

AN EXPLORATION OF GOSSIP AS AN INTRASEXUAL COMPETITION STRATEGY

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DECLARATION

The research reported in this thesis is original work. It has not been submitted for a higher degree in any other university or institution.

Signed

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GENERAL ABSTRACT

The research presented in this dissertation investigated whether gossip is useful as a strategy for intrasexual competition in both traditional and non-traditional mate attraction settings. The variables that influence engagement in, and the success of, reputation-based gossip were explored from the perspective of all three members of the mate competition triad; the individual, the romantic target, and the romantic competitor. *CHAPTER 1* provides a literature review of gossip research, particularly focusing on the role of gossip in mate competition. The historical context of gossip is initially provided, leading to a discussion of gossip as a strategy for intrasexual competition. The variables that influence reputation-based gossip are discussed and directions for future research outlined. *CHAPTER 2* presents a study that investigated the demographic variables influencing a woman's tendency to gossip. The results showed that age, relationship status, and parental status all influence gossip tendencies and gossip content. In line with predictions from evolutionary psychology, parental status was found to be the best predictor of both a woman's overall tendency to gossip in addition to her tendency to focus on physical appearance and social information gossip content. *CHAPTER 3* presents two studies that explored willingness to gossip in a mate poaching context. Cross-culturally, men and women were found to be willing to share derogatory gossip about a competitor in order to poach the competitor's partner. However, as the consequences for sharing this gossip increased, men became more willing to gossip than women and participants from collectivistic cultures became more willing to gossip than participants from individualistic cultures. The study detailed in *CHAPTER 4* investigated reputation-based gossip from the perspective of the target utilising a qualitative methodology. In this study, the target was asked to describe the impact that hearing negative gossip about their partner's sexual reputation would have on their perceptions of their partner and their relationship. Hearing this gossip was found to lead to a variety of negative relational consequences for the target, ranging from expressions of negative affect and distributive communication, to

relationship dissolution. Despite this, targets generally reported being unwilling to retaliate aggressively against the gossiper, preferring to focus their attentions on their partners and their relationships. *CHAPTER 5* presents a two-part study that explored the intrasexual and intersexual retention tactics the derogated competitor engages in as a result of hearing derogatory gossip about their reputation. The results of this study indicated that men and women were generally unwilling to retaliate aggressively against the gossiper, with social norms thought to constrain engagement in aggressive behaviour. Rather, derogated individuals reported they would preferentially focus their attentions on their romantic partners through engagement in intersexual retention tactics. *CHAPTER 6* is a summation providing an overview and analysis of the empirical findings obtained throughout the studies conducted for this dissertation. Limitations of the current research are discussed, as are avenues for future research, before final conclusions conferred. The findings from this dissertation suggest that gossip is a low-risk intrasexual competition strategy, particularly effective when used strategically in mate poaching contexts.

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CHAPTER 1

Who gossips with you will gossip of you:

A review of the function of reputation-based gossip

CHAPTER 1: A REVIEW OF REPUTATION-BASED GOSSIP

American writer and humourist Dave Barry (1998) once stated that “the most powerful force in the universe is gossip” (p. 182). Whilst such a statement is perhaps too grandiose to be true, there is no doubt that gossip is a behaviour that most, if not all, people engage in on a daily basis (Levin & Arluke, 1985). While there is a popular belief that gossip is merely the art of saying nothing, a number of researchers have suggested that it is in fact a useful activity that serves a variety of purposes. Indeed, researchers from disciplines including psychology (Hess & Hagen, 2006a, 2006b), sociology (Fine, 1977), anthropology (Arno, 1990), and organisational communication (De Backer, 2005) have attempted to study gossip. It has received attention with respect to how it operates at both the individual (Paine, 1967) and group level (Gluckman, 1963, 1968), and for issues including social bonding (Baumeister, Zhang, & Vohs, 2004), group control (Barkow, 1992), and reputation manipulation (Bromley, 1993). This chapter will provide a review of the existing gossip literature; in particular, it will focus on the role of gossip in mate competition.

Gossip – definitions and historical context

The scientific study of gossip initially became popular in the 1960s. However, in the ensuing 50 years it has not received the same level of scientific attention as other, related social behaviours, such as humour, ostracism, and bullying (De Backer, 2005). According to some prominent social psychological researchers this is somewhat surprising as gossip is universal, uniquely human, shows up early in child development, and plays a crucial social role (Baumeister et al., 2004; Bloom, 2004). It has been proposed that a potential explanation for why gossip has received less attention than other social behaviours is because it is a multifaceted concept that can be difficult to define (Foster, 2004).

Broadly, gossip has been defined in the literature as an exchange of personal information about absent third parties that can either be positive or negative upon evaluation (Foster, 2004). However, this broader classification of gossip (that includes both positive and

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negative information) is somewhat controversial, as most adult conversation could be considered gossip using this definition (Levin & Arluke, 1985). Other definitions of gossip that have been offered in the literature include a form of societal control (Gluckman, 1963, 1968); a means of manipulating both one's own and others' reputations (Emler, 1994); a form of women's talk (Spacks, 1982); an information management technique (Suls, 1977); and a social activity allowing for discreet indiscretion (Bergmann, 1993). For both the sake of simplicity and also to ensure that all facets of the behaviour are studied, many current gossip researchers (e.g., De Backer & Fisher, 2012; Massar et al., 2011) have utilised general and broad definitions of gossip. However, such inclusive definitions have not historically been utilised by all cross-disciplinary gossip researchers (Foster, 2004). Thus, as a whole, the scientific study of gossip has been somewhat disjointed and incoherent.

A second area of debate has focused on whom the gossip target is. De Backer and Fisher (2012) have stated that the individual is capable of gossiping about any other person, regardless of whether they are known or unknown. However, other researchers have found that women are more likely to gossip about intimate friends and relatives, while men are more likely to gossip about distant acquaintances and celebrities (Levin & Arluke, 1985). Additionally, while most gossip researchers agree that individuals need to be absent in order to be the subject of gossip (e.g., De Backer, 2005; Eder & Enke, 1991; Foster, 2004), others have disagreed with this notion (e.g., DiFonzo & Bordia, 2007; Fine & Rosnow, 1978). Indeed, Medini and Rosenberg (1976) have gone so far as to state that individuals are even able to gossip about themselves. Kuttler et al. (2002) however, propose that such an activity should not be considered gossip, but instead, self-disclosure. Given the confusion over the very definition of gossip, it is perhaps not surprising that the behaviour has been studied less than other social phenomena.

The empirical study of gossip has also faced a number of critics, with one of the biggest detractors of gossip research perhaps being Bloom (2004). Bloom (2004) claims that

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gossip should not be a subject area open to psychological study and that, if anything, it's likely to be an arbitrary and unnatural category. Bloom (2004) is particularly critical about both the lack of a formal definition for the behaviour and its lack of a unique purpose and motivation. In the past half century many researchers have clearly disagreed with this view. However, there is no doubt that the empirical study of gossip is challenging, regardless of how one might choose to define the activity (Wert & Salovey, 2004). Gossip tends to be a private behaviour and, as such, is difficult to investigate empirically (Wert & Salovey, 2004). For example, attempts to study gossip in a natural setting are likely to introduce ethical issues [e.g., Foster (2004) has questioned whether one should have a reasonable expectation of privacy when engaging in gossip in a public place] and the problem of affecting the target behaviour through observation. In comparison, a controlled laboratory study of gossip faces the problem of becoming contrived to the point of meaninglessness. Additionally, the subtleness of gossip behaviour makes it difficult to ascertain its usage and function, and indeed, whether the targeted behaviour is in fact gossip at all (Wert & Salovey, 2004). Researchers have utilised a variety of methodologies to study gossip, including self-report questionnaires (Nevo, Nevo, & Derech Zehavi, 1993), naturalistic observation (Arno, 1980, 1990), and diary methods (Waddington, 2005). However, the sensitivity of gossip to empirical study is an additional element all researchers must keep in mind when attempting to study the behaviour.

The scientific study of gossip was initially popular in the 1960s and 70s, with much debate over whether gossip is beneficial on a group (Gluckman, 1963, 1968) or an individual level (Paine, 1967). Gluckman (1963) suggested that gossip allows for group bonding, identity formation, and social control. In particular, it was contended that for threatened groups, gossip has a positive effect (Gluckman, 1963). This is because gossip enables the strengthening of bonds and social norms and thus allows for the protection of important group values. According to Gluckman (1968) idle chatter about scandals (for example, impending

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quarrel) among group members allows for group unity and amity. Gluckman (1963, 1968) also recognised the usefulness of negative gossip, suggesting that it could be used as a weapon by groups (e.g., by providing exclusive social knowledge and enabling the ostracism of outsiders who lack this knowledge) in times of conflict and competition. Conversely, Paine (1967) focused on the usefulness of gossip for individuals. It was contended that gossip might be used advantageously by individuals in order to promote their own interests and allow for the protection of their own needs (Paine, 1967). Rather than being mutually exclusive, however, recent consensus indicates that gossip may be beneficial at both individual and group levels (Dunbar, 2004; Hess & Hagen, 2006a)

Following on from Paine (1967) and Gluckman's (1963, 1968) work, gossip researchers focused on non-Western communities [e.g., Arno (1980, 1990) who used naturalistic, anthropological methods to study gossip in small, Fijian communities]. Consequently, much of the information that is currently available about gossip comes from ethnographic studies, naturalistic observations, and anecdotal reports (Rosnow, 2001). The aim of these studies was often to investigate the role of gossip in maintaining minority group norms, bonds, and values.

Dunbar (1993) and Rosnow (1991) reignited the psychological study of gossip in the late 1980s and early 1990s, albeit for very different reasons. Dunbar (1993) focused on the evolution of language and gossip as a social grooming tool. It was proposed that gossip evolved to allow individuals to rapidly learn about the behavioural characteristics of other group members. Indeed, in emphasising the importance of gossip in creating and maintaining interpersonal relationships, Dunbar (2004) stated that gossip may be "the core of human social relationships" (p. 100).

Rosnow (1991), however, tended to focus on elucidating the similarities and differences between rumour and gossip. It was contended that there are two main differences between these related, but distinct, social activities. According to Rosnow (1991), it is gossip

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when the person spreading the information knows for certain that the content is either true or untrue. In comparison, it is rumour-spreading if there is ambiguity over the veracity of the information being passed on to others. Second, Rosnow (1991) stated that by looking at the content of the information one is also able to differentiate between gossip and rumour. That is, for information to be gossip it must be about a human subject. Conversely, the content of rumour is much broader and can include humans, but also animals, companies, or events.

Social researchers have since studied gossip, its usage, and functions from a number of different perspectives, including gossip in nursing homes (Reingold & Burros, 2004), workplace gossip (Waddington, 2005), and even gossip in magazines (De Backer & Fisher, 2012). Researchers have also explored gossip (along with the related behaviours of ostracism, bullying, and rumour-spreading) developmentally within the overarching framework of non-physical aggression (Archer & Coyne, 2005). Specifically, three different categories have been proposed for non-physical aggression; indirect aggression (Lagerspetz, Bjorkqvist, & Peltonen, 1988), relational aggression (Crick & Grotpeter, 1995), and social aggression (Cairns, Cairns, Neckerman, Ferguson, & Garipey, 1989). The term indirect aggression emphasises the indirect nature of the attack, while relational and social aggression categories highlight the manipulation of interpersonal relationships. However, there is significant overlap within these categories. Indeed, researchers have suggested that gossip is an indirect form of aggression that may lead to the manipulation of interpersonal relationships (Eder & Enke, 1991). For the sake of consistency, however, this review will refer to gossip as an indirect form of aggression.

An interesting line of research has focused on the form and function of gossip among children and adolescents. Crick, Casas, and Mosher (1997) studying indirect aggression found that children as young as 3-5 years engage in gossip and related behaviours (e.g., rumour spreading and ostracism). Further, teachers were found to rate girls significantly more likely to use methods of indirect aggression than boys. While this finding might be affected by

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social role norms (Eagly & Steffen, 1986), it implies that sex differences in indirect aggression emerge from a very young age.

Early research by Fine (1977) proposed that young children use gossip for four main purposes. First, it is used by children as a learning tool, enabling them to vicariously learn how the world around them works. Second, similarly to adults, children use gossip as an evaluative tool, allowing them to learn group norms and appropriate social behaviours. Third, gossip is used by children as a reputation and impression management tool and, in particular, as a means of differentiating levels of status in group contexts. Fourth, according to Fine (1977), a final function of childhood gossip lies in children gaining the ability to engage in private conversations with other individuals. Childhood gossip can therefore be seen as serving a variety of purposes, with Eder and Enke (1991) contending that the activity is one of the most salient social processes throughout childhood and adolescence.

Interestingly, evolutionary psychologists studying the functional purposes of gossip in adult samples have also investigated gossip as both a strategy learning tool and as a means of reputation manipulation (De Backer, 2005). The two forms of gossip can be differentiated via the importance (or lack of) placed on the gossip target. For example, strategy learning gossip (here gossip is considered a social learning tool) is gossip without importance placed on a specific individual. In comparison, reputation-based gossip (here gossip is considered a method for intrasexual competition) is gossip with importance placed on a specific individual (De Backer, 2005).

