter of the sample did not declare their ethnicity (26%), showing that that there could be some cross ethnicity and race influence on the study outcomes (although ethnicity was analysed and was found to have no significant difference in judgements of video clips). In sum, there is research showing perception differences by participant ethnicity and race, which should be understood and controlled for.

There were no checks completed as to what the participants thought of the acting following viewing the video clips in this study, to find out whether they thought the acting was convincing. This is particularly important as the actors were Psychology students and not trained actors and therefore there should have been a uniform question at the end of the study for each participant. Manipulation checks were not employed in the study, checking whether participants thought the acting was believable and checks around the female actor and male actor such as rating how much the participant understood the female and male actor individually, how normal they thought the female and male actor was to them, and how distracted they were by the male actor. A check could also be included asking participants to rate how much they thought the actors were in an intimate or public setting as the video clips were intended to be within a public setting. A check could be incorporated for the presentational time of video clips such that participants could rate that the duration of the individual video clips was sufficient to interpret an affective cue. Responses to these checks altogether can then be used to determine whether there are components in the video clips that diminish some of the internal validity of the study such as that participants are viewing acting, a setting and a presentation, which is different to that intended. Further to this

manipulation checks could also be included to check whether participants did complete the study adequately such that participants could hear what the actors were saying and checking with participants that all the video clips played on their viewing. In sum, there are a number of manipulation checks that could have been utilized to determine how believable the acting was in the video clips and whether the video clips were presented in the way intended, that will have affected the internal validity of the measure.

Attractiveness was not measured in this study, so it is not known if the participants found the actors attractive. This could be important as previous research has shown that individuals perceive attractive individuals as more sociable, socially skilled, and popular, as well as more competent (Eagly, Ashmore, Makhijani, & Longo, 1991; Feingold, 1992) and intelligent (Lemay, Clark, & Greenberg, 2010; Sheppard, Goffin, Lewis, & Olson, 2011), amounting to the halo effect (Thorndike, 1920) label whereby one positive trait of a person is used to make an overall judgment of that person. These effects are even relatively consistent across gender of target and perceiver (Eagly et al., 1991; Feingold, 1992). It is not known how this could affect the participant's affective cue judgements in this study, but, perhaps if the female in the TRAC is perceived as more attractive the participant's view her affective cues as easier to decipher since the woman is perceived as more socially competent and therefore is more in control of the situation and is perceived as more able to competently convey her actions and emotions.

A potential significant link with attractiveness in this study is when the female in the video clips acts romantically towards the male. This affective cue may be seen as flirtatious by the perceiver, and although research suggests that when rating female targets, male and female observers judge females' flirtatiousness similarly (La France, Henningsen, Oates & Shaw, 2009), there has been no consideration of the relationship between flirtatiousness and attractiveness in this research. Maybe attractiveness alters female affective cue judgements

such that romantic judgements are more or less readily detected, such that beliefs around women's attractiveness and conduct are coordinated, with some female participants adhering to arguably traditional beliefs that women should not approach men romantically (and may have less need if they are attractive) as well as erroneous beliefs that women who make romantic advances towards men are promiscuous women. However, this viewpoint may not prevent the detection of romantic affective cues. Ratings of the attractiveness of the female in the video clips could have been taken as well as beliefs in traditional gender roles in this study to cover interpretations of flirtatiousness. Importantly, ratings of attractiveness may be largely determined by judgements of appearance, which is supported from previous studies that have examined the effect of manipulating the intensity of single nonverbal behavioural female cues (Abbey & Melby, 1986, Abbey et al., 1987) such as interpersonal distance, eye contact, touch and dress using photographs of dyads. This research has shown that except for dress, in which female targets were perceived more sexually when wearing more- versus less-revealing clothing there was no significant findings for other behavioural cue manipulations. The female in the TRAC in the current study did not wear revealing clothing and both the female and male could be deemed to have a conventional clothing appearance for the educational institution they attend suggesting that attractiveness may be less of an influential factor in the affective cue judgements made for this TRAC. In sum, consideration should be given to interpretations between the relationship of flirtatiousness and romance when the female is acting romantically in the TRAC, which may be impacted by attitudes towards women acting romantically as well as the appearance of the woman.

Furthermore, it is of value to incorporate manipulation checks to check for how believable the romantic affective cues are deemed by participants. For instance, the appearance of the male may be such that they could be seen as an unlikely romantic partner through being rated low on attractiveness or suitability. Potentially this could make female

judgements more conservative such that they are more likely to judge the affective cue as friendly rather than romantic with the underlying belief that a woman a lot more attractive than the man would not be flirting with this man. A manipulation check for this should be incorporated into research with the TRAC to identify if there is perceived implausibility of the female in the TRAC being romantic towards the male actor, which could be a reason for why the romantic affective cues are not identified correctly by some participants. Unless checked for it cannot be discounted that this perceived implausibility may not undermine men's overperception bias of friendly affective cues as romantic when viewing the TRAC. If it is difficult for male participants to conceive the male actor as a likely romantic partner who the female actor is attracted to, particularly if there is a large disparity in attractiveness such that the man is a lot less attractive, then male participants may more likely deem the female as behaving in a friendly manner, and not romantic. Future studies should check for this factor so that a lack of believability and realism of the female actor's romantic and friendly affective cues towards the male actor can be ruled out in interpreting the judgements given.

The actor-observer bias can be considered when reflecting on female interpretations of female affective cues. This attributional bias refers to a tendency to attribute one's own actions to external causes while attributing other people's behaviours to internal causes (Fitness & Curtis, 2005; Fletcher et al., 1986). Female participants may anchor onto the female's affective cues, as they can be conceived by the participant to represent female behaviour generally with the added belief that a woman's communication should be understood by a man (Gatens, 2004). In this way they merge their own causes with the female's cause (Cho & Knowles, 2013; DeCremer, 2004) making them more attuned to the female's communications. In contrast, they may be more inclined to blame the male actor for misunderstanding the female's affective cues (Gatens, 2004), with potential feelings that the male is self-motivated and ignorant towards the female. There may be some symmetry when

participants are male, whereby they may favour the male or are more likely to take the viewpoint of the male, who they more easily identify with (Cho & Knowles, 2013). Male participant sexual biases along with a merging of the male's participant's perspective with that of the male actor, may increase some male participant's misperception of affective cues.

Furthermore, there is evidence that individuals can differ in their attributional complexity (Fitness & Curtis, 2005; Fletcher et al., 1986), which can impact their causal explanations and subsequent judgements, such as those on the TRAC. Attributional complexity is the degree of complexity of attributional schemata for human behaviour, and typically attributionally complex individuals, compared with attributionally simple participants, are more likely to spontaneously produce more causes for personality dispositions and select more complex causal attributions for simple behavioural events (Wilson, Levine, Cruz & Rao, 1997). Attributional simplicity is indicated by such features as use of a single fixed rule, no consideration of alternative suggestions, and exhibition of a high degree of certainty, whereas attributionally complex individuals are indicated by such things as the comparison of alternative views, a more relativistic stance, and the existence of sophisticated causal theorizing. Further to this, attributional complexity may be separate to other influences, as it is not related to social desirability, academic ability, or internal-external locus of control, but it is positively related to the need for cognition (Fletcher et al., 1986). Altogether this suggests more attributionally complex individuals may make more developed and take wider perspectives when making their judgements on affective cues from the TRAC separate to other psychological factors. However, it is important to recognise that although there may be dispositional differences in participant attributional complexity that may impact the reasoning they apply to a situation, motivational influences may also determine whether this attributional complexity is applied. Individuals in general may be more likely to rely on simple heuristics, such as the availability heuristic, rather than complex causal schema when

ability or motivation to process information is limited (Chaiken, Liberman, & Eagly, 1989). This reasoning suggests that attributionally complex individuals may be prone to display actor-observer bias when their ability and/or motivation to process causal information is low rather than high. In general, attributional biases could be reduced by accountability, expectations of future interaction, sufficient processing time, and other factors that enhance ability-motivation (Fletcher, Reeder & Bull, 1990; Gilbert, Pelham, & Krull, 1988; Tetlock, 1985) and these situational factors could be potentially be controlled for in improving the validity and reliability of the TRAC scale, further to measuring actual dispositional differences in attributional complexity and the motivation to use this complexity.

Further to this, in considering the impact of the actor-observer bias on the development of the TRAC, it is also important to recognise that many of the undergraduates used to develop the TRAC were taken from a pool of Psychology students, and that Psychology students may have more complex attributional schemata than other students. Psychology students are likely to be interested in explaining human behaviour, as that presumably is one reason they are studying the subject, and it seems likely that studying psychology will lead to the development of more complex explanatory schemata for human behaviour. Hence, Psychology students should possess relatively sophisticated attributional schemata as compared with other groups of students, such as students in the natural sciences. This creates a limitation in the development of the TRAC as affective cue judgements may be because of disproportionately more complex explanatory schema than would be represented by other students let alone the wider general public. This participant sample will inevitably reduce the generalizability of the TRAC in capturing more diverse interpretations and judgements of affective cues from the TRAC.

An important limitation of the study was that the video clips were not randomized, which meant that all participants rated the video clips in the same order. On reflection this

decision was an oversight and the wrong decision. Not randomizing the video clips in this study allows the type of carry-over effect known as a response set, which is a bias toward responding in a particular way because of previous responses made. This may have occurred across the whole sample as there was only one order presented to the whole sample, as well as occurring within individual responses as there were two identical sets of affective cue video clips both presented in the same order meaning the first set may bias responses to the second set. Although only two sets altogether, the same order of the video clips presented makes responding become more of a habit than a natural reaction to a stimulus. Participants overall performance is tied to the particular order used, reducing the reliability of the typical response, especially when compared to other orders. Counterbalancing the order effects through randomization, would mean that across all participants completing the different orders, the total sample will not be biased by one unique order of questions.

Altogether, the current TRAC, despite a number of methodological limitations identified, still captures the ambiguous nature of heterosocial perception; the TRAC enables individual judgements to be offered as opposed to external evaluator's biases and other influences from the external evaluator's own interpretation of heterosocial perception affecting the participant's outcomes. The video clips leave the understanding of heterosocial perception with the participant, which is perhaps best where it is understood. The ratings from this measure provide a quick and clear score tally to judge heterosocial perception and are time effective to combine with other measures or experimental procedures of interest. Hopefully, this research tool can be used to reveal some interesting and informative findings focusing on men who differ in the likelihood to sexually harass in this programme of research, which in turn may expose psychological components that could explain why some men sexually offend.

CHAPTER THREE

The Relationship between Heterosocial Perception and the Male

Likelihood to Sexually Harass

Research has shown that there are integral psychological differences in male sexual offender's perceptions of women's affective cues when comparing against other offending groups including violent and non-violent offenders (Lipton et al., 1987; Malamuth & Brown, 1994; Stahl & Sacco, 1995). Perceptual differences between sex offenders and non-sex offenders have been found when viewing social situations of men and women interacting (Lipton et al., 1987; Stahl & Sacco, 1995). Measures of heterosocial perception have been used to identify poor perceptual judgments in both rapists and child molesters (Lipton, et al., 1987; Malamuth & Brown, 1994; Stahl & Sacco, 1995), and research on heterosocial perception is likely to be an important part of understanding the psychology of those who sexually offend, as well as those reporting a higher likelihood to sexually offend.

Rapists and rape-prone men have shown profound distortions when interpreting women's affective cues (Lipton et al., 1987; Malamuth & Brown, 1994; Stahl & Sacco, 1995). Lipton et al., (1987) carried out a measure of heterosocial cues reading accuracy with three groups of white male inmates from a prison; rapists, violent non-rapists and non-violent non-rapists. They found that rapists were significantly less accurate than participants in either the violent non-rapist and non-violent non-rapist groups when reading cues in simulated first-date video interactions as opposed to more intimate video interactions. This suggests that rapists may have specific heterosocial perceptual deficits in more public settings as opposed to private and physical settings. Responses to female cue, first-date video clips indicated that rapists could be differentiated from other participants most clearly on poorer performance on

scenarios involving negative or bad mood cues. Rapists tended to misinterpret women's negative affective cues in dating situations, perceiving their cues as more positive than they actually are. Examining whether this extends to sexual harassment is of interest given that negative responses from women are common towards continued sexual advances and persistent sexual pressure from men who sexually harass (del Carmen Herrera, Herrera & Exposito, 2017) and these responses can often be non-verbal cues (Graham, Bernards, Abbey, Dumas & Wells, 2017).

In support of the Lipton et al., (1987) findings, Malamuth and Brown, (1994) found that when community males watched video clips of a male attempting to initiate social interaction with a woman in a bar, males high on sexual aggression interpreted that the woman was emitting seductive signals when the woman was in fact, displaying rejecting cues (hostility or assertiveness). These men appeared oblivious to the woman's hostile communications. In further support of this argument Farris et al., (2006) found that men high in rape myth acceptance displayed deficits in their ability to detect rejecting affective cues from provocatively dressed women. It can be argued from the combined above social cognition findings, men prone to sexual aggression, or those holding attitudes supportive of sexual aggression, could be guided by a pre-existing biased schema, which leads sexually aggressive men to interpret women's communications as romantically encouraging, regardless of actual content, or to simply ignore or bypass the actual content. This schema may skew their perception of negative responses from a woman as actually romantically encouraging behaviours that serve to improve their potential to engage in a sexual relationship. It is this distortion that may produce more positive interpretations of female negative response behaviours. The nature of how this schema is formed is debatable (Malamuth & Brown, 1994), although it is likely that the schema is motivated by attitudes towards women and sexual interest.

Schemas are cognitive structures which contain knowledge including attitudes, beliefs and stereotypes, that are derived from past experiences and these schemas are used to guide what someone notices and how they respond in any given situation (Bartlett, 1932; Rumelhart, 1980). Schemas contain fundamental assumptions about oneself and one's relationship with others and the world, and they are described as interlocking ideas with their component concepts and categories (Freeman & Freeman, 2005; Ward, 2000). Schemas as explained by social cognitive theory (Bandura, 1986), are an organizer of thought and information processing. The basic premise of social cognitive theory is that people interpret social situations using expectations, prior knowledge and assumptions. However, most people are unaware of these influences on their thinking and therefore fail to challenge their own interpretations of events. It is argued that maladaptive schema onset may begin at an early age (Baker & Beech, 2004) and these schemas will then negatively influence perceptions of the world in the future. Indeed, schemas can be specific to the type of offender. Hanson (1998) proposed that sexual offenders have sex offence schemas containing the following elements: egocentric self-perception, sex overvalued in the pursuit of happiness (including a link between sex and power), and an ability to justify to oneself that some victims are legitimate. Schemas have also been used as implicit theories used to explain other people's actions and to make predictions about the world (Ward, 2000). Underlying schemas are thought to generate the cognitive distortions that are measured at the surface level. Cognitive distortions arise out of a set of core schemas held by the offender (Ward & Keenan, 1999, Ward, McCormack & Hudson, 1997). Schemas are thought to be deep-rooted, stable structures that are unaffected by conflicting information and that are chronically accessible and particularly relied upon to draw inferences in ambiguous or threatening situations; whereby the person will focus attention and interpretation resources upon schema-relevant cues (Bartlett, 1932; Rumelhart, 1980). In sex offenders, fixed and resistant schemas about women and women's behaviours are highly likely to influence their perception. Indeed,

distortions in perception are an inevitable outcome stemming from these maladaptive schemas.

The maladaptive schemas are portrayed in three theories for male sexual aggressor perceptual differences. These theories are the overperception bias, negativeness blindness and suspiciousness schema. Although these theories have been introduced in chapter 1, providing the general characteristics of these biases, each theory will now be explained in reference to their specific relevance to the psychology of male sexual harassers.

The Overperception Bias

The overperception bias shows a tendency to overestimate sexual interest in another person. This bias needs to be understood as something evidenced by men in general and not just specific to male sexual agressors (Abbey, 1982; Abbey & Harnish, 1995; Fisher & Walters, 2003; Goodchilds & Zellman, 1984; Shea, 1993; Shotland & Craig, 1988), providing support for a mating bias schema in men. Evolutionary theory explains that by perceiving a person as displaying a high degree of sexual interest, that increases the likelihood that one will initiate a romantic encounter with that person and contribute towards maximising gene proliferation through sexual intercourse (Buss, 2016; Buss & Schmitt, 1993; Landolt, Lalumiere & Quinsey, 1995; Schmitt, 2003). Such biases in male perception may embolden men to approach women in order to achieve sexual intercourse.

Sexual Strategies Theory (Buss & Schmitt, 1993) may explain behaviours connected to the overperception bias. Men's powerful desire for sexual access to a large number of women (Schmitt, 2003) may be linked to the overperception bias as it can improve their probability of having subsequent sexual encounters. Sexual Strategies Theory posits that men are also more willing to engage in casual sex with a virtual stranger, as well as imposing

minimum time constraints in knowing a prospective mate before seeking and consenting to

sexual intercourse (Buss & Schmitt, 1993). Men also evidence a relaxation of standards

imposed for acceptable short-term partners to a wide range of mate characteristics; the

overperception bias could assist in this decision by overriding some of their misgivings when

selecting a short-term partner, thus supporting the central motivation to obtain sex at the

expense of some personal preference for mate characteristics. Altogether the overperception

bias may be a key component of the sexual strategies evidenced by men in general but

potentially stronger in men high in LSH, where seeking sexual opportunity may be a priority

over long term mate selection.

Alongside Sexual Strategies Theory the overperception bias may be intertwined with

principles from Error Management Theory (EMT; Haselton & Buss, 2000). EMT, informed

by Parental Investment Theory (Trivers, 1972) suggests that men are biased toward

committing errors in judgement that are evolutionary less costly to them, through intention-

reading adaptations designed to minimize the cost of missed sexual opportunities by over

inferring women's sexual intent. Through falsely inferring a woman's sexual intent (a false-

positive error) they would pay the fairly low costs of failed sexual pursuit through perhaps

some lost time and wasted courtship effort. This overperception bias will increase the

frequency of falsely inferring a woman's sexual intent towards sexual pursuit, but

considerably reduce the costs of losing a sexual opportunity by falsely inferring that a woman

lacked sexual intent (a false-negative error). If men in general are oriented towards falsely

inferring a woman's sexual intent in favour of sexual opportunity, this may make sexual

advances towards women more likely, even towards women who are disinterested, therefore,

increasing the likelihood of sexual harassment.

There is some evidence that women associate sex more with romance, with women

reporting more romantic fantasizing than men do (Hicks & Leitenberg, 2001) and women are

seen as preferring relational sex, wanting commitment and monogamy, and seeking emotional intimacy and trust with sex (Morrisonet al., 2015). For women, sexual intimacy tends to be constructed in terms of love and romance (Gottschall & Nordlund, 2006; OrtizTorres, Williams & Ehrhardt, 2003; Van Hoof, 2013). This construction contributes to gendered sexuality, and cultural scripts of "men want sex and women want love", and much public health research reveals that many women and men in heterosexual relationships do, in fact, enact culturally dominant scripts with traditional gender norms (Beasley, 2013; OrtizTorres et al., 2003; Rutter & Schwartz, 2011; Wojnicka, 2020).

By culturally dominant traditional gender scripts, men may be expected to actively initiate and pursue all sexual opportunities, whereas women are expected to delay sexual activity until emotional intimacy has been established. Men may endorse scripts that portray women associating romance with sex and maintaining this may assist men in obtaining sex through approaching women who are romantically interested in them, or misperceiving women as romantically interested in them. A common theme in men's romantic narratives, may involve two distinct phases – a seduction phase, during which the man attempts to 'win' his partner's heart, followed by a sexual phase where the woman would make herself sexually available (Rutter & Schwartz, 2011; Seal & Ehrhardt, 2003; Wojnicka, 2020). This understanding may encourage men to search for romance in order to obtain sex. Further to this, perceiving the interaction as one in which women are initiating romance towards them, may remove any doubt and uncertainty men have about the woman's interest in them, making sex a more likely outcome.

There is no research to date specifically focusing on high LSH men or male sexual harassers and their sexualisation of romantic behaviour. Men high in LSH are not necessarily expected to show a greater inclination to sexualise romance, as the sexualisation of romance is shown by men in general (Seal & Ehrhardt, 2003; Wagner, Seal, & Ehrhardt, 2001). There

is some evidence that men with high sex goals may be more likely to sexualize women (Blake, Bastian & Denson, 2018; Rudman & Borgida, 1995; Vaes et al., 2011) and this in addition to men's tendency to perceptually connect sex and romance may suggest that men with high sex goals may sexualise romantic behaviour more than those with lower sex goals. Importantly, many men and women interpret sex as part of romance and they believe that romance can be intertwined with sex (OrtizTorres et al., 2003; Seal & Ehrhardt, 2003; Wagner et al., 2001; Wingood & DiCIemente, 2000). Consequently, it is difficult to detect and determine errors in judgement when romantic behaviour is sexualised by all genders and romance has a sexual element and thus sex can be perceived as a permissible part of romance. However, what may be more likely to differentiate high LSH men from other men and what may be a more erroneous perception, is that high LSH men may have a greater inclination to over perceive non-romantic behaviours as romantic, as this would provide a more permissive perceptual environment. Perceiving female non-romantic behaviour as romantic would be less likely to discourage high LSH men from making sexual advances, seeing advances as more acceptable and also increasing likelihood to obtain sex. Although men in general tend to evidence over perception, men lower in LSH may be more disinclined to misperceive non-romantic behaviours as romantic as they may view this misperception as unjustified and morally unreasonable (Page & Pina, 2015).

The overperception bias is expected to be more prominent and impactful on sexual harassers as their motivation for sex may persist over time and throughout a time delay (Higgins, Bargh, & Lombardi, 1985; Wyer & Srull, 1989). A male sexual harasser may possess a stronger belief that they can obtain their sex goal, and thus if the goal is attainable, motivation will be high (Atkinson, 1964; Fishbein & Ajzen, 1974; Forster, Liberman, & Friedman, 2007; Vroom, 1964). This psychological framework is likely to enable perceptual biases that view behaviours in a more sexualized manner, enhancing and justifying sexual

opportunity. Non-sexual behaviours and behaviours not logically connected to sex could be perceived as sexual opportunities by perceiving friendly or neutral cues as romantic. The overperception enables the perpetrators to internally justify their advances since a sexualised woman is more likely seen as encouraging and instigating sexual advances from the perpetrator's perspective. By judging the woman as behaving more romantically, a sexual interest bias (Kunstman & Maner, 2011; Maner et al., 2005) makes women appear sexually available, approachable and potentially promiscuous, and thus goal consistent with sexual harasser's motivations for sexual contact.

Negativeness Blindness

Negativeness blindness refers to the failure to recognize a woman's negative reactions (McDonel & McFall, 1991), while still being able to identify positive reactions. This theory posits that men have an inability to detect female negative behaviours and negative emotional responses from women as opposed to an intentional manipulation when deciding or evaluating on the behaviours or emotions that women are displaying. This theory has specific relevance to male sexual harassers since failure to recognize a woman's negative reactions, could result in persistence in making sexual advances and sexual coercion, since the sexual harasser is unaware that they are causing discomfort and fear towards the female. Although positive cues are detected, this theory argues that there is no misinterpretation of positive cues as negative in some distrustful or sceptical evaluation of female affective behaviour. Negative behaviours are simply not detected and interpreted.

Suspiciousness Schema

The suspiciousness schema implies that women's communications about romantic or sexual interest cannot be trusted as true (ie., women don't tell the truth when it comes to sex). This suspiciousness schema guides perception so that hostile behaviours are seen as seductive and seductive behaviours are seen as hostile (Malamuth & Brown, 1994). Sexual aggressors through this schema perceive communication as having the opposite meaning of that intended. This distorted perspective on female behaviour is an example of cognitive distortions (Ward, 2000), which constitute inaccurate and self-serving interpretations of offense or social situations. Cognitive distortions frequently identified by sexual aggression researchers (Briere, Malamuth & Check, 1985; Bumby, 1996; Ward et al., 1997) include "women cannot be trusted", "women never say what they mean", and "women tease men sexually". Cognitive distortions serve to shift responsibility from the perpetrator by devaluing the victim (Murphy, 1990). This enables the perpetrator to see themselves in a more exonerating light (e.g., Marolla & Scully, 1986), as well as evidence their hostility toward women and justify an acceptance of interpersonal violence (Burt, 1983). Ward (2000) argues that cognitive distortions guide the interpretation of evidence for perpetrators and therefore increase the difficulty to differentiate evidence from theory (Kuhn, Garcia-Mila, Zohar, & Andersen, 1995). This means interpretations of women's behaviour will be distorted by maladaptive theories and existing gender specific schemas.

A suspiciousness schema may have particular relevance to male sexual harassers as this thesis considers sexual harassment as part of the continuum of sexual abuse. It is possible, therefore, that holders of such schemas construe women as always giving false signals and not really meaning what they say, believing that women possess interpersonal strategies that seek to confuse and frustrate them (Ward, 2000). The false signals may be deemed by the harasser as romantic teasing or flirtatious provocation towards them,

reinforcing perceptions that their advances are welcome (Malamuth & Brown, 1994). They may perceive that when women refuse a man's sexual advances, they are not to be taken seriously and because the woman is viewed as disguising her true intentions, she can consequently be blamed for the sexual harassment. Perceiving this distorted view of women's desires can legitimize persisting with sexual advances, despite a victim's protests and distress, while the offender misconstrues that the victim desires him and is playing a deceptive game (Ward, 2000).

All three biases can potentially explain male sexual harasser perceptual inaccuracies, but it has to be acknowledged that not all research findings are supportive of the argument that sex offenders are deficient in their perception. Although Stahl and Sacco (1995) found that rapists were more perceptually proficient than child molesters, they also found that in contrast to Lipton et al., (1987), relative to violent non-sex offenders, rapists were no less accurate in interpreting negative affective cues. They also found that rapists accurately interpreted women's positive affective responses. This suggests that the perceptual outcomes of rapists and possibly sexual harassers will not always be predictable or necessarily follow an established pattern. However, it can be stated that in the Stahl and Sacco (1995) study, the comparison group of violent non-sex offenders may not be as adequate a comparison group as a sample of men from the general population who are non-offenders. Violent incarcerated non-sex offenders may be likely to have aggression schemas towards women that act to distort their perception of female affective behaviour (Dunne, Gilbert, Lee & Dafern, 2018), and this aggression schema may be easier to control for by using a general population of men that are non-incarcerated and who are non-offenders (Gannon, 2009).

Whilst many studies focus on comparisons between groups of offenders in prison (Lipton et al., 1987; Malamuth & Brown, 1994; Stahl & Sacco, 1995), a stronger and more reliable comparison group may well be men from the general population, as it is well

established that incarcerated men have hardened attitudes and other dependencies that are likely to impact strongly upon their perceptions and behaviours towards other people (Dunne, Gilbert, Lee & Dafern, 2018). This methodology is appropriate when trying to compare the perceptions of men in general to those who sexually harass, as the latter group can be recruited by identifying men who are likely or prone to sexually harass, rather than those who may have been incarcerated for sexual harassment. A measure of sexual harassment in the general population, as well as being more rigorous may be more reflective of those who commit it, as imprisonment is an unlikely outcome for these perpetrators. Under most nation's laws, sexual harassment is not an offence in its own right (Fileborn, 2013; Radu, 2014), and it is often subsumed under other offences such as unlawful discrimination and harassment, stalking or cyber-sexual harassment (eg., revenge porn) making it difficult to isolate it as a single offence especially outside of the context of protected settings (e.g., work, transport, schools, universities etc.). Furthermore, with only 3 to 6 percent of general harassment cases making it to trial in the US (Sperino & Thomas, 2017), around only one in one thousand of those accused are convicted for stalking in the UK (Office for National Statistics: Crime Survey for England and Wales, 2020) and 6.2 percent of revenge porn crimes are charged or summoned to court between 2015 and 2021 in the UK (RADAR, 2022); this shows that imprisonment for sexual harassment is likely to be minimal in number across nations and incarcerated harassers are a very difficult group to access.

There are identified differences in the characteristics of sexual harassers as a group, which are presented in different typologies (Lengnick-Hall, 1995; Lucero, et al., 2006; Lucero et al., 2003). A dominant theme emerges around the number of targets of victims when creating these typologies (Lucero et al., 2003). Some harassers appear to target a small number of victims persistently, while others appear to harass any and all targets whenever possible. A number of typologies have tended to focus on this dimension (Gelfand, Fitzgerald

& Drasgow, 1995; Fitzgerald et al., 1997; Lucero et al., 2003), with the offenders who offend whenever possible being labelled "exploitative" (Lucero et al., 2003) or "opportunistic" (Lengnick-Hall, 1995). This division suggests that there is a specific group of sexual harassers who will offend given any opportunity or within any scenario with a range of victims as opposed to a sexual harasser who may restrict their offending to a particular scenario or a particular victim. The Likelihood to Sexually Harass (LSH) scale (Pryor, 1987), albeit a measure that only covers quid pro quo sexual harassment, was chosen in this thesis as a measurement that would enable us to reflect on differences in sexually harassing proclivity behaviours. It identifies men who self-report an inclination to offend in a range of scenarios as opposed to those who report an inclination to offend in only some scenarios, or not offend at all. It is important to differentiate these types of men as this may expose differences in the complexity and cohesiveness of their offence supportive cognitions. Differences in offense supportive cognitions may exist in all three types of men, but the strength in difference between these may best be understood when comparing the exploitative/opportunistic offenders (i.e. those who would report a likelihood of offending across several scenarios/High LSH) to the specific/occasional offender (Medium LSH) and non- offender (Low LSH) groups.

The measurement of participants' proclivity to sexually harass is drawn from the LSH scale (Pryor, 1987) that examines quid pro quo harassment, in which the woman is coerced into having sex with her supervisor or coworker (participants) under the threat of job-related reprisals. Proclivity measurements assess attitudes towards a behavioural intent. Proclivity to perpetrate sexual violence examines the likelihood of committing behaviours under certain conditions (i.e. where someone would not be caught) and it has been linked in some studies with actual perpetration (DeGue & DiLillo, 2004; Gidycz, Warkentin, Orchowski, & Edwards, 2011). As measuring actual perpetration presents with challenges,

proclivity measurements serve as useful proxies for perpetration of sexual violence and can, in some cases, predict future perpetration (Gidycz et al., 2011).

An important element to the LSH scale is that it asks how a man would respond if they were in a powerful position; men high in LSH normally use the opportunity of being in a powerful position to gain sex, as sex has been identified as a key motivator for those men (Bargh et al., 1995). The LSH scale measures the likelihood of men using powerful positions to facilitate sex, as part of sexual arousal and gaining sexual gratification (Davis, Norris, George, Martell & Heiman 2006; Malamuth, 1986). Where a rapist may use superior physical power either as a sexual assault or as a threat towards sexual assault, a man high in LSH may use power as a bargaining tool to make a sexually coercive proposals to a woman in order to obtain sex. It is of particular interest in this research to examine existing sexual aggressor characteristics and motivators and how these relate to sexual harassers, since it is conceptualised that sexual harassment belongs in the continuum of sexual violence (Bargh et al., 1995; Davis et al., 2006; DeGue & DiLillo, 2004; Malamuth, 1986).

Sexual aggressors may have a poorer understanding of consent whereby the concept of consent may be intertwined with men's belief systems regarding dominance, power, strength, and entitlement (Warren, Swan & Allen, 2015) as well as specific distorting schemas as mentioned above. Thus, if a man subscribes to masculine norms that encourage these beliefs, he might be less likely to develop respect for boundaries and the rights of women, which can in turn lead to an increased propensity for the perpetration of sexual aggression. It is argued that there are psychological similarities between men high in LSH and those who sexually aggress in characteristics such as beliefs in rape myths, adversarial attitudes towards women and empathic deficits (Begany & Milburn, 2002; DeGue & Dilillo, 2004; DeGue et al., 2010; DeJucibus & McCabe, 2001; Pryor, 1987).

A final important point about the measurement of harassment in this study, is that previous research has shown that the LSH measure (Pryor, 1987) is applicable across different national samples. For example, Luthar and Luthar (2008) used this LSH measure to compare participants from the USA, China and India. The measure was identical to the original instrument, apart from seven out of ten LSH scenarios in the measure being modified slightly to use marketing settings as opposed to education or other employment settings. It was found that there were men high in LSH in all three nations and Chinese and Indian males scored significantly higher on LSH than American males, showing that men higher in LSH could be found in an Asian sample. Furthermore, several Chinese and Indian participants in the study were interviewed and asked about the clarity of the LSH instrument and all of the participants stated that the scenarios and the questions asked were easy to understand and respond to. This suggests that the measure can be transferable to an international sample. Further to this the LSH measure has been used with no modification other than language translation across European nations such as Switzerland (Krings & Fachin, 2009) and Italy (Dall'Ara & Maass, 1999) showing the utility of the LSH measure across nations and continents in conjunction with the application to American and Asian participants (Luthar & Luthar, 2008). It appears that although the scale was designed in North America (Pryor, 1987) and the predominant use of the measure has been in North America (Bargh et al., 1995; Craig, Kelly & Driscoll, 2001; Murphy, Driscoll & Kelly, 1999; Pryor & Stoller, 1994) the scale can be utilised in other nations that are culturally different to North America, with no significant participant difficulty in understanding and responding to the LSH measure.

Developing on the previous research findings of perceptual biases of sex offenders (Lipton et al., 1987; Malamuth & Brown, 1994; Stahl & Sacco, 1995), heterosocial perception research was looked at as a fruitful opportunity to examine the perceptions and biases of men who are likely to sexually harass. Despite significant research on heterosocial

perception in male rapists and male child molesters (Lipton et al., 1987; Malamuth & Brown, 1994; Stahl & Sacco, 1995), little research has considered heterosocial perception in men who are likely to sexually harass. Although sexual harassment can vary in severity and type, it is generally acknowledged that it is a form of sexual violence (Pina et al., 2009) therefore, for this thesis, it was considered of crucial interest to explore whether there are perceptual misjudgements in men who are likely to sexually harass, and whether these follow the perceptual inaccuracies evidenced by research with men who self-report a proclivity to sexually aggress in other ways. Following on from the development of the TRAC heterosocial perception tool, it is of value to test this tool on men who show a high likelihood to sexually harass. The tool has been developed using a sample of female students and will now be used to test specific hypotheses focusing on particular perceptual differences amongst men who vary in their levels of LSH.

Examining men high in LSH and their biases towards sexual opportunity from an EMT perspective, it can be argued that these men may commit predictable errors that are less costly and that produce more beneficial outcomes for them. These men's high sex goals may influence their decision making in optimising beneficial goal-consistent outcomes. In this way, these men may possess acute and excessive intention-reading adaptations designed to minimize the cost of missed sexual opportunities by over inferring women's sexual intent. This overperception bias towards women may lean strongly toward sexual interest in women (false positive), severely limiting costly errors linked to missed sexual opportunities (false negative). It is argued therefore, that the overperception of high LSH men may be stronger than the bias evidenced by men low and medium in LSH. Altogether, it is argued that in line with EMT, it will only be negativeness blindness and overperception biases in men high in LSH that will be utilised the most for successful avoidance of costly errors linked to missed sexual opportunities (false negative errors).

If negative affective cues are misperceived, it is important to identify whether these affective cues are misjudged as positive affective cues by men high in LSH, as this would evidence an overperception bias for high LSH men. Men high in LSH may be more likely to misjudge negative affective cues as positive cues as this would make a woman seem more approachable and available for sex, which would be consistent with their focus on pursuing a sexual opportunity (Haselton & Buss, 2000). Specifically, bored and rejecting affective cues may be misperceived as neutral, friendly or romantic cues. Alternatively, negative affective cues could be misperceived as other negative affective cues, which would weaken the argument for an overperception bias. Specifically, bored affective cues could be misperceived as rejecting or rejecting affective cues could be misperceived as bored. Although, it could be argued that misperceiving rejecting affective cues as bored is an overperception, this would not be as large an overperception as misperceiving a negative affective cue as a positive affective cue. To determine if men high in LSH evidence a larger overperception bias for negative affective cues than men low and medium in LSH, misperceptions of both bored and rejecting affective cues as friendly, romantic, neutral and bored or rejecting judgements were analysed. This will identify if these negative affective cues are more likely to be misperceived as positive or misperceived as other negative cues by men high in LSH in comparison to men low & medium in LSH.

Present Study

Aim

The aim of this study was to examine if men high in LSH display the biases of negativeness blindness, overperception bias of negative affective cues, overperception bias of

friendly affective cues as romantic and suspiciousness schema towards the female in the TRAC and whether these biases are greater than these of men low and medium in LSH.

Hypotheses

Hypothesis 1: Using the TRAC, it is hypothesised that men who are high in LSH will display more inaccurate perception judgements of female negative affective cues showing negativeness blindness in the TRAC than men low and medium in LSH. This is expected to be evidenced by poorer perceptual accuracy only on bored and rejecting affective cues. Men high in LSH are expected to show similar accuracy in perception judgements of friendly, romantic and neutral affective cues as men low and medium in LSH.

Rationale: As men high in LSH have strong sex goals they may be more likely to misperceive negative affective cues. Specifically, men high in LSH will misperceive negative affective cues, as to them it will minimize missed sexual opportunities (in line with EMT) through over inferring women's sexual intent. In contrast, if men high in LSH accurately perceive negative affective cues this could increase the risk that they miss out on a sexual opportunity and this would be more costly to their strong sex-goals.

Hypothesis 2: It is hypothesized that the judgements of men high in LSH for bored and rejecting affective cues will be erroneously interpreted as positive affective cues compared to those of men low and medium in LSH supporting an overperception bias.

Rationale: Men high in LSH may be more likely to misjudge negative affective cues as positive cues as again this would make the woman in question seem more approachable and available for sex, which would be consistent with their focus on achieving sexual contact with her. Accurately perceiving bored and rejecting cues would mean that the woman is less sexually interested, therefore reducing the chances of obtaining sex and it could lead to high

LSH men not pursuing a sexual opportunity. It is a more goal consistent perception of men high in LSH (with regards to obtaining sex) if they misjudge and overperceive bored and rejecting cues as positive cues.

Hypothesis 3: It is hypothesized that men high in LSH would be more likely to judge friendly affective cues as romantic than men low and medium in LSH supporting an overperception bias.

Rationale: Men high in LSH may be more likely to overperceive friendly affective cues as romantic, in line with EMT, through the process of increasing the frequency of falsely inferring a woman's sexual intent towards their sexual pursuit. This overperception maximises the perceived opportunity of obtaining sex, whilst also reducing the chances of them missing out on sex.

Hypothesis 4: Finally, it is hypothesized that men high in LSH would not evidence a suspiciousness schema in comparison to men low and medium in LSH (whereby they would misinterpret positive cues as negative and negative cues as positive).

Rationale: Holding a suspiciousness schema may conflict with the strategy to maximise sexual opportunities with women. If men high in LSH perceive positive affective cues as negative this will contradict the EMT process of increasing the frequency of falsely inferring a woman's sexual intent. Negative affective cues are likely to be interpreted as making the woman less sexually available, thus making her more resistant to sexual advances.

Method

Participants

Three hundred and four male international participants[11] were recruited online

through the Prolific Academic crowdsourcing platform[12]. After excluding seventy-eight

participants who failed to complete the study, a final sample of 226 male participants was

retained for data analysis. Participants' ages ranged from 18 to 57 ($M = 27.2$, $SD = 7.2$). The

sample reported their ethnic origin as White/Caucasian (46.9%, $n = 106$), Asian (15.4%, $n =$

35), Black (1.8%, $n = 4$), Mixed (3.6%, $n = 8$), Other (30.5%, $n = 69$) and did not disclose

(1.8%, $n = 4$). Participants reported being American (35.6%, $n = 81$), Brazilian (4.7%, $n =$

11), British (6%, $n = 14$), Canadian (5.7%, $n = 13$), Filipino (3.6%, $n = 8$), Indian (13.2%, $n =$

30), Indonesian (2.6%, $n = 6$), Russian (2.2%, $n = 5$), Vietnamese (2.2 %, $n = 5$) and other

(24.2%, $n = 54$)[13]. All participants were paid £2 in compensation.

Design

There were two groups formed from participants' scores on the Likelihood to

Sexually Harass (LSH) Scale (Pryor, 1987), post study data collection. These two groups

were formed by separating High LSH participants from Low and Medium LSH participants.

The decided cut off was 80 percent and over to mark High LSH participants. This represents

participants scoring 4 or higher out of 5 on question B on the scenarios in the LSH scale

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[11] International participants were chosen to widen our participant pool and also examine whether ethnicity played a significant part in LSH.

[12] Prolific Academic is a crowdsourcing platform that is used to conduct psychological research online. It enables registered users to participate in studies in return for monetary reward. Crowdsourcing platforms such as Prolific Academic offer various advantages to researchers such as access to samples that are demographically diverse and have more relevant work experience (Behrend, Sharek, Meade, & Wiebe. 2011). Researchers have also demonstrated that crowdsourcing platforms produce highly reliable and valid data that are equivalent or better in quality to data collected using traditional Internet participant pools and university student samples (see Behrend et al., 2011).

[13] The participants have varied demographics, which to some extent has the advantage of reflecting the global nature of sexual harassment and sexual harassers, with perpetrators coming from varied ethnicities and nationalities as was referred to at the beginning of chapter one.

(Pryor, 1987) measuring the tendency to sexually harass. Although reducing sensitivity between Low and High LSH participants by pooling together Low and Medium LSH participant scores, this combination enabled the strength of any differences to be tested for High LSH participants against a full range of LSH scores. This follows previous research in heterosocial perception that compares only two categories of sexual offending (e.g., sex offender against non-offender) as opposed to multiple gradations of sexual offending (Lipton et al., 1987; Stahl & Sacco, 1995). All participants completed the TRAC (Test of Reading Affective Cues) before completing the LSH measure, so as to avoid priming effects of sexual harassment tendencies on TRAC judgements. For the analysis of the results, differences between high LSH and low and medium LSH men was analysed reflecting the aims of the study focusing on firstly the presence of negativeness blindness of bored and rejecting affective cues, overperception biases of bored and rejecting affective cues, overperception biases of friendly affective cues as romantic and finally analysis focused on the suspiciousness schema (focusing on opposite judgements of positive and negative affective cues). As participants were an international sample and they ranged in ethnicity and age, both ethnicity and age were included as variables in the statistical analysis for each bias.

Measures

Test of Reading Affective Cues (TRAC)

This test was designed in study 1. It includes 10 video clips where the viewer makes affective judgements on the affective cues displayed by a female in conversation with a male in each video clip. There are five affective cues displayed; friendly, romantic, neutral, bored and rejecting. Participants rank the most accurate affective cue that they think is displayed by the female in each video clip and then the second most accurate affective cue. Mean scores

were created by averaging video clips that evidenced the same affective cue according to the normative sample in chapter 2.

Likelihood to Sexually Harass Scale (Pryor, 1987)

This scale measures how likely an individual is to sexually harass. It was chosen because it explicitly measures sexual harassment tendencies and not sexual aggression as a broad and ambiguous measure and the scale has been shown to be an effective measure in distinguishing different gradations of men who are likely to sexually harass (Bargh et al., 1995; Pryor & Stoller, 1994). As mentioned previously, the LSH scale has compatibility with sexual harasser typologies (Lengnick-Hall, 1995; Lucero, et al., 2006; Lucero et al., 2003) in that it enables differentiation of specific groups of men likely to sexually harass such as those who will offend given any opportunity or within any scenario with a range of victims (exploitative/opportunistic offenders - High LSH) as opposed to those who may restrict their offending to a particular scenario or a particular victim (specific/occasional offender - Medium LSH), as well as non- offender (Low LSH) groups. The scale incorporates 10 vignette scenarios describing a different female in a particular situation in each vignette. There are three questions asked after each vignette from 1 (Not at all Likely) to 5 (Very Likely). Importantly the second question (question B) asks the quid pro quo question; of how likely the individual is to help a woman described in the vignette in exchange for sexual favours. A total score of Likelihood to Sexually Harass can be completed by averaging the score on question B across all 10 vignettes. Question A refers to the scenario in asking how the participant would respond to what the woman is asking or the dilemma that she is in without an abuse of position. For example, the participant is told they are a job interviewer and is asked, "Would you give her the job over the other applicants?" and when the woman is trying to sell computers the participant is asked, "Would you recommend her line of

computers?" Question C asks for an abuse of position, which is not sexual harassment. For example, the participant is asked, "would you ask her to meet you later for dinner to discuss her possible employment?" and "would you ask her to meet you later for dinner to discuss the choice of computers?" The purpose of questions A and C is to make the meaning behind question B more inconspicuous to the participant by diluting the focus on quid pro quo exchanges for sexual favours. This in turn may enable the participant to give a more honest answer to question B reducing social desirability biases. The answers given to questions A and C are not reported in prior research with the LSH scale (Bargh et al., 1995; Pryor, 1987; Pryor & Stoller, 1994) and similarly to this research, these answers are redundant for analysis in this programme of research. This measure is provided in Appendix I.

Affective Cue Bias Measures

Negativeness Blindness was assessed by measuring correct judgements given for bored and rejecting affective cues analysing whether there is any difference in the accuracy of these judgements between men high in LSH and those low and medium in LSH. The 2 video clips for each affective cue were averaged and then the five affective cue correct judgements were compared for men low and medium in LSH and those high in LSH using a MANCOVA test to test whether differences existed between men high in LSH and those low and medium in LSH for negative affective cues and whether the differences existed only for negative affective cues as well.

Overperception of bored and rejecting affective cues was assessed by measuring differences in judgements given other than the correct judgement for bored and rejecting affective cues analysing whether there is any difference in these judgements given between men high in LSH and those low and medium in LSH. The incorrect judgements for the bored

affective cues were averaged across the 2 bored affective cue video clips and the incorrect judgements for the rejecting affective cues were averaged across the 2 rejecting affective cue video clips. The incorrect judgements for the bored affective cue were friendly, romantic, neutral and rejecting and the incorrect judgements for the rejecting affective cue were friendly, romantic, neutral and bored. A MANCOVA test was completed to test whether differences existed between men high in LSH and those low and medium in LSH across the incorrect judgements.

Overperception of friendly affective cues as romantic was assessed by measuring judgements of friendly affective cues as romantic and judgements of romantic affective cues as friendly analysing whether there is any difference in these judgements given between men high in LSH and those low and medium in LSH. Friendly judgements for romantic affective cues were included to discount any underperception that could weaken the motive for an overperception bias finding taken from friendly affective cues. The judgements of friendly affective cues as romantic were averaged across the 2 video clips for friendly affective cues and the judgements of romantic affective cues as friendly were averaged across the 2 video clips for romantic affective cues. A MANCOVA test was completed to test whether differences existed between men high in LSH and those low and medium in LSH across both of these judgements.

The suspiciousness schema was assessed by measuring friendly affective cues judged separately as bored and rejecting, romantic affective cues judged separately as bored and rejecting, bored affective cues judged separately as friendly and romantic and rejecting affective cues judged separately as friendly and romantic analysing whether there is any difference in these judgements given between men high in LSH and those low and medium in LSH. The friendly affective cues judged separately as bored and rejecting were averaged across the two video clips for friendly affective cues, romantic affective cues judged

separately as bored and rejecting were averaged across the two video clips for romantic affective cues, bored affective cues judged separately as friendly and romantic were averaged across the two video clips for bored affective cues and rejecting affective cues judged separately as friendly and romantic were averaged across the two video clips for rejecting affective cues. A MANCOVA test was completed to test whether differences existed between men high in LSH and those low and medium in LSH across these judgements.

Procedure

Participants completed an online questionnaire. This study was first approved by the School of Psychology Ethics Committee at the University of Kent. Participants were informed that the purpose of the study was to examine "social perception" in order to minimise response bias. After providing written informed consent, participants were asked to provide certain personal and demographic information including gender, age, ethnicity and nationality. Participants completed the TRAC scale (containing all videos), followed by the likelihood to sexually harass scale (Pryor, 1987). Participants were fully debriefed in writing upon completion of the study. Participants were debriefed that they were not being tested on whether they could be a sex offender, but that they were measured on whether they showed a likelihood to sexually harass on the LSH scale and that their results will be used solely for group and not individual trends and patterns.

Results

Negativeness Blindness

A 2 x 3 MANCOVA was performed to determine the effect of LSH group (low and medium/high) and Ethnicity (White, Asian, and Other/Not disclosed) on affective cue judgements (friendly, romantic, neutral, bored and rejecting) with age entered as a covariate[14]. The analysis revealed a significant main effect of LSH group, $F(5, 212) = 4.48$, $p = .001$, $\eta^2 = .10$, a significant main effect of Ethnicity $F(10, 424) = 2.72$, $p = .003$, $\eta^2 = .06$, and a significant interaction effect of LSH group and Ethnicity $F(10, 424) = 2.75$, $p = .003$, $\eta^2 = .06$. Age as a covariate was non-significant, $F(5, 212) = 1.34$, $p = .247$, $\eta^2 = .03$. Univariate ANOVAs were performed on affective cue judgements (friendly, romantic, neutral, bored and rejecting) with a Bonferroni corrected significance level of .01.