A number of evolutionary researchers have stated that strategy learning gossip functions as a social learning tool because the information contained in such gossip can be used by listeners to increase their personal experience record (Baumeister et al., 2004). For example, the strategy learning gossip 'My six year old nephew contracted measles after not being vaccinated' serves the purpose of transmitting the message that childhood vaccinations may prevent serious illness (De Backer, 2005). Receivers of such gossip are able to

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vicariously learn from other individuals' successes and errors. These are a substantial social learning tool as learning solely from personal experience can often be limited, dangerous, or even life-threatening (Baumeister et al., 2004). These findings, in conjunction with Fine's (1977) work on childhood gossip, suggest that strategy learning gossip can be seen as functioning similarly for both adults and children. In comparison, evolutionary psychologists have contended that reputation-based gossip, as a strategy for intrasexual competition, is specific to adults and, in particular, reproductive-aged men and women (De Backer, Nelissen, & Fisher, 2007; Power, 1998).

Mate competition and reputation-based gossip

Competition often occurs when the individual seeks access to a fitness-enhancing resource that has limited availability. If one individual has access to the desired resource this typically indicates that others will have to make do with either less of, or even without, the resource (Darwin, 1859; Walters & Crawford, 1994). While individuals compete over access to numerous resources including food, water, and shelter, perhaps the resource that causes the most competition is access to high quality mates (Graziano, Jensen-Campbell, Todd, & Finch, 1997). Some individuals possess more highly desired characteristics (e.g., physical attractiveness, positive personality characteristics, and high status) than others and this makes them preferable mating partners (Buss et al., 1990). It has been proposed that men and women should compete among each other for access to such desirable mating targets (Cox & Fisher, 2008). Known as intrasexual competition, a number of evolutionary psychologists (including De Backer et al., 2007) have proposed that gossip might be a particularly useful strategy in competition of this kind.

In its simplest form, mate competition can be thought of as conceptualising three main protagonists: the individual, the romantic target, and the romantic competitor (or rival) (Buss, 1988b). This mate competition triad is often used to describe the function and usage of

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intrasexual competition strategies. It has been contended that one of the primary reasons why gossip might be relied upon during intrasexual competition is because it allows one to influence and alter the reputations of all three of the above named protagonists (De Backer, 2005). Solove (2007) noted that “our reputation is one of our most cherished assets” (p. 30). Further, it is not just one’s own reputation that is important, but also knowledge about others’ reputations (Solove, 2007). It is proposed that gossip functions as a form of informational aggression, with men and women competing for resources by using information to attack a competitor’s reputation (Hess & Hagen, 2002). Gossip may therefore provide the individual with a means of damaging a competitor’s reputation while simultaneously maintaining or even improving their own (De Backer, 2005).

There are three main ways that the individual might use gossip as a form of informational aggression in a mating scenario. First, by spreading negative gossip about a competitor (known as competitor derogation), the individual is able to alter a competitor’s reputation and social standing (DiFonzo & Bordia, 2007). This ensures that, relative to oneself, the competitor’s value is diminished (Buss & Dedden, 1990). Second, this type of gossip also allows the individual to alter their own reputation and enhance their own positive qualities relative to other individuals of the same sex (known as self-promotion; Buss, 1988b; De Backer, 2005), insofar as the individual cannot plausibly accuse someone of behaviours that they also engage in. For example, in sharing derogatory gossip about a competitor’s hygiene, the individual is implying that they are hygienic relative to the competitor.

These initial two functions of reputation-based gossip may be extremely useful in mate competition. This is because, in combination, competitor derogation and self-promotion enable the individual to appear maximally desirable to a potential mate relative to others of the same sex who are attempting to achieve the same goal (Buss & Dedden, 1990). However, gossip allows one to go beyond these initial two strategies. In listening to gossip the individual is able to find out important information (e.g., current relationship status,

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relationship intentions, and personality traits) about targets and competitors. Further, the individual is then able to potentially manipulate this information to their own advantage (De Backer, 2005).

This third function may be particularly effective as the individual may also be able to recruit the help of family members and friends to achieve these goals. For example, Power (1998) has contended that men may use gossip to inform other men about women's sexual behaviour and reproductive value. Women, in comparison, may use gossip to discuss the status of men and to warn female friends about potential cheaters (Power, 1998). Researchers have also claimed that reputation-based gossip need not only occur between individuals of the same sex (De Backer, 2005). Men and women might gossip with members of the opposite sex about the relationship status and suitability of potential mates (De Backer, 2005). Such information may thus indicate whether it is wise for the individual to spend time and energy engaging in mate competition.

In analysing hypotheses put forth by evolutionary psychologists it is clear that gossip might function as an ideal strategy for intrasexual competition. Through reputation-based gossip, the individual is able to derogate competitors, self-promote, and learn about the reputation of targets and competitors. Thus, the individual may be able to achieve a desirable mating outcome; becoming involved with a high-quality mate. An increasing number of studies have investigated whether men and women engage in gossip when involved in mate competition and, if so, the variables that influence both its usage and success. Variables that may influence reputation-based gossip include sex (De Backer et al., 2007); expected relationship length (Schmitt & Buss, 1996); age (Massar et al., 2011); self-perceived mate value (Massar et al., 2011); physical attractiveness (Fisher, 2004); relationship status and parental status (Miller, 1999); socio-economic status (Cross & Campbell, 2011); culture (Buss et al., 1990); attraction context (Schmitt & Buss, 2001); and gossip context (Solove, 2007). The outcome of research investigating these variables will be discussed below.

Variables influencing reputation-based gossip

The variable that has received the most attention from researchers studying reputation-based gossip is perhaps sex. A number of researchers have investigated whether there are sex differences in how (and indeed whether) men and women use gossip in mate competition (De Backer et al., 2007). Initial competition and aggression researchers from the 1970s and 1980s suggested that displays of intra-female competitiveness were less salient as a sexual selection strategy than displays of intra-male competitiveness (Gilligan, 1982; Goodwin, 1980). However, evolutionary psychologists have more recently argued that, while there are universal sex differences in aggression and competition, both men and women should compete fiercely for a high-quality mate partner (Campbell, 2004). In particular, it is contended that both men and women should use intrasexual competition tactics in order to achieve mating goals (Campbell, 2004). Indeed, evidence from both human and non-human primates has proposed that females compete strenuously with rival females for access to high-quality mates and for the resources needed to support themselves and their progenies (Hrdy, 1981). It might be that it is the form of aggression adopted by men and women that differs. A recent study found no sex differences in experiences of indirect aggression, either as a target or instigator (Basow, Cahill, Phelan, & Longshore, 2007). However, it was found that females tend to use indirect aggression more than physical aggression (Basow et al., 2007).

Interestingly, research has indicated that indirect aggression (including gossip) is no less damaging than physical aggression insofar as its potential to inflict stress and diminish a competitor's reputation and social support (Campbell, 2004). Gossip may therefore be a useful intrasexual competition tactic for both men and women. However, it has been hypothesised that indirect aggression is a particularly useful competitor derogation tactic for women to employ in mate competition (Campbell, 2004; Hess & Hagen, 2002). This is because it allows a female to cause harm to a competitor whilst simultaneously attempting to appear harmless. This is important for a number of reasons.

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First, circuitously attacking a competitor's reputation can prevent retaliation from the victim of the aggression (Campbell, 2004). Second, and relatedly, Campbell (1999) has contended that a female's willingness to use methods of indirect aggression in mate competition may be an evolved adaptation that has served to increase their reproductive success. According to Campbell (1999), females should choose indirect aggression methods such as gossip to derogate competitors. This is because being careless in respect to their safety and survival (e.g., by engaging in physical aggression with a competitor) may have greater consequences for a female's reproductive success than if a male had the same attitude (Campbell, 1999). Data from anthropological researchers provide some support for this argument, indicating that maternal death has a greater impact on infant mortality than father absence (Kaplan & Lancaster, 2003). Third, engaging in indirect aggression allows the individual to derogate a competitor while maintaining their reputation as a nice and reliable person. Studies have indicated that people generally prefer mates who are kind and trustworthy (Lukaszewski & Roney, 2010). Cross-cultural researchers have found this to be the case for both men and women (Buss, Shackelford, & LeBlanc, 2000). However, other researchers have contended that it may be women, in particular, who are most concerned about being perceived as unkind or mean by targets (Fisher, Shaw, Worth, Smith, & Reeve, 2010). Fourth, researchers have shown that females find being the victim of indirect aggression significantly more distressful than males (Paquette & Underwood, 1999). As a consequence, a female competitor may be unwilling to continue to engage in mate competition after hearing derogatory gossip being shared about their reputation. Finally, indirect aggression may actually be a more successful strategy for women than men. This is because women are more likely to have significant and close relationships than men and typically spend more time and put more emphasis on building and maintaining relationships than men (Golombok & Hines, 2002; Underwood, 2003). While men's friendships are based around participating in common activities and giving and receiving practical assistance,

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women's friendships are characterised by emotional sharing and self-disclosure (de Vries, 1996). Researchers investigating sex differences in friendship and gossip have found that it is females, in particular, who emphasise forming and maintaining social networks (Dunbar, 2010). Additionally, females are more likely to view in-group gossiping as threatening to the friendship than males (Watson, 2012).

In support of these arguments, Hess and Hagen (2002) have suggested that due to differences in the evolutionary past, women may have evolved specialised adaptations for gossip. According to the researchers, historically, women may have been more vulnerable to inaccurate gossip and may have experienced more within-group competition than men for two main reasons (Hess & Hagen, 2002). First, some elements of female reputation (e.g., sexual promiscuity) may be more vulnerable to inaccurate gossip than elements of male reputation (due to concealed ovulation and the potential threat of paternity uncertainty; Hess & Hagen, 2002). Second, historically following marriage, it was females who typically moved tribes to be with their partners. As there should be less competition between kin than non-kin (Rodseth, Wrangham, Harrigan, & Smuts, 1991) women would consequently have been exposed to more within-group competition than men. As a result, Hess and Hagen (2002) contend that women may have evolved specialisations for gossiping both in dyads and in groups. It is therefore proposed that gossip may be a more important and useful mate competition strategy for women than for men.

However, other social-evolutionary researchers have disagreed with the notion that gossip is of particular benefit to females in mate competition. Miller (2000) has suggested that it is actually men whom derive mating benefits as a result of sharing gossip. This is because, in doing so, men are able to show off their social intelligence and exclusive social knowledge (Miller, 2000). According to Miller's (2000) show-off hypothesis, by engaging in gossip, men may be able to signal to women that they have high ranking and intelligence. As these

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are traits that women, in particular, find desirable in potential mates (Miller, 2000; Pinker, 1995), gossip usage may thus allow men to compete effectively in mate competition.

Additionally, there is some evidence that women generally prefer to engage in methods of self-promotion over competitor derogation when involved in competition (Fisher, Cox, & Gordon, 2009). A potential explanation offered for this finding is that a woman may believe that engaging in derogation strategies will lead to others' perceiving them as mean and unkind, reducing their chances of securing a potential mate (Fisher et al., 2009; Schmitt & Buss, 1996). However, as has been previously discussed, gossip functions differently to many other methods of competitor derogation (e.g., controlling or dominating a competitor) insofar as it is an indirect method of aggression (Buss & Dedden, 1990). Gossip involves the individual covertly attacking a competitor's reputation and thus allows for the preservation of the individual's own reputation (De Backer, 2005). As a result, women may be more willing to engage in gossip than other, more direct, methods of competitor derogation.

Finally, in terms of sex differences, other researchers still have contended that reputation-based gossip is of equal importance and usefulness for both men and women. The central reason for this is that throughout evolutionary history both men and women faced the problem of acquiring and keeping a high-quality mate (De Backer, 2005). As gossip potentially enables the individual to both attain a mate and retain a partnership (De Backer 2005), the behaviour should then be of no more importance for one sex than the other.

A number of empirical studies investigating gossip in mate competition have tested whether sex differences exist in time spent gossiping or gossip content. Leaper and Holliday (1995) examined gossip conversations among friendship dyads and found a number of interesting results. First, female pairs were more likely than male pairs or cross sex pairs to engage in negative gossip. Second, female pairs were more likely to engage in negative gossip than positive gossip. Third, female pairs tended to encourage evaluative gossip. However, Levin and Arluke (1985) found no differences in the type of information (either positive or

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negative) that men and women shared when engaging in gossip. Leaper and Holliday (1995) have stated that one of the reasons that Levin and Arluke (1985) did not find any sex differences in either a positive or negative direction is that they failed to take into account whether the gossip was taking place between same-sex or cross-sex friends. More recent evidence has indicated that women often gossip in groups (rather than on a one-to-one basis), with the primary objective of this gossip to diminish the reputations of other women (Hess & Hagen, 2002). Additional research has also indicated that one of the ways female friends achieve closeness is by derogating non-group members (Owens, Shute, & Slee, 2000). Further, despite Levin and Arluke (1985) finding no sex differences in willingness to engage in either positive or negative gossip, the researchers did find an overall sex difference in time engaged in gossip. Seventy-one percent of women's conversation time was spent gossiping about others, as compared to 64% of men's conversation time (Levin & Arluke, 1985). Such research would appear to indicate that women (especially when with other women) devote more time to gossip than men. However, gossip does appear to be an activity that comprises the majority of both men and women's conversations.

In addition to studying sex differences in time engaged in gossip, researchers have also investigated whether there are differences in the content of men and women's gossip (De Backer et al., 2007; Nevo et al., 1993). From an evolutionary perspective, if gossip does function as an effective intrasexual competition strategy, the content of the gossip men and women engage in should be salient to mating decisions (De Backer et al., 2007). For example, if the individual chooses to actively engage in gossip in order to derogate a competitor's reputation, the content of this gossip should be focused on manipulating the traits of the competitor that mating targets view as most important when making mating decisions (Hess & Hagen, 2002).

Several studies have investigated whether sex differences in competitor derogation strategies (including gossip) are in line with predictions from evolutionary psychology. First,

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it has been found that cross-culturally women desire partners with high status and availability of resources, described as good provider indicators. In comparison, men desire attractive mates, with attractiveness cueing genetic fitness (Buss, Shackelford, Choe, Buunk, & Dijkstra, 2000). Second, researchers have found that men and women do preferentially derogate competitors on traits salient to these sex differences (Buss & Dedden, 1990). For example, while women are more likely to derogate a competitor's appearance, fidelity, and sexual history, men have been found to derogate other men's financial resources, achievements, and inability to have sex (Buss & Dedden, 1990). Third, in conducting a meta-analytic review Schmitt (2002) found that, regardless of the relationship context, women were perceived as being significantly more effective than men when using appearance-based derogations in mate competition. Conversely, men were perceived as significantly more effective than women when using resource-related derogation tactics (Schmitt, 2002). Based on such research, it might then be hypothesised that gossip should be a useful strategy for both men and women to employ in mate competition. However, in order for gossip to function effectively as a derogation tactic there should be sex differences in the information that individuals choose to spread about competitors.

Nevo and colleagues (1993) investigated men and women's tendency to gossip and found empirical support for these hypotheses. The researchers found that women had a higher tendency to engage in physical appearance gossip than men. In comparison, men tended to engage in achievement gossip more often than women (Nevo et al., 1993). Additionally, in line with previous research (Leaper & Holliday, 1995; Levin & Arluke, 1985), women were also found to have a higher overall tendency to gossip than men. Nevo et al. (1993) only investigated overall gossip tendencies and did not differentiate between active (e.g., using gossip to derogate a competitor) and passive (e.g., listening to gossip about a competitor) components of gossip. As such, it remains untested how men and women specifically use gossip when involved in mate competition. Nevertheless, the results from this study provide

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additional evidence that gossip may function as an effective competition strategy for both men and women.

These findings are supported by research focused on the passive component of reputation-based gossip (De Backer et al., 2007; McAndrew & Milenkovic, 2002). For example, McAndrew and Milenkovic (2002) investigated sex differences in interest in gossip information. It was found that females were most interested in gossip about other females when it was concerned with promiscuity and sexual infidelity. In comparison, males were found to have equal interest in gossip about these topics, regardless of whether the subject matter was male or female (McAndrew & Milenkovic, 2002). In extending this research De Backer and colleagues (2007) investigated men and women's ability to recall gossip content about both targets and competitors. In analysing gossip specifically for attraction, the researchers found that men and women showed equal interest in information about potential mates' reputations (De Backer et al., 2007). However, the results also indicated that there were sex differences in the recall of gossip relevant to competitors. Cues of attractiveness were recalled more for female competitors (by females), whereas cues of wealth and status were recalled more for male competitors (by males). Overall, men and women were more likely to recall gossip about a competitor that research indicates should be salient in mate competition (De Backer, et al., 2007). Based on these findings, the researchers concluded that reputation-based gossip is an efficient learning mechanism for both men and women (De Backer et al., 2007).

It appears then, on the basis of these findings, that men and women may tailor their gossip content in order to provide the most use to them in mate competition. However, other researchers have contended that when gossip is used actively as a method of competitor derogation it may be more effective for women than men (Hess & Hagen, 2002). The reason for this is that not all reputational elements are created equal. Some elements of reputation (e.g., physical attractiveness or status) are able to be easily judged and quickly proven (Hess

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& Hagen, 2002). As a result, these reputational elements are difficult to impugn with derogatory gossip. However, other areas of reputation are much more difficult to prove. These reputational elements are therefore more vulnerable to negative and untrue gossip (Hess & Hagen, 2002). Sexual reputation gossip, and particularly female sexual experience, for example, is hard to objectively verify as true or false due to concealed ovulation in females (Geary, 2000; Hess & Hagen, 2002). Three additional hard-to-prove elements of reputation that may be particularly relevant to females include fertility, fidelity, and childcare ability (Hess & Hagen, 2002). Accordingly, gossip may be particularly effective as a competitor derogation strategy when it is used by women to manipulate and derogate these reputational elements of competitors. Currently, however, such hypotheses have not been empirically tested as there has been a lack of research investigating men and women's active usage of gossip in mate competition.

Usage of gossip in intrasexual competition and the effectiveness of the strategy may be dependent on more than just an individual's sex, however. This is because factors including desired relationship length may also affect mate competition tactics (Schmitt & Buss, 1996). In terms of self-promotion, when pursuing a short-term relationship, studies have indicated that women are more likely to emphasise their sexuality and attractiveness. In comparison, when a long-term relationship is desired women tend to promote their faithfulness and sexual restrictiveness (Schmitt & Buss, 1996). The tactics men choose to employ in mate competition may also be dependent on the expected duration of the relationship. When men pursue a short-term relationship, for example, they are more likely to promote their immediately available resources. However, under a long-term relationship scenario men are more likely to promote future resource availability (Schmitt & Buss, 1996).

Competitor derogation tactics have also been found to differ based on the expected duration of the relationship. Utilising a broad selection of 83 different competitor derogation tactics (ranging from derogatory gossip, to rumour spreading, and physical aggression)

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Schmitt and Buss (1996) investigated how sex differences in derogation tactics are influenced by desired relationship length. The researchers found that differences in competition tactics were not as obvious for men. Regardless of whether a short-term or long-term relationship was being pursued men were more likely to describe potential competitors as promiscuous, unkind, dangerous, and unhygienic (Schmitt & Buss, 1996). In comparison, when pursuing a short-term relationship women were more likely to describe other women as ugly, frigid, and unhygienic. Conversely, under a long-term scenario women were more likely to emphasise a competitor's promiscuity (Schmitt & Buss, 1996). Schmitt and Buss (1996) investigated overall usage of competitor derogation tactics and did not focus specifically on reputation-based gossip. However, on the basis of these findings, it may be hypothesised that women, in particular, will factor desired relationship length into a gossip derogation strategy.

A further demographic variable that has been found to affect reputation-based gossip is an individual's age. From an evolutionary perspective, intrasexual competition strategies should peak when an individual is reproductively-capable (Durante, 2009; Miller, 1999). For women, this is approximately her mid-teens to late forties, although fertility does decline rapidly in women after age 35 (Mac Dougall, Beyene, & Nachtigall, 2013; Sherif, 2013). In comparison, men can remain reproductively-capable for an extended period of time and, unlike women, do not experience an abrupt cessation of fertility (Fisch, 2013). However, semen quality and sperm motility has been found to decrease significantly after age 55 (Girsh et al., 2008). Despite this, as women face additional time-dependent reproductive concerns than men, researchers have tended to focus on the influence of age on reputation-based gossip among reproductively-capable women. Researchers tend to agree that reproductively-capable women will be more likely to engage in intrasexual competition strategies, such as gossip, than women who are not reproductively-capable (Campbell, 2004; Cashdan, 1997). However, there is some conjecture as to whether it is younger or older reproductively-capable women who are more likely to engage in reputation-based gossip.

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Emler (1994) proposed that young people benefit more from gossip than older people. This is said to occur because younger people have a larger number of personal social contacts than older individuals. As a consequence, younger people have more options for people to gossip about and gossip with (Emler, 1994). Additionally, Campbell (2004) has stated that younger women should have a higher tendency to engage in intrasexual competition strategies as they are more likely to be involved in mating conflicts and competition than older women. However, this perspective can be contrasted against research that indicates that it is actually older women who should compete more strenuously for a mate. According to this argument a younger woman may experience a period of mating optimism, believing that even if they are currently not involved in a romantic relationship in time they will find a quality mate (Cashdan, 1997). In comparison, according to Cashdan (1997) as a woman ages and faces relational disappointment she may lose this mating optimism. As a result, as a woman ages, if she remains unattached, she should compete more fiercely with competitors for a desirable mate (Cashdan, 1997).

Massar and colleagues (2011) conducted one of the first empirical studies to investigate the relationship between age and reputation-based gossip among women. The researchers found a negative correlation between age and gossip, indicating that younger reproductively-capable women had a higher tendency to engage in gossip than older reproductively-capable women. However, this effect was found to be mediated by a woman's self-perceived mate value; her perceived desirability by men. When mate value was included in analyses, no relationship was found between age and gossip. Rather, younger women were found to have a higher self-perceived mate value than older women, with high mate-value women having a higher tendency to gossip than low mate-value women (Massar et al., 2011). Self-perceived mate value therefore appears to have a stronger association with female engagement in reputation-based gossip than age. Younger, reproductively-capable women may have a higher tendency to engage in reputation-based gossip than older, reproductively-

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capable women as they have a heightened belief that the strategy will lead to a successful mating outcome (Massar et al., 2011).

Closely related to mate value, a number of researchers have also explored the influence of physical attractiveness on engagement in intrasexual competition strategies (Fisher, 2004). Physical attractiveness has been found to be positively correlated with self-perceived mate value in both men and women (Buss & Shackelford, 2008; Regan, 1998). If an individual is physically attractive they are more likely to perceive that they will be desirable to mating targets (Buss & Shackelford, 2008). Despite this, physical attractiveness may be particularly salient for females. This is because cross-cultural studies have indicated that men place more emphasis on the attractiveness of a mate than women (Buss et al., 1990). Accordingly, attractiveness has traditionally been viewed as a major component of a woman's self-promotion strategy, with research indicating that women often emphasise their appearance in order to attract desirable mates (Buss, 1988b). However, physical attractiveness may also influence competitor derogation tactics, in both men and women, in a number of ways.

A number of studies have been conducted to investigate the relationship between physical attractiveness and competitor derogation (Fisher, 2004; Fisher & Cox, 2009). Researchers have previously contended that, as physical attractiveness is quickly and easily judged, it should be difficult to impugn with derogatory gossip (Hess & Hagen, 2002). However, in contrast to these hypotheses, Fisher and Cox (2009) found that usage of derogatory statements enabled both men and women to successfully alter a target's perceptions of a competitor's attractiveness. Further, a positive correlation was found between the attractiveness of a female derogator and how effective derogatory statements were in altering male perceptions of a competitor. Attractive women were more effective at manipulating male perceptions of a competitor's appearance than unattractive women. However, in line with predictions from evolutionary theory, the attractiveness of a male

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derogator did not influence female target perceptions of a competitor's appearance (Buss et al., 1990; Fisher & Cox, 2009). Fisher and colleagues (2009) also found that men and women with higher self-rated attractiveness scores were more willing to engage in competitor derogation tactics than those with lower self-rated attractiveness scores.

These studies extended Fisher's (2004) earlier research, which found that high-oestrogen women were significantly more likely to derogate a competitor's attractiveness than low-oestrogen women. In a process of social comparison, derogating a competitor's appearance may increase the individual's self-esteem, and thus increase perceptions of their own mate-value (Arnocky, Sunderani, Miller, & Vaillancourt, 2012). This may then result in the individual becoming more willing to engage in mate competition (Fisher & Cox, 2009; Massar et al., 2011). In combination these findings suggest that attractiveness is a salient variable in competitor derogation, influencing both engagement in, and success of, derogations. Additional research needs to be undertaken investigating reputation-based gossip specifically, rather than derogation strategies in general. However, it appears that both self-perceived mate value and physical attractiveness influence the derogation strategies individuals engage in when involved in mate competition. In particular, it appears that a woman's involvement in derogation strategies will be influenced by her beliefs of the desirability and attractiveness of both herself and competitors. Further, as attractiveness is positively correlated with self-perceived mate value (Buss & Shackelford, 2008; Regan, 1998), attractiveness may also mediate the relationship between age and reputation-based gossip.

In investigating the relationship between age and usage of gossip in mate competition, it may also be important to consider the influence of both relationship status and parental status. According to Miller's (1999) parenting eclipses courtship hypothesis, engagement in mate competition should peak when the individual is both unmated and reproductively-capable. However, Miller (1999) contends that following the formation of a partnership, men

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and women become less focused on competing with individuals of the same sex for access to desirable mates. Rather, attention turns instead to maintaining a partnership, parenting children, and focusing on careers and other pursuits (Miller, 1999). Thus, if the individual has achieved mating and reproduction goals, they should be less likely to engage in intrasexual competition tactics regardless of their age. According to this perspective, as a result of changes in relationship status and parental status, engagement in intrasexual competition strategies (such as reputation-based gossip) should also be expected to change (Miller, 1999).

However, mate retention indicates that intrasexual competition strategies do not necessarily end following the formation of a successful mateship. That is, the individual must remain vigilant to ensure that a competitor does not poach their partner from the relationship (Schmitt & Buss, 2001). Additionally, by continually and subtly derogating competitors the individual may be able to strengthen and stabilise their current partnership (Fisher, Tran, & Voracek, 2008). In particular, it has been contended that men and women may continue to use gossip following the formation of a successful partnership in order to damage the reputation of a potential mate poacher (Buss, 1988a). Further, mate retention researchers have also proposed that the individual may choose to gossip about their partner in order to reduce the risk of their partner defecting from the partnership (Buss, 1988a). Buss (1988a) has suggested that by spreading negative gossip about their partner the individual might be able to lower their partner's mate value. As a consequence this would make their partner undesirable to competitors and decrease their partner's likelihood of leaving the relationship. From this perspective then, relationship status will not influence men and women's usage of reputation-based gossip.