As there was a significant main effect of LSH group, this was examined more closely. For LSH group there were no significant effects for Friendly affective cues, $F(1, 222) = .027$, $p=.869$, $\eta^2 = 0$, Romantic affective cues, $F(1, 222) = 3.41$, $p=.067$, $\eta^2 = .02$ and Neutral affective cues, $F(1, 222) = 4.99$, $p=.027$, $\eta^2 = .02$. There was a significant effect for Bored affective cues, $F(1, 222) = 11.63$, $p=.001$, $\eta^2 = .05$, which showed that those reporting high LSH ($M = 1.77$, $SD=.91$) showed greater perceptual misidentification on the bored affective cues than those reporting low and medium LSH ($M = 1.28$, $SD=.44$). There was a significant effect for Rejecting affective cues, $F(1, 222) = 17.80$, $p<.001$, $\eta^2 = .08$, which showed that those reporting high LSH ($M = 1.80$, $SD=.98$) showed greater perceptual misidentification on the rejecting affective cues than those reporting low and medium LSH ($M = 1.17$, $SD=.45$).

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[14] Age was entered as a covariate throughout this programme of research as it is a continuous independent variable, as opposed to the other independent variables, which are categorical. This allows a test of the categorical variables independent of Age. Although Age was not a part of the hypotheses, it is controlled for within the analyses, as Age as a covariate will reduce within-group error variance, as well as eliminate a potential confound (Field, 2013), allowing a more accurate assessment of the other variables.

As there was a significant main effect of Ethnicity, this was examined more closely. For ethnicity there were no significant effects for Friendly affective cues, $F(2, 222) = 1.73$, $p=.180$, $\eta^2 = .02$, Romantic affective cues, $F(2, 222) = 1.22$, $p=.298$, $\eta^2 = .01$ and Neutral affective cues, $F(2, 222) = 1.76$, $p=.175$, $\eta^2 = .02$. There was a significant effect for Bored affective cues, $F(2, 222) = 4.71$, $p=.010$, $\eta^2 = .04$. Post hoc comparisons (Bonferroni) revealed those of Asian ethnicity $(M = 1.52)$ showed greater perceptual misidentification on the bored affective cues than those of White $(M = 1.27, p<.05)$ and Other/Not Disclosed $(M = 1.33, p<.05)$ ethnicity. There was a significant effect for Rejecting affective cues, $F(2, 222) = 8.08$, $p<.001$, $\eta^2 = .07$. Post hoc comparisons (Bonferroni) revealed those of Asian ethnicity $(M = 1.38)$ showed greater perceptual misidentification on the rejecting affective cues than those of White $(M = 1.16, p<.01)$ ethnicity. White ethnicity participants showed less perceptual misidentification on the rejecting affective cues than the Other/Not Disclosed $(M = 1.28, p<.01)$ ethnicity.

There was also a significant interaction between LSH group and Ethnicity, which was examined more closely. There were no significant effects for Friendly affective cues, $F(2, 222) = 4.04$, $p=.019$, $\eta^2 = .04$, Romantic affective cues, $F(2, 222) = 1.90$, $p=.153$, $\eta^2 = .02$, Neutral affective cues, $F(2, 222) = 2.77$, $p=.065$, $\eta^2 = .03$ and Bored affective cues, $F(2, 222) = 4.38$, $p=.014$, $\eta^2 = .04$. There was a significant effect for Rejecting affective cues, $F(2, 222) = 7.45$, $p=.001$, $\eta^2 = .07$. For White ethnicity, there were no significant effects for LSH group for Rejecting, $F(1, 105) = .636$, $p=.427$, $\eta^2 = .01$. Participants of Asian ethnicity, $F(1, 33) = 7.88$, $p=.009$, $\eta^2 = .20$ with High LSH $(M = 2.10)$ showed greater perceptual misidentification for rejecting affective cues than Low & Medium LSH $(M = 1.26)$ participants of Asian ethnicity. Additionally those of Other/Not Disclosed ethnicity, $F(1, 82) = 26.56$, $p<.001$, $\eta^2 = .25$ with High LSH $(M = 2.00)$ showed greater perceptual misidentification for Rejecting affective cues than those with Low & Medium LSH $(M = 1.16)$. The F ratios and significance for the effect of LSH group and Ethnicity on affective

cue judgements are presented in Table 2. Please see Table 3 for the mean and standard

deviations for each affective cue for LSH group and Ethnicity.

Table 2

Multivariate and Univariate analyses of variance for the effect of LSH group and Ethnicity

on affective cue judgements with Age as a covariate

		ANCOVA				
	MANCOVA	Friendly	Romantic	Neutral	Bored	Rejecting
Variable	*F*	*F*	*F*	*F*	*F*	*F*
Low & Medium-High LSH	4.48***	.027	3.40	4.99	11.63***	17.80***
Ethnicity	2.72**	1.73	1.22	1.76	4.71**	8.08***
Low & Medium-High LSH x Ethnicity	2.75**	4.04	1.90	2.77	4.38	7.45***
Age(Covariate)	1.34	0.66	3.41	0.36	2.27	2.65

Note: F ratios are Wilk's Lambda approximation of *F*s.
Abbreviations: ANCOVA, univariate analysis of variance, MANCOVA, multivariate
analysis of variance.
Bonferroni corrected alpha value = 0.01.
*p<.05, **p<.01, ***p<.001.

Table 3

Mean and Standard Deviation for each Affective Cue by LSH Group and Ethnicity

	Affective Cue									
Group	Friendly		Romantic		Neutral		Bored		Rejecting	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
LSH										
Low & Medium	1.16	.37	1.22	.46	1.55	.58	1.28_a	.44	1.17_a	.45
High	1.27	.61	1.48	.66	1.84	.85	1.77_a	.91	1.80_a	.98
Ethnicity										
White	1.15	.39	1.23	.50	1.65	.64	1.27_a	.44	$1.15_{a,b}$	.44
Asian	1.22	.43	1.25	.39	1.62	.62	$1.52_{a,b}$	.63	1.38_a	.71
Other/Not Disclosed	1.18	.39	1.26	.50	1.47	.57	1.33_b	.57	1.28_b	.61
LSH & Ethnicity										
Low & Medium LSH White	1.15	.40	1.23	.51	1.65	.63	1.27	.45	1.16	.45
Low & Medium LSH Asian	1.26	.46	1.22	.37	1.50	.50	1.43	.55	1.26_a	.58
Low & Medium LSH Other/Not Disclosed	1.13	.26	1.20	.42	1.42	.50	1.23	.39	1.16_b	,39
High LSH White	1.10	.22	1.20	.45	1.50	.87	1.20	.45	1.00	0
High LSH Asian	1.00	0	1.40	.55	2.30	.84	2.00	.94	2.10_a	1.03
High LSH Other/Not Disclosed	1.46	.78	1.63	.77	1.79	.84	1.92	1.00	2.00_b	1.05

Note: For Group, column mean sections sharing subscripts are significantly different (*p* < .05)

Overperception Bias of Bored and Rejecting Affective Cues

A 2 x 3 MANCOVA was performed to determine the effect of LSH group (low and medium/high) and Ethnicity (White, Asian, and Other/Not disclosed) on bored affective cues judged as friendly, romantic, neutral and rejecting as well as rejecting affective cues judged as friendly, romantic, neutral and bored with age entered as a covariate. The analysis revealed a significant main effect of LSH group, $F(8, 209) = 7.16$, $p < .001$, $\eta^2 = .22$, a significant main effect of Ethnicity, $F(16, 418) = 2.97$, $p < .001$, $\eta^2 = .10$, and a significant interaction effect of LSH group and Ethnicity $F(16, 418) = 2.64$, $p = .001$, $\eta^2 = .09$. The covariate of Age was non-significant, $F(8, 209) = 0.96$, $p = .472$, $\eta^2 = .04$. Univariate ANOVAs were performed on these affective cue judgements with a Bonferroni corrected significance level of .006.

Bored affective cues were misperceived as friendly, $F(1, 222) = 17.53$, $p<.001$, $\eta^2 = .08$, more so by those reporting high LSH ($M = 2.30$, $SD=.96$) than those reporting low and medium LSH ($M = 2.89$, $SD=.34$). Bored affective cues were also misperceived as romantic, $F(1, 222) = 10.73$, $p =.001$, $\eta^2 = .05$, more so by those reporting high LSH ($M = 2.52$, $SD=.70$) than those reporting low and medium LSH ($M = 2.92$, $SD=.33$). There were no significant effects for neutral, $F(1, 222) = 0.95$, $p =.332$, $\eta^2 = 0$ or rejecting judgements, $F(1, 222) = 0.40$, $p =.530$, $\eta^2 = 0$. Rejecting affective cues were also misperceived as friendly, $F(1, 222) = 15.23$, $p<.001$, $\eta^2 = .07$, more by those reporting high LSH ($M = 2.32$, $SD=.93$) than those reporting low and medium LSH ($M = 2.89$, $SD=.38$). Additionally, Rejecting affective cues were also misperceived as romantic, $F(1, 222) = 20.14$, $p<.001$, $\eta^2 = .09$, more so by those reporting high LSH ($M = 2.43$, $SD=.68$) than those reporting low and medium LSH ($M = 2.93$, $SD=.32$). There were no significant effects for neutral, $F(1, 222) = 0.53$, $p =.818$, $\eta^2 = 0$ or bored judgements, $F(1, 222) = 2.48$, $p =.117$, $\eta^2 = .01$.

For ethnicity there were significant effects of misperception of Bored affective cues as friendly, $F(2, 222) = 11.55$, $p<.001$, $\eta^2 = .01$. Post hoc comparisons (Bonferroni) revealed that those of White ethnicity *(M = 2.95, SD = .20)* showed less perceptual misidentification than those of Asian *(M = 2.72, SD = .58, p<.01)* and Other/Not Disclosed *(M = 2.72, SD = .62, p<.001)* ethnicity. Additionally, there were significant effects for Bored affective cues being misperceived as romantic, $F(2, 222) = 8.10$, $p<.001$, $\eta^2 = .07$. Post hoc comparisons (Bonferroni) revealed that those of White ethnicity *(M = 2.99, SD = .11)* showed less perceptual misidentification than those of Asian *(M = 2.82, SD = .41, p<.05)* and Other/Not Disclosed *(M = 2.77, SD = .56, p<.001)* ethnicity. There were no significant effects for the misperception of Bored affective cues as neutral, $F(2, 222) = 1.74$, $p =.178$, $\eta^2 = .02$ and no significant effects for Bored affective cues being misperceived as rejecting, $F(2, 222) = 0.97$, $p =.383$, $\eta^2 = .01$.

Additionally, there were significant effects of Rejecting affective cues being misperceived as friendly, $F(2, 222) = 10.41$, $p<.001$, $\eta^2 = .09$: Post hoc comparisons (Bonferroni) revealed that those of White ethnicity *(M = 2.97, SD = .17)* showed less perceptual misidentification than those of Asian *(M = 2.72, SD = .58, p<.01)* and Other/Not Disclosed *(M = 2.71, SD = .66, p<.001)* ethnicity. Rejecting affective cues were also significantly misperceived as romantic, $F(2, 222) = 10.96$, $p<.001$, $\eta^2 = .09$. less so by those of White ethnicity *(M = 3.00, SD = .05)* compared to those of Asian *(M = 2.79, SD = .41, p<.01)* and Other/Not Disclosed *(M = 2.76, SD = .57, p<.001)* ethnicity. There were no significant effects of Rejecting affective cues being misperceived as neutral, $F(2, 222) = 0.82$, $p =.442$, $\eta^2 = .01$ and no significant effects for Rejecting affective cues being misperceived as bored, $F(2, 222) = 1.06$, $p =.348$, $\eta^2 = .01$.

The significant interaction effect of LSH group and Ethnicity was examined more closely. There was a significant effect for of Bored affective cues being misperceived as

friendly, $F(2, 222) = 7.46$, $p = .001$, $\eta^2 = .07$, but only for those of Other/Not Disclosed ethnicity, $F(1, 82) = 24.51$, $p < .001$, $\eta^2 = .23$: those with High LSH ($M = 2.00$, $SD = 1.05$) showed greater perceptual misidentification than those with Low & Medium LSH ($M = 2.84$, $SD = .41$). There were no significant effects for romantic judgements, $F(2, 222) = 3.43$, $p = .034$, $\eta^2 = .03$, neutral judgements, $F(2, 222) = 1.00$, $p = .369$, $\eta^2 = .01$ and rejecting judgements, $F(2, 222) = 0.37$, $p = .693$, $\eta^2 = 0$. There were however, significant effects for Rejecting affective cues being misperceived as friendly, $F(2, 222) = 5.82$, $p = .003$, $\eta^2 = .05$. but again only for those of Other/Not Disclosed ethnicity (White $F(1, 105) = .219$, $p = .641$, $\eta^2 = 0$. and Asian $F(1, 33) = 2.76$, $p = .107$, $\eta^2 = .08$.) Those of Other/Not Disclosed ethnicity, , $F(1, 82) = 18.23$, $p < .001$, $\eta^2 = .19$ who also displayed High LSH ($M = 2.04$, $SD = 1.01$) showed greater perceptual misidentification than those with Low & Medium LSH ($M = 2.82$, $SD = .51$). There were no significant effects for romantic judgements, $F(2, 222) = 5.13$, $p = .007$, $\eta^2 = .05$, neutral judgements, $F(2, 222) = 0.20$, $p = .821$, $\eta^2 = 0$ and bored judgements, $F(2, 222) = 2.11$, $p = .124$, $\eta^2 = .02$. The F ratios and significance for the effect of LSH group and Ethnicity on bored and rejecting affective cue judgements being misperceived as friendly, romantic, neutral, bored or rejecting are presented in Table 4. Please see Table 5 for the mean and standard deviations for these affective cue judgements by LSH group and Ethnicity.

Table 4

Multivariate and Univariate analyses of variance for the effect of LSH group and Ethnicity with Age as a covariate on bored and rejecting affective cue judgements as friendly, romantic, neutral, bored or rejecting

		ANCOVA								
	MANCOVA	Bored Affective Cues					Rejecting Affective Cues			
		Friendly	Romantic	Neutral	Rejecting		Friendly	Romantic	Neutral	Bored
Variable	F	F	F	F	F		F	F	F	F
Low & Medium-High LSH	7.16***	17.53***	10.73***	0.95	0.40		15.23***	20.14***	0.05	2.48
Ethnicity	2.97***	11.55***	8.01***	1.74	0.97		10.41***	10.96***	0.82	1.06
Low & Medium-High LSH x Ethnicity	2.64***	7.46***	3.43	1.00	0.37		5.82**	5.13	0.20	2.11
Age (Covariate)	0.96	0.37	0.44	0.02	1.58		1.36	0.24	4.64	0.56

Note: F ratios are Wilk's Lambda approximation of *F*s. *Abbreviations*: ANCOVA, univariate analysis of variance, MANCOVA, multivariate analysis of variance. Bonferroni corrected alpha value = 0.006.

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

Table 5

Mean and Standard Deviation for the effect of LSH group and Ethnicity on bored and rejecting affective cue judgements as friendly, romantic, neutral, bored or rejecting

	Bored Affective Cues								Rejecting Affective Cues							
	Friendly		Romantic		Neutral		Rejecting		Friendly		Romantic		Neutral		Bored	
Group	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
LSH Group																
Low & Medium	2.88_a	0.34	2.92_a	0.33	2.47	0.53	2.29	0.57	2.89_a	0.38	2.93_a	0.32	2.63	0.47	2.22	0.43
High	2.30_a	0.96	2.52_a	0.70	2.50	0.66	2.46	0.71	2.32_a	0.93	2.43_a	0.68	2.59	0.63	2.32	0.59
Ethnicity																
White	$2.95_{a,b}$	0.20	$2.99_{a,b}$	0.11	2.55	0.49	2.27	0.58	$2.97_{a,b}$	0.17	$3.00_{a,b}$	0.05	2.73	0.40	2.18	0.43
Asian	2.72_a	0.58	2.82_a	0.41	2.47	0.55	2.27	0.65	2.72_a	0.58	2.79_a	0.41	2.60	0.46	2.28	0.46
Other/Not Disclosed	2.72_b	0.62	2.77_b	0.56	2.38	0.59	2.37	0.56	2.70_b	0.66	2.76_b	0.57	2.51	0.58	2.27	0.46

continued

	Bored Affective Cues								Rejecting Affective Cues							
	Friendly		Romantic		Neutral		Rejecting			Friendly		Romantic		Neutral		Bored	
Group	M	SD	M	SD	M	SD	M	SD		M	SD	M	SD	M	SD	M	SD
LSH & Ethnicity																	
Low & Medium LSH White	2.95	0.21	2.99	0.11	2.55	0.50	2.27	0.59		2.97	0.18	3.00	0.05	2.74	0.39	2.17	0.42
Low & Medium LSH Asian	2.79	0.47	2.88	0.32	2.41	0.55	2.24	0.64		2.79	0.47	2.88	0.32	2.59	0.46	2.22	0.46
Low & Medium LSH Other/Not Disclosed	2.84_a	0.41	2.84	0.48	2.39	0.56	2.33	0.51		2.82_a	0.51	2.85	0.49	2.51	0.55	2.28	0.42
High LSH White	3.00	0	3.00	0	2.60	0.42	2.20	0.27		3.00	0	3.00	0	2.60	0.55	2.40	0.55
High LSH Asian	2.30	0.98	2.50	0.71	2.80	0.45	2.40	0.82		2.30	0.97	2.30	0.57	2.70	0.45	2.60	0.42
High LSH Other/ Not Disclosed	2.00_a	1.05	2.33	0.78	2.33	0.78	2.58	0.79		2.04_a	1.01	2.25	0.75	2.54	0.75	2.17	0.65

Note: For Group, column mean sections sharing subscripts are significantly different ($p < .05$)

Overperception Bias of Friendly Affective Cues

A 2 x 3 MANCOVA was performed to determine the effect of LSH group (low and medium/high) and Ethnicity (White, Asian, and Other/Not disclosed) on overperception of friendly affective cues with age entered as a covariate. The analysis revealed a significant main effect of LSH group, $F(2, 215) = 3.24$, $p = .041$, $\eta^2 = .03$. There was no significant main effect of Ethnicity $F(4, 430) = 1.38$, $p = .239$, $\eta^2 = .01$. There was a marginally significant interaction effect of LSH group and Ethnicity $F(4, 430) = 1.98$, $p = .097$, $\eta^2 = .02$. Age as a covariate was non-significant, $F(2, 215) = 1.24$, $p = .290$, $\eta^2 = .01$. Univariate ANOVAs were performed on these affective cue judgements with a Bonferroni corrected significance level of .025.

As there was a significant main effect of LSH group this was examined more closely. There was a significant effect for friendly affective cues judged as romantic, $F(1, 222) = 6.00$, $p = .015$, $\eta^2 = .03$: those with High LSH ($M = 2.36$) showed greater perceptual misidentification than those with Low & Medium LSH ($M = 2.71$). There was no significant effect for romantic affective cues judged as friendly, $F(1, 222) = 1.28$, $p = .260$, $\eta^2 = .01$.

As there was a marginally significant interaction effect of LSH group and Ethnicity this was examined more closely. Despite this marginal significance, romantic judgements of friendly affective cues was not significant, $F(2, 222) = 1.43$, $p = .241$, $\eta^2 = .01$ and friendly judgements of romantic affective cues was also not significant, $F(2, 222) = 2.33$, $p = .10$, $\eta^2 = .02$.

The *F* ratios and significance for the effect of LSH group and Ethnicity on judgements of friendly affective cues as romantic and romantic affective cues as friendly are presented in Table 6. Please see Table 7 for the mean and standard deviations for judgements of friendly affective cues as romantic and romantic affective cues as friendly by LSH group and Ethnicity.

Table 6

Multivariate and Univariate analyses of variance for the effect of LSH group and Ethnicity with Age as a covariate on judgements of friendly affective cues as romantic and romantic affective cues as friendly

		ANCOVA	
	MANCOVA	Friendly Cues judged as Romantic	Romantic Cues judged as Friendly
Variable	*F*	*F*	*F*
Low & Medium-High LSH	3.24*	6.00*	1.28
Ethnicity	1.38	0.69	2.41
Low & Medium-High LSH x Ethnicity	1.98	1.43	2.33
Age (Covariate)	1.24	2.48	0.02

Note: F ratios are Wilk's Lambda approximation of *F*s.

Abbreviations: ANCOVA, univariate analysis of variance, MANCOVA, multivariate analysis of variance.
Bonferroni corrected alpha value = 0.025.
*p<.05, **p<.01, ***p<.001.

Table 7

Mean and Standard Deviation for the effect of LSH group and Ethnicity on judgements of friendly affective cues as romantic and romantic affective cues as friendly

	Affective Cue				
	Friendly Cues judged as Romantic			Romantic Cues judged as Friendly	
Group	M	SD		M	SD
LSH Group					
Low & Medium LSH	2.71$_a$	.44		1.91	.34
High LSH	2.36$_a$	.62		1.80	.57
Ethnicity					
White	2.74	.38		1.93	.33
Asian	2.54	.48		1.90	.40
Other/ Not Disclosed	2.65	.55		1.86	.40
LSH & Ethnicity					
Low & Medium LSH White	2.75	.37		1.93	.33
Low & Medium LSH Asian	2.55	.49		1.95	.36
Low & Medium LSH Other/Not Disclosed	2.71	.49		1.88	.34
High LSH White	2.50	.50		2.10	.22
High LSH Asian	2.50	.50		1.60	.55
High LSH Other/Not Disclosed	2.25	.72		1.75	.66

Note: For Groups, column mean sections sharing subscripts are significantly different ($p < .05$)

Suspiciousness Schema

A 2 x 3 MANCOVA was performed to determine the effect of LSH group (low and medium/high) and Ethnicity (White, Asian, and Other/Not disclosed) on friendly affective cues judged separately as bored or rejecting, romantic affective cues judged separately as bored or rejecting, bored affective cues judged separately as friendly or romantic and rejecting affective cues judged separately as friendly or romantic with age entered as a covariate. The analysis revealed a significant main effect of LSH group, $F(8, 209) = 9.40$, $p < .001$, $\eta^2 = .27$, a significant main effect of Ethnicity, $F(16, 418) = 3.23$, $p < .001$, $\eta^2 = .11$ and a significant interaction effect of LSH group and Ethnicity, $F(16, 418) = 3.08$, $p < .001$, $\eta^2 = .11$. Age as a covariate was non-significant, $F(8, 209) = 0.45$, $p = .89$, $\eta^2 = .02$. Univariate ANOVAs were performed on these affective cue judgements with a Bonferroni corrected significance level of .006.

For LSH group there were no significant effects for friendly affective cues being perceived as bored, $F(1, 222) = .176$, $p=.675$, $\eta^2 = 0$, nor friendly affective cues being perceived as rejecting, $F(1, 225) = .064$, $p=.800$, $\eta^2 = 0$, nor romantic affective cues being perceived as bored, $F(1, 225) = .134$, $p=.714$, $\eta^2 = 0$, or rejecting, $F(1, 225) = .036$, $p=.850$, $\eta^2 = 0$. Bored affective cues were, however, misperceived as friendly, $F(1, 225) = 17.53$, $p<.001$, $\eta^2 = .08$ more so by those with High LSH ($M = 2.30$) than those with Low & Medium LSH ($M = 2.89$). Bored affective cues were also misperceived as romantic, $F(1, 225) = 10.73$, $p=.001$, $\eta^2 = .05$ more so by those with High LSH ($M = 2.52$) than those with Low & Medium LSH ($M = 2.92$). Finally there were significant effects for Rejecting affective cues, $F(1, 225) = 15.23$, $p<.001$, $\eta^2 = .07$: those with High LSH ($M = 2.32$) misperceived those cues as friendly more so than those with Low & Medium LSH ($M = 2.89$). Rejecting affective cues were also misperceived as romantic, $F(1, 225) = 20.14$,

p<.001, η^2 = .09 more so by those with High LSH (M = 2.43) than those with Low & Medium LSH (M = 2.93).

As there was a significant main effect of Ethnicity, this was examined more closely. For Ethnicity there were no significant effects for Friendly affective misperceived as bored, $F(2, 222)$ = 5.13, p=.007, η^2 = .05, Friendly affective cues misperceived as rejecting, $F(2, 222)$ = 2.95, p=.054, η^2 = .03, Romantic affective cues misperceived as bored, $F(2, 222)$ = 4.23, p=.016, η^2 = .04 and Romantic affective cues misperceived as rejecting, $F(2, 222)$ = 3.40, p=.035, η^2 = .03. There were, however, significant effects for Bored affective cues being misperceived as friendly, $F(2, 222)$ = 11.55, p<.001, η^2 = .10. Post hoc comparisons (Bonferroni) showed those of Asian (M = 2.72, p<.01) and Other/Not Disclosed (M = 2.72, p<.001) ethnicity showed greater perceptual misidentification of bored affective cues as friendly than those of White ethnicity (M = 2.95). There were also significant effects for Bored affective cues misperceived as romantic, $F(2, 222)$ = 8.10, p<.001, η^2 = .07. Post hoc comparisons (Bonferroni) showed those of Asian (M = 2.82, p<.05) and Other/Not Disclosed (M = 2.77, p<.001) ethnicity had greater perceptual misidentification of bored affective cues as romantic than those of White ethnicity (M = 2.99). Additionally, there were significant effects for Rejecting affective misperceived as friendly, $F(2, 222)$ = 10.41, p<.001, η^2 = .09. Post hoc comparisons (Bonferroni) showed those of Asian (M = 2.72, p<.01) and Other/Not Disclosed (M = 2.71, p<.001) ethnicity had greater perceptual misidentification of Rejecting affective cues as friendly than those of White ethnicity (M = 2.97). Finally, there were significant effects for Rejecting affective misperceived as romantic, $F(2, 222)$ = 10.96, p<.001, η^2 = .09. Post hoc comparisons (Bonferroni) showed those of Asian (M = 2.79, p<.01) and Other/Not Disclosed (M = 2.76, p<.001) ethnicity to have greater perceptual misidentification of Rejecting affective cues as friendly than those of White ethnicity (M = 3.00).

In addition, a significant interaction between LSH group and Ethnicity was examined more closely. There were no significant effects for Friendly affective cues misperceived as bored, $F(2, 222) = 3.28$, $p=.040$, $\eta^2 = .03$, or rejecting, $F(2, 222) = .576$, $p=.563$, $\eta^2 = .01$, and Romantic affective cues being misperceived as bored, $F(2, 222) = 1.80$, $p=.168$, $\eta^2 = .02$, or rejecting, $F(2, 222) = 1.08$, $p=.34$, $\eta^2 = .01$. There were however, significant effects for Bored affective cues being misperceived as friendly, $F(2, 222) = 7.46$, $p=.001$, $\eta^2 = .07$. For those of White ethnicity, there were no significant effects for LSH group misperception of bored affective cues as friendly, $F(1, 105) = .303$, $p=.583$, $\eta^2 = 0$. nor where there any significant effects for those of Asian ethnicity on the same measurement, $F(1, 33) = 2.47$, $p=.126$, $\eta^2 = .07$. However, for those of Other/Not Disclosed ethnicity there were significant effects for LSH group of bored affective cues being misperceived as friendly, $F(1, 82) = 24.51$, $p<.001$, $\eta^2 = .23$: those with High LSH ($M = 2.00$) showed greater perceptual misidentification than those with Low & Medium LSH ($M = 2.84$). There were no significant effects for Bored affective cues being misperceived as romantic, $F(2, 222) = 3.43$, $p=.034$, $\eta^2 = .03$. There were significant effects for Rejecting affective cues being misperceived as friendly, $F(2, 222) = 5.82$, $p=.003$, $\eta^2 = .05$. not for those of White ethnicity, $F(1, 105) = .219$, $p=.641$, $\eta^2 = 0$. nor those of Asian ethnicity, $F(1, 33) = 2.76$, $p=.107$, $\eta^2 = .08$ but only for those of Other/Not Disclosed ethnicity, $F(1, 82) = 18.23$, $p<.001$, $\eta^2 = .19$ whereby those with High LSH ($M = 2.04$) were more likely to misperceive Rejecting affective cues as friendly than those of Low & Medium LSH ($M = 2.82$). There were no significant effects for Rejecting affective cues being misperceived as romantic, $F(2, 222) = 5.13$, $p=.007$, $\eta^2 = .05$.

The F ratios and significance for the effect of LSH group and Ethnicity for judgements of Friendly affective cues and Romantic affective cues as bored and rejecting and judgements of Bored and Rejecting affective cues as friendly and romantic are presented in Table 8. Please see Table 9 for the means and standard deviations for judgements of Friendly

and Romantic affective cues as bored and rejecting and judgements of Bored and Rejecting

affective cues as friendly and romantic by LSH group and Ethnicity.

Table 8

Multivariate and Univariate analyses of variance for the effect of LSH group and Ethnicity with Age as a covariate on judgements of Friendly affective cues and Romantic affective cues as bored and rejecting and judgements of Bored and Rejecting affective cues as friendly and romantic

		ANCOVA								
	MANCOVA	Friendly		Romantic			Bored		Rejecting	
		Bored	Rejecting	Bored	Rejecting		Friendly	Romantic	Friendly	Romantic
Variable	*F*	*F*	*F*	*F*	*F*		*F*	*F*	*F*	*F*
Low & Medium-High LSH	9.40***	0.18	0.06	0.13	0.04		17.53***	10.73***	15.23***	20.14***
Ethnicity	3.23***	5.13	2.95	4.23	3.40		11.55***	8.10***	10.41***	10.96***
Low & Medium-High LSH x Ethnicity	3.08***	3.28	0.58	1.80	1.08		7.46***	3.43	5.82**	5.13
Age(Covariate)	0.45	0.23	0.33	1.49	0.75		0.37	0.44	1.36	0.24

Note: F ratios are Wilk's Lambda approximation of *F*s.
Abbreviations: ANCOVA, univariate analysis of variance, MANCOVA, multivariate analysis of variance.
Bonferroni corrected alpha value = 0.006.

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

Table 9

Mean and Standard Deviation for the effect of LSH group and Ethnicity on judgements of Friendly affective cues and Romantic affective cues as bored and rejecting and judgements of Bored and Rejecting affective cues as friendly and romantic

Affective Cue

Group	Friendly				Romantic					Bored				Rejecting			
	Bored		Rejecting		Bored		Rejecting			Friendly		Romantic		Friendly		Romantic	
	M	SD	M	SD	M	SD	M	SD		M	SD	M	SD	M	SD	M	SD
LSH																	
Low & Medium	2.89	.35	2.91	.34	2.91	.34	2.92	.31		2.89_a	.34	2.92_a	.33	2.89_a	.38	2.93_a	.32
High	2.73	.70	2.86	.44	2.80	.55	2.84	.52		2.30_a	.96	2.52_a	.70	2.32_a	.93	2.43_a	.68
Ethnicity																	
White	2.95	.18	2.99	.07	2.97	.16	2.98	.12		$2.95_{a,b}$	.20	$2.99_{a,b}$	.11	$2.97_{a,b}$	.17	$3.00_{a,b}$	.05
Asian	2.85	.38	2.88	.33	2.90	.30	2.91	.29		2.72_a	.58	2.82_a	.41	2.72_a	.58	2.79_a	.41
Other/Not Disclosed	2.78	.56	2.81	.51	2.81	.52	2.83	.48		2.72_b	.62	2.77_b	.56	2.71_b	.66	2.76_b	.57

continued

	Affective Cue															
	Friendly				Romantic					Bored				Rejecting			
	Bored		Rejecting		Bored		Rejecting			Friendly		Romantic		Friendly		Romantic	
Group	M	SD	M	SD	M	SD	M	SD		M	SD	M	SD	M	SD	M	SD
LSH & Ethnicity																	
Low & Medium LSH White	2.95	.19	2.99	.07	2.97	.16	2.98	.12		2.95	.21	2.99	.11	2.97	.18	3.00	.05
Low & Medium LSH Asian	2.83	.41	2.86	.35	2.88	.32	2.90	.31		2.79	.47	2.88	.32	2.79	.47	2.88	.32
Low & Medium LSH Other/ Not Disclosed	2.83	.47	2.82	.50	2.84	.48	2.85	.44		2.84_a	.41	2.84	.48	2.82_a	.51	2.85	.49
High LSH White	3.00	0	3.00	0	3.00	0	3.00	0		3.00	0	3.00	0	3.00	0	3.00	0
High LSH Asian	3.00	0	3.00	0	3.00	0	3.00	0		2.30	.98	2.50	.71	2.30	.98	2.30	.57
High LSH Other/ Not Disclosed	2.50	.90	2.75	.58	2.63	.71	2.71	.69		2.00_a	1.05	2.33	.78	2.04_a	1.01	2.25	.75

Note: For Groups, column mean sections sharing subscripts are significantly different ($p < .05$)

Discussion

The aim of this study was to identify if men high in LSH display the biases of negativeness blindness, overperception of negative affective cues, overperception of friendly affective cues as romantic and suspiciousness schema towards the female in the TRAC and whether these biases are greater or not than men low and medium in LSH. Results showed that those participants who scored high in LSH were more likely to misperceive bored and rejecting affective cue judgements than those who scored medium/low in LSH. This provides support for the hypothesis that men with a higher likelihood to sexually harass will display more inaccurate perception judgements of female negative affective cues showing negativeness blindness in the TRAC than men less likely to sexually harass. This result suggests that men high in LSH may not be as perceptually accurate as those low and medium in LSH for negative behaviours based on the normative sample of female perceptions used to design our measure. Altogether, these perceptual inaccuracies spread across both positive and negative emotional displays, suggesting that type of the behaviour combined with sexual harassment inclination impacts perception of situations for these men.

It was also hypothesized that bored and rejecting affective cues will be erroneously perceived as positive affective cues more by men high in LSH compared to those of men low and medium in LSH, thus supporting an overperception bias. Analysis of the bored and rejecting affective cue judgements revealed that there were significant differences between men high in LSH and those medium/low in LSH, with the former being more likely to erroneously rate the cues as friendly and romantic than the latter, showing support for this hypothesis. Further to this, it was hypothesized that men high in LSH would also be more likely to misperceive friendly affective cues as romantic than men low and medium in LSH, again supporting an overperception bias. Results did show that high LSH men were more likely to misidentify friendly affective cues as romantic than low and medium LSH men

supporting this hypothesis. Importantly, there was no significant difference for an underperception selecting friendly judgements for romantic affective cues between both groups, suggesting that men high in LSH are more likely to misidentify friendly situations as romantic, thus they may be more inclined towards approaching women in those situations.

Finally, it was hypothesized that men high in LSH would not evidence a suspiciousness schema in comparison to men low and medium in LSH. The results showed that in all four comparisons of the Friendly and Romantic affective cues there were no significant differences between men high in LSH and men low and medium in LSH when judging these cues as bored and rejecting showing no support for this hypothesis. There is no support for the suspiciousness schema bias, which would expect positive affective cues to be judged as negative affective cues. That analysis again showed negative behaviours (bored and rejecting) were instead misperceived as friendly and romantic, reaffirming the overperception bias. Therefore, these findings suggest it is possible to discount the suspiciousness schema as a prominent bias in the perception of men high in LSH.

These results altogether provide support for EMT as a theoretical explanation for perceptual differences in men who display a propensity to sexually harass. Men high in LSH evidence biases, which are focused on avoiding missing out on sexual opportunities and instead are focused on approaching women. It appears that men high in LSH are committing errors in judgement that are less costly to them through evidencing biases towards sexually pursuing a woman and not missing out on a sexual opportunity. Overperceiving friendly affective cues as romantic, infers women's sexual intent, which can minimize missed sexual opportunities. This misperception results in women seeming more approachable and available for sex to those men who ascribe to it. If men high in LSH have strong sex goals then this misperception may provide justifying conditions for them to sexually pursue a woman and avoid missing out on a sexual opportunity. Therefore, for men high in LSH, misperceiving

friendly interactions with women as romantic can be seen as a more goal consistent perception and therefore less likely to be doubted or reassessed.

Typically, EMT differentiates men and women as having different benefits and costs dynamics, and as a result evidencing different bias. Current EMT does not clearly acknowledge and explain differences within a gender, which is clearly shown in this study from differences in men by LSH level compared to those medium/low. EMT explains that men evidence overperception biases in comparison to women because of different evolutionary influences towards mate selection (Haselton & Buss, 2000; Perriloux, Easton & Buss., 2012). However, this study suggests that men high in LSH exhibit stronger overperception biases because the costs of missing out on a sexual opportunity may be greater to them than those medium/low in LSH, and EMT may need to be expanded to account for the reasons behind this difference within men.

An overperception favouring a romantic judgement may serve a goal consistent purpose for a man high in LSH; by judging the woman as behaving more romantically (e.g., a sexual interest bias; Kunstman & Maner, 2011; Maner et al., 2005) she is perceived as more sexually available, approachable and potentially promiscuous, and consistent with a man's goal for a sexual relationship. The overperception can also make it more likely that men high in LSH will make sexual advances; if the woman is sexualised by these men, she is then perceived as more encouraging and accepting of sexual advances. It appears that men high in LSH associate romantic cues with an improved chance of a sexual relationship. These outcomes suggest that it is not simply enough for the man high in LSH to perceive a woman as friendly in order to make sexual advances to her, but rather that a romantic perception provides a better, and less risky perceptual environment for that man.

The results from this study did not support the suspiciousness schema. The suspiciousness schema has been argued to guide perception so that hostile behaviours are

seen as seductive and seductive behaviours are seen as hostile (Malamuth & Brown, 1994). If this approach were to be applied to the affective behaviours in this study, it would be expected that negative behaviours would be seen as positive and positive behaviours would be seen as negative. Men high in LSH did not perceive female communication as having the opposite meaning of that intended when it came to positive behaviours. Men high in LSH only misperceived negative behaviours as positive and not the opposite. Perhaps, a suspiciousness schema may be specific to some men high in LSH or specific to men who show a tendency to rape, and not necessarily a generalized belief amongst all men high in LSH, leading to mistrust biases in the processing of social information. The perception of men high in LSH in general does not appear to be based on a mistrust of women as suggested by the suspiciousness schema. Instead, this study shows stronger support for the overperception bias and negativeness blindness in that erroneous positive judgements were made for friendly (seen as romantic), bored (seen as both romantic and friendly) and rejecting (seen as both romantic and friendly) affective cues. Therefore, in all, it is possible to discount the suspiciousness schema in favour of the overperception bias when explaining men high in LSH's perceptions of female affective behaviours.

It is important to recognise that overperception does not exonerate the sexual harassment and the persistent harassment of women when considering men who sexually harass. Men who sexually harass may overperceive sexual interest in a woman that favours approaching them, however, there seems to be a decision made from perception to action, when engaging in repetitive behaviours such as pestering and harassing a woman sexually, despite negative signs from the woman and goal inconsistent outcomes. The overperception bias may only contribute to favouring the option of approaching a woman which is linked to less costly errors in sexual pursuit (Haselton & Buss, 2000) and a stronger overperception of sexual opportunity, whilst being more resistant towards alternative perceptions but it doesn't

fully explain the decision to maintain a goal inconsistent action (such as deciding to persevere with an action that is not resulting in sexual activity or a relationship) and this study did not address sexual harassment behaviours.

The evidence of the overperception bias also shows support for the Sexual Strategies Theory (Buss & Schmitt, 1993) for men high in LSH. The overperception bias may be making these men think that they have an improved probability of having subsequent sexual encounters with many women supporting these men's goals and desires for sexual access to a large number of women. This bias may be giving men high in LSH the impetus to approach and make sexual advances to many women even in situations with minimum time constraints in knowing a prospective mate before seeking sexual intercourse (our participants had no prior exposure to the female in the TRAC). Altogether this study suggests that if men high in LSH evidence a greater propensity to sexually harass, then a greater overperception bias may be a key component in the sexual strategies evidenced by these men.

Overperception biases may overlap with moral disengagement mechanisms, with both these biases and mechanisms serving to interpret social-sexual situations in the aim of removing blame from a man and placing the blame on the woman. In understanding this relationship, it is important to consider how sexual misperception may fit with existing sexual harassment moral disengagement theory (Page & Pina, 2015; Scott & Martin, 2006) in identifying whether overperception biases can contribute to neutralizing and justifying sexual harassment and perhaps in this way facilitate it. It is important to recognise that immoral and sexually aggressive acts (such as sexual harassment) have the potential to backfire on the perpetrator when such behaviours are exposed to a non-receptive audience, and moral disengagement and overperception biases may act in tandem as self-serving cognitions to protect against this potential ramification. Mechanisms of moral disengagement and overperception biases may act as self-serving cognitions to assist in the exoneration of

sexually harassing acts that conflict with the perpetrator's moral beliefs and self-concept of being a generally decent and rule abiding individual. Therefore, understanding the relationship between overperception biases and moral disengagement will further elucidate the function of overperception biases for men high in LSH.

When considering the findings from this study relative to the wider sexual harassment offending literature, the result that negative cues are misinterpreted is particularly interesting, as negative responses from women are bound to be a natural response to continued unwanted sexual advances and persistent sexual pressure from men who sexually harass. This study has shown that there are clear misperceptions of women's negative responses and a reformulation of those responses as positive by men who are high in LSH. What we are not clear on is whether men high in LSH are wilfully ignoring negative affective cues when persisting in their sexual harassment, or whether their goals and inclinations are causing them to experience perceptual deficits. Nevertheless, we also found that the suspiciousness schema was not supported, therefore lending more support to the argument that these men do not have an overall perceptual inability or deficit but instead, only show elective misinterpretation of the negative cues which is more goal consistent and supportive of their desires in an interaction with a woman.

This has serious implications for harassment prevention training but also how we communicate to victims in general. One of the main messages of campaigns on sexual harassment is to clearly communicate (wherever safe) with the perpetrator that their behaviour is unwanted (Hosterman, Johnson, Stouffer & Herring, 2018; Thomas, Sorenson & Joshi, 2016). If the case is that for some men this communication is wilfully ignored then this has serious implications for victim blaming studies and future campaigns. The emphasis should always be placed on the harasser to re-appraise and re-learn how to respond appropriately to women. Interfering with harassers' overperception in the right manner may

deter sexual harassment only if the sexual harasser learns to act appropriately in the presence of negative affective cues.

There were some interesting differences in perceptual accuracy by ethnicity in the analyses completed. For example, Asian participants showed greater perceptual misidentification on bored affective cues than White and Other/Not Disclosed ethnicity participants as well as greater misidentification of rejecting affective cues than White participants. Previous research has shown that higher sexual harassment rates exist in Asian countries such as India (Bhat & Deshpande, 2017) and China (Chan, 2009; Chan et al., 1999), as well as higher negative attitudes towards female victims of sexual harassment (Lee, Pomeroy, Yoo & Rheinboldt, 2005; Ngoc et al., 2015; Stephens et al., 2016) in these countries. Men of Asian ethnicity may share these backgrounds where sexual harassment is more frequent and where negative attitudes towards women may be more common. Some of these nations have societal structures where women may be more restricted and more dependent on men financially and for education, employment and leisure opportunities (Singh, 2016), which may reinforce the belief in men from these nations that women are servient to men and that women's behaviour is to be controlled or manipulated by men. Subsequently these attitudes and beliefs may contribute to making overperception biases more acceptable and prominent for these men. In support of this there is research that has found that less gender equal societies such as Asian countries (Hiraishi, Murasaki, Okuda & Yamate, 2016) evidence high overperception biases towards women. This may explain why participants of Asian ethnicity in this study showed greater misperception on bored affective cues and rejecting affective cues than participants of White ethnicity since Asian men may more likely have backgrounds where it is deemed to be more acceptable for women's behaviour to be controlled and manipulated to men's advantage making overperception biases more prominent.

The Other/Not disclosed ethnicity participant group may include some Asian participants who did not disclose their ethnicity, possibly following the argument where the Other/Not disclosed group includes participants from Asian countries where their background may be more conducive to misperception of female behaviours. This may reflect why participants with Other/Not disclosed ethnicity showed more misperception on bored affective cues than participants of White ethnicity. This may also explain the interaction effect for those of Other/Not disclosed ethnicity where those of high LSH showed more misperception on rejecting affective cues than those low & medium on LSH. Research has shown that those from Asian countries may show higher LSH than other countries (Luthar & Luthar, 2008), which could feed into the Other/Not Disclosed ethnicity whereby there could be a mix of participants from Asian backgrounds who show high LSH and those from different backgrounds that may be more conducive to less misperception of women's behaviour as well as lower LSH.

Limitations

Our findings on ethnicity may suggest that the TRAC may not be as adept towards allowing men from different ethnicities to make accurate perceptual judgements. It is possible that rejecting affective cues are expressed in different ways culturally and that the form of rejection presented to Asian men in this study may have been ambiguous or unfamiliar. Perhaps rejection is expressed more subtly and in a different way to the setting it was presented in for some cultures, or maybe it is rarely expressed publicly in some cultures. These identified differences in ethnicity and perceptual accuracy highlight the importance of calibrating the TRAC towards participants so that it is culturally relevant to them. If participants are culturally unfamiliar with the affective cues then they can become ambiguous and difficult to decipher for the participant and the participant may have to rely on the limited

awareness they have of other cultures making their judgements open to bias and guess work. Making the TRAC more culturally relevant for different ethnicities by including the same ethnicity of actors in the TRAC as the participants, the acting taking place in settings that are culturally familiar and using the same ethnicity and cultural background of participants in future studies using the TRAC should better control for these differences in perception that can be attributed to cultural differences through ethnicity.

It was decided to widen the participant pool and opt for an international sampling for this study but in hindsight, considering the limitations of the TRAC as identified above, it would have been more prudent if the sample was restricted to one nationality or a UK sample as this would better control for variation in different participant cultural differences in experiences and learning. These cultural differences could influence understanding and subsequent responses to the research study. Not restricting the study to one or two nationalities introduces more cultural extraneous variables to the findings. Testing the TRAC with a large number of UK participants initially could have established the utility of the TRAC and then made our decision to extend the research pool to an international sample more valid. This approach was not followed and instead all empirical studies were run at once because of time restrictions relevant to the researcher's working status, and it has inadvertently affected the utility and strength of the TRAC as a measurement used throughout this PhD.

In summary the main findings from this study indicate that men high in LSH showed worse perceptual accuracy than low and medium LSH men on bored and rejecting affective cues showing support for negativeness blindness biases for these men. An overperception bias of these negative affective cues was evidenced by men high in LSH judging them more as romantic and friendly affective cues than men low and medium in LSH. A greater overperception bias of friendly affective cues as romantic was evidenced by men high in LSH

in comparison to men low and medium in LSH. The results from this study showed that men high in LSH did not evidence the suspiciousness schema greater than men low and medium in LSH. Altogether, our findings show men high in LSH evidence biases for negativeness blindness and overperception, but not the suspiciousness schema providing support for EMT in that this sexual bias strategy suggests that men are committing errors in judgement that are less costly to them through evidencing biases towards sexually pursuing a woman and not missing out on a sexual opportunity. In applying the negativeness blindness and overperception findings to male sexual harassers it seems likely that male sexual harassers are not accurately identifying negative affective cues, but that they may overperceive these cues from women, not acting appropriately to the cues by continuing to harass women for sex. The next parts of this thesis will examine psychological concepts that impact on these biases held for overperception for men high in LSH. In particular, the concept of power is of particular interest, and how it could impact high LSH men's perceptual misinterpretation in a way that exacerbates outcomes or draws out other biases they may possess, and gaining insight into these psychological concepts may further understanding of sexual harassment.

CHAPTER FOUR

The Impact of Concepts of Power on the Heterosocial Perception of Men High in the Likelihood to Sexually Harass

The concept of power is a popular area of study amongst psychologists and other academics (Goodstadt & Hjelle, 1973; Kipnis, 1976; Fodor & Smith, 1982; Foucalt, 1982; Fiske, 1993; Foucalt, 1997; Gjerde, 2004; Fiske & Berdahl, 2007; Foucalt, 1977), as its effects are a central experience of most people's day to day living. Power is not straightforward to define, but recently has been grouped into three categories (Fiske & Berdahl, 2007). The first category defines *power as influence* where one person causes or influences another to behave in a certain way; the former has power over the latter. Power is the possibility to influence the behaviour of others in accordance with the actor's own purposes (Hoogerwerf, 1972). It is also considered as the ability to influence others to believe, behave or to value as those in power desire them to, or to strengthen, validate, or confirm present beliefs, behaviours or values (Mokken & Stokman, 1974). Secondly power has been defined as *potential influence*; "the probability that one actor within a social relationship will be in a position to carry out his own will despite resistance" (Weber, 1978, p.32). The third category defines *power as outcome control*; the power to control or influence the other resides in control over the things he or she values (Emerson, 1962). Power, by and large, throughout these definitions represents the ability of one person or group to affect another person or group, whether this effect is directly observable and conscious or unobservable and subconscious.

Power is traditionally investigated in research areas such as leadership (Hollander & Offermann, 1990; Magee, Gruenfeld, Keltner, & Galinsky, 2005), group dynamics (Fodor &

Smith, 1982; Sachdev & Bourhis, 1991) and attitudinal judgements (Weick & Guinote, 2008) where power is often referred to as social power; the capacity to influence other individuals through asymmetric control over valuable resources with the ability to administer rewards and punishments (Emerson, 1962; French & Raven, 1959; Keltner, Gruenfeld, & Anderson, 2003). This type of power has a social context and obviously has particular relevance to the study of people's social interactions, including the study of maladaptive behaviours. These maladaptive behaviours may include those of men inclined to sexually offend (Pryor, 1987; Pryor et al., 1993; Pryor & Stoller, 1994; Bargh et al., 1995), those men's perceived opportunities to offend (Pryor & Stoller, 1994; Pryor et al., 1995; Bargh & Raymond, 1995; Bargh et al. 1995), their behaviours towards their victims (Bargh et al. 1995) and their perceptions of these victims (Malamuth, 1981; Hockett, Saucier, Saucier, Hoffman, & Smith, 2009; Chiroro, Bohner, Viki, & Jarvis, 2004). The psychological relationship between power and offending in men who sexually harass is a key area of research in explaining sexual offending behaviours (Pryor et al., 1993; Pryor & Stoller, 1994; Bargh et al., 1995; Pryor et al., 1995), along with studies of the psychological impact of power on rapists (Groth, 1979; McCabe & Wauchope, 2005; Pardue & Arrigo, 2008) and child molesters (Groth & Burgess, 1977; Kamphuis, De Ruiter, Janssen, & Spiering, 2005).

Previous research has shown that the concept of power is intertwined with the offending behaviour of men likely to sexually harass (Pryor et al., 1993; Pryor & Stoller, 1994; Bargh et al. 1995). Mental concepts of sex and power have been found to be associated in men who are high in LSH (Pryor, 1987; Pryor et al., 1993; Pryor & Stoller, 1994; Bargh et al., 1995), with supportive evidence for the existence of a sex schema that connects concepts of power and sex in these men. Pryor and Stoller, (1994), for instance, asked men high and low in LSH to view and memorize word pairings of neutral, sexual and power-related words. Men high in LSH remembered more sex-power pairings than had actually been presented

compared to men low in LSH. Pryor and Stoller argue that this finding showed evidence that men high in LSH perceived a frequent but otherwise illusory correlation between sex and power related words. They argue that there is support for the theory for the existence of a sex schema in memory that associates power and sex in men with a high LSH. Power and sex are likely to be embedded in a long term memory structure in men high in LSH, which in turn, is likely to impact these men's subsequent behaviour towards women. The power and sex schematic relationship may have a strong and resistant nature which will negatively affect perceptions of women.

Other research supports the hypothesis that power and sex are associated in men likely to sexually harass with the combined effect on perception (Bargh & Raymond, 1995; Bargh et al., 1995). Bargh et al., (1995), for example, showed that although men low on LSH showed no difference in their sexual attraction towards a female confederate, men high on LSH who had been primed by power words on a computer screen reported both that they found a female confederate more attractive, and if given the opportunity, they would like to become more familiar with her. Importantly, men high on LSH did not show awareness for the underlying reason for their attractiveness to the female confederate, instead stating that the female's attractiveness was the underlying cause or that the female confederate was more their 'type'. Power had the effect of subconsciously altering perception so that the female was deemed as more attractive and was given greater value to socialise with. Furthermore, when asked to demonstrate a golfing technique to the female confederate in the study, men high in LSH were found to show more body closeness to the female confederate and used more sexual overtures in the language used to explain the technique. Power seemed to have the subconscious effect of making the interaction and conversation with a woman more sexualised. This research shows that power has a significant impact on the advances, preferences and social behaviours towards women, making them more sexualised. Power has

the capacity to alter the behaviour of men who are high in the likelihood to sexually harass, with particular negative outcomes towards women.

For men high in LSH, the concepts of power and sex are likely to be so closely intertwined such that activating one concept activates the other. This association may result in situations such that when individuals experience power, the activation of power concepts may inadvertently activate concepts associated with sex. This can be particularly dangerous for men who have problematic tendencies, such as men high in LSH where concepts related to sex and power are already chronically active and these men are likely to be highly sexually charged and motivated by sex. Power may also enhance sexual motivation through the association of mating goals and the approach system (Depue, 1995). Finding a sexual partner typically requires a degree of skill in behavioural approach (e.g., initiation of romantic courtship, flirtation), and power may make individuals believe that such an interaction may be more permissive than it actually is (Anderson & Berdahl, 2002; Keltner et al., 2003). This is in addition to the widely held beliefs that dominant individuals have enjoyed relatively high sexual access to potential mates throughout history (e.g., Sadalla, Kenrick & Vershure, 1987), furthermore encouraging the false belief that the individual is more likely to be successful in their sexual advances. Having more confidence in approaching women may subsequently influence these men's interactions with the women they approach (Lammers, Stoker, Jordan, Pollmann, & Stapel, 2011), making them potentially less likely to feel embarrassment and shame from their advances, since their power status may make them feel self-entitled to make them. Power may erroneously enable a man high in LSH to perceive and judge women in a way that is consistent with their sexual/relationship goals.

Research has shown that power can lead to biases in social perception in non-offending populations, such that perceivers view others in ways that help the perceivers satisfy their beliefs or goals (Maner et al., 2005). For example, power has been shown to

increase ingroup favouritism when analysing work performance ratings, suggesting that power has the capacity to heighten support for existing in-group behaviour and objectives (Keltner & Robinson, 1997; Smith, DiTomaso, Farris & Cordero, 2001). This bias against the other or outgroup has also been shown with power increasing reliability on existing stereotypes (Goodwin, Gubin, Fiske, & Yzerbyt, 2000) and even exacerbating racial prejudices (Guinote, Willis & Matellotta., 2010; Richeson & Ambady, 2003). High power has also been linked to poorer accuracy when judging time (Weick & Guinote, 2010), less accuracy when judging the views of others (Ebenbach & Keltner, 1998), less vigilance when completing perceptual discrimination tasks (Weick, Guinote & Wilkinson, 2011), and in greater risk taking (Anderson & Galinsky, 2006), with participants primed with power more optimistic in their perception of risk, acting more in a risk seeking fashion and taking more risks by divulging their interests. High power seems to change men's approaches to tasks, making them less focused on accuracy, more overconfident, and ultimately more reckless in their judgements. In addition to powers effect on intrinsic self-biases suggesting that power may enhance pre-existing psychological beliefs and motivations that are characteristic of the individual, power has been shown to lead to poorer performance on tasks. This combination may be detrimental to perceptual accuracy tasks that require minimal bias and concentration for greater accuracy.

Biases in social perception have been found to extend to sexual motivations in non-offending populations. As well as evidencing that power activates sexual concepts across a temporal delay, Kunstman and Maner, (2011) found that power increased male participant's expectations of sexual interest from a female subordinate in a video interaction and in a face to face interaction. Altogether, these findings evidence that power motivates heightened perceptions and expectations of sexual interest in others, within men that are not highly sexually motivated prior to the influence of power. Power also effects judgements such that

inaccurate and poorer decisions are made when power activates sex goals. Gruenfeld et al., (2008) found that when sexual goals were primed, men in power compared to subordinate men were more likely to prefer an attractive but otherwise unqualified female subordinate, overlooking the female's qualifications and focusing instead on how she could be instrumental to achieving their sexual goals. Biases in social perception influenced by power suggest that these same biases may be more likely to be exaggerated in men who are more sexually driven as greater sexual cognition and motivation already exists within these men as a baseline measure in comparison to non-offending populations who are less sexually charged psychologically from the outset.

Power may also affect how perceivers empathise with those that they perceive. Galinsky, Magee and Inesi (2006) found that high power participants were less likely than low power participants to take into account that other people did not possess their privileged knowledge on a comparison task, a result suggesting that power leads individuals to anchor too heavily on their own vantage point, insufficiently adjusting to others' perspectives. In another experiment they found that, high power participants were less accurate than control participants in determining other people's emotion expressions. They argue that these results suggest a power-induced impediment to experiencing empathy. Power may alter empathy, such that the perceiver's motivational goals override any empathy towards the perceived, altering the perceiver's judgements in favour of the perceiver.

Men high in LSH have already been found to evidence difficulty in perspective taking and expressing empathy when not under conditions of high power (Driscoll et al., 1998). For example, High LSH males compared to low LSH males hold more adversarial sexual beliefs, accept more rape myths and interpersonal violence, have a higher likelihood of committing rape, are higher in authoritarianism, and can be somewhat lower in social desirability (Pryor, 1987; Pryor et al., 1995). Further to these negative attitudes the LSH scale is also positively

correlated with self-reports of various types of sexually harassing behaviours, such as gender harassment, unwanted sexual attention and sexual coercion (Barak & Kaplan, 1996). Even when making judgements on what are deemed non- sexual or non-aggressive judgements, high LSH men show less empathy towards women. High LSH men report more traditional attitudes toward women's roles, an endorsement of masculine personality traits, and lower competency ratings for a female interviewer (e.g., the higher the LSH level the more the competency of the female interviewer was disparaged; Driscoll et al., 1998). There is also evidence that self-reports of masculine gendered personality were not significantly correlated with levels of LSH, showing high LSH scores were associated with a more negative attitude toward other people in general, rather than only being negative toward women (Driscoll et al., 1998). It is not known why men high in LSH show less empathy towards women or other people in general, perhaps it stems from more of a personality structure making it more difficult to adjust to other's perspectives or even these men's sexual perception overrides any balance and deliberation they possess when making judgements on women. It could even be that they sexualise women in most interactions and that it is difficult to rule out any power influence since the psychological connection between sex and power is so strong in these men (Bargh et al., 1995), reducing their empathy towards women. Experiencing high power is only likely to exacerbate the already existing difficulty in taking into consideration another's perspective, resulting in inhibition of any existing empathy that may influence perceptual judgements.

The link between power and sexual cognition may be rooted in power's ability to induce goal pursuit (Galinsky, Gruenfeld & Magee, 2003; Smith & Bargh, 2008). Power has been linked with cognitive precursors to goal pursuit, such as attention to rewards (Depue, 1995), and Anderson & and Berdahl (2002) found that power was associated with heightened perceptions of social rewards in face to face interactions. Attending to goal relevant cues is an

important first step in goal pursuit because it prompts action (e.g., Depue, 1995; Posner & Peterson, 1990). On the basis of theories of motivated social perception (e.g., Maner et al., 2005), power elicits motivated biases in sexual perception, leading power holders to think (often incorrectly) that others are sexually interested in them. Through its capacity to induce goal pursuit, power can activate sex goals that lead men to sexualise interactions with women. Psychologically power can release inhibitions to sexualise interactions with women, which is likely to have a direct impact on perception, such that power facilitates men with chronic sex goals to sexualise their perception and interactions with women. Power not only promotes the false belief and comfort that an individual is more protected from criticism and negative feedback, but it removes any caution or hesitation affecting the perceptions and behaviours towards the pursuit of sex.

Given that the overperception bias was prevalent in men who are high in LSH performance in chapter 3, high power may exacerbate the overperception bias, such that affective judgements are judged greater in the direction of positive behaviours than if the behaviours were judged alone without priming high power. Previous research has shown that power is related to overperception with Kunstman and Maner (2011) finding that sexual overperception mediated the effect of power on sexually tinged behaviour with non-offending populations displaying more flirtatious behaviour. Experiencing higher power may increase men's perceptions of sexual interest above and beyond any actual interest displayed by a partner, when controlling for any actual sexual interest. Kunstman and Maner (2011) demonstrated in dyadic interactions where the male participant and female confederate rated sexual interest in each other, that power holders did not simply (accurately) perceive greater sexual interest from their partners; rather, they displayed a bias wherein they over perceived their partner's level of sexual interest. Power increased perceptions of sexual interest, even though subordinates were no more attracted to power holders than individuals were to their

partners in the control condition without power differentials. These findings demonstrate that power augments overperception biases evidenced against women, further motivating sexual interest. The overperception bias within men high in LSH's psychology is expected to be heightened by high power because these men already possess chronic sex goals, and this should interfere with their accuracy on heterosocial perception judgements. Goal primes often have the strongest effects in people for whom the goal is chronically active (Chen, Lee-Chai & Bargh, 2001; Keltner et al., 2003; Maner, Gailliot & Miller, 2009). As power has a strong impact on sexual thinking in men in general, priming high power should lead to displaying heightened sexual thinking in all men, further extending any pre-existing overperception biases they evidence. Power is expected to be particularly impactful for men high in LSH, who already have high sex goals and already possess high sexual thinking without being primed with power. The combination of high sex goals and power is expected to extend high LSH men's negativeness blindness (for bored and rejecting affective cues) and overperception biases (for romantic judgements of friendly affective cues).

Present Study

Aim

This study aims to test the impact that power has on negativeness blindness and the overperception bias of friendly affective cues.

Hypotheses

Hypothesis 1: It is hypothesized that perceptual accuracy for bored affective cues will be worse under conditions of high power than low power for high LSH men.

Rationale: Given the established detrimental effect of high power on men high in LSH and those men with high sex goals, high power is expected to increase and heighten sexual

thinking, resulting in these men over-inferring women's sexual intent. This should lead to greater errors in perception judgements, which should increase misjudgements of the bored negative affective cue. The impact of high power in line with EMT should increase misjudgements of bored affective cues so as to avoid missing out on a sexual opportunity, which would be more costly to men high in LSH since they have a strong goal for sex.

Hypothesis 2: It is hypothesized that perceptual accuracy for rejecting affective cues will be worse under conditions of high power than low power for high LSH men.

Rationale: Again, given the established detrimental effect of high power on men high in LSH and those men with high sex goals, high power is expected to increase and heighten sexual thinking resulting in these men over-inferring women's sexual intent. This should lead to greater errors in perception judgements, which should increase misjudgements of the rejecting negative affective cue. The impact of high power in line with EMT should increase misjudgements of rejecting affective cues so as to avoid missing out on a sexual opportunity, which would be more costly to men high in LSH since they have a strong goal for sex.

Hypothesis 3: It is hypothesized that perceptual inaccuracy for judging friendly affective cues as romantic will be greater under conditions of high power than low power for high LSH men.

Rationale: Similarly to this, given the established detrimental effect of high power on both men high in LSH and those men with high sex goals, high power is expected to increase and heighten sexual thinking resulting in these men over-inferring women's sexual intent. This should lead to greater errors in perception judgements, which should increase misjudgements of friendly affective cues as romantic. The impact of high power in overperceiving a positive affective should occur in line with EMT through increasing the frequency of falsely inferring a woman's sexual intent towards these men's sexual pursuit. This should serve to maximise

the opportunity of these men obtaining sex, whilst also reducing the chances of them missing out on sex.

Method

Participants

Two-hundred and fifty-eight male international participants were recruited online through the Prolific Academic crowdsourcing platform. Participants' ages ranged from 18 to 65 years old ($M = 28$, $SD = 8.2$). The sample reported their ethnic origin as White/Caucasian (49.2%, $n = 127$), Asian (15.5%, $n = 40$), Black (1.6%, $n = 4$), Mixed (2.7%, $n = 7$), Other (17%, $n = 44$) and did not disclose (14%, $n = 36$). Participants reported being American (7.9%, $n = 20$), British (10.9%, $n = 28$), Bulgarian (3.9%, $n = 10$), Indian (6.7%, $n = 17$), Italian (6.2%, $n = 16$), Polish (4.3%, $n = 11$), Portuguese (7.4%, $n = 19$), Spanish (2.8%, $n = 7$) Vietnamese (23.8%, $n = 61$) and Other (26.7%, $n = 69$). All participants were paid £2.50 in compensation.

Design

A three factor design was used; LSH score (Low and Medium vs High) x Power (Low or High) x Ethnicity (White, Asian, Other/Not disclosed) with the performance on the TRAC for bored and rejecting affective cues (negativeness blindness) and the romantic judgements of friendly affective cues (overperception bias) as the 3 dependent variables. Ethnicity was included as a factor as international participants were used in the sample with a range of ethnicities. Including ethnicity as a factor can control to some extent for the impact of cultural differences on the TRAC. Participants were randomly assigned to one of two Power conditions (Low or High) and were then divided into groups by whether they scored High versus Low and Medium on LSH. The decided cut off was 60% and over to mark High LSH

participants since anything over 50% can be considered high especially as low and medium LSH are taken together as one comparison group (Bargh et al., 1995)[15]. All participants completed the power priming tool before completing the TRAC (Test of Reading Affective Cues), so that the priming effect of power impacted on their TRAC judgements.

Measures

Power Tool

The difference in method chosen to prime power in this study reflects the theoretical difference between conceptual and mind-set priming (Bargh & Chartrand, 2014). Conceptual priming involves the activation of specific mental representations, from traits to stereotypes to goals, which then serve as interpretative frames in the processing of subsequent information (Higgins, 1996). By exposing participants to words related to the possession of power they show that specific, individualized goals that are associated with power also are activated and then used as guides in perception and behaviour. This approach has previously been used in research studying LSH and power (Pryor & Stoller, 1994; Bargh et al., 1995) using subliminally primed words to activate concepts of power, which creates a nonconscious carryover of unintentionally activated psychological power associations. On the other hand, mind set priming activates procedural knowledge and what is primed is a way of thinking. Mind set priming tools such as the power tool devised by Galinsky et al., (2003) involve having participants intentionally use a mental procedure in question rather than simply exposing participants to words related to a particular construct. Mind sets involve the nonconscious carryover of an intentionally pursued mental procedure.

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[15] Originally the cut off was 80 percent to mark High LSH participants, but this produced low group numbers in High LSH participants (High LSH Low Power, $N = 4$ & High LSH High Power, $N = 9$). Sixty percent represents a cut off that provides greater group numbers and still fairly marks participants who are reporting high in LSH.

Consideration was given to both conceptual and mind set priming and the Galinsky et al. (2003) power tool was used in this study because of a number of factors. Firstly, prior research shows that conscious priming tasks, where the individual is aware of the priming material, produces stronger priming effects than does subliminal priming (Anderson & Galinsky, 2006, Bargh & Chartrand, 2014). The stronger the activation of a concept, the greater its accessibility and likelihood of subsequent use (Higgins & King, 1981), suggesting that mind set priming may enable stronger activations if it produces stronger priming effects. Secondly, the Galinsky et al., (2003) power tool is a mind-set priming technique that requests the participants intentionally to recall a detailed personal account of a power situation with subsequent carryover effects and when using this tool with participants, Galinsky et al., (2003) identified statistically in their studies that the difference in participant decision making and the amount of action taken in a social perception task was how much power the person expressed possessing in the power essays and not how many high or low power related words they used. This suggests that the procedural influence of power was greater than the conceptual relevance of power words. Thirdly, the Galinsky et al., (2003) power tool has been used successfully in identifying male perceptual differences in studies considering the psychological link between power and sex in men (Gruenfeld at al., 2008, Williams, Gruenfeld & Guillory, 2017), further suggesting that this approach is a worthwhile application to measuring the impact of power on sexual motivations. Altogether these factors provide support that the Galinsky et al., (2003) power tool would be a good choice to prime power as it is likely to produce a strong activation and use of power within male participant's psychology with a resultant impact on their subsequent responses to tasks.

Participants were randomly assigned to either a high power or a low power condition. Power was manipulated following an experiential prime procedure devised by Galinsky et al., (2003). Participants in the high power condition read the following instructions:

"Please recall a particular incident in which you had power over another individual or individuals. By power, we mean a situation in which you controlled the ability of another person or persons to get something they wanted, or were in a position to evaluate those individuals. Please describe the situation in which you had power – what happened, how you felt, etc".

Those participants in the low power condition read the following instructions:

"Please recall a particular incident in which someone else had power over you. By power, we mean a situation in which someone had control over your ability to get something you wanted, or was in a position to evaluate you. Please describe this situation in which you did not have power – what happened, how you felt, etc".

Participants completed responses to the instructions by describing the situation on a blank page for an indefinite amount of time.

Test of Reading Affective Cues (TRAC)

This scale has been developed to measure heterosocial perception in study 1. It incorporates 10 video clips that are 30 seconds to one minute long whereby the same female and male are interacting with each other in a university class room. The female evidences in her communications with the male, five affective cues, which are friendly, romantic, neutral, bored and rejecting behaviours. One of these five affective cues are evidenced by the female towards the male in each video clip. The participants were asked to rank the first (most accurate) and second (next accurate) affective behaviour that they think the female is evidencing in the video clip. Mean scores were created by averaging video clips that evidenced the same affective cue according to the normative sample in chapter 2.

Likelihood to Sexually Harass Scale (Pryor, 1987)

This is a scale to measure how likely an individual is to sexually harass. It incorporates 10 vignette scenarios describing a different female in a particular situation in each vignette. There are three questions asked after each vignette from 1 (Not at all Likely) to 5 (Very Likely). Importantly the second question (question B) asks the quid pro quo question; of how likely the individual is to help a woman described in the vignette in exchange for sexual favours. A cumulative score of LSH can be completed by averaging the score on question B across all 10 vignettes. This measure is provided in Appendix I.

Procedure

Participants completed an online questionnaire. The study was first approved by the School of Psychology Ethics Committee at the University of Kent. Participants were informed that the purpose of the study was to examine "social perception" in order to minimise response bias. After providing written informed consent, participants were asked to provide certain personal and demographic information. They proceeded to complete the Power tool followed by the TRAC and then the LSH scale. Participants were fully debriefed in writing upon completion of the study.

<div align="center">

Results

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To test for significant differences between groups, 2 (Low & Medium vs High LSH) x 2 (Low/High Power) x 3 (White, Asian and Other/Not Disclosed) with age as a covariate

between subjects ANOVA tests were conducted for each negative affective cue[16] (bored and rejecting affective cues) and an overperception bias (romantic judgements of friendly affective cues).

Testing Negativeness Blindness: Bored Affective Cues

A 2 (Low & Medium LSH, High LSH) x 2 (Low Power, High Power) x 3 (White, Asian and Other/Not Disclosed) between subjects ANCOVA with age as a covariate was conducted to test for main effects and interaction effects between LSH group, Power condition and Ethnicity for the bored affective cues. There was no main effect of LSH level, $F(1, 257) = 0.80$, $p = .373$, $\eta^2 = 0$. There was a main effect of Power condition, $F(1, 257) = 5.23$, $p = .023$, $\eta^2 = .02$, which showed that those in the high power condition ($M = 1.49$, $SD = .63$) showed greater perceptual misidentification on bored affective cues than those in the low power condition ($M = 1.20$, $SD = .37$). There was a main effect of Ethnicity, $F(2, 257) = 3.73$, $p = .025$, $\eta^2 = .03$. Post hoc comparisons (Bonferroni) revealed Other/Not Disclosed ethnicity ($M = 1.48$) showed greater perceptual misidentification on the bored affective cues than White ethnicity ($M = 1.17$, $p<.05$). There was no significant two-way interaction for LSH group by Power condition, $F(1, 257) = .197$, $p = .658$, $\eta^2 = 0$. There was a marginally significant two-way interaction for LSH group by Ethnicity, $F(2, 257) = 2.35$, $p = .097$, $\eta^2 = .02$. In examining this there was no significant difference for LSH group for White Ethnicity, $F(1, 126) = 1.02$, $p = .314$, $\eta^2 = .01$ and Asian ethnicity, $F(1, 39) = .096$, $p = .758$, $\eta^2 = 0$. The only significant difference found was for LSH group for Other/Not Disclosed ethnicity, $F(1, 90) = 4.61$, $p = .035$, $\eta^2 = .05$ whereby those with High LSH ($M = 1.83$, $SD = .79$) showed greater perceptual misidentification than those with Low & Medium LSH ($M = 1.32$, $SD = $

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[16] Statistical analyses were not reported for the friendly, romantic and neutral affective cues as they did not form part of the hypotheses for this study.

.51). There was a marginally significant two-way interaction for Power condition by Ethnicity, $F(2, 257) = 2.98$, $p = .053$, $\eta^2 = .02$. In examining this, there was no significant difference for Power condition for White Ethnicity, $F(1, 126) = 2.03$, $p = .157$, $\eta^2 = .02$. There was marginal significance for Asian ethnicity, $F(1, 39) = 3.67$, $p = .063$, $\eta^2 = .09$, which showed that those in the high power condition ($M = 1.71$, $SD = .67$) showed more misperception than those in the low power condition ($M = 1.21$, $SD = .39$). There was no significant difference for Power condition for Other/Not Disclosed ethnicity, $F(1, 90) = 2.56$, $p = .113$, $\eta^2 = .03$. There was no significant three-way interaction for LSH group, Power condition and Ethnicity, $F(2, 257) = 1.05$, $p = .351$, $\eta^2 = .01$. The covariate of age was marginally significant, $F(1, 257) = 3.25$, $p = .073$, $\eta^2 = .01$ Age was negatively correlated with misperception of bored affective cues ($r = -.013$). As Age increased misperception of bored affective cues decreased.

Testing Negativeness Blindness: Rejecting Affective Cues

A 2 (Low & Medium LSH, High LSH) x 2 (Low Power, High Power) x 3 (White, Asian and Other/Not Disclosed) between subjects ANCOVA with age as a covariate was conducted to test for main effects and interaction effects between LSH group, Power condition and Ethnicity for the rejecting affective cues. There was no main effect of LSH level, $F(1, 257) = 3.14$, $p = .078$, $\eta^2 = .01$. There was a main effect of Power, $F(1, 257) = 4.48$, $p = .035$, $\eta^2 = .02$, whereby those in the high power condition ($M = 1.56$, $SD=.69$) showed greater perceptual misidentification on rejecting affective cues than those in the low power condition ($M = 1.18$, $SD=.49$). There was a main effect of Ethnicity, $F(2, 257) = 23.96$, $p < .001$, $\eta^2 = .16$. Post hoc comparisons (Bonferroni) revealed Asian ($M = 1.75$, $SD =.70$, $p<.01$) and Other/Not Disclosed ($M = 1.64$, $SD =.77$, $p<.001$) ethnicity showed greater perceptual misidentification on the rejecting affective cues than White ethnicity ($M = 1.07$,

$SD = .20$). There was no significant two-way interaction for LSH group by Power condition, $F(1, 257) = .034$, $p = .853$, $\eta^2 = 0$. There was a significant two-way interaction for LSH group by Ethnicity, $F(2, 257) = 8.61$, $p < .001$, $\eta^2 = .07$. There was no significant difference for LSH group for White Ethnicity, $F(1, 126) = .783$, $p = .378$, $\eta^2 = .01$ and Asian ethnicity, $F(1, 39) = .011$, $p = .916$, $\eta^2 = 0$. The only significant difference found was for LSH group for Other/Not Disclosed ethnicity, $F(1, 90) = 14.77$, $p < .001$, $\eta^2 = .15$ whereby those with High LSH ($M = 2.09$, $SD = .86$) showed greater perceptual misidentification than those with Low & Medium LSH ($M = 1.44$, $SD = .62$). There was also a significant two-way interaction for Power condition by Ethnicity, $F(2, 257) = 3.61$, $p = .028$, $\eta^2 = .03$. However, there was no significant difference for Power condition for White Ethnicity, $F(1, 126) = .005$, $p = .946$, $\eta^2 = .0$. There was a marginal significant difference for Asian ethnicity, $F(1, 39) = 4.03$, $p = .053$, $\eta^2 = .10$, which showed that those in the high power condition ($M = 1.85$, $SD = .70$) showed more misperception than those in the low power condition ($M = 1.29$, $SD = .49$). There was no significant difference for Other/Not Disclosed ethnicity, $F(1, 90) = .01$, $p = .92$, $\eta^2 = 0$. There was no significant three-way interaction for LSH group, Power condition and Ethnicity, $F(2, 257) = 1.46$, $p = .234$, $\eta^2 = .01$. The covariate of age was not significant, $F(1, 257) = .026$, $p = .873$, $\eta^2 = 0$.

Testing Overperception Bias: Friendly Affective Cues misperceived as Romantic

A 2 (Low & Medium LSH, High LSH) x 2 (Low Power, High Power) x 3 (White, Asian, Other/Not Disclosed) between subjects ANCOVA with age as a covariate was conducted to test for main effects and interaction effects between LSH group, Power condition and Ethnicity for the overperception bias of friendly affective cues misperceived as romantic. There was no main effect of LSH level, $F(1, 257) = 2.70$, $p = .102$, $\eta^2 = .01$, no main effect of Power condition, $F(1, 257) = .31$, $p = .579$, $\eta^2 = .00$, no main effect of

Ethnicity, $F(2, 257) = .461$, $p = .631$, $\eta^2 = .00$. There were consequently also no interactions observed between our variables: LSH group by Power condition, $F(1, 257) = .447$, $p = .504$, $\eta^2 = .00$, LSH group by Ethnicity, $F(2, 257) = .954$, $p = .387$, $\eta^2 = .01$, Power condition by Ethnicity, $F(2, 257) = .839$, $p = .434$, $\eta^2 = .01$, LSH group, Power condition and Ethnicity, $F(2, 257) = .495$, $p = .61$, $\eta^2 = .00$. The covariate of age was not significant, $F(1, 257) = 1.46$, $p = .228$, $\eta^2 = .01$.

Univariate analyses of variance for the effect of LSH group, Power condition and Ethnicity on bored affective cues, rejecting affective cues and romantic judgements of friendly affective cues are presented in Table 10. The means and standard deviations for the LSH group, Power condition and Ethnicity by bored affective cues, rejecting affective cues and romantic judgements of friendly affective cues are presented in Table 11.

Table 10

Univariate analyses of variance for the effect of LSH group, Power condition and Ethnicity with Age as a covariate on bored affective cues, rejecting affective cues and romantic judgements of friendly affective cues

	ANCOVA		
	Bored Affective Cues	Rejecting Affective Cues	Romantic judgements of Friendly Affective Cues
Variable	F	F	F
Low & Medium-High LSH	0.80	3.14	2.70
Power Condition	5.23*	4.48*	0.31
Ethnicity	3.73*	23.96***	0.46
Low & Medium-High LSH x Power Condition	0.20	0.03	0.45
Low & Medium-High LSH x Ethnicity	2.35	8.61***	0.95
Power Condition x Ethnicity	2.98	3.61*	0.84
Low & Medium-High LSH x Power Condition x Ethnicity	1.05	1.46	0.50
Age (Covariate)	3.25	0.03	1.46

Abbreviation: ANCOVA, univariate analysis of variance.
*p<.05, **p<.01, ***p<.001.

Table 11

Mean and Standard Deviation for the effect of LSH group, Power condition and Ethnicity on bored affective cues, rejecting affective cues and romantic judgements of friendly affective cues

	Affective Cue					
	Bored Affective Cues		Rejecting Affective Cues		Romantic judgements of Friendly Affective	
Group	M	SD	M	SD	M	SD
LSH Group						
Low & Medium	1.28	.47	1.29	.52	2.68	.41
High	1.62	.72	1.73	.86	2.46	.55
Power Condition						
Low Power	1.20_a	.37	1.18_a	.49	2.71	.41
High Power	1.49_a	.63	1.56_a	.69	2.57	.48
Ethnicity						
White	1.17_a	.31	$1.07_{a,b,}$	.20	2.72	.38
Asian	1.63	.66	1.75_a	.70	2.54	.47
Other/Not Disclosed	1.48_a	.65	1.64_b	.77	2.56	.52

	Affective Cue					
	Bored Affective Cues		Rejecting Affective Cues		Romantic judgements of Friendly Affective	
Group	M	SD	M	SD	M	SD
LSH Group & Power Condition						
Low & Medium LSH Low Power	1.18	.35	1.13	.40	2.74	.40
Low & Medium LSH High Power	1.39	.55	1.44	.58	2.61	.42
High LSH Low Power	1.34	.47	1.42	.79	2.53	.46
High LSH High Power	1.77	.79	1.91	.86	2.42	.60
LSH Group & Ethnicity Low & Medium LSH White	1.16	.30	1.07	.21	2.75	.35
Low & Medium LSH Asian	1.67	.64	1.75	.65	2.56	.44

continued

	Bored Affective Cues		Rejecting Affective Cues		Romantic judgements of Friendly Affective Cues	
Group	M	SD	M	SD	M	SD
Low & Medium LSH Other/Not Disclosed	1.32	.51	1.44$_a$	.62	2.61	.49
High LSH White	1.30	.37	1.03	.13	2.47	.52
High LSH Asian	1.44	.73	1.75	.93	2.44	.62
High LSH Other/Not Disclosed	1.83	.79	2.09$_a$	.86	2.47	.57
Power condition by Ethnicity						
Low Power White	1.18	.31	1.06	.19	2.73	.40
Low Power Asian	1.21	.39	1.29	.49	2.36	.63
Low Power Other/ Not Disclosed	1.28	.51	1.52	.84	2.72	.37
High Power White	1.16	.31	1.09	.22	2.69	.33
High Power Asian	1.71	.67	1.85	.70	2.58	.44
High Power Other/Not Disclosed	1.57	.70	1.70	.73	2.48	.56

The header "Affective Cue" spans the three cue columns.

Note: For Group, column mean sections sharing subscripts are significantly different (*p* < .05)

Discussion

Considering the link between power and sexual cognition, this study aimed to test the the impact that power has on negativeness blindness and overperception biases of friendly affective cues in particular. As prior research suggested that men high in LSH would be likely to overperceive friendly affective cues as romantic (Kunstman & Maner, 2011) we expected that priming power for men who are already high in sex-goals would exacerbate both the negativeness blindness and overperception bias. Nevertheless, our results showed that high power did not exacerbate perceptual inaccuracy of bored or rejecting affective cues for men high in LSH providing no support for the hypothesis that negativeness blindness will be exacerbated under conditions of high power for high LSH men.

Results also provided no support for the hypothesis that perceptual inaccuracy for judging friendly affective cues as romantic will be greater under conditions of high power than low power for high LSH men, thus lending no support for an effect of power on overperception bias. In chapter 3, high LSH men evidenced a significantly greater overperception bias for friendly affective cues than low and medium LSH men, and this difference was not found in this study perhaps explaining why high power did not exacerbate and inaccuracy that didn't exist in the first place, although it is acknowledged that the cut off for high LSH men was lower in this study than chapter 3.

The finding that high power did not exacerbate perceptual accuracy of bored and rejecting affective cues, and the overperception bias of friendly affective cues, may support existing research that suggests that power is more strongly related to individual differences. Previous research has shown that powerful individuals construe their judgements on the basis of momentary subjective experiences and do not necessarily rely on core attitudes or prior knowledge (Weick & Guinote, 2008). High LSH men may not be as engaged with their

sexual cognitions as first thought (Pryor, 1987, Pryor, et al., 1993; Pryor & Stoller, 1994,

Bargh et al., 1995). Power may enable them to detach from their sexual preoccupation and

focus in the moment on the task at hand. Furthermore, power has been shown to increase

reliance on accessible constructs that easily come to mind, regardless of whether these

constructs are chronically or temporarily accessible, showing that when alternatives had been

activated, power holders' responses were no more congruent with their dispositions than

those of low-power individuals (Guinote, Weick & Cai, 2012). However, as a control

condition was not included in this study, we are not in a position to know whether power

induces the capacity to focus on other interpretations of affective behaviour that are not

sexually charged.

Mental concepts of sex and power have been found to be associated in men who are

high in LSH (Pryor, 1987, Pryor et al., 1993; Pryor & Stoller, 1994, Bargh et al., 1995), with

supportive evidence for the existence of a sex schema that connects concepts of power and

sex in these men. The research findings in this study did not verify this connection. In

contrast to this study, previous research showed power to be detrimental to perception (Pryor,

1987, Pryor et al., 1993; Pryor & Stoller, 1994, Bargh et al., 1995). Therefore, a key to

further investigations into the relationship of power and perception is to consider the

relevance of power to the individual and the meaning of the power to the individual. The

benefits endowed by power may outweigh the benefits produced from adopting the

overperception bias. Experiencing high power may create meaning to the individual that they

will receive less reprisals from their harassing behaviour as others are powerless in

opposition to them (Rios, Fast & Gruenfeld, 2015; Wilson & Thompson, 2001), the belief

that women will be more compliant and obedient to the powerful (Gruenfeld et al., 2008;

Spekman, 1979), the belief that high power is likely to be more attractive and impressive and

therefore more favourable to a female (Lammers & Maner, 2016; Lindskold & Tedeschi,

1971), and the belief that power psychologically releases the individual from the inhibiting effects of social norms and thus increases their appetite for counternormative forms of sexuality (Lammers & Maner, 2016). It remains to be determined whether the influence of power on perception results in the individual desisting from taking the perspective of an observer when evaluating their actions - that is they disengage from empathy or social approval to suit their own malevolent needs. Further work will assist to explain how power shapes and re-configures perception for high LSH men.

The analyses completed incorporating ethnicity as a factor showed that Asian men and other groups evidenced worse perceptual accuracy on the rejecting affective cue. The White ethnicity showed less perceptual misidentification on the rejecting affective cues than the Asian and Other/ Not Disclosed ethnicities. Again, this may suggest that the TRAC is not culturally adept towards allowing men from different ethnicities to make accurate perceptual judgements. Negative affective cues are expressed in different ways culturally and that the form of rejection presented to Asian men in this study may have been unfamiliar to them. Rejection could be expressed more subtly and uniquely to the setting it was presented in for some cultures, or it is rarely expressed publicly in some cultures. Further to this, difficulties in understanding the TRAC could have limited the impact of the Power tool since participants of different ethnicities finding behaviours in the TRAC unfamiliar could have been confounded with the influence of high power. Such that participants of different ethnicities are showing perceptual inaccuracies because they are having difficulty in interpreting unfamiliar behaviours in the TRAC and not because of a psychological influence of high power on their sexual cognition. This could explain the finding that for high power White ethnicity showed less perceptual misidentification on the rejecting affective cues than the Asian and Other/ Not Disclosed groups. This trend from the analyses in both chapter 3 and the present study of ethnicity differences in perceptual accuracy stresses the importance of

calibrating the TRAC towards participants so that it is culturally relevant to them. If participants are culturally unfamiliar with the affective cues, then they can become ambiguous and difficult to decipher for the participant and the participant may have to rely on the limited awareness they have of other cultures making their judgements open to bias and guess work.

In considering the limitations of this study, the methodology used in this study to prime power is unlikely to have activated power concepts in the same way as previous studies (Bargh et al., 1995; Pryor & Stoller, 1994), when considering that previous research with LSH men used conceptual priming and not mind set priming. Although, an established power priming technique (Galinsky et al., 2003) was used, asking participants to recall a memory where the participant was in a position of high power, this may be subject to extraneous variables, such as whether the memory incorporates a strong power differential between high and low, and whether the intensity of high power memorized is diluted amongst detail and other sentimental components of the memory. This is contrasted to Bargh's and Pryor's technique of priming power through combining vocabularies of different power and sexual words (Bargh et al., 1995; Pryor & Stoller, 1994). This technique may have created a different intensity of power concepts within participants' psychology, which may have primed the participants differently and consequently impacted the findings differently in this study. Using different techniques of power priming will further test how robust the findings are within this study in identifying the relationship between power and perception for high LSH men.

There is some evidence that high power may increase LSH where the dependent variable was LSH. Walker (2014) provided evidence that power increased LSH for participants using the Pryor (1987) Likelihood to Sexually Harass Scale, finding that recalling a past experience of a position of high "positive" power discrepancy increased one's

LSH. It was shown that an individual's past experiences of being exposed to positive power discrepancy (when one has power over another) creates a higher proclivity to sexually harass than those in a negative power discrepancy (when one has less power than another). This shows that simply thinking of a situation in which one had a positive power discrepancy over another in the past led to an increased likelihood to sexually harass an individual in the present. Further to this, Bargh et al. (1995) showed that men who engage in sexual coercion, as measured by the LSH, do not demonstrate the same association between power and sexual attraction as the men who engage in sexual aggression, as measured by the Attractiveness to Sexual Aggression scale (ASA; Malamuth 1989a,b). More specifically, high LSH participants showed a bidirectional power– sex connection, through being faster to pronounce ambiguous sexual target words when they were preceded by power-related primes and being faster to pronounce power-related targets when they were preceded by ambiguous sex-content primes, compared with the respective neutral prime conditions. High ASA men, on the contrary, demonstrated a unidirectional power-then-sex association only being faster to pronounce ambiguous sexual target words when they were preceded by power-related primes. The latter indicates that it is the power then sex association that is the critical factor for men who sexually aggress against females (Bargh et al., 1995) whereas men high in LSH can be influenced by both a power-sex and sex-power association. This suggests that both sex and power when primed individually could influence LSH as a dependent variable, and as both sex and power appear equally connected, one would activate the other. For example, the LSH scale appearing before the power measurement could prime sex, and lead to those allocated in the low power condition to not adequately recall or experience a low power scenario (as being primed with sex has activated feelings and memories of being in high power). Deciding on where to position the LSH scale within research, needs careful consideration when knowing that both priming power and sex individually could influence LSH outcomes.

A future study could examine the effects of placing the LSH scale as the first measure with a substantial time delay before completing the next part of the study (power tool and TRAC), such as a few days or a week. A substantial time delay will measure people's baseline LSH and could disconnect the power and sex association that could lead to misrepresenting scores on the LSH scale. The positioning of the LSH in this study could have confounded the results since men who may normally score low on the LSH scale may have scored high on it because they were influenced by the high-power condition. Thus, their performance on the TRAC is not truly representative of them as low LSH men as they may have been recorded as high LSH men. This may have explained the finding of no significant interaction effects in the study between LSH level and power condition since low LSH men will have been inadvertently mixed with high LSH men.

A further limitation of this study was that sexual motivation was not measured following the priming of power from the power tool. Previous research has shown that power can increase sexual motivation and sexual attraction (Bargh et al., 1995; Pryor et al., 1993; Pryor & Stoller, 1994) towards a woman. It therefore is important to control for the influence of power on sexual motivation, which will undoubtedly impact perceptual appraisals of a woman. Sexual motivation can be assessed in diverse ways such as the eight motives identified by Hill and Preston (1996), which include measures such as the desire for feeling valued by one's sexual partner, showing value for one's sexual partner, obtaining relief from stress, providing nurturance to one's sexual partner, enhancing feelings of personal power, experiencing the power of one's partner, experiencing pleasure, and procreating. This approach could provide a more holistic way to understand the nature of men's sexual motivation towards the woman in the TRAC and perhaps identify if there is impact on a particular strand or strands of sexual motivation from the influence of power. It is also important to assess sexual attraction alongside this sexual motivation assessment as it can

show whether power influences sexual motivations despite an initially low sexual attractiveness towards the woman. The impact, and a further reason to control for sexual motivation, is that it may also explain some of the transitions from low LSH to high LSH for some men since through higher power sexual motivation may also increase sexual harassment tendencies in some men.

The content of both power manipulations was arbitrarily reviewed to examine the stories people referred to in the power conditions. High power examples focused largely on power differentials on school/education, sport, work/employment and being in positions of supervision or leadership. Low power examples focused largely on power differentials in teacher and student relationships, supervisor/manager appraisals, parent-child relationships, landlord/accommodation. The content provided focused more on describing the situation and how participants felt as opposed to providing clear power related words, so it is difficult to equate the number of power words (power differential experienced) to the LSH level. The power tool used in this study was a mindset priming tool and not a conceptual priming tool that involves the activation of specific mental representations (usually using power words). Mindset priming activates procedural knowledge through intentionally using a mental procedure in question rather than simply exposing participants to words and what is primed is a way of thinking and feeling, not how many high or low power related words they used. Therefore, it is unlikely that the number of power words participants expressed corresponds to how much high or low power they felt and their LSH levels. However, the power differential evoked from the power tool used in this study could have set a psychological relationship template that carried over to the power differential relationship in the LSH scenarios and confounded the results. For example, those in the high-power condition may have experienced thinking that encourages control and dominance of a close other that is framed to the power differential scenarios in the LSH. It may be possible to correlate the one-to-one power differentials from

the power tool to the one-to-one scenario responses in the LSH, as opposed to power differentials that recall situations involving power over a group of people or being powerless to a group of people. Alternatively, the similarity of the situation described in the power differential from the power tool can be correlated to the LSH scale scenario, such that power differentials recalled within education and occupational settings may have had a stronger impact on some of the questions on the LSH scale response, which are in the same settings. These checks could be completed as a manipulation check when using mind set priming techniques for power and related participant LSH level[17]

It is important to recognise that the cut off was reduced to mark high LSH men in this study in comparison to chapter 3, and this difference may have impacted on the results. Although this decision was made to increase the sample pool numbers of high LSH men, the decision will have weakened the comparisons to low and medium LSH men. By widening the range of score to identify high LSH men, consequently this sample may then have included men who possess weaker psychological associations between high power and sex. Mental concepts of power and sex have been found to be stronger and more impactful in men high in LSH (Pryor, 1987, Pryor et al., 1993; Pryor & Stoller, 1994, Bargh et al., 1995), and therefore by including men who are medium in LSH within the high LSH category, could potentially dilute the category with men who have weaker psychological associations of power and sex. In terms of reflecting the difference in combining the LSH scale with typologies of sexual harassers, exploitative/opportunistic offenders (High LSH) will be mixed with specific/occasional offenders (Medium LSH) in this high LSH category. Overall, this is likely to reduce any observable differences between high and low and medium LSH men when evidencing biases motivated by sexual interest under high power conditions. A stricter mark

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[17] A one way ANOVA was completed to test the effect of power conditions on LSH scores. There was a significant effect of power condition on LSH score such that as participants experienced high power they had higher LSH levels, $F_{(1,257)} = 10.12$, $p = .002$.

for high LSH men with a greater volume of individuals scoring that mark will have produced a stronger and more rigorous comparison between high and low and medium LSH men.

Altogether, power is argued to increase male sexual attraction to women and potential sexual advances towards them, and whilst power may increase sexual motivations towards women (Bargh et al., 1995; Pryor & Stoller, 1994), this study shows that mindset priming of high power does not lead to a decrease in perceptual accuracy when judging female negative affective cues for high LSH men. Furthermore, this study shows that mindset priming of high power does not affect the overperception bias of friendly affective cues for high LSH men. Judgments may be decided more by individual differences under high power, separate to the impact of sexual cognition. Understanding the impact of power to the individual may explicate changes in behaviour with no relevant perceptual inaccuracies. There may well be inhibition or control strategies that moderate the perceptual link between power and sexual motivations. Although these inhibition and control strategies for power are beyond the scope of this thesis, another psychological component likely to influence high LSH men's perception, objectification, is investigated in the next chapter.

CHAPTER FIVE

The Impact of Objectification on the Heterosocial Perception of Men High in the Likelihood to Sexually Harass

Objectification is often defined as a process of subjugation whereby people, like objects, are treated as means to an end (Frederickson & Roberts, 1997; Nussbaum, 1995, 1999; Orehek & Weaverling, 2017). The process of objectification is thought to involve an instrumental fragmentation in social perception; the splitting of a whole person into parts that serve specific goals and functions for the observer (Gruenfeld et al., 2008). Objectification is evidenced within the psychology of male sex offenders (Rudman & Mescher, 2012) and provides explanations as to why sex offenders have adversarial beliefs towards women (Pryor, 1987) and why they show manipulative and exploitative behaviours towards women (Kosson, Kelly & White, 1997). Objectification may explain sex offender's fixations on pornography (Malamuth, Addison & Koss, 2000; Attwood, 2004; Tylka & Van Diest, 2015; Seto, Maric & Barbaree, 2001) and why sex offenders struggle to empathise with their victims (Loughnan, Haslam & Murnane, 2010), as well as why they indicate high victim blame (Loughnan, Pina, Vasquez, & Puvia, 2013). Ultimately, objectification may contribute to the explanation as to why some men sexually offend and others do not (Gervais, DiLillo & McChargue, 2014; Rudman & Mescher, 2012). A separation of research on objectification is sexual objectification (where someone would view another person as a means to sexual gratification) in contrast to instrumental objectification (whereby the objectifier would use another person as a means to their own success or personal gain; Baldissarri, Andrighetto & Volpato, 2014; Wang & Krumhuber, 2017). Sexual objectification is described as the valuing of another person, typically a

woman, on the basis of the utility of her sexual/body parts or sexual functions, "which are separated out from the rest of her personality and reduced to the status of mere instruments or else regarded as if they were capable of representing her" (Bartky, 1990). The perception of women as sexual objects with little self-control and volition is a significant part of the abuse male sex offenders perpetrate against women (Rudman & Mescher, 2012). It is the treatment of women as sexual objects that is critical to understanding the psychology of male sex offenders in general and male sexual harassers as an individual category.

Objectification can be examined through cognitive theories that describe and use concepts such as implicit theories and schemata to explain sexual offending (Ward et al., 1997; Ward, 2000; Polaschek & Ward, 2002; Baker & Beech, 2004; Polaschek & Gannon, 2004; Mann & Hollin, 2007). Research suggests that rapists hold rape-specific implicit theories where they see women as sexual objects, which is evidenced through beliefs such as that women are naturally, and excessively, preoccupied with sex (Ward, 2000; Polaschek & Ward, 2002; Polaschek & Gannon, 2004). Ward (2000) argues that these implicit theories played an aetiological role in the offence process through skewing offenders' perceptions and experiences of their social world in an offence-supportive manner. With the potential overlap in the psychology of rapists and sexual harassers (Begany & Milburn, 2002; Quina, 1996), it may be that men who sexually harass share these implicit theories where they perceive women as sexual objects in an offence supportive manner. Thus, it may be the offender's own interpretation of women's role in the world that contributes to their attitudes, beliefs, perception and subsequent behaviour towards women. Sexual harassers may objectify women in an analogous way to rapists, in that they perceive women as highly sexual, sexually available and believe that women possess high sexual motivation (Ward et al., 1997; Polaschek & Ward, 2002; Milner & Webster, 2005; Beech, Ward & Fisher, 2006; Mann & Hollin, 2007). Their experiences

and interactions with women in their social world will therefore likely be tainted by their perception of women as sexual objects.