Empirical studies have been conducted investigating how relationship status influences an individual's engagement in both passive and active components of reputation-based gossip. De Backer and colleagues (2007) investigated the relationship between passive recall of gossip information and relationship status. The researchers found that relationship

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status did not influence men and women's recall of gossip information about either a target or a competitor (De Backer et al, 2007). In extending this research, Massar and colleagues (2011) investigated the influence of relationship status on a woman's tendency to gossip. In line with De Backer and colleagues (2007) no relationship was found between reputation-based gossip and relationship status (Massar et al., 2011). Fisher and colleagues (2009) also explored the relationship between relationship status and active engagement in competitor derogation tactics. Results from this study indicated no differences in competitor derogation behaviours between individuals who were not involved in a relationship and those who were dating a partner (Fisher et al., 2009). However, in contrast to De Backer et al. (2007) and Massar et al. (2011), it was found that individuals who were either not involved in a relationship or currently involved in a dating relationship were significantly more willing to engage in competitor derogation tactics than married individuals and those involved in a common-law relationship (Fisher et al., 2009).

Two different explanations may be offered for these contrasting findings. First, as De Backer and colleagues (2007) focused on passive recall of gossip and Massar and colleagues (2011) focused on overall tendency to gossip, it may be that there is a unique relationship between relationship status and active derogation of competitors. Second, as Fisher and colleagues (2009) focused on overall usage of derogation tactics, in contrast, it may be that there is a unique relationship between relationship status and reputation-based gossip. Additional research is needed to investigate which of these explanations is more likely. Further, as Miller (1999) has noted, it is particularly after the birth of children and the achievement of reproduction goals that engagement in intrasexual competition strategies is expected to decrease. Accordingly, additional research is also needed to investigate the influence of parental status on reputation-based gossip.

In investigating the factors that influence reputation-based gossip, it may also be useful to consider socio-economic status (SES). A number of researchers have investigated

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the relationship between physical aggression and SES (Cashdan, 1997; Cross & Campbell, 2011). However, fewer have looked at the role of this variable in respect to indirect aggression, and in particular, gossip. Researchers investigating aggression generally have found that for both men and women willingness to aggress is correlated with poverty (Cross & Campbell, 2011). For women, in particular, research indicates that the escalation of aggression against a competitor from indirect methods to physical attack is correlated with both ecological and demographic factors (Cross & Campbell, 2011). The fiercest competition among women for desirable men has been found to occur in societies that are highly stratified in terms of resource acquisition (Cross & Campbell, 2011). This is because, for middle-class women, the costs of choosing physical forms of aggression rather than indirect forms of aggression outweigh the benefits. There is not sufficient incentive to escalate aggression against a competitor. In comparison, for women in extremely poor societies, the chance to ‘marry-up’ and move out of poverty is a significant inducement to become involved in physical competition with another female (Cross & Campbell, 2011; Taylor, 1993). Put succinctly, the pay-offs for intrasexual competition among females, a mate with resources and status, is at its highest at this stage (Cashdan, 1997).

Despite this, researchers have contended that in adult interpersonal conflict, both between men and between women, physical aggression is the exception to the rule (Bjorkqvist, 1994; Bjorkqvist & Niemela, 1992). Additionally, research indicates that the relationship between SES and engagement in indirect aggression is not necessarily linear. Researchers have suggested that there are no differences in willingness to engage in gossip between men and women of mid-to-high SES (Basow et al., 2007). In line with this, it has also been found that, for men, engaging in physical aggression becomes less socially acceptable, and engaging in indirect methods of aggression, more so as SES increases (Basow et al., 2007). Accordingly, SES might be a variable that moderates sex differences in reputation-based gossip.

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Cross and Campbell's (2011) research on social stratification and engagement in intrasexual competition is also suggestive of culture influencing reputation-based gossip. Specifically, the majority of studies from the behavioural sciences sample participants from Western, Educated, Industrialised, Rich, and Democratic (W.E.I.R.D) societies (Henrich, Heine, & Norenzayan, 2010). This may be problematic for a number of reasons. First, non-Western societies, such as India, tend to be more highly stratified in terms of resource acquisition than Western societies, such as Australia and the United States (Bosher, Penning-Rowsell, & Tapsell, 2007; Eswaran, Ramaswami, & Wadhwa, 2013). As discussed, intrasexual competition, and particularly engagement in aggressive strategies, is expected to occur more frequently in highly stratified societies (Cross & Campbell, 2011). Consequently, in order to explore the effects of both social stratification and culture on reputation-based gossip it is essential to obtain cross-cultural samples. Second, if gossip has evolved as a strategy for intrasexual competition, while there should be some cultural differences, there should also be a number of similarities in gossip usage cross-culturally. In order to examine this hypothesis, again, reputation-based gossip needs to be explored cross-culturally.

An increasing number of researchers have utilised large-scale, cross-cultural samples to investigate intrasexual competition strategies. These results from these studies indicate that, cross-culturally, both men and women engage in self-promotion and competitor derogation tactics when involved in mate competition (Buss et al., 1990). However, researchers have also proposed that there are some cultural differences in intrasexual competition. For example, Buss et al. (1990) undertook a large-scale study to investigate mate competition among men and women cross-culturally. The researchers asked participants across 33 societies (both Western and non-Western) to rank the importance of 31 different mate characteristics (e.g., kindness, physical attractiveness, and intelligence). It was found that approximately 14% of the total variation in mate preferences could be attributed to cultural effects (Buss et al., 1990). Based on this finding, it might be hypothesised that culture will also influence gossip

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usage in mate competition. Early gossip research undertaken in non-Western societies does indicate that gossip is a universal behaviour, prevalent in all societies (Arno, 1980, 1990). However, there has been little research specifically investigating the role of gossip in mate competition in non-W.E.I.R.D societies. As such, and as Mesoudi, Whiten, and Dunbar (2006) have contended, there is a need to replicate gossip studies utilising cross-cultural samples.

This review has focused on investigating the influence variables including sex, age, self-perceived mate value, attractiveness, relationship status and parental status, socio-economic status, and culture have on both engagement in, and the effectiveness of, reputation-based gossip. These variables can be conceptualised as those internal to the individual, factors that will differ dependent on the person. However, it may also be useful to consider the influence of variables external to the individual; the environment in which the gossip is taking place. Two such external variables that may influence reputation-based gossip are attraction context and gossip context.

The majority of researchers investigating reputation-based gossip have tended to focus on how it functions in traditional attraction scenarios (De Backer et al., 2007; Massar et al., 2011). In this context, traditional mate attraction refers to attraction scenarios focused on the available mates in a mating pool (Schmitt & Buss, 2001). This is perhaps not surprising considering the relatively small number of empirical studies investigating gossip. In addition, as Schmitt and Buss (2001) have noted, there is an implicit assumption in much relationships research that intrasexual competition only takes place between available mates. However, reputation-based gossip need not only occur in these traditional contexts and between unmated individuals. In some ways, gossip may actually be ideally suited to usage in non-traditional attraction contexts, such as mate poaching.

Mate poaching is defined as attempting to attract a mate who is already involved in a relationship (Schmitt & Buss, 2001). Researchers have suggested that it is a universal

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phenomenon, occurring across societies (Schmitt et al., 2004). In particular, Schmitt and colleagues (2004) have found that cross-culturally up to 60% of men and 40% of women admit that they have attempted to attract a partner already involved in a relationship. Additionally, results from the Oceania sample (comprising individuals from Australia and New Zealand) indicate that approximately 3% of men and 7% of women poached their current partner in the relationship. Further, 4% of men and 10% of women from the Oceanic sample stated that their current partner poached them into the relationship (Schmitt et al., 2004).

Intrasexual competition strategies, and in particular competitor derogation tactics, can involve challenges if used in mate poaching contexts. This is because the competitor is the target's current partner. Consequently, the individual is unlikely to win any favours by derogating the competitor directly to the target (Schmitt & Buss, 2001). However, gossip, as an indirect form of aggression, may allow the individual to overcome this challenge. Gossip involves the individual covertly derogating a competitor's reputation and thus may enable the individual to escape potential repercussions from both the target and the competitor.

A related advantage of using gossip in a mate poaching context may actually relate back to the competitor being the target's partner. In traditional attraction contexts there can be numerous competitors, both known and unknown (Cox & Fisher, 2008). In comparison, in a poaching context there is a single, known competitor; the target's partner. Consequently, the individual can focus on tailoring gossip so that it is relevant to the competitor and effective in diminishing the competitor's reputation (Cox & Fisher, 2008; Fisher et al., 2010).

However, having a known competitor can also be disadvantageous for the individual. This is because the gossip content that has been found to be effective in traditional attraction scenarios (e.g., derogating a competitor's physical attractiveness; Fisher & Cox, 2009) is often not as effective in mate poaching contexts. As the competitor is the target's partner, derogations based on easily-proved elements of reputation (e.g., physical attractiveness and

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status) are able to be readily verified as untruthful by the target (Hess & Hagen, 2002). In comparison, derogations based on harder-to-prove elements of reputation (e.g., sexual promiscuity) may be particularly damaging in mate poaching contexts (Kaighobadi & Shackelford, 2012). Such gossip is not only more difficult to verify but may also cause negative relational outcomes for the competitor's relationship with the target (Bringle & Buunk, 1991).

Despite this, men and women may still remain unwilling to use gossip to derogate competitors in mate poaching contexts. This is primarily due to the potential negative ramifications that the individual may face by engaging in the tactic. Gossip is an indirect method of aggression, and as such, a low-risk strategy for competitor derogation (De Backer, 2005). However, there remains the possibility that the individual will be revealed as the gossiper (Schmitt & Buss, 1996; Schmitt & Shackelford, 2003). If the individual is found to be spreading derogatory gossip about a competitor with the aim of poaching the competitor's partner it is likely that the individual will face negative repercussions from both the competitor and the target. It is currently unknown, however, whether the potential benefits that the individual might receive from engaging in reputation-based gossip in mate poaching contexts (becoming involved with a desirable target) outweigh these potential costs.

A final, external factor that may affect reputation-based gossip is the context of the gossip. The majority of researchers investigating the role of gossip in mate competition have limited their study methodologies to exchanges occurring in face-to-face, offline contexts (e.g., De Backer et al., 2007; Massar et al., 2011). However, the growth of the internet, and in particular social networking sites, means that gossip need not occur in the presence of another individual. Worldwide, there are approximately 2.5 billion users of the internet (Fowler, 2012). There are currently over one billion active users on Facebook, with over half of these users also having the ability to access Facebook from mobile devices (Fowler, 2012). The

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ubiquity of the internet is one factor that makes it a likely additional context where competitor derogation behaviours take place.

There are numerous other reasons why reputation-based gossip may be ideally suited to an online context. First, when communicating via the internet, many important cues that are exchanged in face-to-face conversations (including voice tone, hand gestures, and facial expressions) are lost (Bargh & McKenna, 2004). This lack of a direct response from another individual following an exchange can have depersonalising consequences for the initiator of the aggression (Smith et al., 2008). Such depersonalising effects can include reduced feelings of guilt, shame, and empathy in addition to a lack of responsibility for behaviours and actions (Smith et al., 2008; Solove, 2007). In line with this, the anonymity that the internet offers is also a significant advantage when communicating sensitive material (Buchanan, Joinson, Paine, & Reips, 2007). Due to the depersonalising effects of the internet the individual may be more willing to derogate a competitor online than offline and feel less guilt and empathy over doing so.

Second, the internet makes gossip more permanent and widespread, but less discriminating in the appropriateness of the audience (Smith et al., 2008). Further, information that is shared on the internet is both retrievable and archival, with details becoming stored as personal digital baggage (Piazza & Bering, 2009). Unlike offline communications, which often involve only a single other person, information that is shared online has the potential to reach a very large audience (Solove, 2007). As a result of this, derogating a competitor online may cause more widespread, long-lasting damage to the competitor's reputation than derogating them in an offline exchange.

However, these unique advantages associated with derogating competitors online may also in turn discourage men and women from engaging in reputation-based gossip over the internet. First, while information shared online may cause sustained damage to a competitor's reputation, doing so may lead to increased risks for the individual. For example, as internet-

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based gossip is archival and retrievable it is more easily traced back to the derogator than offline gossip (Solove, 2007). As a consequence, this may shift gossip from a low-risk to a high-risk strategy. The individual may therefore be disinclined to gossip online for fear of facing negative repercussions from the victims of their gossip (Campbell, 2004). Second, sharing gossip may be more satisfying and gratifying in an offline context than online. This is because gossip is entertaining and a bonding mechanism for friendships (Bosson, Johnson, Niederhoffer, & Swann, 2006; Watson, 2012), with additional cues (such as voice tone and facial expression) available in a real-world context facilitating this bonding. In combination, while derogatory gossip shared in offline contexts may be less damaging and cause increased negative affect for the gossiper than internet-based gossip, these factors may make men and women more likely to share gossip offline than online.

Despite this, there remains an absence of literature investigating internet behaviour from an evolutionary psychology perspective (Piazza & Bering, 2009). According to Piazza and Bering (2009) this lack of research is surprising as utilising theories from evolutionary psychology would allow cyber-psychologists an alternate, distal explanation for causes of internet behaviour. The continued growth of the internet and social networking sites has meant that it is becoming increasingly more important to investigate the occurrence and effects of behaviours traditionally studied in offline contexts (such as gossip) online.

This review has provided a detailed overview of the variables that influence an individual's willingness to engage in reputation-based gossip. However, an effective intrasexual competition strategy, in particular one focused on competitor derogation, is a two-part process. Individuals must first be willing to engage in the strategy (Buss & Dedden, 1990). As has been discussed throughout this review, it appears that both men and women are willing to engage in gossip when involved in mate competition, although there are numerous variables that may influence this willingness. In addition, however, the intrasexual competition strategy must make the target perceive the competitor as an undesirable mate

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choice, in particular, in comparison to the individual (Buss & Dedden, 1990). Therefore, when investigating intrasexual competition strategies it is important to consider the target's perceptions, both of the competitor and of the individual.