Objectification may explain empathy deficits through the dehumanization of victims. Canter (1994) argues that offender's empathy deficits lead them to assign an object or person role to their victims depending on their personal narratives, suggesting that offenders adjust their perception in order to support their belief of the victim as an object. Sexual objectification will influence perception to the extent that women are treated more as animalistic objects than as people who feel and think with complexity of mind (Rudman & Mescher, 2012; Vaes et al., 2011). Men who are more inclined to sexual aggression display greater implicit animalization and dehumanization of women (Rudman & Mescher, 2012). Men who automatically associated women more than men with primitive constructs (e.g., animals, instinct, nature) were more willing to rape and sexually harass women. Men who automatically associated women with animals (e.g., animals, paw, snout) more than with humans scored higher on a rape-behavioural analogue as well as rape proclivity. Rudman and Mescher (2012) demonstrated that men who implicitly dehumanize women (as either animals or objects) are also self-reporting more of a likelihood to sexually victimize them, and this process of dehumanization contributes to a decline in empathy towards victims. Dehumanization research shows that objectification is likely to be a strong influencer to male sexual harassers' perceptions of women in general and is thus relevant to the study of heterosocial perception.

Previous research indicates that activating a sex goal can cause both aggression and objectification in men in a non-offending population. For example, Mussweiler and Forster (2000) showed that men behave more aggressively towards targets when a sex goal is activated. Rudman and Borgida (1995) found that priming sex, increased men's sexualized behaviour toward a female interviewee and enhanced the possibility that she was hired for

her looks and not for her level of competence. Gruenfeld et al., (2008) found that activating a sex goal made high power men more likely to work with a female target who did not have great abilities to perform a collaborative task, but who was instrumental for sexual purposes. Vaes et al., (2011) found that when sex was primed through an anagram presented that had six target words with a slight sexual meaning (feel, wet, stiff, sweat, bed, and skin; see Mussweiler & Förster, 2000 for a similar procedure), male participants saw targets as sexually attractive and focused on appearance instead of competence in selecting a female candidate to collaborate on a mathematical test; Participants rated this female as more sexy, but also as more vulgar and superficial. These findings suggest that when a sex goal is activated, men tend to focus on a woman's appearance and her sexual functions. This shift in perception increases the likelihood that a female target becomes instrumental to fulfil a man's sex goal. In addition, the same sex prime made them dehumanize these female targets; the woman becomes the object of the man's sexual desire, creating the conditions under which men are more likely to dehumanize female targets. An active sex goal in men is a sufficient condition to objectify female targets. It follows the notion that men who sexually harass already possess an active and chronic sex goal, they are more likely to sexually objectify women who serve the purpose of this sex goal. These sex goals are expected to shift a sexual harasser's perception from personality to the body of these women, suggesting the stronger and more pervasive the sex goal, the greater the objectification of these women. Following these arguments, it was expected that men high in LSH will evidence high sexual objectification in contrast to those men lower in LSH.

It is possible to speculate how sexual objectification may serve the sexual harasser. Objectification may serve the perpetrator by exonerating them from any guilt or shame experienced from any moral discrepancies in their behaviours. If the perpetrator adamantly

believes that a woman or women solely serve sexual purposes, it would then be logical and justified to act and behave in ways which confirm this belief. In some instances, it may also serve the individual by simplifying the world around them, in that they do not have to manage and incorporate the complexities of a romantic and genuine intimate relationship in their life, in combination with a sexual relationship (Bumby & Hansen, 1997; Marshall, 2010; Ward et al., 1996). Beliefs in self-entitlement may serve the harasser in that they believe that they are better and superior to women and therefore the objectification supports this ideology by simplifying women, making them less threatening to men's dominance (Mihailades, Devilly & Ward, 2004; Scully & Marolla, 1984; Ward, 2000). Objectification may support and provide structure for a range of perceptions that serve the harasser in some way in their offending behaviours.

It is also probable that sexual harassers will instrumentally objectify women, as well as sexually objectify them. Male sexual harassers' instrumental treatment of women can be seen in their exploitation and manipulation of their victims during their sexual harassment, incorporating gender harassment and quid pro quo, as well as unwanted sexual attention in their sexual harassment strategies (Diehl et al., 2012; Gelfand et al., 1995). Their gender harassment incorporates a range of verbal and non-verbal behaviours that convey insulting, hostile or degrading attitudes toward women, advocating beliefs that women are subordinate, homemakers, inferior, submissive people, lacking complexity of mind (Diehl et al., 2012; Sanchez; Kiefer & Ybarra, 2006). These attitudes are not entrusted in women's role as sexual objects, but in viewing women as the less capable gender in general, reducing women's roles to that of sub-servants for others use. Even quid pro quo harassment incorporates the extortion of sexual cooperation in return for job related considerations with implicit assumptions that women are inferior and can easily be manipulated in sexual bargaining. Furthermore, sexual coercers' general antisocial

orientation towards women (Hanson & Morton-Bourgon, 2005), callous personality (Porter, Fairweather, Drugge, Herve, Birt, & Boer, 2000), lack of empathy (Driscoll et al., 1998), deceitfulness, egocentricity and irresponsibility (Porter, Campbell, Woodworth, & Birt, 2001), serves to reduce women to viable options for exploitation and instruments for use by others. Male sexual harassers may possess a configuration of personality traits and array of behaviours that suggest they will be high in instrumental objectification. Following these arguments, it was expected that men high in LSH will evidence high instrumental objectification in contrast to those men lower in LSH.

The relationship between sexual objectification and romance categorizations can be understood through Ward's (2000) theory of implicit theories since Ward argues that women are perceived as sexual objects by male sex offenders. As romantic behaviours can endorse women being seen to initiate sex and encouraging a sexual relationship, then this will serve to confirm the male sex offender's theory that women are acting in ways to show that they should be treated as objects of sex. This interlinking of sexual objectification and romantic behaviours suggests sexual objectification will form part of men high in sexual aggressions' construal and interpretation of women's romantic behaviours. Following the naive scientist account of automaticity in biases (Fiske & Taylor, 1991) and applying this to the implicit theories of women, romantic judgements are entangled with the sexual objectification of women as there is automatic bias to see romantic behaviours as displays of women acting and serving as sexual objects.

Other research shows that people protect objectification to which they are committed by derogating, devaluing, and inhibiting thoughts and situations about potential alternatives (Berdahl, 2007; Maner, et al., 2009). An example of this with men who show high LSH, is that those who identified highly with traditional roles of women as not being career driven or competent within a traditional male work environment, were more likely

to display quid pro quo sexual harassment towards women who violated these beliefs (Maass, Cadinu, Guarnieri, & Grasselli, 2003). The authors argue that this response from these men is an attempt to protect these beliefs about women from threats. Protecting objectification may provide further positional support for the overperception bias in that valued and strong beliefs are supported so that other judgements are entrenched in an aligned direction to those valued and strong beliefs. If the overperception bias shows that high LSH men perceive women with a misperception that supports sexual interest, then this will provide support for sexual objectification. Perceiving women as more romantically and sexually charged reinforces the belief of them as functioning as sexual objects. Romantic categorizations will be preferable to other categorizations that provide less compatibility with sexual objectification. Alternative categorizations provide conflicting information that interferes with the interpretation of women as sexual objects, so sexual objectification is defended instead by re-categorization or inattention to other categorizations. Potentially sexual objectification may mediate the relationship between the likelihood to sexually harass and romantic categorizations in heterosocial perception as romantic categorizations may endorse and strengthen pre-existing maladaptive beliefs in women as sexual objects.

High sexual objectification may bias perception in a way that supports sexual objectification goals. In the same way that self-protective goals heighten attention to natural threat cues such as angry faces (Ohman & Mineka, 2001), social affiliation goals heighten attention to benevolent social cues such as smiling faces (DeWall, Maner & Rouby, 2009), goals towards sexual objectification may heighten attention towards romantic categorizations. Specific categories of social stimuli are likely to be preferentially processed when goals are active, supporting existing beliefs and reducing threats to them. In this instance, categories supportive of sexual objectification are preferable for men high

in LSH. Indeed, sexual objectification may be protected by a process of "guarding," where categorizations are protected against rival options (Maner et al., 2012), with guarding motives leading the individual to attend to and negatively evaluate rival options. In this particular instance options that do not conform and support sexual objectification will be devalued and derogated such as an alternative categorization, like friendly behaviours.

Present Study

Aim

The aim of this study is to assess the impact of sexual and instrumental objectification on high in LSH men's heterosocial perception. We would achieve this through measuring specific sexual and instrumental objectification towards the woman in the TRAC and general sexual objectification, as well as assessing if specific sexual objectification and general sexual objectification mediates romantic judgements of romantic affective cues and romantic judgements of friendly affective cues. It is also an aim in doing this to determine if the biases of negativeness blindness and overperception of friendly affective cues as romantic evidenced in chapter 3 are present and replicated in this study, which will further support the prevalence of these biases for high LSH men.

Hypotheses

Hypothesis 1

Following the finding of chapter 3 it was hypothesized that high LSH men would evidence poorer perceptual accuracy on bored and rejecting affective cues than low and medium LSH men evidencing negativeness blindness.

Rationale

Following the findings from chapter 3 it is expected that high LSH men would evidence poorer perceptual accuracy on bored and rejecting affective cues than low and medium LSH men. As men high in LSH have strong sex goals they will be more likely to misperceive negative affective cues as in line with EMT it is expected that they will commit errors in judgement that are less costly to them. Specifically, men high in LSH will misperceive negative affective cues, as to them it will minimize missed sexual opportunities through over inferring women's sexual intent.

Hypothesis 2

Following the finding in chapter 3 it was hypothesized that high LSH men would judge friendly affective cues as romantic more than low and medium LSH men supporting an overperception bias.

Rationale

Following the findings from chapter 3 it is expected that men high in LSH will be more likely to overperceive friendly affective cues as romantic. This will occur in line with EMT through the process of increasing the frequency of falsely inferring a woman's sexual intent towards their sexual pursuit. This overperception to these men will maximise the opportunity of them obtaining sex, whilst also reducing the chances of them missing out on sex.

Hypothesis 3

It was hypothesized that high LSH men will display higher specific sexual and instrumental objectification towards the woman in the TRAC than low and medium LSH

men, and higher general sexual objectification towards women than low and medium LSH men .

Rationale

Following the arguments presented it is expected that high LSH men will show higher objectification on specific sexual objectification and general sexual objectification. It is expected that high LSH men will perceive women as highly sexual, sexually available and believe that women possess high sexual motivation (Ward et al., 1997; Polaschek & Ward, 2002; Milner & Webster, 2005; Beech, Ward & Fisher, 2006; Mann & Hollin, 2007). Additionally, these high in LSH men will look at women through a lens of sexual and instrumental objectification, further affecting their perceptions of these women's availability. Further to this research has shown that those men with a sex goal (Mussweiler & Forster, 2000; Rudman & Borgida, 1995; Vaes et al., 2011) will tend to focus more on a woman's appearance and her sexual functions than her personality and therefore as men high in LSH have a strong sex goal they are likely to show high sexual objectification towards women in both specific and general evaluations. It is argued that instrumental objectification will be higher in men high in LSH from drawing on research with sexually coercive men (Diehl et al., 2012; Gelfand et al., 1995) that shows that these men display a range of verbal and non-verbal behaviours which have insulting, hostile or degrading attitudes towards women. These behaviours are indicative of an instrumental treatment of women. Also, in addition to this, research on sexual coercers' personality characteristics suggests they have an antisocial orientation towards women (Hanson & Morton-Bourgon, 2005), callous personality (Porteret al., 2000), lack of empathy (Driscoll et al., 1998), show deceitfulness, egocentricity and irresponsibility (Porter et al., 2001), which can serve to treat women as instruments for the use of a man's personal gain.

Hypothesis 4

It was hypothesized that the relationship between romantic judgements of romantic affective cues and the likelihood to sexually harass would be mediated by specific and general sexual objectification for high LSH men.

Rationale

Sexual objectification may be connected to men high in LSH's understanding of romance. As romantic behaviours can entail women initiating sex and encouraging a sexual relationship, then in line with Ward's (2000) theory this will serve to confirm a male sexual aggressor's implicit theory that women are acting as objects of sex. This connection between sexual objectification and romantic behaviours suggests sexual objectification will form part of sexually coercive men's interpretation of women's romantic behaviours. Therefore, it is expected that men high in LSH's romantic judgements of romantic affective cues will be impacted by sexual objectification such that the women's romantic affective cues will be associated with high sexual objectification. It is expected that sexual objectification will mediate the relationship between LSH and romantic judgements of romantic affective cues for high LSH men.

Hypothesis 5

It was hypothesized that the relationship between romantic judgements of friendly affective cues and the likelihood to sexually harass (overperception bias) would be mediated by specific and general sexual objectification for high LSH men.

Rationale

As sexual objectification is likely to be connected to men high in LSH's understanding of romance, it is conceivable that sexual objectification could both support and be supported by an overperception bias of romantic judgements of friendly affective

cues. Although in line with EMT the main motivation of the overperception bias is to reduce missed sexual opportunities, romantic judgements of non-romantic affective cues can serve to reinforce a sexual aggressor's belief of women as sexual objects. There is research showing that people protect objectification to which they are committed by derogating, devaluing and inhibiting thoughts and situations about potential alternatives (Berdahl, 2007; Maner, et al., 2009). Romantic categorizations could be preferable to other categorizations that provide less compatibility with sexual objectification as romantic categorizations may endorse and strengthen pre-existing beliefs of women as sexual objects. Therefore, it is expected that men high in LSH's romantic judgements of friendly affective cues will be impacted by sexual objectification such that women's friendly affective cues will be preferred to be interpreted as romance partly because this categorization can reinforce the belief of women as sexual objects. It is expected that sexual objectification will mediate the relationship between LSH and romantic judgements of friendly affective cues for high LSH men.

Method

Participants

One hundred and ninety-one male international participants were recruited online through the Prolific Academic crowdsourcing platform. After excluding sixty participants who failed to complete or finish the study, a final sample of 131 participants were retained for data analysis. Participants' ages ranged from 19 to 74 years ($M = 41.7$, $SD = 15.0$). The sample reported their ethnic origin as White/Caucasian (77.3%, $n = 101$), Asian (3%, $n = 4$), African (1.6%, $n = 2$), Hispanic (2.3%, $n = 3$), Latino (1.5%, $n = 2$), Mixed Race (0.8%, $n = 1$), Other (2.3%, $n = 3$) and did not disclose (10.9%, $n = 15$). Participants reported being American (38.4%, $n = 50$), British (40.6%, $n = 53$), French (2.3%, $n = 3$), Italian

(1.6%, $n = 2$), Mexican (2.3%, $n = 3$), Polish (3%, $n = 4$), Portuguese (3%, $n = 4$) and Other

(9.8%, $n = 12$). All participants were paid £2.50 in compensation.

Design

A 2 x 2 factor design was used with LSH group (low and medium/high) and

Ethnicity (White/Caucasian and Asian/Other/Did not disclose)[18] for romantic, friendly,

neutral, bored and rejecting affective cues (negativeness blindness), romantic judgements

of friendly affective cues and friendly judgements of romantic affective cues

(overperception bias) and specific sexual objectification of the TRAC, specific

instrumental objectification of the TRAC and general sexual objectification. Age grouping

was added as a covariate due to the range of ages of participants in the sample used. There

were two groups formed from participant's scores on the Likelihood to Sexually Harass

Scale (Pryor, 1987). These two groups were formed by separating High LSH participants

from Low and Medium LSH participants. The decided cut off was an overall score of 80

percent and over on the LSH scale (Pryor, 1987), to mark High LSH participant scores.

These groups are used to assess differences on the TRAC, specific sexual objectification,

specific instrumental objectification and general sexual objectification measures. All these

measures were completed before completing the LSH measure, to avoid priming effects of

sexual harassment tendencies on judgements made.

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[18] Asian participants were pooled into the Other/Not Disclosed group for the analyses in this study as there were too few numbers (3 participants) for a sufficient comparison to other ethnicities.

Measure

Test of Reading Affective Cues (TRAC)

Mean scores were created by averaging video clips that evidenced the same affective cue according to the normative sample in chapter 2 as per all other chapters.

Specific Sexual Objectification Scale

This measure, adapted from Zolot's (2003) Men's Objectification of Women Measure, asks 20 questions about the woman in the TRAC video clips on a seven-point Likert scale, from 1 = Disagree Strongly to 7 = Agree Strongly. This measure was combined with the instrumental objectification measure for the TRAC video clips, which also has a seven-point Likert scale question response. The Zolot (2003) measure was chosen as it is one of the few available questionnaires that explicitly measures sexual objectification. It measures sexual objectification through four components, which are: natural and entertaining behaviour, insulting unattractive women, display of disempathy and crudeness, and distinction between face and body. These four subdomains of sexual objectification provide an effective way to reflect on current and existing literature on types of sexual objectification (Alam, Aliyu & Shahriar, 2019; Bernard, Loughnan, Marchal, Godart & Klein, 2015; Bernard, Gervais & Klein, 2018; Bobadilla, Metze & Taylor, 2013; Gervais & Eagan, 2017; Tebbe, Moradi, Connelly, Lenzen, & Flores, 2018; Wright & Tokunaga, 2015; Wright & Tokunaga, 2016). The questionnaire asks how much the participant agrees with statements about women such as "When commenting on women, it's okay to be crude" and "I think watching women is entertaining", how much they focus on the body of women such as "The first thing I notice about a woman is her body" and "Commenting on women's physical features is only natural", how much respect they have

for women such as "I respect all women" and "It doesn't bother me if men around me make crude comments about woman loud enough for them to hear", and how they imagine having sex with women, such as "As soon as I see an attractive woman, I wonder what sex with her would be like" and "I often imagine what women I meet on a daily basis would be like in bed".

The original questionnaire asks 41 questions about general sexual objectification but only 20 out of the 41 questions could be adjusted to specific sexual objectification of the woman in the TRAC video clips. Four questions are reverse coded as in the original scale. The scale showed excellent internal reliability ($\alpha = .91$). [19]A composite measure of sexual objectification was created by averaging across all 20 questions of the scale. It was thought better to analyse a composite measure as opposed to the individual components as the individual components were too small in number of questions to provide a strong assessment by individual component (with there being 5 to 6 questions only for each component). In addition to this some of the questions arguably cross over and represent two different components making it difficult to completely separate components, such as the question 'I would always use appropriate names when describing this women's body,' can represent both the display of disempathy and crudeness, and distinction between face and body components. This scale is provided in Appendix II (Questions 1 to 20).

Instrumental Objectification Scale

This measure was devised by Gruenfeld et al. (2008) in their power and objectification studies. The measure was chosen because it is one of the only measures that explicitly assesses instrumental objectification and the questions used in the measure can be adapted towards the female actor in the TRAC. This measure encompasses 10 questions

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[19]Principal component analysis with varimax rotation was performed to examine the underlying structure of the twenty items and one component was identified that accounted for 51.39% of variance.

on a Likert scale of 1 = Disagree Strongly to 7 = Agree Strongly. The questionnaire asks

questions such as "I think more about what this person can do for me than what I can do for

them" and "This person would be very useful to me" and "I would try to motivate her to do

things that will help me succeed" or "This relationship would be important to me because it

would help me accomplish my goals". This scale was adjusted to the TRAC video clips by

relating the questions only to the woman in the video clips. Three questions were reverse

coded as in the original scale. The scale showed acceptable internal reliability (α = .64)[20].

The measure of instrumental objectification was created by averaging across all 10

questions of the scale. This scale was combined with the sexual objectification scale for the

TRAC and is provided in Appendix II (Questions 21 to 30).

General Sexual Objectification Scale

This was measured by the Men's Objectification of Women Measure (Zolot, 2003),

which is a 41 item questionnaire that measures the sexual objectification of women in

general. This same measure was used to create the 20 questions for the specific sexual

objectification scale mentioned earlier, but obviously this current measure only asks

questions about women in general as opposed to the specific individual woman in the

TRAC video clips. This measure was chosen as it provides a comparison to the specific

measure of sexual objectification that was adapted to the TRAC, enabling a general versus

specific comparison of sexual objectification. This measure asks the respondent to

consider their responses to the women they see in their everyday life. Answers were given

on a Likert scale, from 1 = Strongly Disagree to 5 = Strongly Agree (five option points was

consistent with the original scale). Questions covered include, as mentioned before, four

components, natural and entertaining behaviour (e.g., If I see a woman walking down the

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[20] Principal component analysis with varimax rotation was performed to examine the underlying structure of the fourty-one items and one component was identified that accounted for 45.77% of variance.

street, it is easy for me to imagine what's she's like during sex), insulting unattractive women (e.g., I have made jokes about ugly women), display of disempathy and crudeness (e.g., When commenting on women, it's okay to be crude), and distinction between face and body, (e.g., The first thing I notice about a woman is her body). Eight questions are reverse coded. The scale showed excellent internal reliability ($\alpha = .92$). A composite measure can be computed by averaging across all 41 questions. This scale is provided in Appendix III.

Likelihood to Sexually Harass Scale (Pryor, 1987)

As in all previous studies, a cumulative score of Likelihood to Sexually Harass was computed by averaging the score on question B across all 10 vignettes. This measure is provided in Appendix I.

Procedure

Participants completed an online questionnaire. This study was first approved by the School of Psychology Ethics Committee at the University of Kent. Participants were informed that the purpose of the study was to examine "social perception" to minimise response bias. After providing written informed consent, participants were asked to provide certain demographic information. Participants completed the TRAC scale followed by, the specific sexual objectification scale, the instrumental objectification scale, the general sexual objectification scale and finally the Likelihood to Sexually Harass scale. Participants were fully debriefed in writing upon completion of the study.

Results

Negativeness Blindness

A 2 x 2 MANCOVA was performed to determine the effect of LSH group (low and medium/high) and Ethnicity (White and Asian/Other/Not disclosed) on affective cue judgements (friendly, romantic, neutral, bored and rejecting) with age entered as a covariate. The analysis revealed a significant main effect of LSH group, $F(5, 122) = 9.23$, $p < .001$, $\eta^2 = .27$, and a significant main effect of Ethnicity $F(5, 122) = 2.50$, $p = .034$, $\eta^2 = .09$. There was no significant interaction effect of LSH group and Ethnicity $F(5, 122) = 1.79$, $p = .119$, $\eta^2 = .07$. There was a marginal significant effect of the covariate Age, $F(5, 122) = 2.18$, $p = .061$, $\eta^2 = .08$. Univariate ANOVAs were performed on affective cue judgements (friendly, romantic, neutral, bored and rejecting) with a Bonferroni corrected significance level of .01.

As there was a significant main effect of LSH group, this was examined more closely. For LSH group there was a significant effect showing that the high LSH men showed greater misperception of all cues. High LSH men ($M = 1.70$, $SD = .80$) showed greater misperception for friendly affective cues $F(1, 130) = 7.22$, $p = .008$, $\eta^2 = .05$, than low and medium LSH ($M = 1.22$, $SD = .50$). High LSH men ($M = 1.73$, $SD = .62$) also showed greater misperception of Romantic affective cues, $F(1, 130) = 15.44$, $p < .001$, $\eta^2 = .11$, than those low and medium LSH ($M = 1.30$, $SD = .52$). Neutral affective cues, $F(1, 130) = 10.41$, $p = .002$, $\eta^2 = .08$, were also affected, with high LSH ($M = 2.30$, $SD = .73$) showing greater misperception than those reporting low and medium LSH ($M = 1.68$, $SD = .59$). Similarly, bored affective cues, $F(1, 130) = 42.10$, $p < .001$, $\eta^2 = .25$, were more likely to be misperceived by those high in LSH ($M = 2.43$, $SD = .73$) than those reporting low and medium LSH ($M = 1.37$, $SD = .54$), and finally, Rejecting affective cues, $F(1, 130) = 34.92$,

$p<.001$, $\eta^2 = .22$, were more likely to be misperceived by those men high in LSH ($M =$ 2.50, $SD=.78$) than those reporting low and medium LSH ($M = 1.34$, $SD=.65$).

As there was a significant main effect of Ethnicity, this was examined more closely. For ethnicity there was no significant effect for Friendly affective cues, $F(1, 130) = 0.59$, $p=.446$, $\eta^2 = .01$, Neutral affective cues, $F(1, 130) = 0.73$, $p=.394$, $\eta^2 = .01$, Bored affective cues, $F(1, 130) = 5.03$, $p=.027$, $\eta^2 = .04$ or Rejecting affective cues, $F(1, 130) = 2.14$, $p = .146$, $\eta^2 = .02$. There was a significant effect for Romantic affective cues, $F(1, 130) = 8.63$, $p=.004$, $\eta^2 = .06$, which showed that the Asian/Other/Not Disclosed ethnicity group ($M = 1.50$, $SD=.64$) showed greater perceptual misidentification on the romantic affective cues than the White ethnicity group ($M = 1.31$, $SD=.51$).

As the covariate of Age was marginally significant this was examined more closely. Despite the main covariate being significant, it did not influence friendly affective cues, $F(1, 130) = 4.51$, $p = .036$, $\eta^2 = .04$, romantic affective cues, $F(1, 130) = 0.18$, $p = .674$, $\eta^2 = 0$, neutral affective cues, $F(1, 130) = 1.84$, $p = .178$, $\eta^2 = .01$, bored affective cues, $F(1, 130) = .053$, $p = .819$, $\eta^2 = 0$ and rejecting affective cues, $F(1, 130) = 1.24$, $p = .267$, $\eta^2 = .01$. The F ratios and significance for the effect of LSH group and Ethnicity on affective cue judgements are presented in Table 12. Please see Table 13 for the mean and standard deviations for each affective cue for LSH group and Ethnicity.

Table 12

Multivariate and Univariate analyses of covariance for the effect of LSH group and

Ethnicity on affective cue judgements with Age as a covariate

		ANCOVA				
	MANCOVA	Friendly	Romantic	Neutral	Bored	Rejecting
Variable	*F*	*F*	*F*	*F*	*F*	*F*
Low & Medium-High LSH	9.23***	7.22**	15.44***	10.41**	42.10***	34.92***
Ethnicity	2.50*	0.59	8.63**	0.73	5.03	2.14
Low & Medium-High LSH X Ethnicity	1.79	0.07	6.19	0.07	2.08	1.83
Age (Covariate)	2.18	4.51	0.18	1.84	0.05	1.24

Note: F ratios are Wilk's Lambda approximation of *F*s.
Abbreviations: ANCOVA, univariate analysis of variance, MANCOVA, multivariate analysis of variance.
Bonferroni corrected alpha value = 0.01.
*p<.05, **p<.01, ***p<.001.

Table 13

Mean and Standard Deviation for each Affective Cue by LSH Group and Ethnicity

	Affective Cue									
Group	Friendly		Romantic		Neutral		Bored		Rejecting	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
LSH										
Low & Medium	1.22$_a$	.50	1.30$_a$	.52	1.68$_a$	.59	1.37$_a$	.54	1.34$_a$	.65
High	1.70$_a$	.80	1.73$_a$	.62	2.30$_a$	.73	2.43$_a$	.73	2.50$_a$	.78
Ethnicity										
White	1.24	.54	1.31$_a$	.51	1.73	.64	1.45	.60	1.44	.73
Asian/Other/ Not Disclosed	1.41	.64	1.50$_a$	.64	1.82	.64	1.65	.82	1.57	.85
LSH & Ethnicity										
Low & Medium LSH White	1.19	.47	1.28	.51	1.66	.60	1.34	.49	1.32	.63
Low & Medium LSH Asian/ Other/Not Disclosed	1.35	.58	1.38	.54	1.73	.57	1.48	.70	1.40	.72

	Affective Cue									
Group	Friendly		Romantic		Neutral		Bored		Rejecting	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
High LSH White	1.67	.78	1.54	.50	2.25	.72	2.29	.75	2.38	.83
High LSH Asian Other/ Not Disclosed	1.83	1.04	2.50	.50	2.50	.87	3.00	0	3.00	0

Note: For Group, column mean sections sharing subscripts are significantly different ($p < .05$)

Overperception Bias of Friendly Affective Cues

A 2 x 2 MANCOVA was performed to determine the effect of LSH group (low/medium and high) and Ethnicity (White and Asian/Other/Not disclosed) on friendly affective cues judged as romantic and romantic affective cues judged as friendly with age entered as a covariate. The analysis revealed a significant main effect of LSH group, $F(2, 125) = 5.67$, $p = .004$, $\eta^2 = .08$. There was a marginally significant main effect of Ethnicity, $F(2, 125) = 3.06$, $p = .051$, $\eta^2 = .05$ and no significant interaction effect for LSH group and Ethnicity, $F(2, 125) = 2.28$, $p = .107$, $\eta^2 = .04$. There was no significant effect of the covariate Age, $F(2, 125) = 0.39$, $p = .677$, $\eta^2 = .01$. Univariate ANOVAs were performed on these affective cue judgements with a Bonferroni corrected significance level of .025.

As there was a significant main effect of LSH group this was examined more closely. There was a significant effect for friendly affective cues judged as romantic, $F(1, 130) = 6.67$, $p = .011$, $\eta^2 = .05$ such that those with High LSH ($M = 2.27$, $SD = .65$) showed greater perceptual misidentification than those with Low & Medium LSH ($M = 2.75$, $SD = .40$). There was no significant effect for romantic affective cues judged as friendly, $F(1, 130) = 3.21$, $p = .076$, $\eta^2 = .03$.

In analysing the marginally significant main effect of ethnicity, it was found that ethnicity did not influence participants' overperception of friendly affective cues as romantic $F(1, 130) = 0.69$, $p = .407$, $\eta^2 = .01$. Ethnicity did however, influence participant's overperception of romantic affective cues as friendly $F(1, 130) = 5.93$, $p = .016$, $\eta^2 = .05$, with the White ethnicity group ($M = 1.93$, $SD=.48$) more likely to misidentify romantic affective cues as friendly than the Asian/Other/Not Disclosed ethnicity group ($M = 2.11$, $SD=.58$). The F ratios and significance for the effect of LSH group and Ethnicity on judgements of friendly affective cues as romantic and romantic affective cues as friendly are presented in Table 14. Please see Table 15 for the mean and standard deviations for judgements of friendly affective cues as romantic and romantic affective cues as friendly by LSH group and Ethnicity.

Table 14

Multivariate and Univariate analyses of covariance for the effect of LSH group and

Ethnicity on overperception of friendly affective cues as romantic and romantic affective

cues as friendly with Age as a covariate

		ANCOVA	
	MANCOVA	Friendly Cues judged as Romantic	Romantic Cues judged as Friendly
Variable	*F*	*F*	*F*
Low & Medium-High LSH	5.67**	6.67*	3.21
Ethnicity	3.06	0.69	5.93
Low & Medium-High LSH x Ethnicity	2.28	1.24	3.89
Age (Covariate)	0.39	0.15	0.72

Note: F ratios are Wilk's Lambda approximation of *F*s.
Abbreviations: ANCOVA, univariate analysis of variance, MANCOVA, multivariate analysis of variance.
Bonferroni corrected alpha value = 0.025.
*p<.05, **p<.01, ***p<.001.

Table 15

Mean and Standard Deviation for the effect of LSH group and Ethnicity on judgements of friendly affective cues as romantic and romantic affective cues as friendly

	Affective Cue			
	Friendly Cues judged as Romantic		Romantic Cues judged as Friendly	
Group	M	SD	M	SD
LSH Group				
Low & Medium LSH	2.75_a	.40	1.96	.46
High LSH	2.27_a	.65	2.07	.80
Ethnicity				
White	2.70	.45	1.93_a	.48
Asian/Other/ Not Disclosed	2.70	.52	2.11_a	.58
LSH & Ethnicity				
Low & Medium LSH White	2.76	.38	1.94	.43
Low & Medium LSH Asian/Other/Not Disclosed	2.73	.49	2.04	.55
High LSH White	2.21	.62	1.92	.79
High LSH Asian/ Other/Not Disclosed	2.50	.87	2.67	.58

Note: For Groups, column mean sections sharing subscripts are significantly different ($p < .05$)

Objectification

A 2 x 2 MANCOVA was performed to determine the effect of LSH group (low/medium and high) and Ethnicity (White and Asian/Other/Not disclosed) on sexual objectification of the woman in the TRAC video clips, instrumental objectification of the woman in the TRAC video clips and general sexual objectification of women with age entered as a covariate. The analysis revealed a significant main effect of LSH group, $F(3, 124) = 18.49$, $p < .001$, $\eta^2 = .31$. There was no significant main effect of Ethnicity $F(3, 124) = 0.28$, $p = .838$, $\eta^2 = .01$ and no significant interaction effect of LSH group and Ethnicity, $F(3, 124) = 0.19$, $p = .907$, $\eta^2 = .00$. The covariate of Age was marginally significant, $F(3, 124) = 2.65$, $p = .052$, $\eta^2 = .06$. Univariate ANOVAs were performed on the objectification measures with a Bonferroni corrected significance level of .016.

As there was a significant main effect of LSH group this finding was examined more closely. For the sexual objectification there was a significant difference, such that men high in LSH ($M = 5.14$, $SD = 0.78$) showed greater sexual objectification of the woman in the TRAC video clips, in comparison to men low and medium in LSH ($M = 2.88$, $SD = 0.94$), $F(1, 130) = 54.95$, $p < .001$, $\eta^2 = .30$. For the instrumental objectification, men high in LSH ($M = 4.75$, $SD = 0.46$) showed greater instrumental objectification of the woman in the TRAC video clips, in comparison to men low and medium in LSH ($M = 3.42$, $SD = 0.86$), $F(1, 130) = 21.69$, $p < .001$, $\eta^2 = .15$. For the general sexual objectification of women there was a significant difference, such that men high in LSH ($M = 3.64$, $SD = 0.43$) showed greater sexual objectification of women in general, in comparison to men low and medium in LSH ($M = 2.52$, $SD = 0.53$), $F(1, 122) = 44.52$, $p < .001$, $\eta^2 = .26$.

As the covariate of Age was marginally significant this was examined more closely. The covariate did not influence sexual objectification of the woman in the TRAC video clips, $F(1, 130) = 5.10$, $p = .026$, $\eta^2 = .04$ or instrumental objectification of the woman in the TRAC video clips, $F(1, 130) = 5.27$, $p = .023$, $\eta^2 = .04$. The covariate did influence general sexual

objectification of women, $F(1, 130) = 6.87$ $p = .010$, $\eta^2 = .05$. Age was negatively correlated with general sexual objectification of women ($r = -.234$). As Age increased general sexual objectification of women decreased.

The F ratios and significance for the effect of LSH group and Ethnicity on sexual objectification of the woman in the TRAC video clips, instrumental objectification of the woman in the TRAC video clips and general sexual objectification of women are presented in Table 16. Please see Table 17 for the mean and standard deviations for sexual objectification of the woman in the TRAC video clips, instrumental objectification of the woman in the TRAC video clips and general sexual objectification of women by LSH group and Ethnicity.

Table 16

Multivariate and Univariate analyses of covariance for the effect of LSH group and Ethnicity on sexual objectification of the woman in the TRAC video clips, instrumental objectification of the woman in the TRAC video clips and general sexual objectification of women with Age as a covariate

		ANCOVA		
	MANCOVA	Sexual objectification of the woman in the TRAC	Instrumental objectification of the woman in the TRAC	General Sexual objectification of women
Variable	*F*	*F*	*F*	*F*
Low & Medium-High LSH	18.49***	54.95***	21.69***	44.52***
Ethnicity	0.28	0.34	0.00	0.65
Low & Medium-High LSH x Ethnicity	0.19	0.25	0.00	0.42
Age (covariate)	2.65	5.10	5.27	6.87**

Note: F ratios are Wilk's Lambda approximation of *F*s.
Abbreviations: ANCOVA, univariate analysis of variance, MANCOVA, multivariate analysis of variance.
Bonferroni corrected alpha value = 0.016.
*p<.05, **p<.01, ***p<.001.

Table 17

Mean and Standard Deviation for the effect of LSH group and Ethnicity on sexual objectification of the woman in the TRAC video clips, instrumental objectification of the woman in the TRAC video clips and general sexual objectification of women

	Affective Cue					
	Sexual objectification of the woman in the TRAC		Instrumental objectification of the woman in the TRAC		General Sexual objectification of women	
Group	M	SD	M	SD	M	SD
LSH Group						
Low & Medium	2.88_a	.94	3.42_a	.86	2.52_a	.53
High	5.14_a	.78	4.75_a	.46	3.64_a	.43
Ethnicity						
White	3.11	1.17	3.55	.95	2.62	.63
Asian/Other/ Not Disclosed	3.28	1.20	3.66	.84	2.75	.62
LSH & Ethnicity						
Low & Medium LSH White	2.85	.93	3.39	.88	2.50	.53
Low & Medium LSH Asian/Other/Not Disclosed	3.02	.98	3.53	.79	2.62	.51
High LSH White	5.08	.85	4.76	.50	3.59	.46
High LSH Asian/ Other/Not Disclosed	5.38	.43	4.73	.35	3.82	.23

For Groups, column mean sections sharing subscripts are significantly different ($p < .001$)

Mediation Analyses of Romantic judgements of Romantic Affective Cues and Romantic judgements of Friendly Affective Cues

Correlation Matrix

A correlation matrix was created to show the correlation coefficients and significance between variables. There was a positive correlation between LSH and specific sexual objectification and general sexual objectification, which aligns to the previous results showing that men high in LSH show more specific sexual objectification and general sexual objectification than men low and medium in LSH. There was a high positive correlation between specific sexual objectification and general sexual objectification, which would be expected as both variables measure the same concept in a different way. There are negative correlations between romantic judgements of romantic affective cues and all other variables. There is a low but positive correlation between LSH and romantic overperception of friendly affective cues, which aligns to the findings where men high in LSH showed more of this overperception than men low and medium in LSH. The correlation matrix is presented in Table 18.

Table 18

Correlation matrix for LSH, Specific Sexual Objectification, General Sexual Objectification, Romantic judgements of Romantic Affective Cues and Romantic judgements of Friendly Affective Cues variables

	LSH	Specific Sexual Objectification	General Sexual Objectification	Romantic judgements of Romantic AC	Romantic judgements of Friendly AC
LSH	N/A	.62***	.57***	-.25**	.34***
Specific Sexual Objectification	.62***	N/A	.89***	-.47***	.35***
General Sexual Objectification	.57***	.89***	N/A	-.45***	.38***
Romantic judgements of Romantic AC	-.25**	-.47***	-.45***	N/A	-.06
Romantic judgements of Friendly AC	.34***	.35***	.38***	-.06	N/A

Note: AC = Affective Cues   *$p<.05$, **$p<.01$, ***$p<.001$

Romantic Judgements of Romantic Affective Cues

A hierarchical regression model tested the prediction that sexual objectification towards the woman in the video clips and general sexual objectification towards women mediates the romantic judgements of romantic affective cues of high LSH men. Using Hayes (2018) PROCESS macro in SPSS[21], a multiple mediation model was tested with estimates based on 10,000 bootstrap resamples[22]. Coefficients are significant when confidence intervals exclude zero. The 95% Bias Corrected confidence intervals (CIs)[23] for the indirect (mediated) effect of sexual objectification towards the woman in the video clips did not include zero in predicting romantic affective judgements of romantic affective cues at -.38 (lower CI= -.79; upper CI= -.03). This indicated that the predictive effect of LSH group on romantic judgements of romantic affective cues was mediated by sexual objectification towards the woman in the video clips. However, this correlation is negative showing that men high in LSH and high in sexual objectification towards the women in the video clips were less likely to judge romantic affective cues as romantic. It can be deduced from this finding that for men high in LSH who also showed higher sexual objectification towards the woman in the video clips, there was a greater likelihood of incorrect identification of romantic affective cues as romantic than for those high LSH men showing lower sexual objectification towards the

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[21] Modern statistical approaches recommend that the concepts of full or partial mediation are not used due to their high dependence on sample size (Rucker, Preacher,Tormala & Petty, 2011). Instead, they suggest that focus should be on the significance and magnitude of the indirect effects.

[22] Bootstrapping is a nonparametric resampling procedure. It is widely considered to produce more accurate estimates of indirect effects because it does not impose the assumption of normality of the sampling distribution. Bootstrapping involves repeated resampling of the available data to create an empirical approximation of the sampling distribution. Estimates of indirect effects are calculated with greater precision by constructing confidence intervals that are corrected for bias and acceleration (Preacher & Hayes, 2008; Hayes, 2018).

[23] As recommended by Hayes & Scharkow (2013) bootstrap confidence intervals are used to determine significance as they are more accurate in detecting statistical differences in mediation because they make fewer assumptions about the sampling distribution when comparing to *p* values.

woman in the video clips. This would indicate that sexual objectification further affected the judgment of men high in LSH regarding the woman in the TRAC video.

The 95% Bias Corrected confidence intervals (CIs) for the indirect (mediated) effect of general sexual objectification towards women did include zero in predicting romantic judgements of romantic affective cues at -.16 (lower CI= -.48; upper CI= .17). This indicated that the predictive effect of LSH group on romantic judgements of romantic affective cues was not mediated by sexual objectification towards women in general. Although high LSH men showed a greater amount of sexual objectification towards women in general, this did not influence their romantic judgements of romantic affective cues. Please see Table 19, which shows the total, direct and indirect effects of both types of sexual objectification in the relationship of LSH groups on romantic judgements of romantic affective cues. Please see Figure 1, which shows the mediational model of the effect of LSH group on romantic judgements of romantic affective cues through both types of sexual objectification.

Table 19

Results of the mediation analysis of sexual objectification towards the woman in the video clips and sexual objectification of women in general in the relationship of LSH groups to romantic judgements of romantic affective cues (n = 131).

	Coefficient	SE	*p*	BC Bootstrap 95% CI	
				Lower	Upper
LSH to Sexual objectification towards the woman in the video clips	2.26	.25	<.001		
LSH to Sexual objectification of women in general	1.12	.14	<.001		
Total effect of independent variables (IVs) on romantic judgements of romantic affective cues	-.43	.15	.003		
Model R^2	.07		.003		
Direct effect of IVs on romantic judgements of romantic affective cues					
LSH	.10	.17	.544		
Sexual objectification towards the woman in the video clips	-.17	.08	.044		
Sexual objectification of women in general	-.14	.15	.329		
Model R^2	.23		<.001		

continued

	Coefficient	SE	*p*	BC Bootstrap 95% CI	
				Lower	Upper
Indirect effect of IVs on LSH on romantic judgements of romantic affective cues					
Total effect	-.54	.15		-.82	-.26 (sig)
Sexual objectification towards the woman in the video clips	-.38	.20		-.79	-.03 (sig)
Sexual objectification of women in general	-.16	.17		-.48	.17

Note: SE = Standard Error, BC = Bias Corrected, CI = Confidence Interval, sig = significant
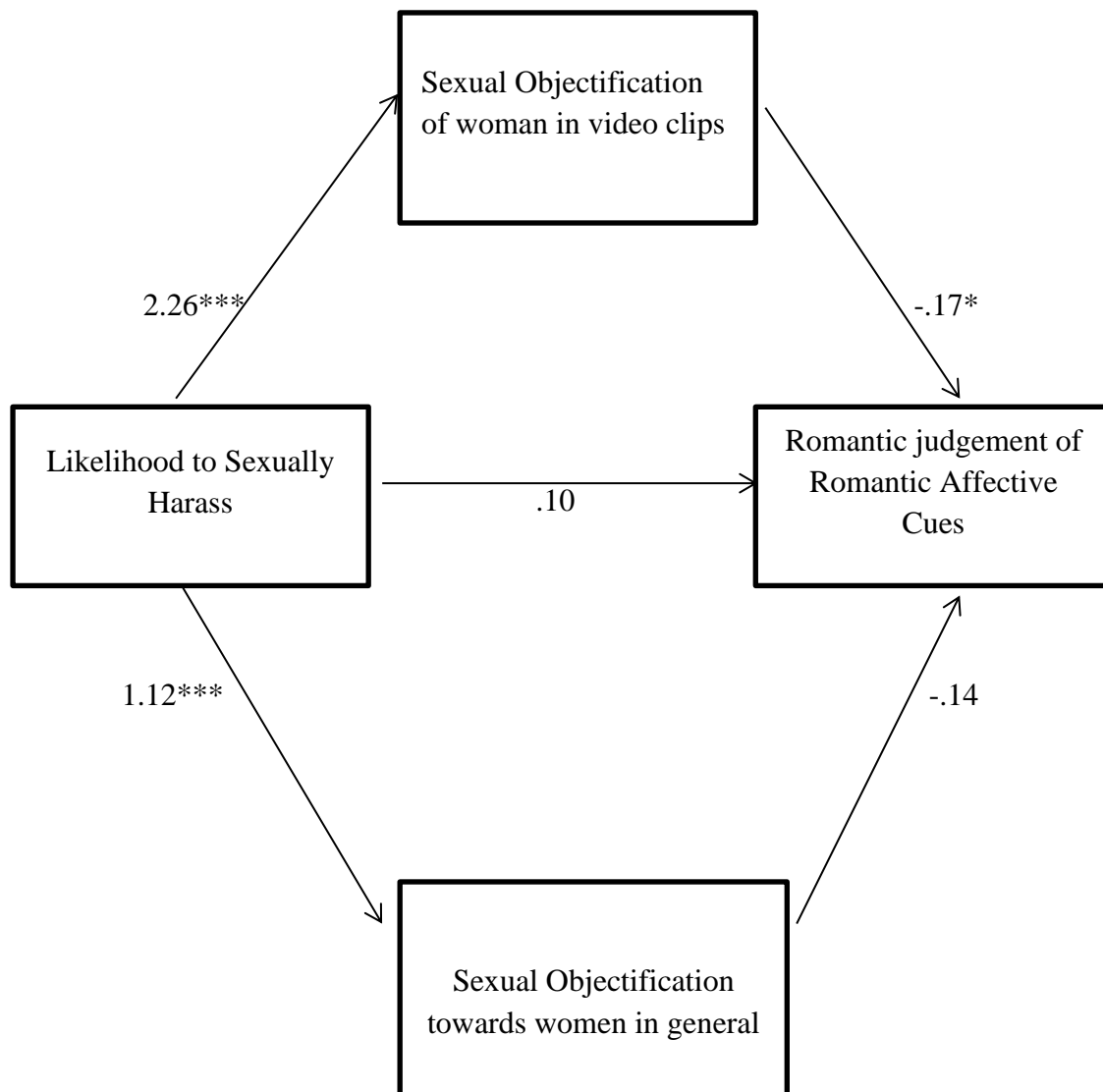
Figure 1: Mediational model of the effect of LSH group on Romantic judgement of

Romantic Affective cues through sexual objectification. Unstandardized regression

coefficients are listed. *Note*: *p<.05, **p<.01, ***p<.001. Coefficients reported below are

noted to be significant when confidence intervals exclude zero. Indirect effect of LSH Group

on romantic judgement of romantic affective cues through: Sexual objectification of woman

in video clips only = -.38 (significant; CI = - 0.79 to - 0.03) Sexual objectification towards

women in general only = -.16 (non-significant; CI = - 0.48 to 0.17). Total effect of LSH

group on romantic judgement of romantic affective cues = - 0.54 (significant; CI = - 0.82 to

- 0.26).

Romantic judgements of Friendly Affective Cues

A separate hierarchical regression model tested the prediction that sexual objectification towards the woman in the video clips and general sexual objectification towards women mediate high LSH men's overperception of friendly affective cues as romantic. Using Hayes (2018) PROCESS macro in SPSS, a multiple mediation model was tested with estimates based on 10,000 bootstrap resamples. Coefficients are significant when confidence intervals exclude zero. The 95% Bias Corrected confidence intervals (CIs) for the indirect (mediated) effect of sexual objectification towards the woman in the video clips did include a zero in predicting romantic judgements of friendly affective cues at -.02 (lower CI= -.32; upper CI= .26). This indicated that the predictive effect of LSH group on romantic judgements of friendly affective cues was not mediated by sexual objectification towards the woman in the video clips. Although high LSH men showed a greater amount of sexual objectification towards the woman in the video clips, this did not lead to an overperception of friendly affective cues as romantic.

The 95% Bias Corrected confidence intervals (CIs) for the indirect (mediated) effect of general sexual objectification towards women did not include zero in predicting romantic judgements of friendly affective cues at .24 (lower CI= .02; upper CI= .48). This indicated that the predictive effect of LSH group on romantic judgements of friendly affective cues was mediated by sexual objectification towards women in general. High LSH men showed a greater amount of sexual objectification towards women in general, which influenced their overperception of friendly affective cues as romantic. Please see Table 20, which shows the total, direct and indirect effects of both types of sexual objectification in the relationship of LSH groups on romantic judgements of friendly affective cues. Please see Figure 2, which shows the mediational model of the effect of LSH group on romantic judgements of friendly affective cues through both types of sexual objectification.

Table 20

Results of the mediation analysis of sexual objectification towards the woman in the video clips and sexual objectification of women in general in the relationship of LSH to romantic judgements of friendly affective cues (overperception bias) (n = 131).

	Coefficient	SE	*p*	BC Bootstrap 95% CI	
				Lower	Upper
LSH to Sexual objectification towards the woman in the video clips	2.26	.25	<.001		
LSH to Sexual objectification of women in general	1.12	.14	<.001		
Total effect of independent variables (IVs) on romantic judgements of friendly affective cues	.49	.12	<.001		
Model R^2	.11		<.001		
Direct effect of IVs on romantic judgements of friendly affective cues					
LSH	.27	.15	.073		
Sexual objectification towards the woman in the video clips	-.01	.07	.883		
Sexual objectification of women in general	.22	.13	.010		
Model R^2	.16		<.001		

continued

	Coefficient	SE	*p*	BC Bootstrap 95% CI	
				Lower	Upper
Indirect effect of IVs on LSH on romantic judgements of friendly affective cues					
Total effect	.22	.11		.01	.44 (sig)
Sexual objectification towards the woman in the video clips	-.02	.15		-.32	.26
Sexual objectification of women in general	.24	.12		.02	.48 (sig)

Note: SE = Standard Error, BC = Bias Corrected, CI = Confidence Interval, sig = significant
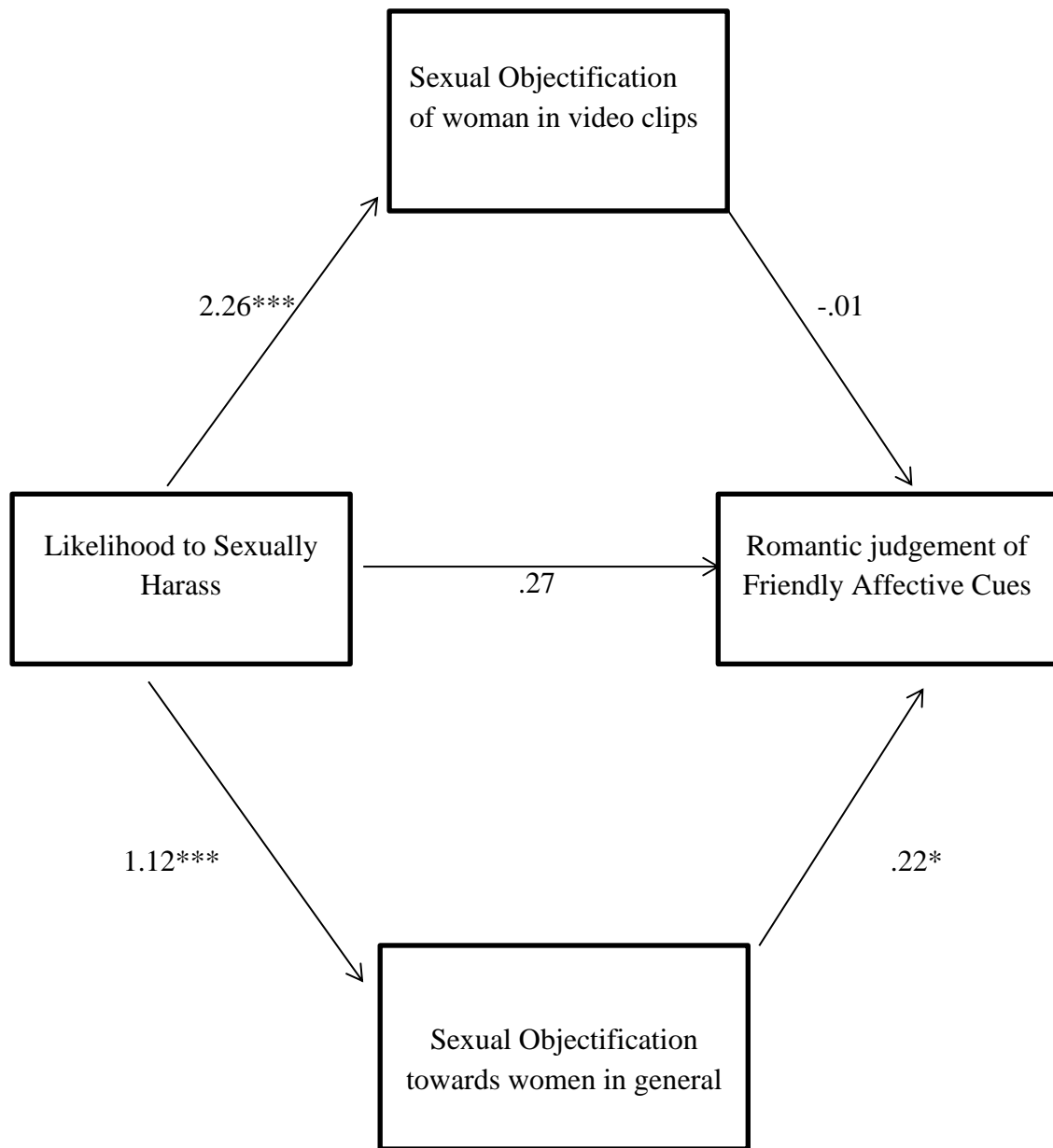
Figure 2: Mediational model of the effect of LSH group on Romantic judgement of Friendly Affective cues through sexual objectification. Unstandardized regression coefficients are listed. *Note*: *p<.05, **p<.01, ***p<.001. Coefficients reported below are noted to be significant when confidence intervals exclude zero. Indirect effect of LSH Group on romantic judgement of friendly affective cues through: Sexual objectification of woman in video clips only = -.02 (non-significant CI = - 0.32 to 0.26), Sexual objectification towards women in general only =.24 (significant; CI = 0.02 to 0.48). Total effect of LSH group on romantic judgement of friendly affective cues =.22 (significant; CI = 0.01 to 0.44).

Discussion

The aim of this study was to assess the impact of sexual and instrumental objectification on high in LSH men's heterosocial perception, through measuring specific sexual and instrumental objectification towards the woman in the TRAC and general sexual objectification, as well as assessing if specific sexual objectification and general sexual objectification mediate accurate perceptions of romantic affective cues as romantic and overperceptions of friendly affective cues as romantic. It is also an aim in doing this to determine if the biases of negativeness blindness and overperception of friendly affective cues as romantic evidenced in chapter 3 are present and replicated in this study, which will further evidence the prevalence of these biases for high LSH men. It was hypothesized that high LSH men would evidence poorer perceptual accuracy on bored and rejecting affective cues than low and medium LSH men evidencing negativeness blindness. This hypothesis was supported as men high in LSH showed worse perceptual accuracy on bored and rejecting affective cues than men low and medium in LSH showing negativeness blindness. This finding is supportive of chapter 3 where the same differences were found for these affective cues. The hypothesis was supported that high LSH men would judge friendly affective cues as romantic more than low and medium LSH men supporting an overperception bias. This finding aligns with chapter 3 where it was found that men high in LSH had worse perceptual accuracy than men low and medium in LSH for this overperception bias.

It was hypothesized that high LSH men will display higher specific sexual objectification towards the woman in the TRAC, higher general sexual objectification towards women and higher instrumental objectification towards the woman in the TRAC than low and medium LSH men. This hypothesis was supported as men high in LSH scored higher on all measures of objectification; namely specific and general sexual objectification, and instrumental objectification. It appears from this finding that men high in LSH are more

likely to perceive women as sexual objects (in specific situations when judging the woman in the video clips and when displaying sexual objectification to women in general) than men low and medium in LSH. Men high in LSH also appear to perceive women more as instrumental objects in specific situations in comparison to men low and medium in LSH, using women to meet their own goals and needs that are not necessarily sexual. As men high in LSH have a greater inclination to sexually harass, pursuing and bargaining with women for sex, manipulating and using them for sex, the finding that these men perceive women as objects, using them for their own sexual satisfaction and other personal gains, altogether suggests that objectification is an integral component in high in LSH men's perception and behaviour towards women.

Considering that men high in LSH displayed high sexual objectification and that the categorization of men high in LSH endorses using women for sexual gains, it was surprising that the hypothesis that accurate judgements of romantic affective cues and the likelihood to sexually harass would be mediated by sexual objectification for high LSH men was not supported. Although there was a significant finding for specific sexual objectification mediating these judgements the mediation was not in the expected direction; it was found that as specific sexual objectification affected the accuracy of romantic affective cues for high LSH men. Men who were high in LSH but less likely to objectify the woman in the TRAC were better in perceptual accuracy of romantic affective cues than those more likely to objectify the woman in the TRAC, therefore appearing as if objectification resulted in a clouding of perceptual accuracy for men high in LSH. General sexual objectification was not found to mediate these judgements. It appears that men high in LSH were not affected by overall objectifying views of women to categorize and identify female romantic behaviours, but rather their objectification of the specific woman in the TRAC video. These categorizations may be made without general sexual objectification of women influencing

their decision making. This indicates that men high in LSH who also are likely to sexually objectify women in specific contexts are less perceptually accurate when it comes to romantic affective cues. It could be that the sexual objectification lens through which they are viewing women in specific romantic settings may bias them towards seeing more sexual undertones than romantic ones, leading to less perceptual accuracy.

The hypothesis was partly supported that romantic judgements of friendly affective cues (evidencing an overperception bias) and the likelihood to sexually harass would be mediated by sexual objectification for high LSH men, in that general sexual objectification was significantly positively correlated with this bias for high LSH men. It appears that high general sexual objectification influences high LSH men's decision making when judging friendly affective cues. Men high in LSH may use a lens of sexual objectification of women to miscategorise female friendly behaviours as romantic. If high LSH men hold general beliefs that women are sexual objects then to them female positive affective cues would be likely construed as romantic as it fits with their belief as women acting and serving as sexual objects. Importantly specific sexual objectification did not mediate this overperception bias for high LSH men, so it was only general sexual objectification that appeared to influence their decision making. This suggests that high LSH men apply their general beliefs of women as sexual objects in making this bias towards a woman and that they are not making specific judgements on individual women as sexual objects separate to their general beliefs in women as sexual objects.

Another important finding in this study was that men high in LSH showed more perceptual misidentification on friendly, romantic, neutral, bored and rejecting affective cues than men scoring lower on LSH. This contrasted with chapter 3 where there were only differences found for negative affective cues in perceptual accuracy, although high LSH men's poorest perceptual accuracy in this current chapter was in the bored and rejecting

affective cues. The finding that they show better accuracy on positive affective cues suggests that it may be possible to anchor in the accuracy of these men's perception for positive affective cues from which to contrast and tackle deficits on negative affective cues. The misidentification of negative affective cues may be the most critical area to focus on in relation to tackling misinterpreting female negative heterosocial responses and sexual harassment, and focusing on the accuracy of positive affective cues may be a good starting point to build upon for intervention particularly as there is a smaller difference when comparing men high and low and medium in LSH on positive affective cues identification in comparison to negative affective cues.

The link between sexual objectification and romantic interpretations of friendly affective cues does support Ward (2000)'s theory of implicit theories since the finding that general sexual objectification does mediate romantic affective categorizations of friendly affective cues in high LSH men, shows that romantic categorizations can be used as a confirmatory bias to the theory of women functioning as sexual objects. Romantic behaviours may fit a psychological theoretical model whereby high LSH men sexualize women's behaviour, deeming them motivated and preoccupied with sex. Romantic behaviours can endorse women being seen to initiate sex and encouraging a sexual relationship, confirming the theory that women are acting in ways to show that they should be treated as objects of sex. This finding regarding the perception of men high in LSH suggests that the belief in women functioning as sexual objects may be key to these men's interpretations of women's social interactions with men and their subsequent behaviours towards women.

Sexual objectification may be tied to romantic categorizations for men high in LSH, which provides support for the guarding theory (Maner et al., 2012) of core beliefs. Categorizations of friendly affective cues as romantic may be preferred and protected as they support the core belief of sexual objectification of women for high LSH men. Romantic

categorizations embrace the belief that women are sexually motivated and sexually accessible (Maner & Ackerman, 2015), as well as reinforcing sexual objectification as a legitimate belief. Perceiving women as more romantically and sexually charged may reinforce the belief of them functioning as sexual objects. Exploring the link between romantic categorizations of women's behaviour and sexual objectification may explicate how significant sexual objectification is in influencing male romantic relationship perceptions and behaviours.

A key contributor to sexual objectification appears to be the impact of the sexual harassers' sex goals, which is shown through men high in LSH evidencing greater objectification on all three measures, as well as evidencing potentially more active and stronger sex goals that are noticeable through their LSH scores. This relationship is further supported through research showing that when men in general are primed with sex, they are more attracted to objectified female pictures, than non-objectified female pictures (Vaes et al., 2011). Sex goals seem to change the male perception towards women, focusing more on their physical features and making women more instrumental for sexual purposes. In line with this argument, once a person becomes instrumental to satisfy a goal, the person becomes interesting and more attractive to those for whom the goal is important (Gruenfeld et al., 2008). An active sex goal in men seems to be a sufficient condition to objectify female targets, with this objectification greater in men who are high in LSH, for whom those goals may be chronic and highly active.

The finding that instrumental objectification is high in men high in LSH is an important finding. Whilst sexual objectification has received more attention, instrumental objectification reveals much about the potential attitudes of sexual harassers towards women. Sexual harasser's may not only believe women's role to be sexual, but believe their role exists in relation to how it benefits the harasser's own success. High sexual objectification may co-occur with instrumental objectification, providing a psychology conducive for

exploitative and manipulative behaviours. Both types of objectification may have cumulative effects to exonerating techniques (Bernard et al., 2015), when perpetrators manage the moral interpretation of their own sexual harassment perpetration. These findings suggest that sexual harassers, not only focus on their sexual goals, but other goals that will benefit them. Whilst instrumental behaviours are evidenced by most people (Orehek & Weaverling, 2017) they are stronger and more pronounced in men high in the likelihood to sexually harass. Interventions will have to tackle sexual harasser's sexualisation of women as well as the instrumental tendencies of sexual harassers towards women, which are both individually highly threatening towards women let alone combined.

A limitation of this study is that the objectification measures could have primed sexual objectification and instrumental objectification when participants completed their responses on the LSH measure, potentially giving them a sex and instrumental goal, perhaps intensifying their instrumental and sexual framing of the woman when responding to the scenarios in the LSH measure, and subsequently increasing their LSH scores. When a sex goal is activated, men tend to focus on a woman's appearance and her sexual functions (Rudman & Borgida ,1995; Vaes et al., 2011) making it more likely that men perceive the women as a sexual object when responding to the LSH measure. This inadvertent priming could potentially influence men who would normally score low on LSH to provide higher LSH scores, with them being categorised erroneously as high in LSH.

There is also some overlap with the instrumental objectification scale and the quid pro quo nature of the LSH scale, with bargaining questions, such as "I think more about what this person can do for me than what I can do for her" and overlap with judgements of the occupational relationship value of women, such as "If the nature of my job or her job changed and this person wasn't helpful anymore, the relationship probably wouldn't continue" being present in the instrumental objectification scale. This is likely to have primed an instrumental

psychology when completing the LSH scale where questions focus on sexual bargaining often for female career development in occupational settings. This combined with the sexual priming from the sexual objectification scales is likely to have had a substantial effect when responding to the LSH scale. The cumulative nature of using three objectification measures may have made it increasingly likely that a sex goal and instrumental goal was primed when completing the LSH. Even men who would normally score high on LSH may have had their scores become more extreme on the LSH measure where their sex and instrumental goals have been activated and intensified through inadvertent priming. Positioning the LSH measure at a separate time point to the TRAC and objectification scales, with a presentation point of several days after the TRAC and objectification scales may have overcome this possible confounding component in this study, minimising any sexual and instrumental priming and carryover to the LSH scale.

Previous research has shown that sexual attraction can moderate the link between sex goals and objectification (Vaes et al., 2011). Although greater sexual attraction is connected to greater objectification (Vaes et al., 2011), it was not controlled for within this study. The greater sexual objectification evidenced by men high in LSH in this study may indicate greater sexual attraction to the female target in this study, although this link would need to be empirically supported. Vaes et al. (2011) suggest that it is not necessarily the type of female target but the relation a male perceives to have with a woman that determines whether dehumanization will occur. They argue that from the moment they feel sexually attracted and shift their focus from the personality to a woman's bodily features, attractive female targets risk to lose part of their humanity. It would be interesting to measure the objectification of women that men high in LSH perceive to be not attracted to, in measuring how strongly sexual attraction contributes as an influencer on these men's perception in comparison to already pre-existing generalized adversarial attitudes towards women (Diehl et al., 2012).

If overperception is linked to sexual objectification within high LSH men's psychology, then it will be of interest to test other affective cue categorizations such as 'promiscuous' and 'sexy', that may explicate how sexual objectification is tied to understanding sexual and romantic relationships with different "frames" of behaviour. Other categorizations may support other beliefs about women, such as promiscuity encouraging hostile beliefs towards women or sexiness categorizations exaggerating existing sexual objectification beliefs. Ways to overcome high LSH men's sexual objectification upon romantic categorizations may be evidenced through men's desire for a long-term relationship and relationship commitment. Research shows that commitment to one's romantic relationship inhibited aggression toward one's partner (Slotter et al., 2012), suggesting that whilst objectification may exist, it does not have to initiate or escalate into aggression against women. There may be inhibitory factors that affect the interdependence between men high in LSH and potential long-term romantic partners that override the urge for aggression or coercion from men high in LSH.

High sexual objectification within some men, serves to provide particularly dangerous foundations for the development of interpersonal relationships with women, potentially contributing to dysfunctional relationships with women, as well as placing women into threatening situations. Furthermore, existing research showing the detrimental impact of sexual objectification to women through decreased attributions of morality (Heflick,Goldenberg, Cooper, & Puvia, 2011), possessing less agency and humanness (i.e., having thoughts and intentions) and eliciting less moral concern (Cikara et al., 2011; Vaes et al., 2011; Loughnan et al., 2010), show that sexual objectification devalues the moral integrity of women, erroneously increasing blame upon women for their own sexual victimization (Bernard et al., 2015; Loughnan et al., 2013) and perceiving women as suffering less from the victimization. In another function, sexual objectification may serve to

exonerate the perpetrator from their actions and crimes towards women. Removing blame from the perpetrator by expunging it upon the victim, enables the perpetrator to remove themselves from social sanctions and self-sanctions through negative feelings such as guilt and shame. This study points to the potential risk that sexual harassers possess towards women, with them evidencing significantly higher objectification of women, which ultimately serves to hinder and restrict women's social functioning. Although, unlikely to be the sole instigator and motivator of misperceptions of women's social behaviours, objectification is an important area of intervention towards tackling its capacity in facilitating sexual harassment of women.

Altogether, this study has shown that men high in LSH display high specific and general sexual objectification and high instrumental objectification towards women. From this study it appears that sexual objectification is not used by high LSH men to support romantic categorizations of romantic affective cues but is used to support romantic miscategorizations of friendly affective cues, which could also serve to more readily exonerate and justify sexual harassment to them in supporting this bias. Romantic categorizations may be used as a confirmatory bias to the theory of women functioning as sexual objects supporting Ward (2000)'s theory of implicit theories. Categorizations of romance of friendly affective cues were given, supporting the core belief of sexual objectification of women for high LSH men and evidencing the guarding theory (Maner et al., 2012) of core beliefs. It may be that sexual objectification is more prominent in men who are high in LSH because their sex goals are chronic and highly active than those lower in LSH, and it is also important to recognise and tackle the impact of instrumental goals within high LSH men's treatment of women. It is of relevance to test other psychological components within high LSH men that explicate how sexual objectification may be connected to understanding sexual and romantic relationships such as sexual attraction, other

sexualized affective cue categorizations and the desire for long-term romantic partners. This study suggests that sexual objectification is connected to high LSH men's friendly affective cue overperception bias, and with existing studies showing that objectification has negative consequences on men's treatment towards women, it is vitally important to tackle both objectification and biases in these men's social interactions with women.

The evidence of men high in LSH's friendly affective cue overperception biases and perceptual inaccuracy for negative affective cues has been confirmed in chapters three and in this chapter suggesting that misperceptions may well be prominent in their psychology, calling for the need to investigate whether there are conditions or interventions where their biases and misperceptions are changed or at least weakened. The next chapter attempts to tackle the malleability and stability of these perceptual biases and misperceptions towards women.

CHAPTER SIX

The Impact of Cool Focus on Heterosocial Perception and the Simultaneous Effect on Objectification and Empathy in Men High in the Likelihood to Sexually Harass

An individual's behaviours can reflect their natural predispositions, but these behaviours may also be altered by their current mental state (Ayduk, Mishel, & Downey, 2002; Eisenberg, Fabes, Guthrie, & Reiser, 2000; Gross, 2001). Different mental states may shed light on how malleable underlying beliefs and motivations are through measurable perception differences. A recognised distinction in mental states that affect self-control, refers to a two-system framework (Metcalfe & Mischel, 1999): A cool, cognitive "know" system is contrasted against a hot, emotional "go" system. The cool system is cognitive, emotionally neutral, contemplative, flexible, integrated, coherent and slow in its nature. Importantly, the cool system is considered as the seat of self-regulation and self-control (Metcalfe & Mischel, 1999), allowing a different approach to cognitive processing and responding to tasks. The cool system allows a temporal lag that may be conceptualized as deliberation before a response pattern is initiated, therefore decelerating instinctive reactions emanating from predispositions. The hot system is impulsive and reflexive, which undermines efforts at self-control. The hot system is characterized by rapid automatic triggering, conditioned responding and inflexibility, accentuating predispositions. Influencing both the hot and cool systems may have differing effects on how male perceivers judge female affective cues.

The cooling system contributes to the reframing of perception so that a stimulus is perceived in a different way. For example, someone who is prone to anger outbursts

following disagreements or provocation, may be more reserved and respectful having attended a workshop that encourages distancing from impulsive reactions and urges (Mischkowski, Kross & Bushman, 2012). Distancing can reduce the feeling of difficulty caused by task complexity and task anxiety and improve self-belief to complete the task (Thomas & Tsai, 2012). In addition to this, an individual who is distracted by memory tasks, may be less likely to focus on their negative mood and self-criticism (Van Dillen & Koole, 2007), and in some cases improve mood (Broderick, 2005). Distraction via memory tasks may serve to reduce fear towards a fear-invoking stimulus such as a snake or a spider (Craske, Street, Jayaraman & Barlow, 1991). In a similar line of thought to the reframing of perception, Kelly (1955) identifies that an individual can construe events differently, viewing them in a different way. Reframing the meaning of the stimulus that produces the impulsive responses can alter perceptual outcomes and behaviours towards the stimulus. Reframing may inhibit an impulsive response in the face of temptation drawn from the impulsive meaning associated with the stimulus. Cooling processes can be conveyed through distraction by diverting activation away from the stimulus, with its pull toward the immediately gratifying response (Metcalfe & Mischel, 1999). Attention control could serve as a protective mechanism that can cool people's chronic impulsive reaction tendencies and vulnerabilities. Another technique that may serve the cooling system is distancing, by not avoiding attending to the stimulus, but attention re-deployment, focusing on other stimuli in the situation as the foci of attention. Attention is diverted away from the stimulus evoking the impulsive reactions and is given to other aspects of the perceptual field.

If men high in LSH evidence perceptual biases that favour an interpretation of women as sexually inclined or sexually available as has been shown by the misidentification of negative affective cues and overperception biases in chapters 3 and 5, as well as high sexual objectification towards these women (also in chapter 5), then it would be interesting and

worthwhile to consider how hard-set these psychological characteristics are in conditions that encourage more deliberation in judgements. A cooling psychological environment may evoke a psychology conducive to more balanced judgements upon women's affective cues. In contrast, a neutral psychological environment may be conducive to more impulsive and instinctive judgements upon women's affective cues, more in line with dispositional tendencies for high LSH men. It is of interest to discover whether perceptual accuracy is improved under cool conditions in comparison to neutral conditions.

In combination with existing cooling techniques of distancing and distraction (Metcalfe & Mischel, 1999), stimulating empathy levels may strengthen or weaken the cooling system. Empathy may alter how someone relates to another individual, adjusting existing judgements and softening harder judgements placed upon the individual. It may potentially provide a different starting point from which the cooling system operates from, with Scully (1988) theorizing that empathy may foster social control by encouraging self-regulation. Empathy may impact the duration and valence of appraisals and deliberations that someone uses to make judgements of another. Empathy has been identified as having a multi-dimensional nature incorporating an interplay of cognitive and affective factors (Aronfeed, 1968; Dovidio, Piliavin, Gaertner, Schroeder, & Clark, 1991; Feshbach, 1978). The definition of empathy applied to this study, is an intellectual capacity to comprehend and identify another's perspective (Cronbach, 1955; Mead, 1934; Regan & Totten, 1975) and an emotional capacity to experience the same feelings as another (Berger, 1962; Fenichel, 1954; Kagan, 1984; Katz, 1963; Stotland, 1969), reflecting both the intellectual and emotional components of empathy. Indeed, emotional recognition is an important part of empathy interacting with emotional judgements. Marshall, Hudson, Jones, and Fernandez (1995) proposed a model of empathy with emotion recognition as an important part for empathy to occur. Emotion recognition "requires that the observer be able to accurately discriminate the

emotional state of another person" (p.102). This suggests that empathy may be tied to affective cue recognition regardless of whether it is experimentally primed or not. Enhancing or inducing empathy in individuals may then facilitate a greater drive to accurately identify affective cues. In combination with distraction and distancing, empathy enhancement may create a strong concoction to enable better affective cue identification.

Men who are high in LSH have distinct psychological characteristics (Pryor et al., 1995) linking to potential empathy deficits. Typical characteristics of these men indicative of empathy deficits include an authoritarian personality (Begany & Milburn, 2002), adversarial sexual beliefs (Pryor, 1987), and a desire to control one's sexual partner (Pryor & Stoller, 1994). Sexual coercers have been characterized as lacking a social conscience and engaging in immature and irresponsible behaviours (Kosson et al., 1997; Rapaport & Burkhart, 1984) and manipulative and exploitative behaviours using verbal coercion (Kosson et al., 1997), with sexually coercive men more likely to manipulate and exploit an intoxicated woman for sex. Kosson et al., (1997) even found when assessing personality traits and sexual aggression in college men, that there was a strong link between psychopathic traits and sexual coercion. These findings are suggestive that empathy deficits may well be a significant factor in male sexual harassers' perceptions of others and the behaviours that they evidence towards them. Empathy deficits across a range of studies may be suggestive of both state and trait empathy deficits. The difference between both types of empathy is that trait empathy is a characterological factor that remains as a foundation rather than changing from situation to situation. State empathy is empathy that is believed to be changeable according to the situation at hand. Sexual harassers may show deficits in trait empathy because a range of studies (Begany & Milburn, 2002, Kosson et al., 1997; Pryor, 1987; Pryor & Stoller, 1994; Rapaport & Burkhart, 1984), has shown harassers to possess personality traits that lack empathy. This deficit in trait empathy is expected to also be expressed in deficits of state

empathy whereby the trait empathy deficit is dominant and persistent across a range of situations. It is anticipated that men high in LSH will evidence less trait and state empathy in comparison to men low and medium in LSH. However, cooling conditions are expected to affect state empathy levels, which are unstable and prone to fluctuation. Empathy enhancement, as part of the cooling system is expected to stimulate the empathy levels of participants in a way that encourages them to show greater empathy towards the woman in the video clips.

Drawing on the cool systems analysis of self-control (Metcalfe & Mischel, 1999), we can examine whether attentional focus adjusts perceptual biases. The Cool system as applied in this study is briefly outlined below for clarity.

Cool system

The cool system is the locus of cognitive mediational processes (Metcalf & Mischel, 1999), generating thoughtful reflective reactions and responses. Effective self-regulation should be possible by flexible and strategic attention deployment on features that allow the individual to access the cool system and attenuate hot-system arousal and thus, to break reflexive stimulus-response contingencies. Identifying protective mechanisms towards reflexive stimulus-responses may point to potential interventions aimed at reducing perceptual biases to affective cues, via diluting the impact of instinctive and habitual responses towards social information. There are three techniques of the cooling system that will be incorporated into this study, namely, distraction, distancing and empathy enhancement, which are explained in turn below.

Distraction

Distraction, by definition, represents a cognitive conflict. Responses elicited by the task at hand are brought into conflict with reactions (e.g., orienting responses) to the distracting stimulation (Sanders & Baron, 1975). Distraction is distinguished from inattention in that distraction involves an explicit activity that competes for attention as compared with a cognitive state (e.g., drowsiness or fatigue) that leads to diminished capacity to attend. Distraction is often seen as a technique to disrupt rumination and counterargument inhibition (Keating & Brock, 1974; Sevdalis & Harvey, 2009) reducing the number of favourable thoughts generated. As well as cognitive processing, distraction also has had an impact on sexual arousal. Sexual arousal, as measured by changes in penile tumescence, varied directly as a function of the complexity of the distracting or interfering cognitive operations (Geer & Fuhr, 1976), supporting the argument that alterations in cognitive processing affect sexual arousal. Distraction overall may work by inhibiting the dominant cognitive response to stimuli and therefore it can result in either enhanced or reduced normal responses.

Distancing

The distancing construct may be viewed as a "spatial metaphor representing the mental separation of the self from the ongoing present" (Sigel, Stinson & Kim, 1993, p. 214). It captures the phenomenon that human beings can step back and withhold an immediate response, survey the environment, and reflect on the course of action instead of being dominated by immediate stimulation. It is also termed as "Shifting" which means the ability to shift focus from one aspect of a problem to another or to shift perspectives. Shifting encompasses the ability for oneself to detach themselves from the problem or issue and shifting abilities generate psychological distance because they create alternatives to the representation of a problem. It is argued that when the individual is becoming aware of and addressing discrepancies between current behaviour and situational demands, this creates

psychological distance. At the same time, shifting abilities may "cool" the problem space through emotion regulation (Muller, Zelazo & Imrisek, 2005). Emotional control and regulation are important because of the suggestion that people's attempts to understand their feelings often fail because they analyse their feelings from a self-immersed perspective rather than a self-distanced perspective (Ayduk & Kross, 2010). Emotional reactivity and intrusive ideation may be curbed by psychologically moving to another perspective that is not entrenched in arousal, and thoughts with a deep emotional connection, and where the intensity of negative and unhelpful ideations is reduced.

Empathy Enhancement

In line with distancing and shifting, empathy through having greater understanding and sensitivity to another, may enhance the cooling system. Empathy is the ability to take on another's perspective and by doing this it transfers the individual's focus on their own thoughts and feelings, to the other's thoughts and feelings, reducing focus and concentration on their own instinctive responses and the intensity of their own negative ideations. This switch or shift in focus can enable the individual to detach from their own natural responses and focus on the other's situation.

Empathy may naturally exist with individuals as it can be considered as trait based, but it can vary depending on the situation (state empathy). Enhancement may occur by altering the environments and information which the individual makes their empathy judgements on. By supplying information that favours a more positive emotional connection and evaluative appraisal of the individual, may enhance empathy. Supplying positive information about the target individual's behaviours and characteristics may encourage a greater empathic connection to the target.

It must be noted that empathy may impact on the objectification of an individual as both empathy and objectification share an interrelationship where one affects the other. Empathy deficits have been evidenced in men who sexually offend, and they have been linked to their lack of responsibility for their crimes and blame towards their victims, with cognitive distortions and rape myth acceptance at a greater level in sex offenders who showed lower empathy towards their victims (Pithers, 1999). This psychology is supportive of the offender's instrumental treatment towards their victims, as it endows responsibility on the victims for the crimes that happened to them, in a manner that dehumanizes and simplifies them. Blaming the victim's volitional control of their own behaviours, including their appearance, location they choose to be, and social interactions that they choose to engage in with men is part of the victim blaming process. In addition to this, when people are encouraged to focus on the personhood of a female, they are more likely to attribute empathy supportive features in the target such as morality and warmth (Heflick et al., 2011) than when participants were instructed to focus on the female's physical appearance. It appears that greater objectification is detrimental to empathy and reduces its levels, but in contrast reduced objectification could well be connected to greater empathy.

In considering this relationship, empathy enhancement is expected to have a dual impact of objectification reduction and as part of an overall cooling system impacting on affective cue judgement. Empathy is expected to reduce instrumental and sexual objectification towards the female in the video clips. The cooling system should have an effect of changing the psychological space, from which judgements are made, encouraging broader and more diverse thinking, which may lead to reduced objectification. If the cooling system creates a psychological space, which facilitates change then this may be conducive to the individual disengaging from their hardened attitudes and beliefs, in a way that stimulates a more dispassionate interpretation of the woman, away from objectification.

Present Study

Aim

The aim of this study is to test the impact of the cooling system on men high in LSH and whether it can reduce biases such as negativeness blindness and overperception bias as is evidenced in chapters 3 and 5, as well as result in reduction of high instrumental and sexual objectification towards the same women as is evidenced in chapter 5 and the impact on state and trait empathy. It is of interest to discover whether perceptual accuracy is improved under cool conditions in comparison to neutral conditions.

Hypotheses

Hypothesis 1: It was hypothesized that perceptual accuracy for the bored and rejecting affective cues (negativeness blindness) will be better for high LSH men in the cooling conditions than high LSH men in neutral and low empathy conditions.

Rationale: A cooling system was created to test if high LSH men's affective cue identification is improved under conditions that facilitate self-regulation and self-control (Metcalfe & Mischel, 1999), allowing a different approach to cognitive processing and responding to tasks. Cooling conditions may encourage more deliberation in judgements and may evoke a psychology conducive to more balanced judgements upon women's affective cues, thus decelerating instinctive reactions emanating from these men's predispositions. From reviewing the cooling system components of distraction, distancing and empathy enhancement it appears they may serve in combination to enable better affective cue identification. Distraction may work by inhibiting these men's dominant cognitive response to stimuli by interfering with normal responses. Distancing may allow these men to detach themselves from the situation and create alternatives to the representation of that situation. Furthermore, empathy enhancement may alter how these men relate to the female in the TRAC, adjusting existing judgements and softening harder judgements placed upon the

female and in addition to this, by them focusing more on the female's situation as opposed to their own. In sum, this tripartite cooling system is expected to impact high LSH men's perceptual accuracy, potentially negating some of the negativeness blindness resulting in better affective cue identification of bored and rejecting affective cues of the female in the TRAC videos. The cooling system may serve to better detach the high LSH man from biases that support EMT. Specifically, men high in LSH may be able to detach from some of their sexual cognitions via the cooling system. This should then lead them to sexualise female's affective cues less, enabling better affective cue identification.

Hypothesis 2: It was hypothesized that high LSH men will show less misjudgements of friendly affective cues as romantic (evidencing an overperception bias) in the cooling condition than high LSH men in neutral and low empathy conditions.

Rationale: Similarly to the previous rationale, the cooling system is expected to impact high LSH men's perceptual accuracy, potentially negating their romantic judgements of friendly affective cue overperception bias due to better affective cue identification. This may enable them to show fewer misjudgements of friendly affective cues as romantic when judging the female in the TRAC videos. The cooling system may serve to better detach the high LSH man from biases that support EMT. Specifically, men high in LSH may be able to detach from some of their sexual cognitions via the cooling system. This may lead them to sexualise women's affective cues less. Accurately identifying a friendly affective cue could be sufficient to them in this situation as there is less of an incentive to overperceive this as a romantic affective cue. This is likely to be because men may be less focussed on accessing and missing out on a sexual opportunity.

Hypothesis 3: It was hypothesized that high LSH men will evidence less instrumental and sexual objectification towards the woman in the TRAC in the cooling condition, than high LSH men in neutral and low empathy conditions.

Rationale: If a man shows greater objectification towards another individual this is likely to affect the empathy shown towards them. In contrast, a reduction in objectification could be connected to and affected by greater empathy levels (Pithers, 1999, Heflick et al., 2011). Empathy is expected to change how the perceiver relates to the perceived in a way that stimulates greater perspective taking and emotional connection, and this impact is more likely to change the perceiver's focus away from the objectified features of the individual to focus on their personhood. Increasing empathy through the cooling system is expected to reduce instrumental and sexual objectification towards the female in the TRAC. The cooling system should altogether enhance empathy levels as well as encourage a psychological space, which may be conducive to the individual disengaging from their hardened attitudes and beliefs in a way that stimulates a more dispassionate interpretation of the woman away from objectification. Although this change is not expected to reduce high LSH men's objectification scores to a lower level than low and medium LSH men, it is expected that high LSH men will evidence less instrumental and sexual objectification towards the woman in the video clips in the cooling condition, than high LSH men in neutral and low empathy conditions.

Hypothesis 4: It was hypothesized that high LSH men will evidence more state empathy in the cooling condition, than high LSH men in neutral and low empathy conditions and that high LSH men will evidence less trait empathy than low and medium LSH men. The trait empathy finding will contrast with state empathy, with state empathy expected to be increased in the cooling condition for high LSH men.

Rationale: Similarly to the previous rationale in accounting for the impact of empathy, empathy is expected to change how the perceiver relates to the perceived in a way that stimulates greater perspective taking and emotional connection to the perceived. Therefore, it is expected that men high in LSH who have been in the cooling condition, will show greater

state empathy towards the female in the TRAC than those men high in LSH in the other

conditions where high empathy is not encouraged and stimulated. Cooling conditions are

expected to positively affect state empathy levels, which are unstable and prone to

fluctuation. In contrast trait empathy is a more stable and static measure. In considering this

static measure of empathy, if there are similarities in the psychology of men high in LSH and

male sexual coercers, then men high in LSH may show similar deficits in trait empathy. As

men high in LSH and sexual coercers have shown a pervasiveness of a lack of empathy

across a range of studies (Begany & Milburn, 2002, Kosson et al., 1997; Pryor, 1987; Pryor

& Stoller, 1994; Rapaport & Burkhart, 1984), evidencing a personality with low trait

empathy, this could also be evidenced for men high in LSH and their empathy towards others

in this study. It is expected that men high in LSH will evidence less trait empathy than men

low and medium in LSH, and this is expected across conditions as trait empathy is a static

measure that should not be affected by condition.

Method

Participants

Four hundred and sixty-nine male international participants were recruited online

through the Prolific Academic crowdsourcing platform. After excluding one hundred and

fifty-three participants who failed to complete or finish the study, a final sample of 316

participants were retained for data analysis. Average age was 28.75 years. Participant ages

ranged from 18 to 71 years ($M = 28.8$, $SD = 8.8$). The sample reported their ethnic origin as

White/Caucasian (67.1%, $n = 212$), Asian (6%, $n = 19$), Latino (2.8%, $n = 9$), Mixed (1.6%, $n = 5$), other (21.2%, $n = 67$), or did not disclose (1.3%, $n = 4$). Participants reported their

nationality as American (27.2%, $n = 86$), British (14.9%, $n = 47$), Portuguese (8.5%, $n = 27$),

Canadian (6.3%, $n = 20$), Polish (5.7%, $n = 18$), Italian (4.8%, $n = 15$), Spanish (3.8%, $n = 12$), Other (27.5%, $n = 87$), or did not disclose (1.3%, $n = 4$). All participants met the pre-

requisite criterion of identifying as fluent English speakers. All participants were paid £2.50 in compensation.

Design

Participants were randomly assigned to one of three conditions in a three factor design; perception: cool, neutral or low empathy conditions, LSH level: Low/Medium LSH and High LSH and Ethnicity: White and Asian/Other & Not Disclosed[24]. The decided cut off was again 60% and over to mark High LSH participants as in chapter 4 as these two studies were run in parallel to each other and thus a similar cut off was followed before switching to the original 80% cut off that was followed in chapter 5.

Measures

Cool and Low Empathy Scenarios

The Cool and Low Empathy scenarios were inspired by the methodology of Metcalfe & Mischel, 1999. The scenarios focused on descriptions that either encourage (Cool condition) or discourage (Low Empathy condition) empathy. Distraction was incorporated into the Cool scenario by asking the participant to engage in a memory test which involved two parts; a number and letter combination to memorize, and three questions asking the participant to memorize the colours of items in the room in each of the video clips of the TRAC (the colours of the items were the same in each video clip). Participants were asked to recall the number and letter combination and colours of items in the room following the last video clip in the TRAC (video clip number 10). Distancing was incorporated into the Cool

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[24] Asian participants were pooled into the Other/Not Disclosed group for the analyses in this study as there were too few numbers for a sufficient comparison to other ethnicities. For example, in the low empathy low and medium LSH condition there were only 4 Asian participants and in the low empathy high LSH condition there were 0 Asian participants.

scenario by asking the participant to focus on the physical structures and lighting in the rooms in each of the video clips in the TRAC.

Vignettes were created in this study to encourage low and high empathy towards the female in the TRAC video clips. There are several situational variables that can impact upon the level of empathy someone shows towards another person (Blader & Tyler, 2002; Davis, Mitchell, Hall, Lothert, Snapp & Meyer, 1999; Decety & Cowell, 2015): these are seeing the other person as having a helpful nature (Bereczkei, Birkas & Kerekesl, 2010; Whiting, Podsakoff & Pierce, 2008), managing adversity (Blader & Rothman, 2014; Lim & De Steno, 2016) and showing a careful and resourceful nature (Decety & Yoder, 2016; Pelligra, 2011). As these variables have been shown to increase empathy towards another, they were included in the vignette that had the objective of enhancing the empathy experienced by participants towards the female in the TRAC video clips. This vignette described the female as helpful (she has helped a new member of staff today to give them help and travel directions/ she bakes for her parents once a week), facing adversity (she has to pay out for car repairs and a student loan/ She has a broken tap in her kitchen at home) and being careful and resourceful (She is good at budgeting her money/ always gets to work on time). In contrast, the opposite of these variables was applied to the vignette that had the objective of reducing the empathy experienced by participants towards the female in the TRAC video clips. This vignette described the female as selfish (gives little support to work colleagues/ she rarely visits her sister who has been taken ill), lucky/fortunate (She lives in a lavish apartment in the centre of the city/ manages to avoid the rush hour traffic) and reckless (She had a pet dog that she had to give away because she couldn't care for it/ She is reckless with money and spends too much money on clothes and accessories and owes money on a personal loan). To check whether these vignettes showed high and low empathy as expected, manipulation checks were conducted on the vignettes within the main study.

The vignettes for both the Cool and Low Empathy conditions are presented below:

Cool Scenario

Please read the below scenario about a female you will see in future video clips.

You work in an office unit in the advertising and printing department. You know a female work colleague in the unit who is aged in her early 20s. She has helped a new member of staff today to give them help and travel directions. She bakes for her parents once a week and cares for her sick sister. She walks her dog daily. She is a member of the local rounder's team and organises their matches. She is good at budgeting her money but has to pay out for car repairs and a student loan. She has a broken tap in her kitchen at home, which she is waiting to be fixed. She travels a long distance to work, has to manage a lot of traffic on the road, but always gets to work on time. She is helpful to her colleagues and often takes on extra work to help others at work.

Instructions that followed the scenario

When viewing the video clips think about them in terms of their objects and the spatial relations between them. What's the lighting like? Where is the table positioned in the room? Look where the chairs are in relation to the table? Look where the bags and jacket are positioned? Look where the walls are in relation to the table? Look where the carpet is in relation to the table and chairs? Look where the spare tables are positioned in the background?

There will also be a memory test at the end of the 10 video clips. It is important to complete the memory test by completing the following actions. Please rehearse the following 3 letter and number combinations when viewing the video clips:

1X   2Y   3Z

At the end of the 10 video clips, you will be asked to recall this letter and number combination.

In addition, you are asked to recall the colour of the table in front of the female, the colour of the chair the female is sitting on and the colour of the walls in the video clip, at the end of the 10 video clips. Please pay attention to the colour of these items when viewing the video clips.

This scenario created distraction via the memory task to memorise objects and the alpha and numerical combination (mathematical algebra). These components were created to put high load on working memory, as it is well established that the ability to focus attention deteriorates under conditions of high load on cognitive control processes such as working memory (Konstantinou, Beal, King, & Lavie, 2014; Lavie, 2010). The algebra task was chosen in addition to the objects, as numerical tasks have been shown to place a heavy load on working memory (Ashcraft & Kirk, 2001; Beilock & Carr, 2005). Altogether, high working memory load during task performance should result in greater distractor interference.

Distancing in the scenario was created from adapting self-distancing techniques used by previous researchers (Ayduk & Kross, 2008; Kross, Ayduk & Mischel, 2005), which explicitly instructed participants to adopt a self-distanced perspective. The technique encourages participants to change their orientation and perspective to tasks along the dimensions of time and space leading people to adopt a broader perspective on tasks, facilitating self-regulation (Fujita, Trope, Liberman & Levin-Sagi, 2006; Trope & Liberman, 2010). Questions are asked of the participant to distance them psychologically from the present in time (time) and distancing further away in physical space from the task (space). By focusing attention to the placement of objects and the relationship of objects to the people in

the room, the participant perspective is traversed so the situation can be evaluated with a different frame of mind. This will serve to encourage more global perception as opposed to specific perception (Trope & Liberman, 2010).

Empathy levels were induced using the two newly designed vignettes that were compatible in narrative to the women acting within the TRAC; one vignette to enhance empathy (cool condition) and one vignette to reduce empathy (low empathy condition). The use of vignettes has been applied successfully within research with men high in sexual aggression to differentiate empathic responses (Fernandez & Marshall, 2003; Fernandez, Marshall, Lightbody, & O'Sullivan , 1999; Hanson & Scott, 1995; Neutze, Seto, Schaefer, Mundt, & Beier, 2012). The use of vignettes allows empathy level induction to be standardized amongst all participants, minimizing subjective interpretations that can occur with more individual self-report or disclosure measures. Manipulation checks were completed to test whether these vignettes had the intended effect upon empathy. These checks are described below.

Manipulation Check

A manipulation item was employed to test how much state empathy the participant felt towards the female, immediately, following the Cool scenario vignette (before viewing the video clips). Mean empathy in the cool condition was 3.68 out of a maximum of 5, showing that participants felt empathy towards the female, which was above the middle of the empathy scale (Batson's Impressions and Feelings Questionnaire, 1987). Standard deviation was 0.73. The empathy measure used was the same measure used to measure state empathy following each video clip. Please see the state empathy measure explanation below.

This manipulation check showed that the Cool scenario vignette had the intended effect of making participants feel high empathy towards the female prior to viewing the video clips.

Low Empathy Scenario

Please read the below scenario about a female you will see in future video clips.

You work in an office unit in the advertising and printing department. You know a female work colleague in the unit who is aged in her early 20s. She works independently and gives little support to work colleagues. She has ongoing disputes with her parents over a family summer holiday and she rarely visits her sister who has been taken ill. She had a pet dog that she had to give away because she couldn't care for it. She is reckless with money and spends too much money on clothes and accessories and owes money on a personal loan. She lives in a lavish apartment in the centre of the city. She lives close by to work, manages to avoid the rush hour traffic, although is sometimes late for work. She is not always helpful to colleagues at work and refuses to take on extra work to help others at work.

Instructions that followed the scenario

When viewing the video clips think about your experience in terms of the feelings and emotions involved. How does your heart beat? How does your face feel? How does your body feel? What sensations do you feel? How is your breathing? Let yourself feel the event as if you were right there, living it and experiencing it[25].

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[25] The additional focus in the vignette encouraging reflection on body sensations was added so as to make the experience of viewing and completing responses to the TRAC more immediate and absorbing. This is in contrast to the distancing method applied in the Cool scenario that encourages a more distant and global perspective when viewing and completing the TRAC.

Manipulation Check

A manipulation item was employed to test how much state empathy the participant felt towards the female, immediately, following the Low Empathy vignette (before viewing the video clips). Mean empathy was 2.35 out of a maximum of 5, showing that participants felt empathy towards the female, which was below the middle of the empathy scale (Batson's Impressions and Feelings Questionnaire, 1987). Standard deviation was 0.81. The intended effect was achieved with the mean empathy displayed less than the mean empathy in the Cool scenario. The empathy measure used was the same state empathy measure as was used to measure state empathy following each video clip. Please see the state empathy measure explanation below. This manipulation check showed that the Low Empathy scenario vignette had the intended effect of making participants feel less empathy towards the female prior to viewing the video clips. An independent samples t-test was completed to test for a significant difference in empathy scores between the Cool scenario (M=3.68, SD=0.73) and the Low Empathy scenario (M=2.35, SD=0.81), $t(211) = 12.54$, $p<.001$. This finding showed that the Low Empathy scenario participants displayed significantly lower empathy than those in the Cool scenario, showing that both scenarios had their intended effect of producing higher (Cool scenario) and lower (Low scenario) empathy towards the female, prior to viewing the video clips.

Test of Reading Affective Cues (TRAC)

This scale is the same scale used across this thesis. Mean scores were created by averaging video clips that evidenced the same affective cue according to the normative sample in chapter 2.

State Empathy

State empathy was measured using Batson's Impressions and Feelings Questionnaire (1987). The measure was chosen as it incorporates both affective (Moved, Compassionate etc.) and intellectual (Concerned and Blaming of Her) aspects of empathy, as well as being compatible to be used towards the female in the TRAC as all questions can be directed towards the female apart from one question. This measure incorporated 6 questions asking how the participant feels towards any woman on a five-point Likert scale 1(Not at all to) to 5 (Very Much) on Empathic, Moved, Sympathetic, Compassionate, Concerned and Blaming of Her components. The Blaming of Him component was removed from this study because it measures empathy towards the male actor, which was not the focus of this study. The measure was adapted to this study by asking the participants to complete it following each video clip in the TRAC and the measure asked how the participant felt towards the woman in the video clip just viewed. The scale showed excellent internal reliability ($\alpha = .93$). A composite mean of state empathy was created by averaging across all six components. This measure is provided in Appendix IV.