In a meta-analytic review of intrasexual competition strategies, Schmitt (2002) found that numerous factors influence the effectiveness of both self-promotion and competitor derogation. Sex, attraction context, and type of strategy were all found to influence the perceived effectiveness of an intrasexual strategy (Schmitt, 2002). Regardless of attraction context (traditional, mate retention, or mate poaching) women were viewed as more effective when engaging in appearance-related tactics, while men were perceived as more effective when engaging in resource-related tactics. These sex differences were found in both self-promotion and competitor derogation contexts. However, sex differences in resource-related tactics were larger in derogation contexts, with sex differences in appearance-based tactics larger in promotion contexts (Schmitt, 2002). Fisher and Cox (2009) also considered variables that influence the effectiveness of intrasexual competition tactics, focusing on appearance-related derogations. Both men and women were found to be effective in diminishing a target's perceptions of a competitor's appearance. Additionally attractive women were more effective at manipulating a target's perceptions of a competitor's appearance than unattractive women (Fisher & Cox, 2009). While reputation-based gossip has not specifically been investigated from the perspective of the target, it appears that variables including sex, attraction context, type of strategy, and attractiveness will influence the effectiveness of a gossip strategy.

In investigating reputation-based gossip from the perspective of the target it may also be useful to consider the target's perceptions of the individual (the gossiper). Throughout this review, gossip has been referred to as a covert, low-risk strategy for intrasexual competition. However, while engaging in gossip minimises potential risks, as has been discussed, there remains the possibility that the individual will be revealed as the gossiper (Schmitt & Buss,

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1996). If learning that the individual is using gossip to derogate others diminishes the target's perceptions of the individual, this may decrease the effectiveness of the strategy.

Fisher and colleagues (2010) conducted an empirical study investigating both male and female perceptions of female derogators. It was found that learning that a female is a derogator decreases both men and women's perceptions of the individual. Both men and women viewed the derogator as less friendly, kind, trustworthy, and desirable in comparison to women who did not derogate competitors (Fisher et al., 2010). However, male perceptions of the derogator's physical attractiveness and promiscuity remained unchanged, as did male willingness to become involved in a relationship with the derogator. As Fisher et al.'s (2010) study only investigated perceptions of female derogators, perceptions of male derogators currently remain untested. Additionally, it is unknown if derogations based on additional reputational elements (e.g., sexual promiscuity) lead to similar outcomes. Despite this, the current research indicates that derogatory gossip may be effective in manipulating and decreasing target perceptions of competitors. Additionally, if the individual is revealed as the gossipier, it appears that women, at least, will still be perceived as potential relationship targets by men.

Finally, in investigating the role of gossip in mate competition it is also important to consider the competitor, the third member of the mate competition triad. Research does indicate that women decrease their perceptions of other women after learning that they are derogators (Fisher et al., 2010). However, learning that the individual is sharing derogatory gossip about one's reputation may also lead the competitor to engage in further acts of retaliation against the individual.

For example, as has been discussed, signalling that a competitor is sexually promiscuous or unfaithful can be an ideal strategy when competing for a mate (Hess & Hagen, 2002). However, the individual may face a number of costs if they choose to do so, insofar as the competitor will likely retaliate (De Backer, 2005). The retaliation may take the

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form of indirect aggression (i.e., by spreading gossip in return) or physical aggression (i.e., by punching the derogator; Bromley, 1993; Campbell, 2004). Studies have indicated that when females are in conflict with each other the cause is generally over access to a relationship partner (Campbell, 1999, 2001). For females, sharing information about a competitor's sexual reputation may be a particularly pertinent competition strategy (Hess & Hagen, 2002).

However, spreading this gossip is considered such an extreme measure that it may lead a female to escalate retaliation to physical aggression. Campbell (1986) has found that the most common category for physical aggression among females (accounting for 46% of physical fights) is due to damaging another female's sexual reputation. Aggression between females is more likely to intensify if one makes accusations and gossips about another female's alleged promiscuity (Campbell, 2004). If the competitor does retaliate aggressively toward the individual as a result of hearing this information about their reputation, gossip may become a high-risk strategy. Accordingly, despite the potential benefits of engaging in reputation-based gossip, the individual may instead choose to engage in other, less risky strategies. Again, it is unknown first, how men respond to learning that derogatory gossip is being spread about their reputation and second, if the same effects occur when derogations are based on different gossip content. However, in combination, these studies imply the importance of considering the competitor in investigating the effectiveness of gossip as an intrasexual competition strategy.

Future directions and conclusions

Overall, it appears that there are an increasing number of empirical studies dedicated to investigating gossip in general, in addition to reputation-based gossip specifically. However, as discussed at the start of this review, gossip research remains in its infancy. Consequently, in investigating how gossip functions as a strategy for intrasexual competition there are numerous avenues of research that remain unexplored.

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First, additional exploration is needed of the variables that affect both the individual's willingness to engage in reputation-gossip and the success of the strategy. These variables can be conceptualised as those both internal the individual (e.g., sex, desired relationship length, age, self-perceived mate value, physical attractiveness, relationship and parental status, socio-economic status, and culture) and external to the individual (e.g., attraction context and gossip context). In investigating these variables it is important that researchers utilise broad and heterogeneous samples. By sampling participants from a wide range of cultures, socio-economic backgrounds, and ages, this would not only allow for research questions to be answered, but also for research conclusions to be generalisable to a broad population.

Second, in line with the aforementioned point, researchers have tended to focus on investigating reputation-based gossip among women (e.g., Campbell, 2004; Hess & Hagen, 2002). As has been outlined in this review, there are numerous reasons both why women may be more likely to engage in reputation-based gossip than men, and why gossip may actually be a more effective and successful strategy for women than men. Despite this, an increasing number of researchers have contended that men may also benefit from engaging in gossip when involved in mate competition (De Backer, 2005; Miller, 2000). Additionally, if gossip has evolved as a strategy for intrasexual competition, including men in samples would allow for hypotheses based on evolutionary theory to be investigated. Accordingly, in future, it may be useful for researchers investigating the role of gossip in mate competition to utilise samples comprising both men and women.

Third, future research may benefit from differentiating between active (derogation) and passive (listening) components of gossip. This would allow for a greater understanding of how individuals engage in gossip throughout mate competition. Additionally, it would provide information about how individuals use gossip to support both their own and their allies (family and friends) mating goals.

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Fourth, the majority of researchers investigating intrasexual competition strategies have conducted their studies from the perspective of the individual (Massar et al., 2011; Nevo et al., 1993). However, the success of an intrasexual competition strategy is dependent not just on the individual, but also on the target, and competitors. Future studies should then focus on investigating gossip from the perspective of both the target and the competitor.

In conclusion, this review has indicated that there is a sound theoretical base for the role of gossip as a strategy for intrasexual competition. Numerous variables, both internal and external to the individual, appear to influence both willingness to engage in gossip in mate competition and the effectiveness of the strategy. Additional exploration of how these variables specifically influence reputation-based gossip is needed. Nevertheless, while perhaps not “the most powerful force in the universe” (Barry, 1980, p.182), it appears that engaging in gossip may enable the individual to achieve a desirable mating outcome. Something that, after all, is extremely powerful indeed.

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CHAPTER 2

***Gossip girl:* Exploring the demographic variables that
influence reputation-based gossip**

CHAPTER 2: VARIABLES INFLUENCING REPUTATION-BASED GOSSIP

Abstract

Gossip appears to be an ideal strategy for women to engage in when involved in mate competition, enabling the derogation of a competitor's reputation, whilst simultaneously preserving their own. The aim of this study was to investigate the influence of demographic variables on women's gossip tendencies. A sample of 196 Australian women answered an online questionnaire about their gossip tendencies and habits. Age, relationship status, and parental status were all found to influence women's engagement in gossip. Young, unmarried, and childless women had the highest gossip tendencies. Additionally, these women also had the highest tendencies to engage in physical appearance, social information, and sublimated gossip; gossip which, from an evolutionary perspective, should be the most salient for women during mate competition. Parental status was the best predictor of both a woman's overall tendency to gossip and her tendency to specifically engage in physical appearance and social information gossip. The results from the current study support Miller's (1999) parenting eclipses courtship hypothesis and elucidate the role of gossip in mate competition.

CHAPTER 2: VARIABLES INFLUENCING REPUTATION-BASED GOSSIP

Good gossip is just what's going on. Bad gossip is stuff that is salacious, mean, and bitchy - the kind most people really enjoy (Smith, 1992).

Newsweek columnist Liz Smith (1992) may have meant for her comment to be a humorous aside about human nature. However, it is true that gossip is both entertaining and willingly transmitted from person-to-person (Hess & Hagen, 2002). It is for these reasons, among many others, that evolutionary psychologists have suggested that gossip may be an ideal strategy for individuals to employ during mate competition (De Backer, Nelissen, & Fisher, 2007; Massar, Buunk, & Rempt, 2011).

Gossip has been defined as a form of evaluative talk about absent third parties (Foster, 2004). With up to 70% of conversational talk being classified as gossip (Levin & Arluke, 1985), researchers have contended that the activity may serve numerous purposes. These include as a form of societal control (Barkow, 1992), a means of reputation manipulation (Emler, 1994), and as a learning mechanism for children (Fine, 1977). Further, evolutionary psychologists have proposed that a specific form of gossip—reputation-based gossip—may have evolved as a strategy for intrasexual competition (De Backer et al., 2007; Power, 1998).

The aim of intrasexual competition is for an individual to attract and become involved with a desirable mate partner (Buss & Dedden, 1990). Men and women may choose to compete with other same-sex individuals in order to gain access to a high quality mate with desirable qualities (including physical attractiveness, status and resources, and emotional stability; Buss et al., 1990). An individual who engages in mate competition strategies, such as gossip, may increase their chances of becoming involved with a desirable partner.

Mate competition can be thought of as always having a minimum of three main actors: the individual (the person engaging in intrasexual competition), the romantic target (the desired mate), and the romantic competitor (the man or woman who also wishes to gain access to the target; Buss, 1988b). Gossip may be particularly effective in mate competition

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because it potentially enables the individual to manipulate the reputations of all three of these actors (De Backer, 2005). This is achieved in a number of ways.

First, reputation-based gossip may enable the individual to manipulate a competitor's social standing through competitor derogation (DiFonzo & Bordia, 2007). By sharing derogatory gossip about a competitor, the individual may be able to decrease the value of the competitor's reputation. As a result, the competitor may appear undesirable to the target (Buss & Dedden, 1990; DiFonzo & Bordia, 2007). In line with this, a second form of reputation manipulation potentially achieved through gossip is self-promotion. Through self-promotion, the individual is able to increase the value of their own reputation (Buss & Dedden, 1990). This may be achieved through gossip as the individual cannot credibly accuse a person of behaviours (through competitor derogation) that they also engage in (Buss, 1988b). Additionally, the individual may be able to recruit the help of family and friends to share positive information about their own reputation (De Backer, 2005; McAndrew, Bell, & Garcia, 2007). Consequently, this self-promoting function of gossip potentially enables the individual to increase their own desirability in the eyes of the target.

When discussing intrasexual competition strategies, evolutionary psychologists typically refer to functions of competitor derogation and self-promotion (Fisher & Cox, 2011). Indeed, a benefit of reputation-based gossip is that it allows for both derogation and promotion goals to be achieved simultaneously (De Backer, 2005). However, there is also an additional benefit of engaging in gossip when involved in mate competition. As the passive receiver of gossip, the individual may be able to learn important information (e.g., current relationship availability, personality characteristics, and desired relationship goals) about both targets and competitors (De Backer, 2005). This gossip may provide an indication to the individual as to whether it is wise to engage in mate competition and, if so, the best strategy for competing (De Backer, 2005; Power, 1998). By actively engaging in gossip in addition to passively listening to gossip, the individual may be able to gain access to a desired target.

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Whereas both men and women may benefit from engaging in reputation-based gossip, it may be a particularly useful strategy for women (Campbell, 2004; Hess & Hagen, 2002). As a strategy of indirect aggression, gossip involves the individual covertly attacking a competitor and, as such, reduces the risk of retaliation (Campbell, 1999). This may be of practical importance for women because engaging in high-risk strategies (such as physical aggression) may have more detrimental outcomes for a woman's reproductive success than for a man's (Campbell, 1999). Evidence for this argument comes from anthropological data, which indicate that mother-absence has a stronger effect on childhood mortality than father-absence (Kaplan & Lancaster, 2003). Additionally, evolutionary psychologists have contended that some elements of a woman's reputation (e.g., sexual promiscuity) may be particularly susceptible to untruthful gossip as a result of factors including concealed ovulation (Hess & Hagen, 2002). Consequently, women may have evolved adaptations for indirect aggression strategies, such as gossip, and may preferentially choose to engage in these strategies during mate competition (Hess & Hagen, 2002).