Specific Sexual Objectification Scale

This measure is the same as was used in chapter 5, which was adapted from Zolot's (2003) Men's Objectification of Women Measure asking 20 questions on a seven point Likert scale, from 1 = Disagree Strongly to 7 = Agree Strongly. This scale was adjusted to the TRAC video clips by relating the questions only to the woman in the video clips. Four questions are reverse coded as in the original scale. The scale showed excellent internal reliability ($\alpha = .85$). This measure was combined with the instrumental objectification measure for the TRAC video clips, which also has a seven-point Likert scale question response. A composite measure of sexual objectification was created by averaging across all 20 questions of the scale. This scale is provided in Appendix II (Questions 1 to 20).

Instrumental Objectification Scale

This measure is the same as that used in chapter 5. This measure was devised by Gruenfeld et al., (2008) in their power and objectification studies and encompasses 10 questions on a Likert scale of 1 = Disagree strongly to 7 = Agree Strongly. This scale was adjusted to the TRAC video clips by relating the questions only to the woman in the video clips. Three questions were reverse coded as in the original scale. The scale showed acceptable internal reliability (α = .62). A composite measure of instrumental objectification was created by averaging across all 10 questions of the scale. This scale was combined with the sexual objectification scale for the TRAC and is provided in Appendix II (Questions 21 to 30).

Trait Empathy

This was measured using the Interpersonal Reactivity Index (Davis, 1980, 1983) asking participants their thoughts and feelings in a variety of situations. These situations were unrelated to the TRAC video clips. Again, an advantage of using this measure, similarly to the state empathy measure used, is that it incorporates both affective (Empathic Concern and Personal Distress) and intellectual (Fantasy Empathy and Perspective Taking) aspects of empathy. This measure incorporated 28 questions using a Likert scale of 1 = Not Much to 5 = Very Much, reflecting the extent to which each test item accurately describes them. Eight of the 28 questions are reverse coded. There are four different subcomponents in this measure of trait empathy; *Fantasy Empathy*; the capacity to identify with fictitious characters in movies, plays and books, *Empathic Concern*; the affective capacity to be compassionate toward others experiencing distress, *Perspective Taking*; a cognitive ability to anticipate and understand another's point of view and *Personal Distress*; the extent to which one feels anxious and uncomfortable when witnessing others' anguish. Each subcomponent was tested in 7 questions per subcomponent. A composite measure for trait empathy is created by

averaging across all 28 items. The 28 item scale showed excellent internal reliability (α = .83). This measure is provided in Appendix V.

Likelihood to Sexually Harass Scale (Pryor, 1987)

This is a scale to measure how likely an individual is to sexually harass. It incorporates 10 vignette scenarios describing a different female in a particular situation in each vignette. There are three questions asked after each vignette from 1 (Not at all Likely) to 5 (Very Likely). Importantly the second question (question B) asks the quid pro quo question; of how likely the individual is to help a woman described in the vignette in exchange for sexual favours. A cumulative score of Likelihood to Sexually Harass can be completed by averaging the score on question B across all 10 vignettes. This measure is provided in Appendix I.

Procedure

Participants completed an online questionnaire. This study was first approved by the School of Psychology Ethics Committee at the University of Kent. Participants were informed that the purpose of the study was to examine "social perception" in order to minimise response bias. After providing written informed consent, participants were asked to provide certain personal and demographic information. Participants completed the Cool, Low Empathy or no vignette depending on what condition they were in, then the TRAC scale followed by state empathy scale after each video clip, the sexual objectification scale, instrumental objectification scale, the trait empathy scale and finally the Likelihood to

Sexually Harass scale. Participants were fully debriefed in writing upon completion of the study.

Results

Negativeness Blindness

A 2 x 3 x 2 MANCOVA was performed to determine the effect of LSH group (low/ medium and high), Perception condition (Cool, Neutral or Low Empathy) and Ethnicity (White and Asian/Other/Not disclosed) on affective cue judgements (friendly, romantic, neutral, bored and rejecting) with age entered as a covariate. The analysis revealed a significant main effect of LSH group, $F(5, 297) = 15.27$, $p < .001$, $\eta^2 = .20$. There was a marginally significant main effect of Condition, $F(10, 594) = 1.78$, $p = .061$, $\eta^2 = .03$. There was no significant main effect of Ethnicity $F(5, 297) = 0.69$, $p = .631$, $\eta^2 = .01$. There was no significant interaction effect of LSH group and Condition, $F(10, 594) = 1.29$, $p = .230$, $\eta^2 = .02$ and no significant interaction effect of LSH group and Ethnicity, $F(5, 297) = 0.68$, $p = .640$, $\eta^2 = .01$. There was a significant interaction effect of Condition and Ethnicity $F(10, 594) = 2.48$, $p = .007$, $\eta^2 = .04$. There was no significant three way interaction effect of LSH group, Condition and Ethnicity, $F(10, 594) = 1.38$, $p = .185$, $\eta^2 = .02$. The covariate of Age was non-significant, $F(5, 297) = 1.71$, $p = .133$, $\eta^2 = .03$. Univariate ANOVAs were performed on affective cue judgements (friendly, romantic, neutral, bored and rejecting) with a Bonferroni corrected significance level of .01.

As there was a significant main effect of LSH group, this was examined more closely. For LSH group there was a significant effect for all affective cues but neutral ($F(1, 313) = 5.94$, $p=.015$, $\eta^2 = .02$.): Friendly $F(1, 313) = 20.49$, $p<.001$, $\eta^2 = .06$, which showed that those reporting high LSH ($M = 1.46$, $SD=.64$) showed greater perceptual misidentification on

the friendly affective cues than those reporting low and medium LSH ($M = 1.12$, $SD=.34$), Romantic affective cues, $F(1, 313) = 12.06$, $p= .001$, $\eta^2 = .04$, which showed that those reporting high LSH ($M = 1.50$, $SD=.60$) showed greater perceptual misidentification on the romantic affective cues than those reporting low and medium LSH ($M = 1.20$, $SD=.42$), Bored affective cues, $F(1, 313) = 45.79$, $p<.001$, $\eta^2 = .13$, which showed that those reporting high LSH ($M = 1.79$, $SD=.70$) showed greater perceptual misidentification on the bored affective cues than those reporting low and medium LSH ($M = 1.25$, $SD=.39$) and finally, Rejecting affective cues, $F(1, 313) = 67.09$, $p<.001$, $\eta^2 = .18$, which showed that those reporting high LSH ($M = 1.81$, $SD=.89$) showed greater perceptual misidentification on the rejecting affective cues than those reporting low and medium LSH ($M = 1.13$, $SD=.36$).

As there was a marginally significant main effect of Condition this was examined more closely. There was no significant main effect of Condition for Friendly affective cues, $F(2, 313) = 4.12$, $p = .017$, $\eta^2 = .03$, Romantic affective cues, $F(2, 313) = 1.24$, $p = .291$, $\eta^2 = .01$, Neutral affective cues, $F(2, 313) = .24$, $p = .788$, $\eta^2 = 0$ and Bored affective cues, $F(2, 313) = 3.84$, $p = .023$, $\eta^2 = .03$. There was only significant main effect for Condition for Rejecting affective cues, $F(2, 313) = 4.81$, $p = .009$, $\eta^2 = .03$. Post hoc comparisons (Bonferroni) revealed the Low Empathy condition *(M = 1.28, SD = .58)* showed greater perceptual misidentification on rejecting affective cues than the Cool *(M = 1.14, SD = .42, p < .01)* condition.

As there was a significant interaction effect for Condition and Ethnicity this was examined more closely. The univariate ANOVA showed that there was a significant effect for friendly affective cues, $F(2, 313) = 5.71$, $p = .004$, $\eta^2 = .04$. For White ethnicity, there were significant effects for Condition for Friendly affective cues, $F(2, 223) = 3.71$, $p =.026$, $\eta^2 = .03$. However, post hoc comparisons (Bonferroni) revealed there was no differences between the conditions for white ethnicity; Low Empathy *(M = 1.27, SD = .56)* and Cool *(M*

= 1.10, *SD* = .30, *p* = .057), Low Empathy *(M* = 1.27, *SD* = .56) and Neutral (*M* = 1.10, *SD* =

.33, *p* = .063) and Cool (*M* = 1.10, *SD* = .30) and Neutral (*M* = 1.10, *SD* = .33, *p* = 1.00). For

Asian/Other/Not Disclosed ethnicity, there were no significant effects for Condition for

Friendly affective cues, $F(2, 89) = 0.11$, $p = .90$, $\eta^2 = 0$. There were no significant effects for

Condition and Ethnicity for Romantic affective cues, $F(2, 313) = 0.04$, $p = .962$, $\eta^2 = 0$,

Neutral affective cues, $F(2, 313) = 0.86$, $p = .424$, $\eta^2 = .01$, Bored affective cues, $F(2, 313) =$

1.33, $p = .267$, $\eta^2 = .01$ and Rejecting affective cues, $F(2, 313) = 0.15$, $p = .862$, $\eta^2 = .0$. The

F ratios and significance for the effect of LSH group, Perception Condition and Ethnicity on

friendly, romantic, neutral, bored and rejecting affective cue judgements are presented in

Table 21. Please see Table 22 for the mean and standard deviations for each Affective Cue by

LSH Group, Perception Condition and Ethnicity.

Table 21

Multivariate and Univariate analyses of variance for the effect of LSH group (low and medium/high), Ethnicity (White and Asian/Other/Not Disclosed) and Perception condition (Cool, Neutral or Low Empathy) with Age as a Covariate on friendly, romantic, neutral, bored and rejecting affective cue judgements.

		ANCOVA				
	MANCOVA	Friendly	Romantic	Neutral	Bored	Rejecting
Variable	F	F	F	F	F	F
LSH Group	15.27***	20.49***	12.06**	5.94	45.79***	67.09***
Perception Condition	1.78	4.12	1.24	0.24	3.84	4.81**
Ethnicity	0.69	2.98	1.70	0.47	0.38	1.17
LSH Group x Perception Condition	1.29	2.33	0.38	1.17	0.67	0.99
LSH Group X Ethnicity	0.68	2.93	2.11	0.20	0.83	1.03
Perception Condition x Ethnicity	2.48**	5.71**	0.39	0.86	1.33	0.15
LSH Group x Perception Conditon x Ethnicity	1.38	4.06	0.04	0.68	0.62	0.28
Age(Covariate)	1.71	0.14	3.40	0.44	1.13	0.99

Note: F ratios are Wilk's Lambda approximation of *F*s.
Abbreviations: ANCOVA, univariate analysis of variance, MANCOVA, multivariate analysis of variance.
Bonferroni corrected alpha value = 0.01.
*p<.05, **p<.01, ***p<.001.

Table 22

Mean and Standard Deviation for each Affective Cue by LSH Group, Perception Condition and Ethnicity

	Affective Cue									
	Friendly		Romantic		Neutral		Bored		Rejecting	
Group	M	SD	M	SD	M	SD	M	SD	M	SD
LSH Group										
Low & Medium	1.12$_a$	.34	1.20$_a$	.42	1.59	.54	1.25$_a$	.39	1.13$_a$	.36
High	1.46$_a$	.64	1.50$_a$	.60	1.82	.59	1.79$_a$	.70	1.81$_a$	.89
Perception Condition										
Low Empathy	1.24	.51	1.32	.56	1.67	.55	1.37	.52	1.28$_a$	.58
Neutral	1.13	.32	1.19	.37	1.55	.55	1.30	.47	1.18	.46
Cool	1.11	.33	1.18	.38	1.62	.54	1.26	.39	1.14$_a$	.42

continued

	Affective Cue									
	Friendly		Romantic		Neutral		Bored		Rejecting	
Group	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Ethnicity										
White	1.16	.42	1.23	.47	1.62	.56	1.29	.47	1.19	.49
Asian/Other/Not Disclosed	1.16	.34	1.23	.41	1.59	.51	1.35	.46	1.22	.49
LSH & Perception Condition										
Low & Medium LSH Low Empathy	1.19	.45	1.28	.53	1.65	.54	1.29	.44	1.19	.45
Low & Medium LSH Neutral	1.12	.32	1.17	.35	1.51	.54	1.25	.40	1.12	.33
Low & Medium LSH Cool	1.07	.21	1.14	.33	1.61	.53	1.20	.32	1.08	.25
High LSH Low Empathy	1.67	.75	1.58	.73	1.83	.62	1.96	.72	2.04	.87
High LSH Neutral	1.22	.36	1.39	.55	2.00	.56	1.83	.75	1.78	.97
High LSH Cool	1.42	.67	1.50	.54	1.69	.60	1.62	.65	1.62	.87

continued

	Affective Cue									
	Friendly		Romantic		Neutral		Bored		Rejecting	
Group	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
LSH & Ethnicity										
Low & Medium LSH White	1.12	.37	1.20	.43	1.60	.55	1.24	.40	1.13	.37
Low & Medium LSH Asian/ Other/Not Disclosed	1.12	.26	1.20	.39	1.55	.49	1.27	.36	1.12	.31
High LSH White	1.58	.69	1.61	.70	1.86	.64	1.86	.74	1.89	.96
High LSH Asian/Other/Not Disclosed	1.31	.57	1.38	.47	1.78	.55	1.72	.66	1.72	.82

continued

Group	Friendly		Romantic		Neutral		Bored		Rejecting	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Perception Condition & Ethnicity										
Low Empathy White	1.27	.56	1.32	.57	1.68	.56	1.31	.51	1.24	.57
Low Empathy Asian/Other/Not Disclosed	1.17	.31	1.30	.56	1.63	.53	1.54	.52	1.41	.59
Neutral White	1.10	.33	1.17	.38	1.57	.58	1.29	.47	1.18	.47
Neutral Asian/Other/Not Disclosed	1.17	.32	1.24	.35	1.51	.50	1.32	.47	1.17	.43
Cool White	1.10	.30	1.20	.42	1.60	.55	1.27	.42	1.16	.42
Cool Asian/Other/Not Disclosed	1.13	.41	1.15	.27	1.67	.50	1.20	.32	1.11	.42

The table header "Affective Cue" spans the five affective cue columns.

For Groups, column mean sections sharing subscripts are significantly different ($p < .05$)

Overperception bias of romantic judgements of friendly affective cues

A 2 x 3 x 2 MANCOVA was performed to determine the effect of LSH group (low and medium/high), Perception condition (Cool, Neutral or Low Empathy) and Ethnicity (White and Asian/Other/Not disclosed) on overperception of friendly affective cues as romantic and romantic affective cues as friendly with age entered as a covariate. The analysis revealed a significant main effect of LSH group, $F(2, 300) = 3.05$, $p =.049$, $\eta^2 = .02$, a significant main effect of Perception condition, $F(4, 600) = 2.99$, $p =.019$, $\eta^2 = .02$ and a significant main effect of Ethnicity, $F(2, 300) = 3.48$, $p =.032$, $\eta^2 = .02$. There was a significant interaction effect for LSH group and Perception condition, $F(4, 600) = 4.76$, $p = .001$, $\eta^2 = .03$, a significant interaction effect for LSH group and Ethnicity, $F(2, 300) = 4.62$, $p = .011$, $\eta^2 = .03$, and a significant interaction effect for Perception condition and Ethnicity, $F(4, 600) = 2.64$, $p = .033$, $\eta^2 = .02$. There was a significant three-way interaction effect of LSH group, Condition and Ethnicity, $F(4, 600) = 2.61$, $p = .035$, $\eta^2 = .02$. The covariate of Age was non-significant, $F(2, 300) = .47$, $p =.628$, $\eta^2 = 0$. Univariate ANOVAs were performed on Perception condition for the romantic judgements of friendly affective cues and friendly judgements of romantic affective cues. The univariate ANOVA used Bonferroni corrected alpha values of .025.

For LSH group the univariate ANOVAs showed there was no significant effect for romantic judgements of friendly affective cues, $F(1, 313) = 1.38$, $p =.241$ $\eta^2 = .01$ and no significant effect for friendly judgements of romantic affective cues, $F(1, 313) = 4.26$, $p =.040$ $\eta^2 = .01$.

Participants ratings of romantic judgements of friendly affective cues were not affected by condition, $F(2, 313) = 2.01$, $p =.136$ $\eta^2 = .01$. Participants ratings of friendly judgements of romantic affective cues was affected by condition, $F(2, 313) = 3.83$, $p =.023$, $\eta^2 = .03$. Post-hoc analyses (Bonferroni) revealed that there was a significant difference

between low empathy ($M = 1.89$, $SD = 0.48$) and the cool ($M = 1.87$, $SD = 0.31$, $p = 0.02$) condition. Participants showed more underperception in the cool condition in comparison with the low empathy condition. There was no significant difference between low empathy ($M = 1.89$, $SD = 0.48$) and neutral ($M = 1.91$, $SD = 0.36$, $p = 1.00$), and cool ($M = 1.87$, $SD = 0.31$) and neutral ($M = 1.91$, $SD = 0.36$, $p = .230$) conditions.

Participants ratings of romantic judgements of friendly affective cues were not affected by ethnicity, $F(1, 313) = 0.62$, $p =.431$ $\eta^2 = 0$. Participants ratings of friendly judgements of romantic affective cues were instead affected by ethnicity, $F(2, 313) = 6.66$, $p =.01$ $\eta^2 = .02$ whereby the Asian/Other/Not Disclosed ($M = 1.88$, $SD = 0.37$) ethnicities showed more perceptual misidentification than those of White ($M = 1.90$, $SD = 0.40$) ethnicity.

As there was a significant interaction effect of LSH group and Condition this was examined more closely. There was a significant effect for romantic judgements of friendly affective cues, $F(2, 313) = 3.84$, $p=.023$, $\eta^2 = .03$. There were no significant effects for LSH group for the Low Empathy condition, $F(1, 105) = 0.14$, $p =.708$, $\eta^2 = 0$ and the Cool condition, $F(1, 103) = 1.36$, $p =.246$, $\eta^2 = .01$. There was a significant difference in the Neutral condition, $F(1, 103) = 7.22$, $p =.008$, $\eta^2 = .07$ whereby those with High LSH ($M = 2.50$, $SD = .50$) showed greater perceptual misidentification than those with Low & Medium LSH ($M = 2.77$, $SD = .32$) of friendly affective cues judged as romantic. There was a significant effect for friendly judgements of romantic affective cues, $F(2, 313) = 5.34$, $p=.005$, $\eta^2 = .03$. There was a significant difference for LSH groups in the Low Empathy condition, $F(1, 105) = 8.43$, $p =.005$, $\eta^2 = .08$ whereby those with Low & Medium LSH ($M = 1.85$, $SD = .43$) showed greater underperception than those with High LSH ($M = 2.25$, $SD = .69$) of romantic affective cues judged as friendly. There were no significant effects for LSH

group for the Neutral condition, $F(1, 103) = 1.83$, $p =.180$, $\eta^2 = .02$ and the Cool condition, $F(1, 103) = 1.75$, $p =.189$, $\eta^2 = .02$.

The significant interaction effect of LSH group and Ethnicity was also examined more closely. There was no significant effect for romantic judgements of friendly affective cues, $F(1, 313) = 2.60$, $p=.108$, $\eta^2 = .01$. There was, however, a significant effect for friendly judgements of romantic affective cues, $F(1, 313) = 7.36$, $p=.007$, $\eta^2 = .02$. For White ethnicity, there were significant effects for LSH group, $F(1, 223) = 12.99$, $p <.001$, $\eta^2 = .06$ whereby those with Low & Medium LSH ($M = 1.87$, $SD = .37$) showed greater underperception than those with High LSH ($M = 2.19$, $SD = .55$) for friendly judgements of romantic affective cues. For Asian/Other/Not Disclosed ethnicity there was no significant effect for LSH group, $F(1, 89) = 0.18$, $p =.672$, $\eta^2 = 0$. It appears that low and medium LSH white men underperceive romantic conditions as friendly.

The significant interaction effect of Condition and Ethnicity was also examined more closely. However, there was no significant effect for romantic judgements of friendly affective cues, $F(2, 313) = 1.53$, $p=.219$, $\eta^2 = .01$ and no significant effect for friendly judgements of romantic affective cues, $F(2, 313) = 3.39$, $p=.035$, $\eta^2 = .02$.

The significant three-way interaction for LSH group, Condition and Ethnicity was examined more closely. However, there was no significant effect for romantic judgements of friendly affective cues, $F(2, 313) = 2.31$, $p=.101$, $\eta^2 = .02$ and no significant effect for friendly judgements of romantic affective cues, $F(2, 313) = 2.54$, $p=.081$, $\eta^2 = .02$. The F ratios and significance for the effect of LSH group, Perception Condition and Ethnicity on romantic judgements of friendly affective cues and friendly judgements of romantic affective cues are presented in Table 23. Please see Table 24 for the mean and standard deviations for judgements of friendly affective cues as romantic and romantic affective cues as friendly by LSH Group, Perception Condition and Ethnicity.

Table 23

Multivariate and Univariate analyses of variance for the effect of LSH group, Perception condition and Ethnicity with Age as a covariate on judgements of friendly affective cues as romantic and romantic affective cues as friendly

		ANCOVA	
	MANCOVA	Friendly Cues judged as Romantic	Romantic Cues judged as Friendly
Variable	*F*	*F*	*F*
LSH Group	3.05*	1.38	4.26
Perception Condition	2.99*	2.01	3.83*
Ethnicity	3.48*	0.62	6.66**
LSH Group x Perception Condition	4.76**	3.84*	5.34**
LSH Group x Ethnicity	4.62*	2.60	7.36**
Perception Condition x Ethnicity	2.64*	1.53	3.39
LSH Group x Perception Condition x Ethnicity	2.61*	2.31	2.54
Age (Covariate)	0.47	0.02	0.89

Note: F ratios are Wilk's Lambda approximation of *F*s.
Abbreviations: ANCOVA, univariate analysis of variance, MANCOVA, multivariate analysis of variance.
Bonferroni corrected alpha value = 0.025.
*$p<.05$, **$p<.01$, ***$p<.001$.

Table 24

Mean and Standard Deviation for judgements of friendly affective cues as romantic and romantic affective cues as friendly by LSH Group, Perception Condition and Ethnicity

	Affective Cue				
	Friendly Cues judged as Romantic			Romantic Cues judged as Friendly	
Group	*M*	*SD*		*M*	*SD*
LSH Group					
Low & Medium	2.75	.35		1.88	.36
High	2.72	.35		2.02	.54
Perception Condition					
Low Empathy	2.78	.33		1.89$_a$	.48
Neutral	2.75	.34		1.91	.36
Cool	2.73	.36		1.87$_a$	.31
Ethnicity					
White	2.74	.34		1.90$_a$	.40
Asian/Other/Not Disclosed	2.77	.35		1.88$_a$	.37

continued

	Affective Cue				
	Friendly Cues judged as Romantic			Romantic Cues judged as Friendly	
Group	*M*	*SD*		*M*	*SD*
LSH & Perception Condition					
Low & Medium LSH Low Empathy	2.78	.34		1.85$_a$	.43
Low & Medium LSH Neutral	2.77$_a$	.32		1.90	.36
Low & Medium LSH Cool	2.71	.37		1.88	.28
High LSH Low Empathy	2.75	.26		2.25$_a$	.69
High LSH Neutral	2.50$_a$	.50		2.06	.30
High LSH Cool	2.85	.24		1.77	.44
LSH & Ethnicity					
Low & Medium LSH White	2.74	.35		1.87$_a$	.37
Low & Medium LSH Asian/ Other/Not Disclosed	2.80	.33		1.89	.34
High LSH White	2.78	.26		2.19$_a$	.55
High LSH Asian/Other/Not Disclosed	2.66	.44		1.81	.48

continued

Group	Affective Cue				
	Friendly Cues judged as Romantic			Romantic Cues judged as Friendly	
	M	*SD*		*M*	*SD*
Perception Condition & Ethnicity					
Low Empathy White	2.77	.33		1.91	.50
Low Empathy Asian/Other/Not Disclosed	2.82	.34		1.83	.42
Neutral White	2.73	.33		1.90	.34
Neutral Asian/Other/Not Disclosed	2.78	.37		1.93	.40
Cool White	2.73	.37		1.87	.32
Cool Asian/Other/Not Disclosed	2.72	.35		1.85	.27

continued

	Affective Cue				
	Friendly Cues judged as Romantic			Romantic Cues judged as Friendly	
Group	*M*	*SD*		*M*	*SD*
LSH, Perception Condition & Ethnicity					
Low & Medium LSH, Low Empathy & White	2.77	.33		1.85	.45
Low & Medium LSH, Low Empathy & Asian/Other/Not Disclosed	2.81	.37		1.83	.37
Low & Medium LSH, Neutral & White	2.73	.33		1.89	.34
Low & Medium LSH, Neutral & Asian/Other/Not Disclosed	2.84	.27		1.92	.40
Low & Medium LSH, Cool & White	2.71	.38		1.87	.30
Low & Medium LSH, Cool & Asian/Other/Not Disclosed	2.71	.37		1.91	.20

continued

	Affective Cue					
	Friendly Cues judged as Romantic			Romantic Cues judged as Friendly		
Group	*M*	*SD*			*M*	*SD*
LSH, Perception Condition & Ethnicity						
High LSH, Low Empathy & White	2.67	.26			2.67	.52
High LSH, Low Empathy & Asian/Other/Not Disclosed	2.83	.26			1.83	.61
High LSH, Neutral & White	2.70	.27			2.10	.22
High LSH, Neutral & Asian/Other/Not Disclosed	2.25	.65			2.00	.41
High LSH, Cool & White	2.93	.19			1.86	.48
High LSH, Cool & Asian/Other/Not Disclosed	2.75	.27			1.67	.41

For Groups, column mean sections sharing subscripts are significantly different ($p < .05$)

Sexual and Instrumental objectification of the woman in the TRAC video clips

A 2 x 3 x 2 MANCOVA was performed to determine the effect of LSH group (low/medium and high), Perception condition (Cool, Neutral or Low Empathy) and Ethnicity (White and Asian/Other/Not disclosed) on sexual and instrumental objectification of the woman in the TRAC video clips with age entered as a covariate. The analysis revealed a significant main effect of LSH group, $F(2, 300) = 37.83$, $p < .001$, $\eta^2 = .20$. There was no significant main effect of Perception condition, $F(4, 600) = 0.18$, $p = .950$, $\eta^2 = 0$ and Ethnicity, $F(2, 300) = 0.64$, $p = .529$, $\eta^2 = 0$. There was no significant interaction effect for LSH group and Perception condition, $F(4, 600) = 0.60$, $p = .662$, $\eta^2 = 0$, no significant interaction effect for LSH group and Ethnicity, $F(2, 300) = 0.63$, $p = .531$, $\eta^2 = 0$, and no significant interaction effect for Perception condition and Ethnicity, $F(4, 600) = 0.49$, $p = .742$, $\eta^2 = 0$. There was no significant three-way interaction effect of LSH group, Condition and Ethnicity, $F(4, 600) = 0.70$, $p = .591$, $\eta^2 = 0$. Age as a covariate was non-significant, $F(2, 300) = 0.33$, $p = .722$, $\eta^2 = 0$. Univariate ANOVAs were performed on sexual and instrumental objectification of the woman in the TRAC video clips. The univariate ANOVA used Bonferroni corrected alpha values of .025.

For the sexual objectification of the woman in the TRAC video clips there was a significant difference, whereby men high in LSH ($M = 3.77$, $SD = 0.81$) showed greater sexual objectification of the woman in the TRAC video clips, in comparison to men low and medium in LSH ($M = 2.58$, $SD = 0.71$), $F(1, 313) = 75.90$, $p < .001$, $\eta^2 = .20$. For the instrumental objectification of the woman in the TRAC video clips there was a significant difference, such that men high in LSH ($M = 3.90$, $SD = 0.61$) showed greater instrumental objectification of the woman in the TRAC video clips, in comparison to men low and medium in LSH ($M = 3.32$, $SD = 0.77$), $F(1, 313) = 13.21$, $p < .001$, $\eta^2 = .04$. The F ratios and significance for the effect of LSH group, Perception Condition and Ethnicity on sexual

objectification of the woman in the TRAC video clips and instrumental objectification of the woman in the TRAC video clips are presented in Table 25. Please see Table 26 for the mean and standard deviations for sexual objectification of the woman in the TRAC video clips and instrumental objectification of the woman in the TRAC video clips by LSH Group, Perception Condition and Ethnicity.

Table 25

Multivariate and Univariate analyses of variance for the effect of LSH group, Perception condition and Ethnicity with Age as a covariate on sexual objectification of the woman in the TRAC video clips and instrumental objectification of the woman in the TRAC video clips

| | | ANCOVA | |
| | MANCOVA | Sexual objectification of the woman in the TRAC | Instrumental objectification of the woman in the TRAC |
Variable	*F*	*F*	*F*
Low & Medium-High LSH	37.83***	75.90***	13.21***
Perception Condition	0.18	0.17	0.19
Ethnicity	0.64	0.02	1.16
LSH Group Perception Condition	0.60	1.19	0.18
LSH Group Ethnicity	0.63	0.92	0.89
Perception Condition Ethnicity	0.49	0.70	0.25
LSH Group Perception Condition Ethnicity	0.70	1.38	0.14
Age (Covariate)	0.33	0.13	0.66

Note: F ratios are Wilk's Lambda approximation of *F*s.

Abbreviations: ANCOVA, univariate analysis of variance, MANCOVA, multivariate analysis of variance.
Bonferroni corrected alpha value = 0.025.
*p<.05, **p<.01, ***p<.001.

Table 26

Mean and Standard Deviation for Sexual Objectification of the woman in the TRAC and

Instrumental Objectification of the woman in the TRAC by LSH Group, Perception

Condition and Ethnicity

	Type of Objectification				
	Sexual objectification of the woman in the TRAC			Instrumental objectification of the woman in the TRAC	
Group	*M*	*SD*		*M*	*SD*
LSH Group					
Low & Medium	2.58$_a$	.71		3.32$_a$	.77
High	3.77$_a$	.81		3.90$_a$	.61
Perception Condition					
Low Empathy	2.69	.84		3.42	.71
Neutral	2.61	.76		3.30	.76
Cool	2.82	.81		3.42	.85
Ethnicity					
White	2.65	.79		3.30	.78
Asian/Other/Not Disclosed	2.84	.85		3.58	.72

continued

Group	Sexual objectification of the woman in the TRAC		Instrumental objectification of the woman in the TRAC	
	M	*SD*	*M*	*SD*
LSH & Perception Condition				
Low & Medium LSH Low Empathy	2.54	.71	3.35	.70
Low & Medium LSH Neutral	2.49	.64	3.25	.73
Low & Medium LSH Cool	2.71	.75	3.36	.87
High LSH Low Empathy	3.86	.89	3.97	.62
High LSH Neutral	3.87	.76	3.87	.84
High LSH Cool	3.62	.80	3.85	.44
LSH & Ethnicity				
Low & Medium LSH White	2.55	.70	3.25	.79
Low & Medium LSH Asian/ Other/Not Disclosed	2.66	.73	3.51	.68
High LSH White	3.85	.74	3.90	.40
High LSH Asian/Other/Not Disclosed	3.69	.89	3.90	.80

continued

	Type of Objectification				
	Sexual objectification of the woman in the TRAC			Instrumental objectification of the woman in the TRAC	
Group	*M*	*SD*		*M*	*SD*
Perception Condition & Ethnicity					
Low Empathy White	2.58	.79		3.37	.73
Low Empathy Asian/Other/Not Disclosed	3.00	.92		3.59	.63
Neutral White	2.56	.72		3.20	.75
Neutral Asian/Other/Not Disclosed	2.70	.83		3.49	.76
Cool White	2.80	.82		3.33	.87
Cool Asian/Other/Not Disclosed	2.88	.80		3.68	.74

For Groups, column mean sections sharing subscripts are significantly different ($p < .001$)

State and Trait Empathy

A 2 x 3 x 2 MANCOVA was performed to determine the effect of LSH group (low

and medium/high), Perception condition (Cool, Neutral or Low Empathy) and Ethnicity

(White and Asian/Other/Not disclosed) on State and Trait empathy[26] with age entered as a

covariate. The analysis revealed a significant main effect of LSH group, $F(2, 300) = 13.89$, p

<.001, $\eta^2 = .09$. There was no significant main effect of Perception condition, $F(4, 600) =$

0.94, $p =.441$, $\eta^2 = .01$, and no significant main effect of Ethnicity, $F(2, 300) = 1.80$, $p =.167$,

$\eta^2 = .01$. There was no significant interaction effect for LSH group and Perception condition,

$F(4, 600) = 0.79$, $p =.530$, $\eta^2 = .01$, no significant interaction effect for LSH group and

Ethnicity, $F(2, 300) = 0.10$, $p =.906$, $\eta2 = 0$ and no significant interaction effect for

Perception condition and Ethnicity, $F(4, 600) = 0.44$, $p =.781$, $\eta^2 = 0$. There was also no

significant three-way interaction effect of LSH group, Condition and Ethnicity, $F(4, 600) =$

0.74, $p = .563$, $\eta^2 = .01$. Age as a covariate was non-significant, $F(2, 300) = 0.45$, $p =.636$, η^2

$= 0$. Univariate ANOVAs were performed on LSH group for state and trait empathy. The

univariate ANOVA used Bonferroni corrected alpha values of .025.

For the state empathy towards the woman in the video clips, there was a significant

difference for LSH group, whereby men high in LSH ($M = 2.67$, $SD = 0.58$) showed more

state empathy in comparison to men low and medium in LSH ($M = 2.48$, $SD = 0.46$), $F(1,$

313) = 5.48, $p = .020$, $\eta^2 = .02$. For trait empathy, there was a significant difference, such that

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[26] The subcomponents of the Trait Empathy measure (Davis, 1983) of Fantasy (M = 3.21, SD = .72), Empathic Concern (M = 3.51, SD = .69) and Perspective Taking (M = 3.49, SD = .74) all significantly correlated with each other positively (Fantasy and Empathic Concern, r = .35, p < .001, Fantasy and Perspective Taking, r = .21, p < .001, Empathic Concern and Perspective Taking, , r = .56, p < .001). The subcomponent of Personal Distress (M = 2.74, SD = .74) correlated in part negatively or with marginal significance with the other subcomponents (Fantasy and Personal Distress, r = .10, p = .088, Empathic Concern and Personal Distress, r = - .01, p = .885 and Perspective Taking and Personal Distress, r = -.100, p = .075). As the Personal Distress component correlated poorly with the other subcomponents it was removed from the composite measure, and as the other three subcomponents correlated well together they were retained for the composite measure. A composite measure for trait empathy is created by averaging across all 21 items., The 21 item scale showed excellent internal reliability (α = .85).

men high in LSH (M = 3.07, SD = 0.42) showed less trait empathy in comparison to men low

and medium in LSH (M = 3.44, SD = 0.55), F(1, 313) = 9.09, p = .003, η^2 = .03. The F ratios

and significance for the effect of LSH group, Perception Condition and Ethnicity on State

Empathy towards the woman in the TRAC and Trait Empathy are presented in Table 27.

Please see Table 28 for the mean and standard deviations for State Empathy towards the

woman in the TRAC and Trait Empathy by LSH Group, Perception Condition and Ethnicity.

Table 27

Multivariate and Univariate analyses of variance for the effect of LSH group, Perception condition and Ethnicity with Age as a covariate on State Empathy towards the woman in the TRAC and Trait Empathy

| | | ANCOVA | |
| | MANCOVA | State Empathy | Trait Empathy |
Variable	*F*	*F*	*F*
Low & Medium-High LSH	13.89***	5.48*	14.50**
Perception Condition	0.94	1.80	0.01
Ethnicity	1.80	3.42	0.02
LSH Group Perception Condition	0.79	0.18	1.36
LSH Group Ethnicity	0.10	0.20	0.01
Perception Condition Ethnicity	0.44	0.58	0.22
LSH Group Perception Condition Ethnicity	0.74	0.47	0.59
Age (Covariate)	0.45	0.29	0.35

Note: F ratios are Wilk's Lambda approximation of *F*s.
Abbreviations: ANCOVA, univariate analysis of variance, MANCOVA, multivariate analysis of variance.
Bonferroni corrected alpha value = 0.025.
*$p<.05$, **$p<.01$, ***$p<.001$.

Table 28

Mean and Standard Deviation for State Empathy towards the woman in the TRAC and

Trait Empathy by LSH Group, Perception Condition and LSH Group x Perception

Condition

	Type of Empathy				
	State Empathy of the woman in the TRAC			Trait Empathy	
Group	*M*	*SD*		*M*	*SD*
LSH Group					
Low & Medium	2.48_a	.46		3.44_a	.55
High	2.67_a	.58		3.07_a	.42
Perception Condition					
Low Empathy	2.60	.46		3.37	.45
Neutral	2.39	.40		3.49	.59
Cool	2.52	.54		3.35	.59
Ethnicity					
White	2.54	.46		3.41	.53
Asian/Other/Not Disclosed	2.41	.51		3.38	.60

continued

	State Empathy of the woman in the TRAC			Trait Empathy	
			Type of Empathy		
Group	*M*	*SD*		*M*	*SD*
LSH & Perception Condition					
Low & Medium LSH Low Empathy	2.58	.43		3.40	.45
Low & Medium LSH Neutral	2.37	.36		3.54	.57
Low & Medium LSH Cool	2.51	.54		3.39	.60
High LSH Low Empathy	2.80	.62		3.17	.42
High LSH Neutral	2.57	.65		2.95	.55
High LSH Cool	2.62	.53		3.06	.33
LSH & Ethnicity					
Low & Medium LSH White	2.52	.45		3.44	.53
Low & Medium LSH Asian/ Other/Not Disclosed	2.38	.47		3.45	.59
High LSH White	2.77	.51		3.07	.27
High LSH Asian/Other/Not Disclosed	2.56	.65		3.07	.56

continued

Group	State Empathy of the woman in the TRAC		Trait Empathy	
	M	*SD*	*M*	*SD*
Perception Condition & Ethnicity				
Low Empathy White	2.64	.43	3.42	.45
Low Empathy Asian/Other/Not Disclosed	2.50	.54	3.24	.44
Neutral White	2.42	.38	3.50	.55
Neutral Asian/Other/Not Disclosed	2.33	.42	3.46	.67
Cool White	2.55	.53	3.33	.57
Cool Asian/Other/Not Disclosed	2.44	.58	3.42	.65

Note: For Group, column section means sharing subscripts are significantly different ($p < .05$)

Discussion

The aim of this final study was to test the impact of the cooling system in reducing biases such as negativeness blindness and romantic judgements of friendly affective cues overperception bias for men high in LSH as is evidenced in chapters 3 and 5, as well as in reducing high instrumental and sexual objectification towards the same women as is evidenced in chapter 5 and the impact on state and trait empathy. Results showed that cooling did not have a beneficial impact on high LSH men's perceptual accuracy on negative affective cues reducing the negativeness blindness bias. It was found that men high in LSH in general showed poorer perceptual accuracy across affective cues, particularly bored and rejecting affective cues. There was no difference across low empathy, neutral and cooling conditions for high and low and medium LSH men on affective cue judgements. The hypothesis is not supported that perceptual accuracy for the bored and rejecting affective cues will be greater for high LSH men in the cooling conditions than high LSH men in neutral and low empathy conditions.

Results showed that cooling did have a beneficial impact on high LSH men's perceptual accuracy on judging friendly affective cues as romantic. Whilst there was a difference between men low and medium in LSH and men high in LSH in the neutral condition with men high in LSH showing greater misperception, the difference did not exist in the Cooling condition. The hypothesis is supported that high LSH men show fewer misjudgements of friendly affective cues as romantic (evidencing an overperception bias) in the cooling condition than high LSH men in neutral and low empathy conditions. Results showed that cooling did not have a beneficial impact on sexual and instrumental objectification. There was no difference across low empathy, neutral and cooling conditions for high and low/medium LSH men on sexual and instrumental objectification. The only

differences found were the same findings from chapter 5, such that men high in LSH in general showed more sexual and instrumental objectification than men low and medium in LSH. The hypothesis was not supported that high LSH men will evidence less instrumental and sexual objectification towards the woman in the TRAC in the cooling condition, than high LSH men in neutral and low empathy conditions.

Similarly, results showed that cooling did not have a beneficial impact on state and trait empathy. There was no difference across low empathy, neutral and cooling conditions for high and low and medium LSH men on state and trait empathy. It was found that men high in LSH in general showed more state empathy than men low and medium in LSH, but less trait empathy than men low and medium in LSH. The hypothesis was not supported that high LSH men will evidence more state empathy in the cooling condition than high LSH men in neutral and low empathy conditions but was supported in that high LSH men will evidence less trait empathy than low and medium LSH men.

The affective cue judgements from this study suggest that the perception of men high in LSH may not be malleable in nature with compatibility for change under cooling conditions for negative affective cues, but there may be benefits of cooling for reducing the romantic judgements of friendly affective cues overperception bias. Affective cue misperception, particularly on negative affective cues may have a resistant nature within the psychology of men high in LSH, and this may explain why cooling had little impact on them. Perhaps negative affective cues are a 'tipping point' for men high in LSH, such that facing up to rejection seemingly ends the chances of forming a sexual relationship with a woman for men high in LSH, and this outlook holds resistance to other psychological influences. Negative affective cue misperception may be resilient to cooling as these cues have critical and determining outcomes for men high in LSH (Begany & Milburn, 2002;

Kelly, Dubbs & Barlow, 2015; Schweinle, Cofer & Schatz, 2009) and therefore to them it is of importance for these affective cues to be distorted.

The results from this study suggest that romantic overperception biases of friendly affective cues could be affected by cooling. This is promising as there may be potential to change this bias for high LSH men if the correct psychological influences are identified and controlled for in future studies. In addition, this finding could suggest that this overperception bias may be more easily influenced than negative affective cue biases revealing underlying psychological processes in men high in LSH. Perhaps misinterpreting negative affective cues is more of a critical bias than the romantic overperception bias of friendly affective cues. This makes sense since for high LSH men identifying the woman's behaviour as friendly may not extinguish her sexual availability for advances as much as acknowledging her rejection could. Men high in LSH may be more pressed to forego biases towards negative affective cues as this protects sexual opportunity.

More sexual and instrumental objectification was evidenced by men high in LSH in comparison to men low and medium in LSH, with cooling not reducing this objectification for men high in LSH. Objectification beliefs within men high in LSH may be resistant to psychological influences such as cooling conditions. It is not clear whether men high in LSH can adjust their perception towards women, but the underlying objectification remains. There is some evidence that for some men objectification of women is constructed and supported around peer membership with links to sexual aggression (Seabrook, Ward & Giaccardi, 2018) such that reducing these men's objectification may threaten their peer membership, which may be one reason why objectification shows resistance. The effect of cooling on objectification in this study is in contrast to other research that has shown that some adversarial beliefs can be changed through empathy enhancement (Pithers, 1999), which was one part of the cooling system. Sex offenders' endorsements of rape-

predisposing beliefs and cognitive distortions were reduced under an empathy enhancing treatment group (Pithers, 1999), which may suggest that objectification beliefs are less malleable than these beliefs, although this current study tested men high in LSH and not sex offenders. Results in this current study show that a transition in mental state to a more contemplative and deliberative outlook from distancing and empathy enhancement, did not lead to a reduction in sexual and instrumental objectification, indicating that objectification seems to exist in a way that it is resistant to self-regulatory approaches. Transitory mental states may not be the solution to changing objectification as it may exist as a structure that needs a deeper more aligned approach that is specific to its nature through attitude change. Other research has shown that interventions aimed directly at attitude change (Foubert & Marriott, 1997; Gilbert, Heesacker & Gannon, 1991) are successful at changing adversarial attitudes towards women, rather than focusing on transitory mental states. It seems that reductions in objectification, even temporarily, must be achieved by more direct measures aimed at tackling its harm towards women, as opposed to broad and generalised changes to mental focus.

Research suggests that sexual objectification may be intertwined with men's social dominance of women and this may be one reason why their objectification requires an aligned and direct approach to intervene and potentially effect objectification. Men's social dominance orientation has been correlated with their tendency to sexually objectify women (Bareket & Shnabel, 2020), whereby when their dominance was threatened by being assigned to work under the supervision of female bosses this led to more sexual objectification of women amongst high social dominance men. As men high in LSH have established attitudes and beliefs that indicate a need to dominate women, such as rape related attitudes and adverse sexual attitudes (Begany & Milburn, 2002; Lee et al., 2003; Pryor et al., 1995; Pryor & Stoller, 1994) , these men are likely to have a high social

dominance orientation over women, meaning that if in any way their dominance over women is threatened then these men may retaliate by showing high sexual objectification towards women. As well as social dominance orientation not being measured in the present study, the cooling system did not give an assurance that dominance was not being threatened or did anything in any way for men not to feel that they would need to reassert their dominance over women, A more effective intervention towards tackling sexual objectification would need to counteract men's responses to women that are motivated by a need to dominate women.

This study showed that surprisingly men high in LSH evidenced more state empathy than men low and medium in LSH across conditions. This finding suggests that men high in LSH may be able to show more state empathy towards the woman in the TRAC, but still evidence more biases of negativeness blindness and overperception of friendly affective cues. Further to this, although men low and medium in LSH showed more trait empathy than men high in LSH, both groups showed medium ratings of trait empathy overall, suggesting that there was not a large deficit in trait empathy that contributes to misperception for this sample. It may be that men high in LSH are able to show empathy, yet their perceptual judgements are not necessarily aligned in the same direction as the empathy that they show towards a woman. In extending to sexual harassment, possessing empathy may not act as a deterrent for a sexual harasser. To comprehensively understand empathy in sexual harassers, affective precursors prior to offending should be considered as it may only be then that empathy levels drop dramatically (Pithers, 1999). The occurrence of negative affective states can create a relative deficit in the emotional element of empathy (Pithers, 1999), which could explain why state empathy can be relatively high, yet only under certain emotional or aggressive states could it then lower to enable more aggressive actions. It may well be that comparing typical mood to precursive mood within empathy

levels may further outline the connection between empathy and perception within male sexual harassers.

It may be premature to rule out cooling conditions as having a beneficial impact on high LSH men's perceptual accuracy for negative affective cues. The cooling conditions used in this study have not been tailored or piloted accurately enough to better impact the perception of men high in LSH. First and foremost, all components of the cooling system were combined, which prevented testing which component of the cooling system worked or didn't work, or whether any of them counteracted each other. The cooling condition will need to be more attuned to the specific individual, including personality variables such as whether the individual shows an openness to experience (potentially making them more conducive to self-distancing), or the individual's working memory may need to be more closely assessed to determine how working memory can be loaded so that the distraction component is optimised. There may be a necessity for the distancing component to be utilised with greater intensity enabling instructions to be more strongly absorbed, improving the likelihood of inducing a different mental state, rather than a short passage of information simply encouraging a different focus of attention. Similarly, the distraction component could have been more complex putting more duress on working memory, possibly with distraction being part of the individual video clips themselves to ensure a fairer distribution of load on working memory. In contrast, there is also the possibility that multiple competing influences from the cooling components overload cognition and do not create the individual intended component effect, with dominant cognition capitalizing on this opportunity through reverting to normal perception and providing clarity amongst a confusion of other influences. Further research can determine whether individual components have greater influences on high LSH men's psychology or alternatively, which

combinations have the greatest influences in overriding underlying sexual cognition reducing its influence on interpreting social information.

It is important to recognise that the cut off was reduced to mark high LSH men in this study, and this difference may have impacted the results. Although this decision was made to increase the sample pool numbers of high LSH men, the decision will have weakened the comparisons to low and medium LSH men. By widening the range of score to identify high LSH men, consequently this sample may then have included men who may have a different susceptibility to cooling conditions. Men marked as high on LSH, but who scored lower than the eighty percent could have a different resistance to cooling since they seem to be more in control of their LSH than a man who is likely to sexually harass at every opportunity or most opportunities, perhaps suggesting more self-control in general with potentially less or more resistance to cooling. Combining these men in a group together could weaken the impact of cooling on high LSH men overall since men with less resistance to cooling could be combined with those with more resistance to cooling. In addition to this, combining these men is likely to reduce the differential between high and low/medium LSH men when evidencing biases motivated by sexual interest potentially further reducing the effects of cooling. A stricter mark for high LSH men with a greater volume of individuals scoring that mark will have produced a stronger and more rigorous comparison between high and low/medium LSH men when investigating the effect of different mental states on their perception.

In terms of applying and extending the findings from this study from men high in LSH to male sexual harassers, identifying psychological influences that can change perception and subsequent behaviour is crucial to preventing offending. Adjusting perception could increase sexual harasser self-awareness that their unwanted sexual advances are unjust and inappropriate, thus creating psychological conflict for future

offending. In the same way, it is of interest to understand the naturally occurring mental state that contributes to instinctive and impulsive biases creating distorted thinking towards women and then explore ways to more easily transition towards self- stimulating a psychology that harnesses more balanced and diverse thinking towards women. Ideally this endeavour will create an optimum opportunity to challenge and correct existing negative attitudes towards women. A cognitive space should be explored, where existing attitudes and beliefs can be more easily challenged, with the hope that some men may be facilitated to think about women in complex, multidimensional ways rather than with harmful biases. Of course, the challenge then is finding how to make this psychology more accessible and ready for real life situations. Future studies may wish to test the life span of psychological adjustments to test how long better perceptual accuracy can last. Ultimately, the likely success of harnessing this psychology may be in placing the initiative on the sexual harasser to change their approach to making perceptual judgements.

CHAPTER SEVEN

Summary, Conclusions and Suggestions for Future Research

Background and aims of thesis

Heterosocial perception can be understood as how someone perceives a woman and a man interacting together in any context. In the realm of sexual violence, research with heterosocial perception has mainly focused on perceptual inaccuracies within men who have raped or molested children (Lipton et al., 1987; Stahl & Sacco, 1995). Research has shown that rapists and child molesters experience difficulty in accurately identifying negative behaviours displayed by females when socially interacting with another male (Lipton et al., 1987; Stahl & Sacco, 1995). This research has been evidenced through using the Test of Reading Affective Cues (TRAC) which is considered a standard way to measure heterosocial perception. The TRAC encompasses video clips of people interacting, with one target person evidencing positive, neutral and negative affective cues towards another person. The participant then makes judgements on the affective cues that the target person is evidencing in the video clips. Whilst this is an important area of research, as perception is likely to be key in explaining perpetrator harmful attitudes and behaviours (with particular relevance to social interactions), much less research attention has focused specifically on sexual harasser's heterosocial perception and potential perceptual inaccuracies that exist.

Sexual harassment is another important type of sexual aggression that has been focused upon in much research looking at the causes, characteristics, and extent of sexual aggression (Gannon, 2009; Gutek, 1985; Lipton, et al., 1987; Stahl & Sacco, 1995; Pina et al., 2009). Sexual harassment comprises a type of abuse where the perpetrator targets women and persists in the aggression despite feedback and rejection from the victim that

the perpetrator's sexual intentions and motivations are unreciprocated. As perpetrator perception is fundamentally related to victim selection and to the persistence of the offending (Bargh & Raymond, 1995; Bargh et al., 1995; Pryor et al., 1995; Pryor et al., 1993; Pryor & Stoller, 1994 & Pryor & Whalen, 1997), there is clear evidence that sexual harassers' perception of women is a key area of study and is likely to be central to explaining sexual harassment perpetration and in understanding the psychological pathways that lead to perpetrators committing sexual harassment. In addition to this, sexual harassment encompasses a wide range of behaviours, from explicit and flagrant abuses of power, such as explicit demands of sexual favours in exchange for work and academic advancement (Rolphe, 1993), to behaviours such as staring, whistling, sexual joking and sexual innuendoes (Wise & Stanley, 1987), and verbal comments, requests and nonverbal behaviours that can all be classified as sexually harassing behaviours that have the effect of making victims feel unsafe, humiliated and offended (Fitzgerald, 1996: Timmerman & Bajema, 1998). This range of sexual harasser behaviours suggests that it is important to identify the characteristics of these men's perceptions of social situations, considering that these perceptions may subsequently lead to and support these abusive behaviours.

In developing a modernised version of the TRAC, the current thesis explores the perceptual characteristics and differences between men high in the likelihood to sexually harass (LSH) and those low and medium in LSH. The TRAC should reveal whether men high in LSH, will identify positive and negative behaviours evidenced by the female in the same way as those who are not high in LSH. This will provide a point of focus so that the reasons why there may be differences in perception can be explored. It may also reveal in combination with the findings from research from sexual offenders (Lipton et al., 1987; Stahl & Sacco, 1995), the nature of perception to the broader context of sexual violence.

The broad aim of this thesis was to explore the theory that perceptual inaccuracies and biases exist in men who are high in the likelihood to sexually harass that serve to enable and support potential offending. Men high in LSH in the community were used as participant samples, as obtaining a large enough sample of men that have been convicted of sexual harassment is unlikely, as in most nations it is not an outright offence and is charged under other offences such as general harassment, stalking and cyber-sexual harassment (Fileborn, 2013; Radu, 2014). Within this aim there was a focus on perceptual inaccuracies when making affective judgements of negative behaviours; particularly when the female evidences bored and rejecting affective cues, as well as a focus on other potential biases such as the overperception bias whereby friendly affective cues are interpreted as romantic. In order to investigate this broad aim, the thesis had three main objectives. First, the current research programme set out to construct a modernized instrument of heterosocial perception, namely the TRAC, providing an array of video clips that evidence a range of affective cues from positive behaviours; friendly and romantic, neutral to negative behaviours; bored and rejecting. Second, following the development of the TRAC, three studies utilised the TRAC to examine the perceptual characteristics of men who are high in LSH in comparison to those low and medium in LSH. Different psychological factors previously associated with male sexual aggressors' psychology, namely, malevolent schemas, power and objectification were applied separately in these studies to establish the perceptual characteristics of men who are high in LSH. These studies revealed differences in men high in LSH and the nature of their perception, with the underlying reasons and rationalizations that explain their perception. Third, the final study investigated the malleability of high LSH men's perception with an attempt made to provide conditions that augment perception to improve accuracy on the TRAC for men high in LSH and reduce the potential impact of aligned maladaptive attitudes and beliefs towards women. If there is

malleability in the perceptual characteristics of men high in LSH, then psychological pathways can be established that improve perceptual accuracies, making justifications to support sexually harassing behaviours more incongruent. This potentially could make a sexual harasser more receptive towards diminishing their harassing intentions or more likely to adhere to a correct perception of a social situation involving a woman.

In the current research it was found that men high in LSH displayed greater negativeness blindness, misperceiving bored and rejecting affective cues more and an overperception bias judging friendly affective cues as romantic more than men low and medium in LSH. Reasons are proposed as to why this misinterpretation may exist. Men high in LSH may be more likely to display negativeness blindness and overperceive friendly affective cues as romantic in line with the Error Management Theory (Haselton & Buss, 2000) where men increase the frequency of falsely inferring a woman's sexual intent towards their sexual pursuit. This overperception bias serves these men in maximising their opportunity of obtaining sex, and at the same time reduces the chances of them missing out on sex.

Men may overperceive negative affective cues in order to not diminish sexual pursuit towards women. It is argued that as men high in LSH have strong sex goals they will be more likely to misperceive negative affective cues, in line with EMT, therefore it is expected that they will commit errors in judgement that are less costly to them. Specifically, men high in LSH will misperceive negative affective cues, as to them it will minimize missed sexual opportunities through over inferring women's sexual intent.

Although a friendly affective cue could be sufficient to approach a woman for sex, a romantic perception is preferred as for these men it portrays the woman as more sexually available making it easier to sexually pursue the woman. A romantic perception for men high in LSH may even make it seem to these men as if the woman is seeking sex by being

romantic. Overperception could then make it easier for men high in LSH to act towards and justify sexual pursuit, since to them the woman is sexually available, seeking and even encouraging sex. Altogether to these men romance may more easily enable sex to be more accessible to these men in sexually pursuing a woman with the underlying motive that these men do not want to miss out on a sexual opportunity.

It was also found that men high in LSH showed more specific sexual objectification and instrumental objectification towards the woman in the TRAC, and general sexual objectification towards women than men low and medium in LSH. This supports the argument that those men with a stronger sex goal (Mussweiler & Forster, 2000; Rudman & Borgida, 1995; Vaes et al., 2011) will tend to focus more on a woman's appearance and her sexual functions than her personality. Research with sexually coercive men (Diehl et al., 2012; Gelfand et al., 1995) shows that these men display a range of verbal and non-verbal behaviours which have insulting, hostile or degrading attitudes towards women supporting an instrumental treatment of women. This suggests that men high in LSH may show greater instrumental objectification, which was supported. General sexual objectification mediated men high in LSHs' romantic judgement of friendly affective cues bias, indicating that the greater their general sexual objectification the greater this overperception bias. As romantic behaviours can endorse women being seen to initiate sex and encouraging a sexual relationship, then in line with Ward's (2000) theory this will serve to confirm a male sexual aggressor's implicit theory that women are acting in ways to show that they should be treated as objects of sex. This connection between sexual objectification and romantic behaviours suggests sexual objectification forms part of sexually coercive men's interpretation of women's romantic behaviours, which is supported by this finding.

It was found that men high in LSH evidenced more state empathy, but less trait empathy as an overall measure than men low and medium in LSH. This supports the

argument that sexual aggressors show a lack of empathy in general (Kosson et al., 1997;

Rapaport & Burkhart, 1984), but have the capacity to show empathy in some situations.

Summary of Findings

In chapter 2, a study was conducted to develop a modernized version of the Test of

Reading Affective Cues (TRAC) to measure heterosocial perception. The 10 items of the

TRAC incorporated a range of affective cue judgements that cover both positive and

negative affective cues, similarly to TRAC measures that have been previously designed

(Lipton, et al., 1987; Stahl & Sacco, 1995). A sample of women from a UK university was

used to develop the affective cue judgements on the TRAC. The advantage of a female only

sample population is that the given affect cue judgements represent female affect

behaviours. This can enable us to explore if men with different psychological

characteristics identify female affective cues differently to females. In chapter 3, a study

then tested perceptual accuracy deficits using the TRAC when comparing high LSH men

with low and medium LSH men. Participants were recruited internationally to increase the

scope of finding men who are high in LSH as it was expected that widening the pool of

participants will recruit more men high in LSH, with the LSH scale already shown to be

internationally transferable for participant understanding (Luthar & Luthar, 2008).

However, there are some critical limitations when using an international sample with the

TRAC not being culturally relevant to all participants. Utilising an international sample

introduces cultural differences in the studies. This was evidenced in chapter 3 where there

were identified differences in perceptual accuracy by ethnicity such as for example, Asian

ethnicity participants perceived rejecting affective cues as romantic more than White

ethnicity participants. The TRAC may not have been culturally adequate towards allowing

men from diverse cultural backgrounds to make accurate perceptual judgements. Affective

cues may be expressed in different ways culturally and the affective cues presented in the TRAC may have been unfamiliar to some participants. Finding differences in ethnicity and perceptual accuracy can highlight the importance of calibrating the TRAC towards participants so that it is culturally relevant to them.

Men high in LSH showed similar perceptual accuracy to men low and medium in LSH on friendly, romantic, and neutral affective cues, but poorer perceptual accuracy on bored and rejecting affective cues. Previous research has shown with male sex offenders (Lipton et al., 1987; Stahl & Sacco, 1995) that they show the poorest perceptual accuracy when identifying the negative cues displayed by the female in the relevant video clips. Men high in LSH showed a similar pattern evidencing perceptual inaccuracy when identifying the negative cues displayed by the female in the TRAC. This suggests that men high in LSH may have deficits in interpreting negative behaviours displayed by females in social settings. If men high in LSH were to sexually harass women, it may be partly due to this misinterpretation, leading inadequate responding to negative affective cues from women.

If we were to extrapolate these findings to male sexual harassers, a friendly overperception bias may allow a male sexual harasser to persist in their offending since misperceiving female friendly affective cues as romantic may be considered as conducive and encouraging to sexual advances (OrtizTorres, Williams & Ehrhardt, 2003; Page & Pina, 2015; Seal & Ehrhardt, 2003; Scott & Martin, 2006). An intentional blurring of the lines of female behaviour may assist by camouflaging the harasser's own offending behaviour through placing blame onto the victim and averting social disapproval and reprisals (Scott & Martin, 2006).

Chapter 4 reported the impact of concepts of power on perception. We examined whether power exacerbates the perceptual deficits found in chapter 3. Since power has been found to interact with attitudes towards women, sexual motivations towards women and is

strongly correlated with the likelihood to sexual harass (Bargh & Raymond, 1995; Bargh et al., 1995; Pryor, 1987; Pryor et al., 1995; Pryor et al, 1993; Pryor & Stoller, 1994; Pryor & Whalen, 1997), power is argued to increase sexual attraction to a target and potential advances and behaviours towards that target. It was expected that power will enlarge the perception deficit, with men high in LSH making more inaccurate judgements on the negative affective cues; bored and rejecting and the romantic judgements of friendly affective cues overperception bias. However, these hypotheses were not empirically supported. Power did not seem to create a psychological state that facilitates more perceptual inaccuracies for high LSH men. Reasons considered to explain this finding include theory that power leads to judgements based on momentary subjective experiences rather than core beliefs (Weick & Guinote, 2008) and power enabling focus on easily accessible constructs detached from sexual motivations (Guinote et al., 2012), as well as power being erroneously used to improve social approval management along with a freedom to execute better perceptual accuracy (Lammers & Maner, 2016; Rios et al., 2015; Wilson & Thompson, 2001). This study suggests that the influence of high power on high LSH men's psychology may not always be detrimental, which is in contrast to existing research showing that power may change the appraisal and approach towards women with high power making the woman seem more attractive and desirable towards men (Bargh et al., 1995) with a subsequent increase in physical touching and sexual harassment tendencies (Driscoll et al., 1998; Pryor, 1987; Pryor et al., 1995). If high power stimulates a greater focus on the sexual availability of a woman and a greater focus on sexual opportunities with a woman, this did not manifest itself for high LSH men in greater negativeness blindness and overperception biases towards within this study. This could be because power was primed in a different way in this study using an established mind set power priming technique (Galinsky et al., 2003), where participants are asked to recall a memory

of being in a position of high power and consequently is unlikely to have activated power concepts in the same way as previous studies using conceptual priming (Bargh et al., 1995; Pryor & Stoller, 1994) where vocabularies of different power and sexual words were combined (Bargh et al., 1995; Pryor & Stoller, 1994). Using different techniques of power priming in future studies will further test how robust the findings are within this study in identifying the relationship between power and perception for high LSH men.

Chapter 5 provided an assessment of both instrumental and sexual objectification and their relationship to perceptual accuracy. The TRAC was used to measure heterosocial perception along with a specific measure of objectification related to the female in the TRAC video clips, which encompassed both instrumental and sexual objectification. A measure of general sexual objectification towards women was also taken. Results showed that men high in LSH, showed significantly worse perceptual accuracy on bored and rejecting affective cues providing evidence, in conjunction with chapter 3, that men high in LSH seem to be experiencing perceptual difficulties where negative affective cues are present. Men high in LSH also showed a greater romantic overperception bias of friendly affective cues than men low and medium in LSH in this study. Men high in LSH showed significantly more instrumental and sexual objectification towards the female in the TRAC video clips as well as more general sexual objectification towards women. Results showed that specific sexual objectification negatively mediated romantic categorizations of romantic affective cues for high LSH men, such that the greater the specific sexual objectification the less they judged romantic affective cues as romantic. General sexual objectification positively mediated romantic categorizations of friendly affective cues (overperception bias) for high LSH men, whereby the greater their general sexual objectification, the greater this overperception bias. This finding provided support for Ward's (2000) theory that men high in sexual aggression may possess implicit theories of

women as sex objects and the reasoning that this implicit theory may affect the judgements that they subsequently make of women's behaviour. This finding also provided support for the guarding theory of core beliefs (Maner et al., 2012) in explaining the motivation to protect and support the belief of women as sexual objects through shielding this belief in a bias of judgements made of women's behaviour.

In chapter 6, techniques used to facilitate self-regulation via activating a cooling system, were applied to men's perception of the TRAC, with the prediction that this would improve their perceptual accuracy and minimise their objectification. Techniques employed were distraction, distancing and empathy enhancement to form a psychological cooling system. As a contrast both low empathy and neutral conditions were created, where the cooling system techniques were not utilised. Measures of both state and trait empathy were taken, as well as both instrumental and sexual objectification of the female in the video clips. Participants were placed into one of the three conditions; cool, neutral and low empathy and their LSH was also measured. Results showed that the cooling system was not beneficial in improving high LSH men's perceptual accuracy for negative affective cues, thus not helping high LSH men's biases towards negativeness blindness. However, cooling did improve perceptual accuracy of friendly affective cues removing the overperception bias to romantic judgements in comparison to the neutral condition. The cooling system was not found to reduce instrumental and sexual objectification for high LSH men. There was a difference on state empathy between men low and medium in LSH and those high in LSH with men high in LSH showing more state empathy, although in contrast men high in LSH showed less trait empathy. Results were discussed in relation to how adjusting perception could improve affective cue accuracy.

Affective cue misidentification, particularly on negative affective cues may have a resistant nature within the psychology of men high in LSH, and this may explain why

cooling had little impact on these cues. The finding that negative affective cues remained unaffected by cooling, suggests that perhaps negative affective cues are a 'tipping point' for men high in LSH, because facing up to rejection seemingly ends the chances of forming a sexual relationship with a woman, and therefore misperceiving negative affective cues resists psychological influences such as cooling. As negative affective cues have critical and determining outcomes for men high in LSH, it is of importance for these affective cues to remain distorted. Further to this, results in this current study show that a transition in mental state to a more contemplative and deliberative outlook within distancing and empathy enhancement techniques, did not lead to a reduction in sexual and instrumental objectification, which may indicate that objectification seems to exist in a way that it is resistant to self-regulatory approaches. Transitory mental states may not be the solution to changing sexual and instrumental objectification as this objectification may exist as a structure that needs a deeper more aligned approach that is specific to its nature through attitude change. It could be that reductions in objectification, even temporarily, may be achieved by more direct measures, as opposed to, as has been shown in this study, through broad and generalised changes to mental focus from the cooling system.

Theoretical Implications of Findings

The research presented within this thesis has important theoretical implications for understanding the social-cognitive processes that regulate sexual harassment and sexual violence more widely. Firstly, the role of heterosocial perception inaccuracy in extending existing theoretical frameworks of sexual harassment perpetration and EMT will be discussed. In considering the empirical findings of the current research programme, the discussion will then focus on concepts of power, attitudes and beliefs, and implicit theories in explaining heterosocial perception in sexual harassment. Finally, the role of strategies

and techniques to improve heterosocial perceptual accuracy and the subsequent potential to reduce sexual harassment perpetration are considered. The theoretical implications must be interpreted cautiously to account for the limitations of the TRAC measure identified in Chapter 2.

Perceptions of Female Negative Affective Behaviours and Theoretical Frameworks

A key finding in heterosocial perception across studies was that males high in LSH were significantly less accurate at judging the female when she displayed bored and rejecting behaviours. In considering this finding, existing theories of sexual harassment may need to account for this characteristic difference in perception. Theories that try to explain the attitudes, beliefs and motivations of male sexual harassers may need to give recognition to this deficiency in perception that is characterised by inaccuracy in identifying and recognising female negative behaviours. The prevalence of this finding across studies shows the potential resistance and rigidity of underlying sexual desires and motivations that may contribute to this perception, emphasising that existing theories of sexual harassment will be enhanced by accounting for perceptual differences.

In considering theoretical explanations of sexual harassment and the negative affective cue bias, existing theories of sexual harassment[27] may be able to incorporate and account for this bias in their tenets of how sexual harassment occurs. For example, the Four Factor theory (O'Hare & O'Donohue, 1998) of sexual harassment posits that in order for sexual harassment to take place four conditions need to occur. These conditions are i) that the individual must be motivated to harass, ii) must overcome internal inhibitions not to harass, iii) must overcome external inhibitions to harassment and iv) must overcome the victim's resistance. In focusing on the condition that the individual must overcome external

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[27] An overview of theories of sexual harassment can be found in Pina et al., 2009.

inhibitions to harassment, with an example of overcoming specific organizational workplace barriers like professionalism, this condition suggests that the bias towards negative affective cues may be more noticeable in social environments with less risk to the individual's professionalism defending it from being questioned and criticised. Social environments such as informal gatherings in the workplace or one to one meetings with other individuals who hold the same bias, may be sought after as they provide protection for the individual's professionalism. Similarly, the condition of overcoming victim's resistance, suggests that the bias may be more prevalent when the victim's status is lower than the individual, or under conditions of victim intoxication where the victim is less aware and responsive to the individual's biases, or when the victim is more dependent on the individual for occupational progression and promotion than vice versa. Thus, existing theories of sexual harassment can provide more structure in understanding this negative affective cue bias as well as explicate the nature of how and when the bias occurs. In addition to providing a number of research avenues with this bias, theories of sexual harassment may provide a framework from which to develop a stronger understanding of the psychological characteristics of men who sexually harass and whether their biases are reflective of a situational awareness to perpetrate sexual harassment. Further to this, understanding these biases may test existing theories in terms of inadequacy towards explaining the psychology of the sexual harasser, and their lack of specificity towards explaining the harasser aetiology and pathway towards offending.

The inclinations and preferences evidenced in high LSH men's perception can be incorporated into existing theories of sexual harassment self-regulation such as moral disengagement theory (Page & Pina, 2015). Biases and manipulations to misperceive negative behaviours will need to be accounted for in the development of existing and future theories of sexual harassment in explaining this potential psychological moral adjustment.

Analyses showed in chapters 3, 5 and 6 that men high in LSH were more likely to misperceive bored and rejecting behaviours; these findings suggest that as well as a sexual harasser managing the moral incongruence of their behaviour, there is some impression management evidenced, in that positive behaviours are perceptually favoured by these men as they may be more likely to make sexual harassment permissive with less reprisals. This perception of female behaviour will serve to minimise any potential embarrassment or guilt felt through their sexual advances being considered as socially acceptable (Scott & Martin, 2006). This perception may exonerate any felt negativity and self-censure, as well as protect a positive moral evaluation that the harasser has of their behaviour. Moral disengagement processes underlying this overperception bias can be explored further in connection to explaining this perceptual distortion.

Further research can explore the complex psychological relationship to the affective cue of rejection for high LSH men. It is important to understand that rejection is central to sexual harassment, as a harasser can persist with requests for sexual intercourse with the victim despite being rejected multiple times. Perceptually, boredom may also overlap with rejection and be seen as a form of social rejection through the disinterest and apathy shown towards another person. In cases of sexual harassment where cues are ignored by the perpetrator, victims seeing their disinterest or rejection not being understood or acted upon correctly, may feel frustrated, afraid and/or angry. These factors stress the importance of understanding high LSH men's psychological interpretation of rejection to understand sexual harassment and existing research on rejection in general may provide some insight. Being the recipient of rejection may be naturally painful and has even been shown to activate two brain regions that are also active when people experience physical pain (Eisenberg, 2012). Thus, people who are socially rejected may react physiologically much like people who experience physical pain. Rejection may also increase frustration because

people's efforts to obtain desired outcomes that depend on acceptance are thwarted (Berkowitz, 1989; Leary, Twenge & Quinlivan, 2006). Thus, rejection is psychologically challenging and individuals within a normal population are generally motivated to avoid rejection, let alone high LSH men which are shown to have particular sex/power schemas. Inferring from high LSH men's perceptions of rejection from the TRAC, along with the findings that rejection is painful and may increase frustration levels, could partly be motivators for high LSH men to distort interpretations of rejecting behaviour.

Biases towards rejection affective cues have been evidenced by male rapists and male child molesters (Lipton et al., 1987; Stahl & Sacco, 1995), as well as men high in LSH, suggesting some crossover between the psychology of sexual harassers, rapists and child molesters. Men high in LSH, like male rapists and male child molesters (Lipton et al., 1987; Stahl & Sacco, 1995) evidence poor perceptual accuracy when judging female negative behaviour. With this in consideration, there is potential for a unified theory of perception, especially between rapists and sexual harassers with their recognised psychological similarity (Begany & Milburn, 2002; Quina, 1996). Although there are differing levels of self-control amongst both types of offenders, underlying attitudes and beliefs affecting perception may be very similar. Psychological components such as their attributions, cognitive distortions and self-regulatory processes could be very similar and consequently explain perceptual deficits in both types of offenders. Both types of offending may be explained in some way by the reluctance to accurately identify women's affective behaviour and respond appropriately. The shared capacity to misconstrue and ignore negative behaviours means that there is lateral similarity between both types of offenders. There may be other shared psychological traits that if evidenced will illuminate the understanding of the full spectrum of sexual offending against adult women.

The Overperception Bias and Error Management Theory

A feature that differentiated men high in LSH from those low and medium in LSH was the overperception bias. This was evident in chapter 3 where men high in LSH were shown to misidentify friendly affective cues as romantic. This bias is argued to have a basis as an evolutionary explanation showing that males as a gender tend to over perceive friendly behaviours from women (Buss, 2016; Buss & Schmitt, 1993; Landolt et al., 1995; Schmitt, 2003). Further research can identify why men high in LSH over perceive to a greater extent and build a theoretical model from an evolutionary perspective, providing support for a mating bias schema in men and identifying what basis this has in maximising gene proliferation (Buss, 2016; Buss & Schmitt, 1993; Landolt et al., 1995; Schmitt, 2003). Incorporating the overperception bias of high LSH men can help explain their sexual strategies (Buss & Schmitt, 1993) and the nature of their biases (Haselton & Buss, 2000)[28]. Further studies may reveal how high LSH men are likely to endorse perceptual biases that judge behaviours in a more sexualized manner, enhancing and justifying sexual opportunity with a focus on sexual harassment. In creating a theoretical model, boundaries and limitations may be identified by researching non-sexual behaviours and behaviours not logically connected to sex to discover whether these behaviours are tended to be perceived in a direction or preference towards sexual opportunity.

There are implications for evolutionary explanations of male sexual biases, particularly for EMT. The findings that men high in LSH have different overperception biases from those low and medium in LSH suggests that this theory may need to be developed further to account for why some men may have stronger sexual biases than others. The theory may delineate why men have different sex goals and how this influences the benefits and cost dichotomy such that some men may hold stronger sexual biases

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[28] Men high in LSH's biases and sexual strategies are covered in chapter 3 in relation to Error Management Theory (Haselton & Buss, 2000).

affected by the cost of missing out on a sexual opportunity. It appears that much of the theory focuses on gender differences in biases as opposed to differences between men (Fisher & Walters, 2003; Haselton & Buss, 2000; Perilloux et al., 2012). There are clear differences between people in sexual drives, sexual preferences, relationship attitudes and experiences amongst other factors that influence the sexual strategy that someone might use: the finding that men high in LSH show different overperception biases with a potentially underlying difference in sexual goals further suggests that individual differences should be accommodated for within EMT.

In line with this argument, the individual man's assessment of benefits and costs towards sexual opportunity may alter depending on the nature of the interaction between them and the women they are considering for sexual opportunity. Differences in the strength of biases found between men high in LSH and those men low and medium in LSH could depend on whether they have the opportunity to interact and meet the woman they are evaluating (Bargh et al., 1995; Maas et al., 2003). The potential of meeting the women could make the sexual opportunity more proximate and obtainable increasing the man's arousal levels, and thus increasing the costs of a missed sexual opportunity, leading to potentially more extreme overperception biases. In contrast it is also conceivable that men high in LSH have sex goals that heighten the costs of missed sexual opportunities regardless of whether the opportunity is proximate and obtainable. Further to this there are contextual factors that could alter costs and benefits of sexual opportunity influencing subsequent overperception biases. Contextual factors such as whether the behaviours are taking place in a work setting or a public space could alter underlying costs when evaluating a sexual opportunity. For example, sexual relationships not being permissible in some work settings (McDonald, 2012) could reduce some of the benefits of the sexual opportunity through sanctioning, which potentially could inhibit displayed sexual biases in

this context. Altogether, the current findings from this programme of research show that there are differences in overperception biases between men with different LSH levels when making judgements on interactions with women, suggesting that EMT fails to account for individual differences, alongside contextual and situational factors.

Concepts of Power

Power did not seem to create a psychological state that facilitates more perceptual inaccuracies for high LSH men in chapter 4. It may be the case that the influence of high power on high LSH men's psychology is not always detrimental, which is in contrast to existing research showing that power may change the appraisal and approach towards women with high power making the woman seem more attractive and desirable towards men (Bargh et al., 1995) with a subsequent increase in physical touching and sexual harassment tendencies (Driscoll et al., 1998; Pryor, 1987; Pryor et al., 1995). The finding in chapter 4 that high power did not exacerbate perceptual accuracy of bored and rejecting affective cues, and the overperception bias of friendly affective cues for high LSH men, may support existing research that suggests that power is more strongly related to individual differences (Guinote et al., 2012), than sexual harassment tendencies. Power may increase reliance on accessible constructs that easily come to mind, regardless of whether these constructs are chronically or temporarily accessible, such that when alternatives are activated, power holders' responses are no longer congruent with their dispositions (Guinote et al., 2012). In contrast to chapter 3, where overperception biases were prominent for men high in LSH, high power may activate other competing concepts that are equally accessible to the man, so a prevailing judgement of an overperception bias is displaced and is no longer a dominant outcome for high LSH men. Perhaps the relationship of high power and biases in men high in LSH is such that power is deemed enough to make multiple

sexual advances and a reliance on biases in judgement is required less. The benefits endowed by power may exceed the benefits produced from adopting the overperception bias. Power could negate the necessity to rely on and execute an overperception bias. Experiencing high power may create a sense of protection from reprisals from harassing behaviour (Rios et al., 2015; Wilson & Thompson, 2001), alongside the belief that women will be more compliant and obedient to the powerful (Gruenfeld et al., 2008; Spekman, 1979), because high power is more attractive and favourable for a woman (Lammers & Maner, 2016; Lindskold & Tedeschi, 1971). The exact reasoning behind why high LSH men do not evidence a greater overperception bias under high power would need to be further empirically tested with an alternative power prime, but there is significant evidence that power changes an individual's dispositional tendencies (Gruenfeld et al., 2008; Guinote et al., 2012; Lammers & Maner, 2016) suggesting that judgements are augmented in some way.

The conclusions from this study need to be considered tentatively, as these findings have only been supported using mind set priming for high power and it is unknown how high LSH men's overperception biases manifest from conceptual priming for high power. Power was primed using an established mind set power priming technique (Galinsky et al., 2003) where participants are asked to recall a memory of being in a position of high power. This is unlikely to have activated power concepts in the same way as previous studies using conceptual priming (Bargh et al., 1995; Pryor & Stoller, 1994) involving the activation of specific mental representations, from traits to stereotypes to goals, which then serve as interpretative frames in the processing of subsequent information (Higgins, 1996). Crucially, conceptual priming is a subliminal method of priming, which creates a nonconscious carryover of unintentionally activated psychological power associations. This may activate power in a way that removes deliberative judgements where the benefits of

being in a position of high power could be self-evaluated against the benefits of an overperception bias. In contrast to this, mind set priming is a mental procedure involving the nonconscious carryover of an intentionally pursued mental procedure, which may be more suited to enabling individuality in responses to power (Guinote et al., 2012). It may be that overperception biases are more prone to being influenced by power under subconscious conditions with no awareness of high power, resulting in less control on the use of these biases. A comprehensive understanding of overperception biases under high power conditions for men high in LSH will require a comparison between subliminal and non-subliminal power priming techniques.

Attitudes and Beliefs

The findings from chapters 5 and 6 have shown that objectification theory is highly applicable to men likely to sexually harass. This objectification may associate to other adversarial beliefs about women such as dehumanization, rape myth acceptance, hostile sexism, rape proclivity and sexual aggression towards women (Cikara et al., 2011; Rudman & Mescher, 2012). Instrumental objectification and sexual objectification in addition to these beliefs are relevant to theories explaining existing perceptual biases. Indeed, the high scores on instrumental objectification show that women are not just perceived or used for their sexual value. Men high in LSH may evidence a belief system that shows a strong manipulation of women's role in the world. A woman is evaluated and judged on her productivity and how she fits the man's goal completion, with the idea that she is replaceable if her instrumentality is lowered or deemed insignificant (Gruenfeld et al., 2008). In evidencing the prevalence of instrumental objectification in the psychological profile of men high in LSH, it is important that it is not overlooked as a construct in explaining the behaviours of men who sexually harass, by just focusing on sexual

objectification solely. An integrated theory of sexual harassment should incorporate both instrumental and sexual objectification in explaining the motivations and behaviours of sexual harassers, as well as their appraisals of women.

Sexual objectification was clearly evidenced by men high in LSH in chapters 5 and 6. Sexual objectification is likely to impact on perceptions of women and the affective judgements placed upon women (general sexual objectification mediated romantic overperception biases of friendly affective cues, as in chapter 5). The consequences of this can be very serious and are part of an overall psychological profile that results in aggression against women. Existing empirical research shows that in addition to high willingness to aggress, rape proclivity and aggressive attitudes, sexual objectification has been evidenced to increase physical aggression towards women (Vasquez, Ball, Loughnan & Pina, 2018). This risk towards women is the central reason why sexual objectification in these men must be further elucidated. Sexual objectification may impact choices and behaviours with it being found to underlie the friendly affective cue overperception bias and therefore careful and precise research methodologies must be used to examine it. Theories of sexual objectification should not focus on the concept as a single dimension, but instead consider how the objectification contributes to these men's perception and subsequent behaviours. Importantly, chapter 5 shows that sexual objectification does not just solely exist in specific examples towards a single woman but pervades to beliefs about women in general. This provides evidence of how pervasive sexual objectification may be in high LSH men's outlook towards women in everyday life. Furthermore, the finding that sexual objectification was reported more than instrumental objectification suggests that sexual objectification is the bigger contributor to high LSH men's perception of women and therefore it is a crucial target to changing these men's harmful attitudes, beliefs and behaviours towards women.

Implicit Theories in Men High in LSH

The prominence of sexual objectification of women by men high in LSH in chapter 5 shows support for the *women as sex objects* implicit theory. This draws into question whether there are any other implicit theories identified by Ward (2000) and Polaschek and Ward (2002) in the psychology of men high in LSH, and whether these theories explain these men's biases towards women in social situations. For example, the *women are unknowable* implicit theory may explain the sexual harasser perception that it is acceptable to persist with sexual advances towards women despite these advances being rejected by women. This implicit theory suggests that women are resistant to men's sexual advances whether they are interested in sex or not, because to the men that hold this theory, resistance is a socially scripted form of foreplay, not an indicator of a woman's desires (Ward, 2000). By extension, one could argue that the overperception biases shown by high LSH men could feed into this implicit theory as men are reading social cues inappropriately, or choosing to ignore certain cues that are goal inconsistent. The *entitlement* theory may explain the male sexual harasser's persistence in sexual advances and disregard for women's feelings and welfare when the women are victimised. The *entitlement* theory proposes that men are assumed to be inherently superior to women. Women are thought to be sexually naive and psychologically immature, so that men are entitled to control women's sexuality, and to determine what a woman really wants. Related to this, men are entitled to shape women's sexual and nonsexual behaviour, and to decide what is acceptable or unacceptable (Ward, 2000). This theory endorses the belief that a man, any man, is entitled to punish a woman for unsuitable conduct and the punishment in this instance may be sexual harassment, if he wants sex.

Of course, male sexual harassers' perceptual biases may not be limited to the implicit theories of *women as sex objects*, or *women are unknowable* and *entitlement*. A

thorough investigation into all implicit theories within sexual harassers' psychology may provide a more comprehensive understanding of the nature of sexual harassers' biases towards women in social situations. In considering implicit theories to sexual offending broadly, implicit theories may interact in distinctive ways to guide information processing in conjunction with different types of offences and may become relevant at different stages of the offence process. A consideration of implicit theories to male sexual harassers' psychology may further explicate the relevance of implicit theories to sexual offending as a whole (Blake & Gannon, 2010; Polaschek & Gannon, 2004) and explain whether configurations of different implicit theories explain different types of sexual offenders, as well as different typologies of sexual harassers (Lengnick-Hall, 1995; Lucero et al., 2006; Lucero et al., 2003). A more comprehensive assessment of sexual harassment supportive cognition could be developed by building scales around the operationalization of their specific implicit theories. Efforts to reduce the influence of specific cognitions on information processing and decision making are unlikely to be successful while the underlying implicit theory that generates them remains in place, strengthening itself by biasing incoming information all the while. A thorough exploration of implicit theories relationship to sexual harassment offending will inform both theoretical explanations of sexual harasser offending and interventions to tackle distortive beliefs supportive of sexual offending in general.

Improving perceptual accuracy

The Cooling condition created in chapter 6 did not improve perceptual accuracy for men high in LSH, although there may be other psychological influences that could be used to improve perceptual accuracy for men high in LSH. Techniques such as interpretation bias modifications (Grey & Mathews, 2000; Mathews & Mackintosh, 2000; Mathews &

MacLeod, 2002) could be used. This technique encourages individuals to repeatedly constrain interpretations of information in a particular direction (positive or negative) that can, over time, habitually bias the interpretation of fresh information. Interpretation bias modification tasks typically aim to increase the extent individuals interpret ambiguous situations in different (benign) ways to encourage more flexible thinking that is less rigidly negative or erroneous. The *ambiguous situations paradigm* is one of the most commonly used protocols used to manipulate interpretation bias (Coyne, Barrett & Duffy, 2000; Schoth & Liossi, 2017). In this task, individuals are typically presented with short paragraphs describing an ambiguous situation. By repeatedly practicing assigning new meanings to the ambiguous situations, the individual is thought to learn that a situation is more likely to be resolved in a new way. The principles from this approach could be applied to affective cue judgment through interfering with erroneous overperception judgements of negative affect and friendly to romantic affective cue biases, and then practicing and reinforcing accurate judgements of negative affect and friendly affect. This could be achieved by not making positive affect an option when women are displaying negative affect on the TRAC and then test carryover effects when positive affect judgments are then given as an option within a "recognition" task of negative affective cues. At least a neutral judgment on negative affective behaviour, as the most extreme option, is a starting point that may disengage instinctive judging of negative affect as positive to justify sexual opportunity. Repetitive training may strengthen the mental association between rejecting affective cues and negative affect and weaken mental associations misinterpreting rejecting affective cues as positive affect. Training on identifying different gradations of rejection, may aid an understanding of the complexity and variation of negative affective cues and make identification more aligned to the fluidity and subtle differences in real world affective behaviours.

Repetitive training has been shown to be beneficial towards changing automatic associations towards rejection. Dandeneau and Baldwin (2004) used a total of 112 training trials divided into 4 blocks of 28 trials where participants repeatedly identified smiling and accepting faces in a matrix of frowning faces. It was found that cognitive responses to rejection seemed to be modifiable to the point where people with low self-esteem exhibited less attentional bias toward rejection words. This finding suggests that it is possible to teach people skills that help them deal with negative social information. Perhaps repetitive training could inhibit positive responses towards rejection for men high in LSH by using repetitive training trials where participants are asked the opposite, to identify frowning faces from accepting faces in repetitive trials. Furthermore, the fact that the training task, which involved identifying faces, resulted in increased inhibition of rejection words suggests that participants learned not only a specific procedural ability of looking for smiling/accepting faces but also the conceptual ability of looking for acceptance information while inhibiting rejection information. This altogether suggests that responses to rejection could be altered through repetitive training, with potentially scope to change responses on the TRAC, with participants responding to facial/body expressions (procedural ability) as well as understandings of rejection within conversation (conceptual ability) within video clips.

Another technique that could be applied to the TRAC to change high LSH men's affective cue biases is 'nudging' (Hansen & Jespersen, 2013; Marchiori, Adriaanse & DeRidder, 2017), which is changing the information presentation or the manner by which judgments and decisions are elicited. This could be achieved by exposing the individual to the emotional and psychological consequences of the woman's negative affect not being understood when rejecting a man's social advances in the TRAC. Options can be reframed in ways that make important victim attributes salient, such as providing a running indicator

of the woman's anxiety, frustration and sadness in conjunction with the TRAC choices made by the individual. Reframing perception so that a direct impact on the victim can be interpreted, will show the individual the behavioural consequences of not responding appropriately to rejection. Of course, this manipulation is dependent on the man high in LSH, being motivated to not cause psychological discomfort to the female in the TRAC, but with practise it could strengthen awareness of the mental association between poor affective cue judgements and negative psychological consequences for others, with an increased motivation to show more care when making these decisions. This methodology may be prone to social acquiescence biases, but this could be overcome to some extent by comparing one trial run where the participant is made aware of active feedback from the female 'experimenter' after each video clip, against a trial run where the participant is given only a preamble of an unrelated scenario advocating that wrong male perception judgements may have negative psychological consequences for women. Although the principles of this technique is commonly used in marketing, sales or health campaigns (Hansen & Jespersen, 2013, Hausman & Welch, 2010; Sugden, 2009) to effect consumer choices to sell more products or sell particular products, and the technique is not usually applied in a forensic context, it could have value in reframing perception. Reframing perception in the TRAC should provide more information about perceptual inadequacies and biases and identify possible starting points for psychological pathways for changing perception.

Changing incentives (Berridge, 2001; Kamenica, 2012) may assist by reframing some of the judgements made by men high in LSH. Incentives are based on the idea that decisions are "strategy-based" errors (Shah, Higgins & Friedman, 1998) that occur simply because the necessary effort outweighs the benefit. In the case of high LSH men, this may suggest that by not judging a woman's behaviour as negative makes her more susceptible to

sexual advances and makes it easier for men high in LSH to pursue her for sexual advances, ultimately reducing the effort involved for a man to have a sexual relationship with this woman. Incentives may exacerbate the issue with high LSH men's desire for sex making affective cue judgement more erroneous in the pursuit of sex. However, whilst avoiding encouraging pursuing women just for sex, re-educating men high in LSH to perceive that a greater likelihood of obtaining sex is as part of a romantic relationship (Castro, Hattori & de Araújo Lopes, 2012; MacNeil & Byers, 2009), in addition to advocating that a romantic relationship is more fulfilling and psychologically rewarding (Cramer, 2003; Malouff ,Schutte, & Thorsteinsson, 2014), could alter the balance of incentives for these men. Through understanding that misidentifying women's negative affect and consequently responding inappropriately, is unlikely to lead to romance, this may encourage perceptual accuracy. In this sense, incentives can be calibrated to change preferences toward more beneficial behaviour. Of course, the incentive would have to be correctly calibrated so that it does not backfire, such as only encouraging high LSH men to perceive that romantic relationships are only long term commitments (Seal & Ehrhardt, 2003). Romantic relationships can be short-term in nature, which do not develop into long-term commitments. High LSH men may erroneously think romance is an extensively time-consuming, laborious, misuse of time, through long-term relationships only being advocated to them (Petersen & Hyde, 2010; Schmitt, Couden & Baker, 2001), which may reduce the incentives for pursuing romance as opposed to just sex.

It may be inevitable that the key to changing misperception will be long term individualized training (Bellack & Hersen, 2013; Hollin & Bilby, 2012; McMurran & Ward, 2010; Simon & Gagnon, 1986). Providing individuals with personalized feedback (Donche, Coertjens,Vanthournout, & Van Petegem, 2012) regarding the direction and degree to which they exhibit bias may be an essential step. Getting participants to discuss

the reasoning for their categorization may reveal common threads in their reasoning such as minimization of cues from facial expressions or body language or over focus on certain vocabulary. Although, it is clear that there are distinct biases in high LSH men, there may be differences for example such that some men may exhibit more biases against negative affective cues than a romantic overperception bias of friendly cues or vice versa. More consistent findings can be measured over several blocks of trials (Dandeneau & Baldwin, 2004) to confirm how prominent these biases are and whether they change with variables such as mood or motivation. An individual profile may be more helpful in outlining specific irregularities in perception and may make it easier to track changes in perception and whether interventions have an impact on perception.

Employing different psychological strategies to change high in LSH men's perception may identify whether their perception exists in a fixed state or alternatively whether it has a malleable nature. The finding that men high in LSH have deficient perceptual accuracy with distinct biases in comparison to men low and medium in LSH, signals the importance for future research to investigate perceptual change for high LSH men. While much evidence has identified negative attitudes and beliefs towards women in high LSH men, much less research has attempted to investigate conditions that improve their perceptions. Exploring ways to shift perceptual focus away from women's sexual value, is likely to be a significant contributor in stopping the perpetrator from offending. Also, it is essential for these techniques to be evaluated ecologically so that they are practical in their application and success, counteracting opportunities to sexually harass outside of clinical settings. Clinical settings are yet to fully capture the demands, motivations and acute situations that may contribute to perceptual misinterpretations and subsequent offending.

Men high in LSH may well temporarily reconstruct their perceptions with repetitive training serving to weaken their misidentification of negative affective cues and overperception biases. However, unless their underlying sexual cognition is attenuated the lasting effects of this training may be minimal. Any effects could be eroded by underlying sexual cognition that can function to minimise missed sexual opportunities (Haselton & Buss, 2000; Perriloux et al., 2012), particularly where sex goals and sexual attraction (Blake et al., 2018; Rudman & Borgida, 1995; Vaes et al., 2011) is activated. High LSH men's sexual cognition could make it difficult to restrict overperception biases, as is suggested in chapter 3. Men may be exposed to a number of power differentials within their day to day life (Samuels, 2004), as well as situations where power could subliminally influence them (Bargh et al., 1995), which could easily impact their sexual cognitions. Whilst repetitive training could weaken associations that may lead to misjudgements of rejection, these training effects may not be robust enough to counteract real world influences on sexual cognition.

Perceiving rejection accurately will make it difficult for a sexual harasser to justify and exonerate themselves from their sexual harassment since they will correctly perceive that these advances could be causing the victim discomfort, fear and anger amongst other negative feelings. Unfortunately, this perception may not prevent the sexual harasser from committing sexual harassment as recognising rejection may trigger aggressive responses from these men resulting in sexual harassment. This aggression could be brought about through rejection loosening constraints on aggression as once an individual feels rejected the costs of behaving antisocially can be lowered (Leary et al., 2006) with rejected individuals feeling that they have nothing to lose by being aggressive, especially if they do not believe the other person will ever accept them. Further to this rejection may reduce self-control because individuals do not process information as deeply or carefully after being

rejected (Baumeister, Twenge & Nuss, 2002). Rejection can undermine cognitive processing whereby rejected individuals do not analyse situations as accurately, consider their options as carefully, or have the necessary cognitive resources to regulate themselves effectively. As a result, they may go with their initial impulse to act in their short term interest without engaging in cognitive elaboration and self-regulation as they otherwise might. Studies have posited that rejected individuals devote attention to regulating their emotional reactions, leaving them with inadequate resources needed for self-control (Muraven, Tice & Baumeister, 1998; Twenge & Baumeister, 2005). Rejection may serve to heighten emotional decontrol in sexual harassers limiting psychological resources towards controlling aggression. A male sexual harasser's response to rejection may be complex. Sexual harassers evidence limited self control through the persistence of their sexual advances; for them rejection may act to further reduce this self-control and the cognitive capacity to adjust to the rejection, blocking cognitive elaboration and self-regulation to counteract instinctive responses towards aggression. Whilst it can be difficult for sexual harassers to accurately perceive rejection, they may possess aggressive responses towards women intertwined with increased susceptibility to react disastrously to rejection with further aggression. Self-regulatory strategies to circumvent aggression, negative emotions and enable individuals to engage in thoughtful cognition in response to rejection may have to be part of a rehabilitation programme for sexual harassers. It is not enough to just improve perceptual accuracy at identifying rejection; tackling sexual harasser's psychological responses to rejection when they correctly identify it without bias is also critical to stopping sexual harassment.

Practical implications of findings

The current programme of research has identified important practical applications for identifying potential male sexual harassers and preventing sexual harassers from offending or reoffending. The use of the TRAC in chapter 3 shows it to be a promising tool for identifying perceptual inadequacies in sexual harassers, particularly when looking for dysfunctional perception of negative affective behaviours. A TRAC could form part of a risk assessment or treatment diagnostic package in high LSH men or convicted sexual harassers in addition to using other important measures such as rape myth acceptance, hostile sexism and moral disengagement measures. An advantage of a TRAC is that it closely incorporates potential real-life scenarios through video technology and has the capacity to incorporate more fluid arousal/sensual measures to identify potential sexual harassers by the visual nature of the measure, and whilst the female or confederate is kept in protected and safe surroundings. Indeed, a TRAC with a capacity for inherently prompt data collection and considering the psychological overlap between sexual harassers and rapists (Begany & Milburn, 2002; Quina, 1996), can be added to a number of measures that are trying to identify characteristics that may contribute to offending in different types of sex offenders. A TRAC measure can be administered by researchers and organisational practitioners (such as managers and human resources officials) to detect identifiable differences in cognition in men. The use of these measures within occupational settings may shed light on why particular men are of greater risk of perpetrating sexual harassment at work than others and therefore, greater need for monitoring and intervention. The ethical implications of the findings will have to be considered as men who score poorly on these measures may unfairly risk losing their job or unfairly risk being placed onto probation measures.