There has been a growing, albeit relatively small, number of empirical studies investigating the role of gossip in mate competition. Researchers have tended to focus on exploring individual willingness to engage in gossip and the factors that influence its success as an intrasexual strategy (De Backer et al., 2007; Massar et al., 2011). Nevo, Nevo, and Derech-Zehavi (1993), for example, designed one of the first psychometrically valid scales [the *Tendency to Gossip Questionnaire (TGQ)*] to measure gossip tendencies in adults. In line with previous studies (Leaper & Holliday, 1995; Levin & Arluke, 1985), by utilising the *TGQ*, it was found that women had a higher overall tendency to engage in gossip than men (Nevo & Nevo, 1993; Nevo et al., 1993). Further, women also tended to engage in physical appearance gossip more often than men, while men had a higher tendency to engage in achievement gossip than women (Nevo et al., 1993; Watson, 2012). These findings are in line with predictions from evolutionary psychology. From an evolutionary perspective, women

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should choose to derogate the attractiveness of competitors, while men should derogate male competitors on achievement-related factors (Buss et al., 1990). This is because attractiveness acts as a cue for genetic fitness and is a salient trait for men when making mating decisions. In comparison, achievement acts as a good provider cue and is thus a salient factor for women when choosing a mate (Buss et al., 1990). Additionally, Watson (2012), utilising the *TGQ*, also found that women had a higher tendency to engage in social information gossip (gossip pertaining to other people's lives) than men. This finding provides evidence for the third function of reputation-based gossip. An increased tendency to engage in social information gossip may benefit an individual involved in intrasexual competition by enabling them to learn personal information about targets and competitors (De Backer, 2005; Power, 1998).

De Backer and colleagues (2007) extended this research by investigating men and women's ability to recall gossip content. The results from the study indicated that both men and women had higher levels of recall for gossip about same-sex individuals who could represent potential competitors. Further, it was found that cues of attractiveness were recalled more for female competitors, with cues of wealth and status recalled more for male competitors (De Backer et al., 2007). These findings are in line with earlier research from Nevo et al. (1993) and support predictions from evolutionary psychology (Buss, 1988b; Buss et al., 1990). De Backer and colleagues (2007) also investigated the recall of gossip about the reputation of other-sex individuals who could represent potential targets and found no sex differences. In explaining these results, the researchers drew on contentions from Power (1998). According to Power (1998), both men and women use gossip to support not only their own mating efforts, but also those of their friends (both same-sex and cross-sex). Consequently, men and women should have equal recall of gossip pertaining to potential targets, regardless of the content.

In combination, the results from these studies indicate that gossip may function as an ideal method for intrasexual competition. However, Chapter 1 noted that additional

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exploration is needed to understand the usefulness of gossip in mate competition. It was stated that, as reputation-based gossip research is in its infancy, many of the variables that have been found to impact other intrasexual strategies have not been investigated with respect to gossip. For example, if gossip does function as a strategy for intrasexual competition, variables including age, relationship status, and parental status should also influence gossip tendencies

It is important to consider the influence of an individual's age when investigating intrasexual strategies. From an evolutionary perspective, a woman should be most likely to engage in mate competition when she is unmated and reproductively-capable, that is, from her mid-teens to approximately 50 years (Durante, 2009; Sherif, 2013). During this time period, women face time-dependent reproductive concerns and, as a result, should engage in competition strategies to achieve mating and reproduction goals (Durante, 2009). In comparison, outside of this time period, when women are not reproductively-capable, engagement in intrasexual competition should occur less frequently (Durante, 2009). However, there is some conjecture over whether it is younger or older reproductively-capable women who compete more fiercely.

According to Emler (1994), younger individuals gain greater benefit from engaging in gossip than older individuals. This is because younger people have a broader network of people with whom they interact than older people. Consequently, younger individuals have an extended number of people with and about whom they can potentially gossip (Emler, 1994). However, Cashdan (1997) suggests that older reproductively-capable women should compete more fiercely when involved in mate competition than younger reproductively-capable women. A central reason for this is that younger women have an increased optimism about their mating outcomes than older women. Cashdan (1997) contends that this mating optimism means that younger women who are not currently involved in a relationship remain optimistic that, in time, they will become involved with a desirable partner. Conversely, it is proposed

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that older women, particularly those who have previously experienced mating disappointment, may be more pessimistic about their mating outcomes. As a result of this loss of mating optimism, older, reproductively-capable, unmated women should compete more intensely when involved in mate competition (Cashdan, 1997). From this perspective, it is older women who should be more likely to engage in reputation-based gossip than younger women.

Massar and colleagues (2011) conducted one of the first empirical studies to examine the effect of age on a woman's tendency to gossip about a competitor. It was found that age was negatively associated with tendency to gossip about the competitor, with younger women having a higher tendency to gossip than older women. However, the relationship between age and tendency to gossip was found to be mediated by a woman's self-perceived mate value; when mate value was included in the analysis, no relationship was found between age and tendency to gossip. Younger women were found to have higher self-perceived mate values than older women, indicating that they view themselves as more desirable toward men. Thus, according to Massar and colleagues (2011), while younger women may have an increased tendency to engage in gossip about competitors, this can be explained by their higher self-perceived mate values. Younger women perceive themselves as being more desirable to men than older women. Consequently, younger women are more likely to engage in intrasexual strategies, such as gossip, as they have heightened beliefs of the success of these strategies.

However, in addition to mate value, other demographic variables may also influence the relationship between age and reputation-based gossip. Miller (1999), in particular, has contended that, among reproductively-capable men and women, relationship status and parental status should both influence intrasexual strategies more so than age. According to Miller's (1999) parenting eclipses courtship hypothesis, following the formation of a successful mateship and, particularly after the birth of children, men and women should spend less time and energy engaging in intrasexual competition. Focus should instead turn to

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relationship maintenance, childbearing and rearing, and achieving career goals (Miller, 1999). Further, from an evolutionary perspective, the primary goal of sexual selection is to enable the survival of the species (Cartwright, 2000; Darwin, 1859). Consequently, once childbirth allows for this goal to be achieved, engagement in intrasexual competition should decrease. Accordingly, it should not necessarily be the age of the individual that directly affects engagement in reputation-based gossip, but whether the individual is involved in a mateship or is a parent.

Traditional methods of mate attraction refer to intrasexual competition that is focused on the available mates in a mating pool (Schmitt & Buss, 2001). However, researchers investigating intrasexual competition in non-traditional contexts (where one or more competition participants are already mated), including mate poaching and mate retention, propose that intrasexual competition may continue after the formation of a successful partnership (Buss, 1988a). A central reason for this is the presence of mate poaching; a universal behaviour that between 40-60% of individuals admit they have attempted to engage in (Schmitt et al., 2004). The individual may continue to engage in intrasexual strategies after becoming involved with a desired mate in order to deflect mate poachers and to stop their partner defecting from the relationship (Schmitt & Buss, 2001). This continuous derogation of competitors may also serve the purpose of reinforcing and stabilising the relationship (Fisher, Tran, & Voracek, 2008). Thus, from a mate retention perspective, relationship status should not influence gossip tendencies.

De Backer and colleagues (2007) analysed how reputation-based gossip is affected by relationship status and found no relationship between the two variables. However, this study only investigated passive recall of gossip information, rather than how participants actively use gossip to derogate and/or self-promote. Further, as Power (1998) has noted, men and women may listen to gossip in order to support the mating efforts of both themselves and their friends. This would explain why no correlation was found between relationship status and

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gossip recall. Massar and colleagues (2011) did investigate the effect of relationship status on tendency to gossip through an exploratory correlational analysis and again found no association between reputation-based gossip and relationship status. However, by undertaking a correlational analysis, age was not controlled for. This may be problematic, as older women are more likely to be involved in long-term, committed relationships than younger women (ABS, 2012). Age effects may therefore be masking the relationship between relationship status and gossip tendencies. Additionally, no study has currently investigated the effect of parental status on reputation-based gossip. Finally, while women have been found to have a higher overall tendency to engage in both physical appearance and social information gossip than men (Nevo et al., 1993; Watson, 2012), it is currently unknown how age, relationship status, and parental status affect the content of women's gossip.

The aim of this study is therefore to investigate how a woman's age, relationship status, and parental status influence both her overall tendency to engage in gossip and the gossip content she engages in.

Method

Participants

A total of 196 (100 psychology undergraduates and 96 community members) women participated in this study. The mean age for participants was 25.8 years (SD 10.7, range 18-49). The majority (88%) of participants identified their nationality as Australian. Of the remaining participants, 4% identified as Asian, 3% as European, 3% as North American, 1% as South American, 1% as African, and 1% as Middle Eastern. In terms of relationship status, 42% stated that they were currently single, 38% in a relationship, and 20% married. Finally, 72% of participants stated that they were not parents.

Measures and procedure

Data collection took place online and both members of the general public and undergraduate psychology students from an Australian university were recruited to take part.

The first section of the questionnaire gathered demographic data, including participant age, sexual orientation, relationship status, and parental status.

Participants were then asked to answer the *Tendency to Gossip Questionnaire (TGQ)* (Nevo et al., 1993). The *TGQ* includes 20 items asking participants about their tendency to gossip in everyday life. Participants rate their own behavior on each item on a 7-point scale from *never* to *always*, with higher scores indicating an increased tendency to gossip. The measure has been factor analysed, revealing four subscales. First, achievement gossip; e.g. 'I like talking to friends about other people's grades and intellectual achievements', with Cronbach's α .75. Second, physical appearance gossip; e.g. 'I like talking to friends about other people's clothes', with Cronbach's α .84. Third, social information (others' personal lives) gossip; e.g. 'I tend to talk with friends about the love affairs of people we know', with Cronbach's α .74. Fourth, sublimated gossip ('intellectual' gossip); e.g. 'I like reading biographies of famous people', with Cronbach's α .50. Nevo et al. (1993) reported a full scale α .87 for the measure, while the results from the current study indicating a full scale α .89.

Results

The study was undertaken with student participants and community members. In order to ensure the feasibility of combining the data from these two groups, statistical analyses were run on the main measure, the *TGQ*. As the *TGQ* has been validated through the use of standard psychometric methods (Nevo et al., 1993), De Boeck and Wilson (2004) suggest that it is not necessary to apply exploratory factor analysis prior to collapsing data across groups. Rather, the researchers suggest investigating for significant differences between the two sample groups on the main measure of interest. There were no significant differences between

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the two sample groups on the *TGQ*. Accordingly, and in line with De Boeck and Wilson (2004), data from the two groups were collapsed and all further statistical analyses were conducted on the whole sample.

Summary of results from the *TGQ*. Based on previous research and current hypotheses, the *TGQ* was analysed with respect to three demographic variables: age, relationship status, and parental status. For both relationship status and parental status, age was included as a covariate in data analyses, as researchers (e.g., Miller, 1999) have suggested that this may be a mediating factor. For relationship status, follow up contrasts were examined for significant findings. As these were planned, directional contrasts alpha was set at .1 and follow-up tests adjusted for at .1/3.

Gossip subscales. Means and standard deviations for the *TGQ* and each of the four gossip subscales among all participants, and based on participant relationship status and parental status were initially calculated (see Table 1). Differences between each of the four gossip subscales were measured through a series of paired t-tests. Participants were significantly more likely to engage in physical appearance gossip than achievement gossip, $t(146) = 8.71, p < .0005, d = 1.44$. Women were significantly more likely to engage in social information gossip than achievement gossip, $t(146) = 11.19, p < .0005, d = 1.85$. Women were significantly more likely to engage in sublimated gossip than achievement gossip, $t(146) = 11.48, p < .0005, d = 1.90$. However, no significant differences were found between tendency to engage in physical appearance gossip compared to social information gossip, $t(146) = -1.59, p = .11, d = .26$; or sublimated gossip, $t(146) = -.98, p = .33, d = .16$. Further, no significant differences were found between tendency to engage in social information gossip compared to sublimated gossip, $t(146) = .45, p = .66, d = .07$.

Table 1: *Tendency to Gossip among Participants*

	Overall TGQ <i>M (SD)</i>	Physical Appearance <i>M (SD)</i>	Achievement <i>M (SD)</i>	Social Information <i>M (SD)</i>	Sublimated <i>M (SD)</i>
All Participants	76.97 (18.84)	3.97 (1.39)	3.06 (1.12)	4.10 (1.17)	4.06 (1.13)
Relationship Status					
Single	78.23 (2.39)	4.14 (.18)	3.16 (.15)	4.11 (.15)	4.04 (.15)
In a relationship	79.28 (2.34)	4.09 (.17)	2.99 (.14)	4.34 (.15)	4.26 (.14)
Married	67.34 (4.21)	3.22 (.31)	2.95 (.26)	3.44 (.26)	3.60 (.26)
Parental Status					
No children	79.14 (1.68)	4.13 (.12)	3.15 (.10)	4.30 (.11)	4.92 (.73)
Children	63.18 (5.02)	2.97 (.37)	2.44 (.30)	3.30 (.32)	3.36 (2.19)

Demographic factors: Age. There was a significant negative correlation between age and overall tendency to gossip, $r(148) = -.16, p = .047$. As women aged, they had a significantly overall tendency to gossip decreased. Additionally, there was a significant negative correlation between age and tendency to engage in physical appearance gossip, $r(147) = -.20, p = .017$. As age increased, tendency to become involved in this type of gossip decreased. However, there was no significant correlation between age and tendency to engage in achievement gossip, $r(147) = -.12, p = .13$; social information gossip, $r(147) = -.11, p = .20$; or sublimated gossip, $r(148) = -.01, p = .90$.

Relationship status. Although there was no significant difference in overall tendency to gossip between women who were in a relationship those who were single, $p = .75, d = .02$, participants who were single had a significantly higher overall tendency to gossip than those who were married, $p = .032, d = 1.64$. Additionally, participants who were in a relationship also had a significantly higher overall tendency to gossip than participants who were married, $p = .015, d = .08$.

A number of significant findings were also obtained when each of the gossip subscales were analysed separately. Participants who were single had a significantly higher tendency to engage in physical appearance gossip than participants who were married, $p = .014, d = 3.15$. Additionally, participants who were in a relationship also had a significantly higher tendency to engage in physical appearance gossip than participants who were married, $p = .017, d =$

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.69. Conversely, there was no significant difference in tendency to engage in physical appearance gossip between participants who were in a relationship and those who were single, $p = .83$, $d = .01$.