As much sexual harassment occurs in employment (Stop Street Harassment, 2018), it is important to assist and educate employers in dealing and managing men who show significant errors in identifying and appropriately responding to negative responses from women in the workplace. The fact that some men show perceptual inaccuracy on female negative behaviours shows that in occupations which involve group-based tasks and mixed working environments (McDonald, 2012), a TRAC can be used to identify perceptual differences as a starting point to provide assistance and specific training to these men. Focus should be placed on men in all hierarchical positions (not just those in positions of high power) and professions (McDonald, 2012). Although power was not shown to negatively impact on perception in this programme of research (chapter 4), there is a substantial body of research evidence showing the detrimental effects of power on male sexual harassment proclivities (Bargh & Raymond, 1995; Bargh et al., 1995; Pryor, et al., 1995; Pryor, et al., 1993; Pryor & Stoller, 1994 & Pryor & Whalen, 1997). Men in positions of high power have still shown to hold attitudes and beliefs that negatively impact on their behaviours and judgements towards women. This strongly suggests that perception of women should be reviewed in men in all positions of power. If organisations endorse and embrace a TRAC then remedial actions and adjustments can be made to counteract male perceptual differences in the workplace. Not only should intervention and treatment focus on perceptual inaccuracies, but on the instrumental and sexual objectification that exists behind this perception. As much sexual harassment occurs in employment, it is important to assist and educate employers in learning the significance of objectification evidenced by some men and how best to identify and deal with it (Orehek & Weaverling, 2017). Instrumental objectification has particular relevance to occupational settings, where men are in positions of power or team-based environments and where there is potential opportunity to exploit others. High instrumental objectification in combination with sexual

objectification may be indicators of someone who is likely to be a sexual harasser, and staff awareness in occupational settings will allow the individual to be flagged up. Instrumental objectification as an indicator in isolation may not necessarily raise a significant concern, as it can co-occur with other characteristics such as a successful yet ruthless manager or someone who possesses autistic tendencies for example. For that reason, measures of instrumental objectification need to be carefully interpreted. Similarly, the intention of measures of sexual objectification is not necessarily to ascend to the assumption that the individual is a sexual harasser, but instead to focus on and tackle the sexual objectification in isolation. Reducing the sexual objectification is likely to impact on other attitudes and beliefs that contribute to sexual harasser behaviour and consequentially improve working conditions. It may be advisable for organisations that are largely populated by men, to actively encourage and promote gender diversity and equality (Orehek & Weaverling, 2017), and ensure that the language and working practices comply with legislation. By identifying objectification as a serious issue to employers, it will give confidence to complainants of objectification that these issues are serious and that their complaints are less likely to be dismissed as an overreaction.

A strength of the TRAC measure is that it can allow some perceptual insight and understanding for the sexual harasser, if they are made aware that their perception is inaccurate when judging affective behaviours. Some sexual harassers may not be fully aware of their actions and ultimately require help and assistance. The TRAC is a tool that can be used as a measure without the stigma associated with sexual harassment identification or labelling avoiding making the man feel targeted. If interventions are introduced for poor performance on a TRAC, there is the possibility that at least a small percentage of men receiving this intervention are averted from committing sexual

harassment. Adding other measures indicative of LSH such as negative attitudes towards women may improve the predictive ability of a TRAC to prevent actual sexual harassment.

By identifying a potential sexual harasser and intervening at the correct time, this should help the individual to develop better social skills, reducing potential offending, and ultimately preventing sexual harassment victimisation. The TRAC is a suitable tool as a starting point for improving social skills for a number of reasons. It covers a diverse range of social affective behaviours to identify and focus on improving specific deficits in perceptions. It can enable analysis alongside a visual presentation with comparisons between different video clips and learning can occur with an expert pausing the video at relevant moments to explain stages in the female communicating a particular affective cue, making it ideal for training interventions. For example, affective cues may change from being subtle to overt, such that an expert can point these transitions to the participant using the TRAC. The tool is also closer to real life interactions giving it ecological validity. The tool can also be tailored towards the particular individual such that if there are settings or scenarios that the male is known to show poor perceptual accuracy on, they can be incorporated. The male can also contrast and mould their interpretations with the male actor within the TRAC, providing an anchor from which to evaluate the male's perspective taking. Further to this, the tool also provides a more protective environment for women if the man has particularly aggressive perceptions and reactions to women as opposed to other methodologies using people meeting in person. The tool is also time effective as it can provide results quickly where results can be determined at different intervals supporting the tracking of progress.

The TRAC can be used to improve social skills by focusing on identifying strong biases associated with high LSH men such as negativeness blindness and the romantic overperception bias of friendly affective cues. It is important to check whether these biases

are prevalent across a span of time to avoid them being attributed to mood or misunderstanding of the task. Any intervention should be conducted in a private and confidential manner to protect the individual's dignity and protect them from negative responses from colleagues interfering with their intervention, remembering that these men have only shown a bias against women and no evidence of actual sexual harassment. Preferably the intervention should be introduced at the earliest opportunity as this may be an optimal time to attack biases not long formed, with biases less likely to be hardened against intervention, and also avoid further influences from other men close to the individual who may share similar attitudes reinforcing these biases. Intervention aimed at tackling these biases could use techniques such as interpretation bias modification, nudging and incentives[29],as well as exploring underlying reasons for these biases such as sexual desire, negative attitudes towards women and aggression towards women. Finally, the effectiveness of interventions should be monitored through measuring the TRAC after intervention over interval periods of time to see if biases are declining.

Limitations and future research avenues

The studies reported in this thesis have several limitations, which provide interesting avenues for future research. There are a number of methodological issues with the development of the TRAC, covered in the Discussion in chapter 2, which shows that the TRAC used in these studies will require more extensive and thorough testing to improve confidence in findings in existing and future research using this TRAC and to enable the measure to be used as a diagnostic tool for interventions. Using a participant sample of women that is over one thousand participants as opposed to just over one hundred will

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[29] These techniques are explained in the improving perceptual accuracy section within chapter seven.

improve confidence in the baseline measure for use of the TRAC in future studies, particularly when there can be subtle differences in depicting affective cues in video clips such as neutral and friendly affective cues. Female university students were used to form this baseline and whilst they may be likely victims of sexual harassment, they do not represent all women or all relationship experiences. Also, sexual harassment is an offence that occurs globally, and it will be a challenge to produce a universal TRAC that represents women globally. It may well be that individual TRACs will have to be produced, representing certain countries or cultures. The actors used should reflect the culture of the participants viewing the TRAC and be in settings that also reflect that culture, with customs, gestures and etiquette of social behaviour that are common. This will enable research to reflect these differences and importantly if the TRAC was used as a diagnostic tool in intervention, this would give a stronger justification to place men into intervention programmes due to poor performance on the TRAC.

An important limitation within all studies were that the video clips were all presented continuously on one page, as opposed to each individual video clip being presented on a separate page, and on reflection this was the wrong decision, with limitations in this way of presenting the video clips. Presenting the video clips on separate pages would have reduced carryover effects, allowing better psychological detachment from the previous video clip impacting responses to the current video clip. Presentation on separate pages would have removed opportunities to replay video clips previously completed, minimising carryover effects between video clips. Presenting video clips on separate pages would have also removed the potential for participants to unintentionally complete the video clips in a different order by either going backwards to complete video clips thought missed or unintentionally missing out video clips. Although incomplete data were removed from the data analysis, presenting the video clips on separate pages would

have reduced any confusion and mistakes from the participant not accurately tracking their response completion to the video clips, and subsequently this would enable better data collection. In sum, internal validity would have been improved by placing the video clips onto separate pages, which will reduce carryover effects, prevent completion of video clips in the wrong order and prevent uncompleted video clips.

Although the TRAC has good external validity in representing social interactions that are visual, inevitably the video clips do not completely replicate real life experiences, where men would be in live situations. For some participants, the social interactions in the TRAC could be akin to watching social interactions for entertainment on a media platform. In this way participants may have a level of comfort in that these videos are for entertainment and not to be taken seriously. As a result, participants may not show their true biases when not fully engaging with the videos and completely focusing on the interactions between the man and woman. Furthermore, the actors were not trained actors, and it is unknown how convincing their acting was, as this measure was not taken. Using trained actors and asking participants to give feedback on how convincing the acting was, gives us confidence of ecological validity. Replicating real life experiences better may enable participants to engage with judgements more naturally. Real life conversations between a man and a woman are likely to incorporate different moods, situations and topics that fluctuate within the same conversation. Although the TRACs ecological validity could be improved, the TRAC has enabled a host of socially existing variables to be controlled for that will affect perception. Variables such as mood modifiers like music, other persons interjecting in the natural flow of conversation, multiple people creating distraction and noise, and other external factors that may affect participant concentration are controlled for.

Another limitation of the TRAC was the influence of the male actor in the video clips. The visibility of the male may have influenced participant judgements. For example,

if the male actor were to appear unintentionally annoyed or disappointed within their interaction and the participant holds a suspiciousness schema, the participant could conflate the male's response as being angry or upset with the female not conveying the truth with their affective cues, confirming their suspiciousness schema. Further to this the male actor could be atypical and arouse all sorts of emotions in participants, impacting biases held towards the female in different ways. Failure to understand the responses and reactions from an atypical male actor could unintentionally support and heighten biases towards the female depending on the emotions evoked or be so distracting that their biases are not able be fully revealed because they are unable to focus on the female with being confused by the male actor who is unfamiliar and odd to them. Research could check for this by asking participants to rate whether they understood the male actor, how normal they thought the male was to them, and how distracted they were by the male and if these ratings are high these participants data could be removed. In contrast to this, it is possible to position the female on her own speaking in the video clip as if she is talking to someone else, however some adjustments would have to be made such as that it is clear the female is talking to a male and not a female if the second person is hidden. Although the approach taken followed the methodology used by Lipton et al., (1987) and Stahl and Sacco (1995) where both the female and male are visible to the participant, if the female actor was to communicate with a non-visible male actor it would decrease noise that can be distracting for the participant such as what the male actor is wearing, their overall appearance and the facial expressions and gestures they are making towards the female when communicating and responding to her. This presentational adjustment would also reduce bias towards the female, which could be influenced by the visible male.

The internal coherence of the use of the TRAC can be improved. The TRAC used the same female in each video clip and did not control for situational factors such as sexual

attractiveness ratings, relationship status of the perceiver and sexual orientation of the perceiver. In reality these men's sexual attractiveness ratings of different women will vary, and this may have impacted their perceptions of the female. Relationship status can impact on perception as interest displayed by an attractive alternative to one's current partner can threaten relationship commitment and elicit relationship maintenance processes designed to reduce temptations posed by relationship alternatives (Simpson, Gangestad & Lerma, 1990). There may be a range of female personal characteristics, which are likely to influence perception such as age, ethnicity, and appearance amongst other differences. Future assessments of the TRAC can encompass control measures for sexual attractiveness and relationship status and other variables that have been shown to impact on perception. It may be beneficial to add different affective cues to the TRAC scale to see how much biases extend to other affective cues. For example, negative affective cues such as anger, disgust and sadness may engage a different response from high LSH men or reveal further discrepancies between high and low and medium LSH men on biases towards negative affective cues. Similarly, other positive affective cues such as happiness, curiosity and confidence may inform whether the romantic overperception bias extends to other positive cues than friendliness. This finding will inform how encompassing these biases are in distorting women's behaviour broadly as well as the nature of interventions these men could possibly receive since there could be a psychological manipulation broadly rather than on specific affective cues.

There are other factors that reduce the ecological validity of the TRAC to explaining sexual harassment perpetration. The combination and use of a number of video clips creates familiarity and fatigue effects, as well as removing the natural impact of judging the female. Incorporating measures such as using different confederates, varying confederate appearance and varying location settings, may help to counteract familiarity and fatigue

effects, as well as in invigorating participant interest. Importantly, the TRAC discounts the impact of the male sexual harasser or man high in LSH interacting with the female. If these men have the genuine belief of a harassment opportunity when judging a female, then this may change their perceptual decisions. There is potential that if these men know that they could meet the female then their perceptions may be greater skewed towards the man optimising the harassment opportunity. Future studies may explore the potential of allowing the man to meet the female in the video clips in later stages of their study and the impact that this has on prior perception. The ethical nature of these studies must be evaluated and ultimately approved, where the confederate's safety is maintained. Meeting the female in person may further expose the psychological characteristics of the man such that the potential of meeting a woman could heighten sexual thinking, which could be evident through biases only on performance on the TRAC, only when meeting the female, or both. This could identify if these biases are masked in the TRAC performance and revealed in real life situations, showing that considerable learning is still required. If there is some deception then more robust interventions may have to be used challenging wrong cognitions with a greater direction and intensity. Even if the man is showing exemplary performance on the TRAC, a further test of performance could involve using women who have been victims of sexual harassment to produce the baseline for the TRAC, such that diagnosing men as performing poorly on the TRAC extends such that affective cues have been decided through an influence of actual sexual harassment and this diagnosis may be more transferable to understanding potential sexual harassment from men than TRACs with other women as a baseline.

It could be productive to use the male as the focus of attention where the male in the video clips is displaying the affective behaviours, with the woman as the recipient of the affective behaviours in the video clips. This may grant opportunity for the participant to use

the male as a model of their own behaviour, where the participant's intentions and motivations are moulded onto the male in the video clips. A comprehensive understanding of the perception of different gendered interactions and different social situations can be gained through the use of the TRAC, and this may help identify whether sexual harassers' flawed perception of social behaviour is limited to specific situations or is generalized across different circumstances.

There are limitations with selecting international participants to use for the participant samples. One of the limitations of using international participants is that they may vary in their cultural background and their subsequent interpretations of affective cues (this is supported in Chapters 3 and 4). For example, what may be a neutral interpretation in one culture may be a friendly interpretation in another culture as different cultures may differ in terms of behavioural etiquette, gestures and social nuances. An example of the influence of cultural background was in chapter 3, where Asian participants perceived rejecting affective cues as romantic more than White participants. It is suspected that this difference was because the affective cues within the TRAC were culturally unfamiliar to those of Asian ethnicity. Also, the social settings within the TRAC may not reflect the normality of the settings that participants from diverse international backgrounds are used to, which could potentially psychologically detach them from the actors in the TRAC influencing how recognisable the affective cues are towards them. Further to this, although the participants had to be English speaking in the study international participants may have a different understanding when reading as opposed to English being verbally spoken with even subtle words spoken by participants in the TRAC differing by accent. This may have had an impact on their comprehension and understanding of the video clips they completed.

It must be emphasised, that the likelihood to sexually harass only indicates a tendency of a person to perpetrate a specific type of behaviour. Consequently, it is not

possible to ascertain from this measure if participants had ever committed harassing acts in the past or whether they would ever actually engage in harassment in the future. Few men are imprisoned for sexual harassment, and few may admit they have committed sexual harassment (Fileborn, 2013; Radu, 2014), so in considering these facts, the LSH is a good way of obtaining potential sexual harassers, whilst protecting participants anonymity and confidentiality. The actual correlation between sexual harassment and the LSH scale is unknown, although the LSH scale has strong crossover with rape myth acceptance, rape proclivity and other adversarial belief measures towards women (Pryor, 1987), suggesting the LSH could be a good predictor of actual sexual harassment behaviours. Nevertheless, some confidence can be taken that the LSH is a measure that can go some way towards signalling a step to actual harassing behaviour, since attitudes and beliefs frequently and often correspond to actual behaviour.

If men high in LSH were told that they would meet the woman in the video clips after completing the TRAC, then knowing that there is an imminent meeting with that woman could potentially change their biases evidenced in the TRAC. Knowing there is an imminent meeting could accelerate their goal for sex, with this sexual opportunity being more obtainable in knowing they are meeting the woman. Anticipation of this meeting could make overperception biases more pronounced in not wanting to miss out on this sexual opportunity. This could result in more overperception biases of friendly affective cues and greater misidentification of negative affective cues towards not missing out on this sexual opportunity. Having a proximate sexual opportunity could change biases and subsequent behaviour towards that sexual opportunity. Although using a power manipulation, this has been evidenced by Bargh et al., (1995) in that priming men high in LSH with high power led to them standing closer and displaying more physical contact when demonstrating a golfing technique to a woman. These men knew that they were going

to meet this woman before the demonstration showing that a proximate sexual opportunity can change men high in LSHs' behaviours towards a woman. Comparing biases towards the TRAC and those biases towards real meetings with a woman could inform how these biases serve towards actual sexual harassing behaviours, such that it is of value to establish if biases change between a man high in LSH knowing and not knowing if they are going to meet a woman when making judgements on the TRAC. If these biases are more severe in anticipation of meeting the woman, then this could be an adjustment by these men towards making their sexual advances more permissive when they meet the woman.

In this way, potentially the TRAC could be predictive of actual sexually harassing behaviour. Such endeavours, within ethical boundaries, will be useful in conducting a stronger behavioural assessment of the TRAC beyond a dependence on self-report methods and scenario based proclivity measures. Using a similar experimental methodology to the 'computer harassment paradigm' (see Dall'Ara & Maass, 1999; Diehl et al., 2012; Maass et al., 2003; Siebler, Sabelus & Bohner, 2008), it would be useful for researchers to explore whether men who show biases on the TRAC, do engage in more harassing and sexually advancing behaviour toward a computer-simulated female target. Within this paradigm the participant is given the opportunity to send pornographic material to a virtual female partner, and results have shown that they are more likely to do so if their social identity is threatened (Maass et al., 2003). Their social identity is threatened by challenging the individual's status as a good or prototypical member of their group, questioning that the individual's group is indistinguishable from the out-group and challenging the legitimacy of the in-group through questioning the social standing or privileges derived from a group. The argument being that by defending male supremacy and to restore a threatened gender identity they engage in harassing behaviours against women. Combining this measure with the TRAC will show whether social identity is a critical antecedent towards perceptual

biases in the TRAC and subsequent sexual harassment. There could potentially be more biases on the TRAC when men's social identity is threatened prior to completing the TRAC and potential harassment carryover effects from completing the computer harassment paradigm prior to the TRAC. This may show whether actual harassing behaviour can impact future judgements on other women than the victim in the computer harassment paradigm, putting other women at risk of harassment. The TRAC's value as a diagnostic tool in summary may at least indicate dysfunctional perceptions that exist within potential harassers, but it may be indicative of the necessity for further evaluation and safe testing of actual harassing behaviours in these men.

It must be acknowledged that some of the limitations of this study were not addressed as all studies were completed at once in parallel over a short period of time. This approach was taken due to the author's full time employment commitments across this programme of research. Consequently, this gave little opportunity to correct some of the limitations identified in chapter 2 with the development of the TRAC measure and correct the limitations identified within the current chapter, as well as re-test some of the findings with an improved methodology. Addressing these limitations would have provided a stronger test of the hypotheses within the studies and improved confidence in the study findings across this thesis.

Summary

This thesis can stimulate further research into the perceptions of the perpetrators of sexual harassment, specifically focusing on heterosocial perception as a concept to measure men's perceptions of women. The key methodology used in this thesis is the Test of Reading Affective Cues (TRAC) as a tool to measure perceptual differences. This tool has been used throughout this programme of research as the central measure of perception

providing a range of affective cue judgements from positive to negative. This tool has identified evidence of negativeness blindness, overperception of negative affective cues and a romantic overperception bias of friendly affective cues in perception for men high in LSH. These biases may fit an EMT evolutionary argument such that the biases serve to minimise missed sexual opportunities. There may be a moral disengagement component to the biases such that affective cues are judged and determined in a way that appears to exonerate men high in LSH from potential sexual harassment. Importantly, rejecting affective cues are misinterpreted, which links to much theoretical reasoning on sexual harassment, identifying that male perpetrators do not adequately respond to rejection and dismissive behaviours from women. The findings from the TRAC have importantly identified that heterosocial perception is a key area of study that identifies significant differences between those men who could be more likely to sexually harass and those who could be less likely.

The TRAC has been used in this programme of research to detail and delineate the nature of men high in LSH's perception. When considering the impact of power on heterosocial perception, findings showed surprisingly that power did not have a detrimental impact on perceptual accuracy in this study. Contrary, to previous research with power and men high in LSH, priming high power did not exacerbate perceptual deficits for negative affective cues and the friendly affective cue overperception bias. Men high in LSH exhibited more instrumental and sexual objectification towards the women in the TRAC video clips and more general sexual objectification towards women. Perceiving a woman as a sexual object, and erroneously categorising her behaviours in connection to this, may support men high in LSH to sexually harass women. This is evidenced in general sexual objectification being found to mediate the romantic overperception of friendly affective cues showing sexual objectification has a role in supporting this bias.

Improving perceptual accuracy in men high in LSH may not be as a result of transitory mental states as shown by the use of the cooling system on perception in this programme of research, although there was some evidence that cooling reduced the friendly affective cue overperception bias. In addition to this, instrumental and sexual objectification was not altered by the cooling system suggesting that direct and specific approaches to this attitude change are required rather than transitory mental states. Empathy enhancement may assist in improving perceptual accuracy, but it has to be structured in the correct way, taking into account that men high in LSH show higher state empathy, but less trait empathy than men low and medium in LSH. Overall, in extending to sexual harassers and understanding sexual harassment, a social cognitive psychological perspective has capacity to reveal much about the perception of sexual harassers and how malleable their perception can be towards changing their offending behaviours.

There are key theoretical implications from this heterosocial perception research for LSH men and sexual harassment. Across studies men high in LSH were significantly less accurate at judging the female when she displayed negative affective cues. In considering this finding, existing theories of sexual harassment may need to account for this characteristic difference in perception. Further theoretical research can explore the complex psychological relationship to the affective cue of rejection for high LSH men considering that it is important to understand that rejection is central to sexual harassment as a harasser can persist with requests for sexual intercourse despite being rejected multiple times. The overperception bias findings may highlight intra differences amongst men that EMT will need to account for incorporating why high LSH men overperceive to a greater extent in explaining men's sexual strategies. There are also important influences of power on perceptual biases, which could be altered differently by how power is primed. Objectification in both instrumental and sexual forms will need to be tackled in men high in

LSH and these attitudes and beliefs may suggest that there are other implicit theories that support these men's biases and subsequent behaviours. Finally, theory can inform techniques that can improve perceptual accuracy as well as tackling erroneous sexual harasser psychological responses to rejection when this affective cue is correctly identified, all in the aim of preventing sexual harassment.

There are important practical implications from this research. In light of the current findings, it is necessary for educational workshops to enable people to understand the biases that some men may have in misinterpreting the behaviours of women and this may co-exist if evidenced with the sexual harassment of women. Interventions and treatment programmes should also incorporate awareness of differences in heterosocial perception, as well as potentially using the TRAC as a diagnosis tool. Intervention and treatment programmes can advance techniques to tackle perceptual inaccuracies, specifically focusing in improving perpetrator's identification and responses to female negative affective cues and overperception biases of friendly affective cues. Of course, it is not guaranteed that a sexual harasser would be able to respond appropriately to the affective cue if they correctly identified it, but correct identification may be the first step in improving behaviour towards women and is likely to be a key step in preventing sexual harassment that is partly explained in misidentifying the affective behaviours of women. Heterosocial perception is an important avenue of research to support male sexual harassers in learning how they can appropriately interact with women in a range of circumstances and situations, preventing offending.

The current research programme has some important limitations, notably the internal validity and reliability of the current TRAC measure, the cultural and real life relevance of the TRAC and the use of convenience sampling and rigid methodology and outline due to the researcher's working arrangements. These limitations highlight

interesting avenues for further research on the TRAC to improve confidence in the findings gained from this measure. The TRAC has compatibility and versatility to work with other research designs. Future researchers may choose to adapt the TRAC for other dyads (e.g., female on male or male on male harassment), social environments and cultural contexts. It is important that future experimental work is conducted in order to establish whether heterosocial perception can predict actual sexually harassing behaviour. There are many exciting opportunities for future research in this area of sexual offending psychology. There is great scope to expand the current research programme in order to investigate further the influence of heterosocial perception in the wider realm of sexual violence.

Altogether this programme of research has shown that perpetrator perception is a complex and integral part in understanding sexual aggression and sexual coercion. This has been shown specifically from the current research in understanding sexual harassment. The way an individual perceives the world around them may reveal much about their intentions and motivations and subsequent behaviour. Capturing a male sexual aggressor's perception and the psychology related to this perception is imperative in aiding these men to change their perceptions for the better, removing bias and negative attitudes towards women, in the aim of stopping these men from sexually offending. Most importantly, this body of research is crucial towards protecting women from the harmful psychological consequences of being victims of sexual aggression and sexual coercion, and it is hoped that the progression of this research is prioritised in achieving this aim.

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APPENDICES

Appendix I: Likelihood to Sexually Harass Scale (Pryor, 1987)

On the questions that follow you will find 10 brief scenarios that describe 10 different interactions between males and females. In each case you will be asked to imagine that you are the main male character in the scenario. Then you will be asked to rate how likely it is that you would perform each of several different behaviours in the described social context. Assume in each scenario that no matter what you choose to do, nothing bad would be likely to happen to you as a result of your action. Try to answer each question as honestly as you can. Your answers will be completely anonymous. No one will ever try to discover your identity, no matter what you say on the questionnaire.

Scenario 1

Imagine that you are an executive in a large corporation. You are 42 years old. Your income is above average for people at your job level. You have had numerous job offers from other companies. You feel very secure in your job. One day your personal secretary decides to quit her job and you have the task of replacing her. The personnel department sends several applicants over for you to interview. All seem to be equally qualified for the job. One of the applicants, Michelle S., explains during her interview that she desperately needs the job. She is 23 years old, single and has been job hunting for about a month. You find yourself very attracted to her. She looks at you in a way that possibly conveys she is also attracted to you. How likely are you to do the following things in this situation?

a. Would you give her the job over the other applicants? (Mark a number to indicate your response)

1…………….2……………3……………4…………….5

   Not at all likely   Very likely

b. Assuming that you are secure enough in your job that no possible reprisals could happen to you, would you offer her the job in exchange for sexual favours? (Mark a number to indicate your response)

1…………….2……………3……………4…………….5

   Not at all likely   Very likely

c. Assuming that you fear no reprisals on your job, would you ask her to meet you later for dinner to discuss her possible employment?

1…………….2……………3……………4…………….5

   Not at all likely   Very likely

Scenario 2

Imagine that you are the owner and manager of an expensive restaurant. One day, while going over the receipts, you discover that one of the waitresses has made some errors in her cheques. She has undercharged several customers. The mistake costs you £50. In talking to some of the other employees, you find that the particular customers involved were friends of the waitress. You call her into your office and ask her to explain her behaviour. The waitress confesses to having intentionally undercharged her friends. She promises that she will never repeat this dishonest act and tells you that she will do anything to keep her job. The waitress is someone you have always found particularly attractive. She is a divorcee and about 25 years old. How likely are you to do the following things in this situation?

a. Would you let her keep her job?

1…………….2……………3……………4……………..5

Not at all likely   Very likely

b. Would you let her keep her job in exchange for sexual favours?

1…………….2……………3……………4……………..5

Not at all likely   Very likely

c. Would you ask her to meet you for dinner after work to discuss the problem?

1…………….2……………3……………4……………..5

Not at all likely   Very likely

Scenario 3

Imagine that you are the manager of a shipping company. One day your supervisor asks you to study the possibility of buying several computers for the office. You call up several competing companies that sell computers. Each company sends a sales representative over to your office who describes the company's products. A salesperson from company 'A' calls you and asks to come to your office. You agree and the next day a very attractive woman shows up. She can offer no real reason for buying her company's products over those of the other companies. However, she seems very sexy. How likely are you to do the following things in this situation?

a, Would you recommend her line of computers?

1……………2……………3……………4……………..5

Not at all likely   Very likely

b. Assuming that you are secure enough in your job hat no possible reprisals could happen to you, would you agree to recommend her line of computers in exchange for sexual favours?

1……………2……………3……………4……………..5

Not at all likely   Very likely

c. Given the same assumptions as the last question above, would you ask her to meet you later for dinner to discuss the choice of computers?

1……………2……………3……………4……………..5

Not at all likely   Very likely

Scenario 4

Imagine that you are a Hollywood film director. You are casting for a minor role in a film you are planning. The role calls for a particular stunning actress, one with a lot of sex appeal. How likely are you to do the following things in this situation?

a. Would you give the role to the actress whom you personally found sexiest?

1……………2……………3……………4……………..5

Not at all likely   Very likely

b. Would you give the role to an actress who agreed to have sex with you?

1……………..2……………3……………4……………..5

Not at all likely   Very likely

c. Would you ask the actress to whom you were most personally attracted to talk with you about the role over dinner?

1……………..2……………3……………4……………..5

Not at all likely   Very likely

Scenario 5

Imagine that you are the owner of a modelling agency. Your agency specializes in sexy female models used in television commercials. One of your models, Amy T., is a particularly ravishing brunette. You stop her after work one day and ask her to have dinner with you. She coldly declines your offer and tells you that she would like to keep your relationship with her "strictly business". A few months later you find that business is slack and you have to lay off some of your employees. You can choose to lay off Amy or one of four other women. All are good models, but someone has to go. How likely are you to do the following things in this situation?

a. Would you fire Amy?

1……………2……………3……………4……………5

Not at all likely   Very likely

b. Assuming that you are unafraid of possible reprisals, would you offer to let Amy keep her job in return for sexual favours?

1……………2……………3……………4……………5

Not at all likely   Very likely

c. Would you ask Amy to dinner so that you could talk over her future employment?

1……………2……………3……………4……………5

Not at all likely   Very likely

Scenario 6

Imagine that you are a University professor. You are 38 years old. You teach in a large university in the Midlands. You are renowned in your field (Abnormal Psychology) and have numerous offers for other jobs. One day following the return of an examination to a class, a female student stops in your office. She tells you that her score is one point away from a distinction and asks you if she can do some extra credit project to raise her score. She tells you that she may not have a sufficient grade to get into postgraduate study without the distinction. Several other students have asked you to do extra credit assignments and you have declined to let them. This particular woman is a stunning blonde. She sits in the front row of the class every day and always wears short skirts. You find her extremely sexy. How likely are you to do the following things in this situation?

a. Would you let her carry out a project for extra credit e.g. write a paper)?

1……………2……………3……………4……………..5

Not at all likely   Very likely

b. Assuming that you are secure in your job and the university has always tolerated professors who make passes at students, would you offer the student a chance to earn extra credit in return for sexual favours?

1……………..2……………3……………4……………..5

Not at all likely   Very likely

c. Given the same assumptions as the question above, would you ask her to join you for dinner to discuss the possible extra credit assignments?

1……………..2……………3……………4……………..5

Not at all likely   Very likely

Scenario 7

Imagine that you are a student at a large university in the Midlands. You are an undergraduate in your penultimate year who just transferred from another university on the East coast. One night at a bar you meet an attractive female student named Rhonda. Rhonda laments to you that she is failing a course in English Poetry. She tells you that she has a paper due next week on the poet, Shelley, and fears that she will fail since she has not begun to write it. You remark that you wrote a paper last year on Shelley at your former university. Your paper was given a distinction. She asks you if you will let her use your paper in her course. She wants to just retype it and put her name on it, How likely are you to do the following things in this situation?

a. Would you let Rhonda use your paper?

1…………….2…………….3……………4……………..5

Not at all likely   Very likely

b. Would you let Rhonda use your paper in exchange for sexual favours?

1…………….2…………….3……………4……………..5

Not at all likely   Very likely

c. Would you ask Rhonda to come to your apartment to discuss the matter?

1…………….2…………….3……………4……………..5

Not at all likely   Very likely

Scenario 8

Imagine that you are the editor for a major publishing company. It is your job to read new manuscripts of novels and decide whether they are worthy of publication. You receive literally hundreds of manuscripts per week from aspiring novelists. Most of them are screened by your subordinates and thrown in the trash. You end up accepting about one in a thousand for publication. One night you go to a party. There you meet a very attractive woman named Betsy. Betsy tells you that she has written a novel and would like to check into getting it published. This is her first novel. She is a dental assistant. She asks you to read her novel. How likely are you to do the following things in this situation.

a. Would you agree to read Betsy's novel?

1……………2……………3……………4……………..5

Not at all likely   Very likely

b. Would you agree to reading Betsy's novel in exchange for sexual favours?

1……………2……………3……………4……………..5

Not at all likely   Very likely

c. Would you ask Betsy to have dinner with you the next night to discuss your reading her novel?

1……………2……………3……………4……………..5

Not at all likely   Very likely

Scenario 9

Imagine that you are a physician. You go over to the hospital one day to make your rounds visiting your patients. In looking over the records of one of your patients, you discover that one of the attending nurses on the previous night shift made an error in administering drugs to your patient. She gave the wrong dosage of a drug. You examine the patient and discover that no harm was actually done. He seems fine. However, you realize that the ramifications of the error could have been catastrophic under other circumstances. You pull the files and find out who made the error. It turns out that a new young nurse names Wendy H, was responsible. You have noticed Wendy in some of your visits to the hospital and have thought of asking her out to dinner. You realize that she could lose her job if you report this incident. How likely are you to do each of the following things?

a. Would you report Wendy to the hospital administration?

1……………2……………3……………4……………..5

Not at all likely   Very likely

b, Assuming that you fear no reprisals, would you tell Wendy in private that you will not report her if she will have sex with you?

1……………2……………3……………4……………..5

Not at all likely   Very likely

c. Assuming that you fear no reprisals, would you ask Wendy to join you for dinner to discuss the incident?

1……………2……………3……………4……………..5

Not at all likely   Very likely

Scenario 10

Imagine that you are the news director for a local television station. Due to some personnel changes you have to replace the anchor woman for the evening news. Your policy has always been to promote reporters from within your organization when an anchor woman vacancy occurs. There are several female reporters from which to choose. All are young, attractive, and apparently qualified for the job. One reporter, Loretta W., is someone whom you personally find very sexy. You initially hired her, giving her a first break in the TV news business. How likely are you to do the following things in this situation?

    a. Would you give Loretta the job?

        1……………2……………3……………4……………5

    Not at all likely   Very likely

    b. Assuming that you fear no reprisals in your job, would you offer Loretta the job in exchange for sexual favours?

        1……………2……………3……………4……………5

    Not at all likely   Very likely

c. Assuming that you fear no reprisals in your job, would you ask her to meet you after work for dinner to discuss the job?

        1……………2……………3……………4……………5

    Not at all likely   Very likely

Note: Question b. is the question for all 10 scenarios measuring the likelihood to sexually

harass.

Appendix II: Sexual and Instrumental Objectification Scale for the TRAC.

Please answer the questions below about the FEMALE you have seen in the previous 10 video clips.

1.   The first thing I notice about this woman is her body.

1………………2…………..3………………4…………...5…………...6……………7

1=disagree strongly   4=neither agree nor disagree   7=agree strongly

2. It doesn't bother me if men around me make crude comments about this woman.

1………………2…………..3………………4…………...5…………...6……………7

1=disagree strongly   4=neither agree nor disagree   7=agree strongly

3.   This woman should be flattered when I look at her.

1………………2…………..3………………4…………...5…………...6……………7

1=disagree strongly   4=neither agree nor disagree   7=agree strongly

4. If I see this woman walking down the street, it is easy for me to imagine what she's like during sex.

1………………2…………..3………………4…………...5…………...6……………7

1=disagree strongly   4=neither agree nor disagree   7=agree strongly

5. If this woman wants to be on the cutting edge of fashion she needs to show a little skin.

1………………2…………..3………………4……………..5……………..6……………7

1=disagree strongly   4=neither agree nor disagree   7=agree strongly

6. Commenting on this woman's physical features is all in fun.

1………………2…………..3………………4……………..5……………..6……………7

1=disagree strongly   4=neither agree nor disagree   7=agree strongly

7. I would be less likely to comment on the body of this woman if I knew her well.

1………………2…………..3………………4……………..5……………..6……………7

1=disagree strongly   4=neither agree nor disagree   7=agree strongly

8. I respect this woman.

1………………2…………..3………………4……………..5……………..6……………7

1=disagree strongly   4=neither agree nor disagree   7=agree strongly

9. I think watching this woman is entertaining

1………………2…………..3………………4……………..5……………..6……………7

1=disagree strongly   4=neither agree nor disagree   7=agree strongly

10. When commenting on this woman, it's okay to be crude.

1………………2…………..3………………4……………..5……………..6……………7

1=disagree strongly   4=neither agree nor disagree   7=agree strongly

11. You can tell a lot about this woman's sexual availability by how she looks.

1………………2…………..3………………4……………..5……………..6……………7

1=disagree strongly   4=neither agree nor disagree   7=agree strongly

12. It doesn't bother me if men around me make crude comments about this woman loud enough for her to hear.

1………………2…………..3………………4……………..5……………..6……………7

1=disagree strongly   4=neither agree nor disagree   7=agree strongly

13. Commenting on this woman's physical features is only natural.

1………………2…………..3………………4……………..5……………..6……………7

1=disagree strongly   4=neither agree nor disagree   7=agree strongly

14. The first thing that attracts me to this woman is her nice body.

1………………2…………..3………………4……………..5……………..6……………7

1=disagree strongly   4=neither agree nor disagree   7=agree strongly

15. I would always use appropriate names when describing this woman's body.

1………………2…………..3………………4…………..5………….…..6……………7

1=disagree strongly   4=neither agree nor disagree   7=agree strongly

16. I would make up nicknames for this woman based on her appearance.

1………………2…………..3………………4…………..5………….…..6……………7

1=disagree strongly   4=neither agree nor disagree   7=agree strongly

17. It would bother me if someone comments on this woman's body if I knew her well.

1………………2…………..3………………4…………..5………….…..6……………7

1=disagree strongly   4=neither agree nor disagree   7=agree strongly

18. This woman should be used to hearing the men around her comment on her body.

1………………2…………..3………………4…………..5………….…..6……………7

1=disagree strongly   4=neither agree nor disagree   7=agree strongly

19. I feel it would be alright to comment on this woman's chest in a bar setting.

1………………2…………..3………………4…………..5………….…..6……………7

1=disagree strongly   4=neither agree nor disagree   7=agree strongly

20. If this woman is attractive, she doesn't need to have anything interesting to say.

1………………2…………..3………………4…………...5…………....6……………7

1=disagree strongly   4=neither agree nor disagree   7=agree strongly

21. I think more about what this person can do for me than what I can do for her.

1………………2…………..3………………4…………...5…………....6……………7

1=disagree strongly   4=neither agree nor disagree   7=agree strongly

22. I would tend to contact this person only when I need something from her.

1………………2…………..3………………4…………...5…………....6……………7

1=disagree strongly   4=neither agree nor disagree   7=agree strongly

23. I am interested in this person's feelings because I would want to be close with her.

1………………2…………..3………………4…………...5…………....6……………7

1=disagree strongly   4=neither agree nor disagree   7=agree strongly

24. I would try to motivate her to do things that will help me succeed.

1………………2…………..3………………4…………...5…………....6……………7

1=disagree strongly   4=neither agree nor disagree   7=agree strongly

25. This relationship would be important to me because it would help me accomplish my goals.

1………………2…………..3………………4……………..5……………..6……………7

1=disagree strongly   4=neither agree nor disagree   7=agree strongly

26. This person would be very useful to me.

1………………2…………..3………………4……………..5……………..6……………7

1=disagree strongly   4=neither agree nor disagree   7=agree strongly

27. My relationship with this person would be based on how much I enjoy our relationship, rather than how productive our relationship is.

1………………2…………..3………………4……………..5……………..6……………7

1=disagree strongly   4=neither agree nor disagree   7=agree strongly

28. If the nature of my job or her job changed and this person wasn't helpful anymore, the relationship probably wouldn't continue.

1………………2…………..3………………4……………..5……………..6……………7

1=disagree strongly   4=neither agree nor disagree   7=agree strongly

29. Someone else with the same skill set could become equally important to me.

1………………2…………..3………………4……………..5……………..6……………7

1=disagree strongly   4=neither agree nor disagree   7=agree strongly

30. I really like this person a lot even though she is not all that useful to me.

1………………2…………...3………………4…………...5…………...6……………7

1=disagree strongly   4=neither agree nor disagree   7=agree strongly

Note: The Sexual Objectification scale used is taken from Zolot (2003) displayed in questions 1 to 20. The Instrumental Objectification scale used is taken from Gruenfeld et al. (2008), displayed in questions 21 to 30. Questions 7, 8, 15, 17, 23, 27, 30 are reverse coded.

Appendix III: General Sexual Objectification Scale.

Men's Objectification of Women Measure (Zolot, 2003)

This measure asks you to consider your responses to the women you see in your everyday life. Please read the following statements and mark how much you agree according to the following values.

 1=Strongly Disagree   2=Disagree   3=Undecided or Neutral   4=Agree   5=Strongly Agree

1. The first thing I notice about a woman is her body.

| 1 | 2 | 3 | 4 | 5 |

2. It doesn't bother me when men around me make crude comments about women.

| 1 | 2 | 3 | 4 | 5 |

3. I would complement a woman's looks if she had a very attractive face, but a not so ideal body.

| 1 | 2 | 3 | 4 | 5 |

4. A woman should be flattered when I look at her.

| 1 | 2 | 3 | 4 | 5 |

5. I have made jokes about ugly women.

| 1 | 2 | 3 | 4 | 5 |

6. If I see a woman walking down the street, it is easy for me to imagine what she's like during sex.

| 1 | 2 | 3 | 4 | 5 |

7. I like it when a thin woman wears tight clothing.

| 1 | 2 | 3 | 4 | 5 |

8. Women who want to be on the cutting edge of fashion need to show a little skin.

| 1 | 2 | 3 | 4 | 5 |

9. Commenting on a woman's physical features is all in fun.

| 1 | 2 | 3 | 4 | 5 |

10. I would be less likely to comment on

| 1 | 2 | 3 | 4 | 5 |

the body of a woman I know well.

11. I often comment on a woman's looks based on how her clothing fits her.	1	2	3	4	5
12. I have made comments to friends about women who I find unattractive.	1	2	3	4	5
13. I respect all women.	1	2	3	4	5
14. I think watching women is entertaining.	1	2	3	4	5
15. When commenting on women, it's okay to be crude.	1	2	3	4	5
16. I am more likely to notice or flirt with a woman with an attractive body than one with an attractive face.	1	2	3	4	5
17. You can tell a lot about a woman's sexual availability by how she looks.	1	2	3	4	5
18. My friends and I tease each other about unattractive women with whom we have had romantic encounters.	1	2	3	4	5
19. I am more likely to notice or flirt with a woman with an attractive face than one with an attractive body.	1	2	3	4	5
20. It doesn't bother me when men around me make crude comments about women loud enough for them to hear.	1	2	3	4	5
21. It is okay to insult a friend's girlfriend if she is ugly.	1	2	3	4	5
22. Commenting on a woman's physical features is only natural.	1	2	3	4	5

23. The first thing that attracts me to a woman is a nice body.   1   2   3   4   5

24. As soon as I see an attractive woman, I wonder what sex with her would be like.   1   2   3   4   5

25. I always use appropriate names when describing women's bodies.   1   2   3   4   5

26. I often imagine what women I meet on a daily basis would look like naked.   1   2   3   4   5

27. I frequently give women a rating based on attractiveness.   1   2   3   4   5

28. When I'm with female friends, I sometimes wonder what they would look like naked.   1   2   3   4   5

29. It's okay to insult a friend's sister if she is ugly.   1   2   3   4   5

30. I have made up nicknames for a woman based on her appearance.   1   2   3   4   5

31. I often imagine what women I meet on a daily basis would be like in bed.   1   2   3   4   5

32. A woman doesn't have to be totally beautiful, but if she at least has something cute about her face or her body, I'll comment about it.   1   2   3   4   5

33. I enjoy pornography.   1   2   3   4   5

34. I would complement a woman's looks if she had an ideal body, but a not so ideal face.   1   2   3   4   5

35. It bothers me when someone comments on a woman's body if I know her well.	1	2	3	4	5
36. I would never make comments to peers about unattractive women.	1	2	3	4	5
37. I treat attractive women differently than I treat unattractive women.	1	2	3	4	5
38. Women should be used to hearing the men around them comment on their bodies.	1	2	3	4	5
39. I feel it is alright to comment on a woman's chest in a bar setting.	1	2	3	4	5
40. I rarely compare how one woman looks to another.	1	2	3	4	5
41. If a woman is attractive, she doesn't need to have anything interesting to say.	1	2	3	4	5

Note: Questions 3, 10, 13, 19, 25, 35, 36 & 40 are reverse coded.

Appendix IV: State Empathy Measure (Batson's Impressions and Feelings Questionnaire, 1987)

How do you feel towards this woman?

Empathic   1………………2…………...3………………4……………...5

                            Not at all   A little   Medium   Quite a bit Very much

Moved   1………………2…………...3………………4……………...5

                            Not at all   A little   Medium   Quite a bit Very much

Sympathetic   1………………2…………...3………………4……………...5

                            Not at all   A little   Medium   Quite a bit Very much

Compassionate   1………………2…………...3………………4……………...5

                            Not at all   A little   Medium   Quite a bit Very much

Concerned   1………………2…………...3………………4……………...5

                            Not at all   A little   Medium   Quite a bit Very much

Blaming of her   1………………2…………...3………………4……………...5

                            Not at all   A little   Medium   Quite a bit Very much

Appendix V: Trait Empathy Scale (Davis, Interpersonal Reactivity Index, 1980, 1983)

The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you by choosing the appropriate number on the scale. Answer as honestly as you can. Thank you.

1. I daydream and fantasize, with some regularity, about things that might happen to me.

    1…………………2……………….3……………..4…………………5

    Not at all   A little   Medium   Quite a bit   Very much

2. I often have tender, concerned feelings for people less fortunate than me.

    1………………..2……………….3……………..4………………….5

    Not at all   A little   Medium   Quite a bit   Very much

3. I sometimes find it difficult to see things from the "other guy's" point of view.

    1………………..2……………….3……………..4………………….5

    Not at all   A little   Medium   Quite a bit   Very much

4. Sometimes I don't feel very sorry for other people when they are having problems.

    1…………………2……………….3……………..4………………….5

    Not at all   A little   Medium   Quite a bit   Very much

5. I really get involved with the feelings of the characters in a novel.

    1…………………2……………….3……………..4………………….5

    Not at all   A little   Medium   Quite a bit   Very much

6. In emergency situations, I feel apprehensive and ill-at ease.

    1………………….2………………….3……………..4………………….5

    Not at all   A little   Medium   Quite a bit   Very much

7. I am usually objective when I watch a movie or play, and I don't often get completely caught up in it.

    1………………….2………………….3……………..4………………….5

    Not at all   A little   Medium   Quite a bit   Very much

8. I try to look at everybody's side of a disagreement before I make a decision.

    1………………….2………………….3……………..4………………….5

    Not at all   A little   Medium   Quite a bit   Very much

9. When I see someone being taken advantage of, I feel kind of protective towards them.

    1………………….2………………….3……………..4………………….5

    Not at all   A little   Medium   Quite a bit   Very much

10. I sometimes feel helpless when I am in the middle of a very emotional situation.

    1………………….2………………….3……………..4………………….5

    Not at all   A little   Medium   Quite a bit   Very much

11. I sometimes try to understand my friends better by imagining how things look from their perspective.

    1………………….2………………….3……………..4………………….5

    Not at all   A little   Medium   Quite a bit   Very much

12. Becoming extremely involved in a good book or movie is somewhat rare for me.

1………………….2……………….3……………..4………………….5

Not at all   A little   Medium   Quite a bit   Very much

13. When I see someone get hurt, I tend to remain calm.

1………………….2……………….3……………..4………………….5

Not at all   A little   Medium   Quite a bit   Very much

14. Other people's misfortunes do not usually disturb me a great deal.

1………………….2……………….3……………..4………………….5

Not at all   A little   Medium   Quite a bit   Very much

15. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments.

1………………….2……………….3……………..4………………….5

Not at all   A little   Medium   Quite a bit   Very much

16. After seeing a play or a movie, I have felt as though I were one of the characters.
1………………….2……………….3……………..4………………….5

Not at all   A little   Medium   Quite a bit   Very much

17. Being in a tense emotional situation scares me.

1………………….2……………….3……………..4………………….5

Not at all   A little   Medium   Quite a bit   Very much

18. When I see someone being treated unfairly, I sometimes don't feel very much pity for them.

1…………………2……………….3……………..4…………………5

Not at all   A little   Medium   Quite a bit   Very much

19. I am usually pretty effective in dealing with emergencies.

1………………….2……………….3……………..4…………………5

Not at all   A little   Medium   Quite a bit   Very much

20. I am often quite touched by things that I see happen.

1………………….2……………….3……………..4…………………5

Not at all   A little   Medium   Quite a bit   Very much

21. I believe that there are two sides to every question and try to look at them both.

1………………….2……………….3……………..4…………………5

Not at all   A little   Medium   Quite a bit   Very much

22. I would describe myself as a pretty soft-hearted person.

1………………….2……………….3……………..4…………………5

Not at all   A little   Medium   Quite a bit   Very much

23. When I watch a good movie, I can very easily put myself in the place of a leading character.

1………………….2……………….3……………..4…………………5

Not at all   A little   Medium   Quite a bit   Very much

24. I tend to lose control during emergencies.

1…………………2……………….3……………..4…………………5

Not at all   A little   Medium   Quite a bit   Very much

25. When I'm upset at someone, I usually try to "put myself in his shoes" for a while.

1…………………2……………….3……………..4…………………5

Not at all   A little   Medium   Quite a bit   Very much

26. When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me.

1…………………2……………….3……………..4…………………5

Not at all   A little   Medium   Quite a bit   Very much

27. When I see someone who badly needs help in an emergency, I go to pieces.

1…………………2……………….3……………..4…………………5

Not at all   A little   Medium   Quite a bit   Very much

28. Before criticizing somebody, I try to imagine how I would feel if I were in their place.

1…………………2……………….3……………..4…………………5

Not at all   A little   Medium   Quite a bit   Very much

Note: Items corresponding to the four mechanisms of trait empathy. *Fantasy Empathy*: 1, 5, 7, 12, 16, 23, 26. *Empathic Concern*: 2, 4, 9, 14, 18, 20, 22. *Perspective Taking*: 3, 8, 11, 15, 21, 25, 28. *Personal Distress*: 6, 10, 13, 17, 19, 24, 27. Questions 3, 4, 7, 12, 13, 14, 15, 18, 19 are reverse coded.