There was no significant relationship between relationship status and tendency to engage in achievement gossip, $F(2,143) = .46$, $p = .63$, $d = .08$.

Women who were single had a significantly higher tendency to engage in social information gossip than women who were married, $p = .034$, $d = 1.53$. Additionally, women who were in a relationship also had a significantly higher tendency to engage in social information gossip than women who were married, $p = .003$, $d = 1.15$. Conversely, there was no significant difference in tendency to engage in social information gossip between participants who were in a relationship and those who were single, $p = .26$, $d = .22$.

Women who were in a relationship had a significantly higher tendency to engage in sublimated gossip than women who were married, $p = .026$, $d = 1.37$. However, there was no significant difference in tendency to engage in sublimated gossip between participants who were single and those who were in a relationship, $p = .29$, $d = .24$. Additionally, there was no significant difference in tendency to engage in sublimated gossip between participants who were single and those who were married, $p = .14$, $d = .50$.

Parental status. Women who did not have children had a significantly higher overall tendency to gossip than women who did have children, $F(1, 145) = 8.54$, $p = .004$, $d = 1.41$.

A number of additional significant findings were also obtained when gossip subscales were analysed separately. First, participants who did not have children had a significantly higher tendency to engage in physical appearance gossip than participants who did have children, $F(1,144) = 8.01$, $p = .005$, $d = 1.33$. Second, participants who did not have children had a significantly higher tendency to engage in achievement gossip than participants who did have children, $F(1,144) = 4.50$, $p = .036$, $d = .75$. Third, participants who did not have children had a significantly higher tendency to engage in social information gossip than

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participants who did have children, $F(1, 144) = 7.19, p = .008, d = 1.19$. Conversely, there was no significant difference in tendency to engage in sublimated gossip between women who had children and those who did not have children, $F(1,145) = .41, p = .52, d = .07$.

Regression analysis. A regression analysis was undertaken in order to analyse which demographic variables (age, relationship status, and parental status) were significant in predicting a woman's tendency to gossip. First, only parental status significantly, positively predicted overall tendency to gossip, $\beta = .14.06, t(143) = 2.52, p = .013, d = .42$. Parental status also explained a significant proportion of variance in overall tendency to gossip, $R_2 = .08, F(1,145) = 12.58, p = .001$. Second, only parental status significantly predicted tendency to engage in physical appearance gossip, $\beta = .093, t(143) = 2.27, p = .025, d = .38$. Parental status also explained a significant portion of variance in tendency to engage in physical appearance gossip, $R_2 = .09, F(1,145) = 14.17, p < .0005$. Third, only parental status significantly predicted tendency to engage in social information gossip, $\beta = .029, t(143) = 2.50, p = .014, d = .42$. Parental status also explained a significant portion of variance in tendency to engage in social information gossip, $R_2 = .06, F(1,145) = 8.57, p = .004$. However, none of the variables predicted tendency to engage in either achievement gossip or sublimated gossip.

Discussion

An initial aim of this study was to explore the specific types of gossip women choose to engage in. In line with previous research, it was found that women had a significantly higher tendency to engage in both physical appearance and social information gossip than achievement gossip (Nevo et al., 1993; Watson, 2012). These findings support contentions from evolutionary psychologists about the type of gossip content that should be salient for women (De Backer, 2005; Hess & Hagen, 2002). Women in the current study also had a significantly higher tendency to engage in sublimated gossip than achievement gossip. While

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previous studies utilising the *TGQ* have not reported this finding (Nevo et al., 1993), researchers investigating mating trade-offs have proposed that intelligence is a trait viewed by both men and women as a necessity in a prospective mate partner (Li, Bailey, Kenrick, & Linsenmeier, 2002). As such, engagement in sublimated gossip (intellectual gossip) may act as a cue of intelligence to the target, thus increasing the desirability of the individual.

A number of additional results were found when exploring how demographic variables influence gossip tendencies. A significant negative correlation was found between overall gossip tendency and age, indicating that younger reproductively-capable women had a higher tendency to gossip than older reproductively-capable women. This finding is in line with research that contends younger people benefit more from gossip than older people (Emler, 1994) and consequently are more likely to engage in reputation-based gossip (Massar et al., 2011). The current study also found a significant negative correlation between age and engagement in physical appearance gossip. Campbell (2004) has noted that mate competition occurs more frequently among young reproductively-capable women. As appearance is a salient trait in mate competition (Buss et al., 1990), an older woman may avoid discussing the topic as it might draw a target's attention to the older gossipers' appearance (Symons, 1995).

While age was found to influence gossip tendencies, the results from the current study indicate that both relationship status and parental status also impact on a woman's engagement in gossip. Overall, no differences in gossip tendencies were found between women not involved in a relationship and those involved in a dating relationship. However, it was found that women who were either single or involved in a dating relationship had higher overall gossip tendencies than women who were married. Women who were either single or involved in a dating relationship were also more likely to engage in physical appearance and social information gossip than married women. Finally, women involved in a dating relationship were more likely to engage in sublimated gossip than women who were married. It appears that unmarried women (either single or involved in a dating relationship) are more

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likely than married women to engage in the gossip content that should be the most salient for women during mate competition (Buss et al., 1990; Li et al., 2002).

The findings from the current study support those of Fisher, Cox, and Gordon (2009), who investigated the influence of relationship status on general involvement in competitor derogation strategies. The researchers found that men and women who were either single or currently dating a partner engaged in similar patterns of competitor derogation behaviour (Fisher et al., 2009). In both cases, these individuals were found to be significantly more likely to engage in derogation strategies than men and women who were either married or involved in a common-law relationship (Fisher et al., 2009). In combination, the findings from both the current study and Fisher and colleagues (2009) suggest that mate competition strategies, such as reputation-based gossip, are influenced by relationship status. In particular, it appears that simply being involved in a dating relationship does not lead to changes in an individual's competition strategies. Rather, the results indicate that it is only after the relationship becomes a long-term partnership (either de-facto or marital) that focus turns away from mate competition and engagement in intrasexual competition declines.

According to Miller's (1999) parenting eclipses courtship hypothesis, one of the reasons why this decline in competition occurs following marriage is because men and women instead turn their attention to parenting and raising children. Consequently, the current study also investigated the effect of parental status on a woman's tendency to gossip. It was found that, among reproductively-capable women, those who did not have children had significantly higher gossip tendencies than those who did have children. While an explanation for this finding may be that women who have children have less social time than women who do not have children, gossip content findings indicate that other factors are at play. For example, women who did not have children were also significantly more likely to engage in physical appearance, achievement, and social information gossip than women who did have children. Conversely, no differences were found in tendency to engage in sublimated gossip

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based on parental status. If the relationship between parental status and gossip tendency was caused solely as a result of social time (or lack thereof), differences in sublimated gossip would also be expected as a result of a woman's parental status. Parental status was found to be the best predictor (above age and relationship status) of a woman's overall tendency to engage in gossip. A woman's parental status was also found to be the best predictor of her tendency to engage in both physical appearance and social information gossip. On the basis of these findings, a number of conclusions can be made.

First, among reproductively-capable women, age does not act as the best predictor of gossip tendencies. This finding again makes sense from an evolutionary perspective. Age should not predict whether a reproductively-capable woman engages in competition strategies, but rather whether she has achieved mating and reproduction goals (Miller, 1999). As the current results indicate, if a reproductively-capable woman has not achieved these goals, she continues to engage in intrasexual competition tactics in order to increase her chances of attaining a desirable mate.

Second, in contrast it appears that simply becoming involved in a dating relationship does not lead to declines in engagement in gossip, particularly physical appearance and social information gossip. Marital relationships have a higher level of sexual exclusivity than dating relationships (Forste & Tanfer, 1996), with marital infidelity viewed as significantly more socially unacceptable than infidelity in a dating relationship (Sheppard, Nelso, & Andreoli-Mathie, 1995). Further, dating couples have been found to have lower overall levels of commitment than married couples (Kurdek, 1995). Consequently, a woman in a dating relationship may feel that her relationship is at a higher risk of dissolution than a woman in a marital relationship. This would explain why women involved in dating relationships were more likely to engage in gossip than those involved in marital relationships. A woman in a dating relationship may use gossip as a means of retaining her mate and maintaining her relationship.

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Third, the findings from the current study indicate that after becoming a parent, overall tendency to gossip, in addition to tendency to engage in physical appearance, achievement, and social information gossip declines. A woman's parental status is viewed as the best predictor of her tendency to engage in gossip. These findings are in line with evolutionary theory, which proposes that the ultimate aim of sexual selection is to allow for survival of the species (Cartwright, 2000; Darwin, 1859), with mate competition behaviours expected to decrease following parenthood. From an evolutionary perspective, the unique influence of each of these demographic variables on women's engagement in gossip provides further evidence that gossip functions as a strategy for intrasexual competition.

The current study does, however, have some limitations. The *TGQ* does not differentiate between active (e.g., derogation of a competitor) and passive (e.g., listening to information about a competitor) gossip usage. As such, this study does not specifically inform as to how demographic variables influence women's usage of gossip when involved in mate competition. The present findings, when taken with research by De Backer and colleagues (2007) and Massar and colleagues (2011), are suggestive of the effect of age, relationship status, and parental status on women's combined active and passive engagement in gossip. However, in future, it might be useful for researchers to differentiate between active and passive gossip components when investigating how demographic variables influence reputation-based gossip.

Future studies may also benefit from including both male and female participants. A number of researchers have proposed that indirect aggression, and gossip in particular, is particularly beneficial for women involved in mate competition (Campbell, 2004; Hess & Hagen, 2002). However, Miller (2000) has previously stressed the importance of reputation-based gossip for men. Miller (2000) suggests that men benefit from sharing gossip in mating contexts as it enables them to demonstrate their social intelligence and exclusive social knowledge. As researchers have contended that these are characteristics that are particularly

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attractive to women (Miller, 2000; Pinker, 1995), engaging in gossip may thus prove advantageous for men involved in intrasexual competition. An alternate perspective contends that reputation-based gossip is of no greater importance for one sex over the other (De Backer, 2005). Researchers considering this argument propose that attracting and retaining a quality partner is a problem faced by both men and women. As gossip is a strategy that potentially provides a solution to these problems (De Backer, 2005), both men and women should engage in gossip when involved in mate competition. Utilising samples comprising men and women would allow for alternate hypotheses about the role of gossip for men in mate competition to be explored. Further, doing so would also allow for the investigation of sex differences in reputation-based gossip usage and content.

In future it might also be useful to explore the role of reputation-based gossip in non-traditional attraction contexts, and in particular, in mate poaching. Competitor derogation, one of the most effective intrasexual competition strategies, often fails to be successful when used to mate poach (Schmitt & Buss, 2001). The central reason for this is that in a mate poaching context, the competitor is the target's present mate partner. Consequently, the individual is likely to sustain reputational damage if they derogate the competitor directly to the target (Schmitt & Buss, 2001). Strategically engaging in reputation-based gossip may allow the individual to bypass this difficulty. This is because one of the main strengths of gossip, as a form of indirect aggression, is that it simultaneously allows for the covert derogation of the competitor's reputation and the preservation of the individual's reputation (De Backer, 2005). An additional reason why gossip may be ideally suited to mate poaching contexts is that these contexts involve a single, known competitor. This means that gossip derogations can be focused on content that will cause the most damage to the competitor's reputation (Fisher, Shaw, Worth, Smith, & Reeve, 2010). These factors suggest that reputation-based gossip may ideally be suited to mate poaching contexts.

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In conclusion, the results from the current study extend previous research by showing that a woman's age, relationship status, and parental status affect both her tendency to gossip and the type of gossip she engages in. Women appear to engage in physical appearance, social information, and sublimated gossip; gossip which, from an evolutionary perspective, should prove the most useful in mate competition. Further it tends to be young, unmarried, childless women who have the highest tendencies to engage in this gossip, with parental status being the best predictor of gossip tendencies among reproductively-capable women. It thus appears that gossip, both of the good and the bad kind, does function as an intrasexual competition strategy, used strategically by women to achieve a desirable mating outcome.

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CHAPTER 3

***“Just between you and me...”* The role of gossip in mate
poaching**

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Abstract

Gossip appears to be a useful strategy for intrasexual competition, enabling an individual to compete effectively with romantic competitors and gain a desired mating outcome. However, while reputation-based gossip may be ideally suited to, and prove effective in non-traditional attraction contexts, it has not yet been explored in these settings. Two studies were conducted utilising cost-benefit methodologies to investigate gossip willingness in mate poaching contexts. The influence of demographic variables (sex and culture) and factors related to the gossip itself (cost, severity, and veracity) on willingness to gossip were also measured. Cross-culturally, both men and women indicated that they were willing to use gossip strategically to derogate a competitor's sexual reputation and poach the competitor's partner. In addition, in high consequence contexts (e.g., when the gossip was untrue), men were more willing to gossip than women, and participants from collectivistic cultures were more willing to gossip than participants from individualistic cultures. The findings are discussed with reference to evolutionary, socio-cultural, and economic psychology research.

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Thomas Jefferson (1961), when writing the Declaration of Independence, stated that “all men are created equal” (p. 28). While a commendable notion, it remains the case that, in the mating game at least, some men and women have more desirable characteristics than others (Cox & Fisher, 2008). These individuals consequently become preferred mating targets who can be thought of as valuable and scarce resources. Men and women may engage in competition with other same-sex individuals, known as intrasexual competition, in order to increase their chances of gaining access to these resources (Cox & Fisher, 2008). While researchers have suggested that individuals engage in numerous intrasexual competition strategies, most can be classified into two overarching tactics: competitor derogation and self-promotion (Buss & Dedden, 1990; Schmitt & Buss, 1996). Competitor derogation comprises the individual altering and decreasing the target’s perceptions of the romantic competitor. This is achieved through the individual engaging in tactics including being physically aggressive toward the competitor and diminishing the competitor’s reputation (Schmitt & Buss, 1996). Conversely, self-promotion involves the individual manipulating and increasing their own value in the eyes of the target. Tactics of self-promotion include acting flirtatiously, doing special things for the target, and being talkative and outgoing (Schmitt & Buss, 1996).

Gossip may be an effective intrasexual competition strategy as engaging in the behaviour potentially enables the individual to achieve both derogation and promotion goals (De Backer, 2005). Broadly defined as an informational exchange about persons absent from the conversation, gossip can include both positive and negative information (Foster, 2004). Evolutionary psychologists have extended on this classification by demarcating gossip used for intrasexual competition as reputation-based gossip (De Backer, 2005). Engagement in reputation-based gossip may allow the individual to covertly diminish the competitor’s reputation and thus, make the target perceive the competitor as undesirable (Buss & Dedden, 1990; DiFonzo & Bordia, 2007). This also allows for the achievement of self-promotion goals; the individual cannot credibly accuse the competitor of behaviours they too engage in

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(Cox & Fisher, 2008; De Backer, 2005). Additionally, enlisting the assistance of family and friends may allow the individual to share positive information about their own reputation (Power, 1998). In combination, the derogation and promotion components of gossip may enable the target to perceive the individual as a preferential mate in comparison to the competitor.

Researchers investigating the role of gossip in mate competition typically study its usage in traditional mate attraction contexts. In this setting, traditional mate attraction refers to competition centred on men and women who are currently unmated (Schmitt & Buss, 2001). However, researchers investigating intrasexual competition in non-traditional contexts where one or more competition participants are already mated (including mate poaching and mate retention) propose that intrasexual competition may continue after the formation of a successful partnership (Buss, 1988a).

Such research has indicated that individuals, and particularly women, use gossip in mating contexts in order to learn about, and diminish the reputations of, competitors (Massar, Buunk, & Rempt, 2011, Sutton & Oaten, 2014). When studying reputation-based gossip, researchers have tended to focus on the demographic factors that influence both engagement in, and the success of, the strategy. For example, Sutton and Oaten (2014) found a negative correlation between a woman's age and her tendency to gossip in general, as well as her tendency to engage in physical appearance gossip. In addition, the researchers reported that unmarried and childless women had higher tendencies to engage in gossip than married women and those who had children. Further, a woman's parental status was found to be the best predictor of both her overall tendency to gossip and her tendency to focus on physical appearance and social information gossip content (Sutton & Oaten, 2014). In combination, these results are suggestive of women using gossip as a strategy for intrasexual competition in traditional attraction contexts.

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It was noted in Chapter 1 that there has been an increasing, albeit still relatively small, number of studies investigating gossip in conventional attraction settings. However, currently no studies have specifically explored the role of gossip in non-traditional mating contexts. This is somewhat surprising as gossip may be ideally suited to, and prove extremely effective in, the context of mate poaching. Mate poaching is defined as attempting to attract a mate who is already involved in a romantic relationship (Schmitt & Buss, 2001). Despite this behaviour receiving less attention than other, more common forms of attraction, research suggests that mate poaching is a universal phenomenon, occurring across societies (Schmitt et al., 2004). In particular Schmitt and colleagues (2004) found that cross-culturally, up to 60% of men and 40% of women admit that they have attempted to poach a desired target.

One of the main difficulties associated with trying to attract a mate through mate poaching is that competitor derogation strategies often fail (Schmitt & Buss, 2001). This is because, in a mate poaching context, the competitor is the target's current relationship partner. For example, the individual is unlikely to increase their desirability in the eyes of the target by behaving physically aggressively towards the target's partner (Schmitt & Buss, 1996). Rather, this could lead to both the diminishment of the individual's own reputation and to the individual facing retaliation from both the competitor and the target (Schmitt & Buss, 1996; Schmitt & Shackelford, 2003). One of the reasons why reputation-based gossip may be effective in poaching contexts is because engaging in the strategy potentially enables the individual to bypass such challenges. Under these circumstances gossip enables the individual to covertly diminish the competitor's reputation (Buss & Dedden, 1990; Schmitt & Buss, 1996). Accordingly, engaging in gossip in poaching contexts may enable the individual to achieve derogation outcomes while preserving their own reputation and minimising the risk of retaliation (De Backer, 2005).

An additional, unique advantage of engaging in gossip when attempting to mate poach relates to the competitor being the target's partner, and thus known to the individual (Schmitt

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& Buss, 2001). This allows the individual to overcome problems associated with multiplicity; the concept that in traditional attraction contexts there can be any number of competitors, both known and unknown (Cox & Fisher, 2008). In a mate poaching context the individual is able to focus their time and energy on derogating a single, identifiable competitor. Consequently, reputation-based gossip may be more targeted and effective in poaching contexts than in traditional attraction settings (Fisher, Shaw, Worth, Smith, & Reeve, 2010).

However, the individual may also face a number of challenges when using gossip in poaching contexts. An initial challenge arises from the content of gossip derogations. Research conducted by Fisher and Cox (2009) indicates that men and women are able to successfully manipulate a target's perceptions of a competitor's appearance through usage of disparaging statements. However, derogatory gossip content based on appearance may not prove nearly as successful in mate poaching contexts. There are two main reasons for this contention. First, the target is currently involved in a relationship with the competitor, implying that they are attracted to the competitor. Second, it would take the target relatively little time and effort to verify the attractiveness of their partner (Hess & Hagen, 2002). In comparison, other dimensions of reputation are much more difficult to prove and are thus more vulnerable to inaccurate or slanderous gossip (Hess & Hagen, 2002). For example, it can be hard to objectively ascertain if gossip content based on another's sexual reputation (e.g., their sexual fidelity) is true or false (Geary, 2000; Hess & Hagen, 2002). Additionally, gossip about a competitor's alleged sexual infidelity may be particularly damaging in poaching contexts. For both men and women, hearing such gossip about a partner may lead to negative affect and relational conflict (Bringle & Buunk, 1991).

While sharing derogatory gossip may prove effective in poaching contexts, men and women may still choose not to engage in the strategy. The central reason for this is that the individual may fear the repercussions of sharing this gossip. Research by Fisher and colleagues (2010) indicates if a male target learns that a female is a derogator, his perceptions

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of her attractiveness and her status as a potential mate do not change. However, this is unlikely to remain the case if the person who is being derogated is the target's partner. Despite gossip being an indirect method of aggression, there remains the possibility that the individual will be identified as the gossip. If revealed as the derogator in a mate poaching context, the individual will most likely face ramifications over and above the conventional consequences faced in traditional attraction contexts (Schmitt & Buss, 2001). It has yet to be determined if the benefits that the individual might gain from sharing this gossip (becoming involved with a desired target) are enough to outweigh these costs.

The aim of the current study is therefore to investigate if gossip functions as a strategy for intrasexual competition in mate poaching contexts. The potential costs and benefits of reputation-based gossip will be compared to determine whether men and women are willing to share derogatory gossip about a competitor in order to poach the competitor's partner.

Study 1

While reputation-based gossip may prove effective when attempting to mate poach, there are numerous variables that might influence men and women's engagement in the strategy, including sex, gossip cost, and gossip severity. First, there is some contention over the influence an individual's sex has on their willingness to engage in reputation-based gossip. Researchers including Campbell (1999, 2004) and Hess and Hagen (2002) have proposed that gossip may be a beneficial strategy for women to engage in when involved in mate competition. This primarily relates to gossip being a method of indirect aggression; a covert, low-risk derogation strategy. According to Campbell (1999), women have evolved to be more willing than men to use indirect aggression strategies when involved in intrasexual competition. Campbell (1999) states that engaging in reckless and high-risk behaviour (e.g., using derogation tactics such as physical aggression) may have more negative consequences for a woman's reproductive outcomes than if a man engaged in the same behaviour.

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Anthropological evidence showing that maternal absence is more consequential to childhood mortality than paternal absence provides support for these claims (Kaplan & Lancaster, 2003). Hess and Hagen (2002) extend Campbell's (1999) argument by contending that, due to differences in the evolutionary past, women may have actually evolved specialised adaptations for gossip. The researchers propose that women may have experienced more within-group aggression than men (Hess & Hagen, 2002). A central reason why this is said to occur is because some elements of a woman's reputation (e.g., her sexual reputation) may be more susceptible to derogation from competitors as a result of factors including concealed ovulation and the potential threat of paternity uncertainty (Hess & Hagen, 2002). According to this perspective, gossip, and particularly gossip focused on derogating a competitor's sexual reputation, will be a more effective and useful competition strategy for women than men.

Conversely, Miller (2000) has emphasised the importance of reputation-based gossip for men. Miller (2000) proposes that by engaging in gossip in mate competition men are able to display their social intellect and wisdom. Researchers have suggested that women, in particular, find these traits desirable in potential mates (Miller, 2000; Pinker, 1995). However, in a mate poaching context the individual is unlikely to have perceptions of their social intelligence increased if they are exposed as the gossiper. Rather, as the person that they are derogating is the target's partner, if revealed as the gossiper the individual may instead face negative repercussions from the target.

De Backer, Nelissen, and Fisher (2007) utilised a sample comprising both men and women to investigate sex differences in the recall of mating gossip. While men had higher recall for gossip pertaining to a competitor's status and resources, women had higher recall of gossip relevant to a competitor's attractiveness (De Backer et al., 2007). From an evolutionary perspective, the gossip that both men and women were more likely to recall should provide the most use in mate competition (Buss & Dedden, 1990; De Backer et al, 2007). However,

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this study only investigated passive recall of gossip, rather than active usage of gossip to derogate competitors. While empirical studies investigating active gossip usage are suggestive of gossip being a useful intrasexual competition strategy for women (Massar et al., 2011; Sutton & Oaten, 2014), these studies have only investigated reputation-based gossip in female populations. Despite this, it might be hypothesised that as a result of factors including the high-consequence nature of mate poaching and women's susceptibility to within-group gossip, women will be more likely to share derogatory sexual reputation gossip in poaching contexts than men.

Two additional factors that may influence willingness to gossip in poaching settings are gossip cost and gossip severity. Hess and Hagen (2002) contended that men and women use gossip strategically when involved in competition as a form of informational warfare. If this is the case, manipulating cost and severity should lead to changes in an individual's willingness to gossip. First, as the cost of sharing gossip (the possibility of the individual being revealed as the gossiper) increases, the individual should conversely become less willing to gossip. This should particularly be the case in mate poaching contexts, where the potential repercussions for the individual are already heightened. From an evolutionary perspective, rather than engaging in gossip at high levels of cost, the individual should instead engage in less risky strategies (e.g., self-promotion tactics including being kind to the target; Fisher, Cox, & Gordon, 2009; Schmitt & Buss, 1996).

In line with this, manipulating the severity of the gossip should also influence gossip behaviour. However, there are two alternate perspectives on exactly how severity influences gossip willingness. First, it may be that the individual will be more willing to share sexual reputation gossip as it increases in severity. This is because the individual may believe that severe gossip will be more effective in derogating the competitor's reputation than mild gossip. However, a more likely hypothesis is that as severity increases, the individual's willingness to gossip will conversely decrease. This is because the consequences, if the

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individual is found to be sharing severe sexual reputation gossip, are expected to be more acute than if the gossip is mild in severity. For example, research from Campbell (1986) indicates that physical aggression among females occurs most frequently as a result of severe derogations about another female's sexual reputation. Further, research from relationship psychologists is suggestive that mild gossip may still be effective in damaging a competitor's sexual reputation. Researchers exploring suspicious jealousy have reported that if men and women have even mild doubts, not necessarily based on fact, about a partner's fidelity this may lead to reactions including apprehension, sadness, anger, and distrust (Bringle & Buunk, 1991).

The aim of study 1 is to investigate the influence of factors including sex, cost, and severity on willingness to share derogatory gossip about a competitor's sexual reputation in a mate poaching context. It is hypothesised that:

H1: Participants will be willing to share derogatory sexual reputation gossip about a competitor in order to poach the competitor's partner.

H2: Participants will be more willing to gossip at low levels of cost than at high levels of cost.

H3: Participants will be more willing to gossip at low levels of severity than at high levels of severity.

H4: Women will be more willing to gossip than men.

Method

Participants and Recruitment

A total of 733 respondents (363 women and 370 men) participated in the study. The mean age for women was 27.5 years (SD 6.97, range 18-59), with the mean age for men 27.6 years (SD 8.86, range 18-66). The majority (83%) of participants identified as Asian. Of the

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remaining participants, 9% identified as North American, 6% as European, 1% as Australian, .5% as African, .3% as South American, and .1% as Middle Eastern.

Data collection took place online and community members from the Mechanical Turk website (DeScioli & Kurzban, 2009) were invited to take part for a nominal fee. Conditional upon participation in the study, participants had to be 18 years or older, proficient in English, and identify as either heterosexual or bisexual.

Design and Measures

The first section of the questionnaire gathered demographic data including sex, age, nationality, sexual orientation, and relationship status.

After completing these measures participants were asked to respond to the experimental context. Participants were initially directed to read a version of the hypothetical description of person scenario corresponding to their sex (female condition provided):

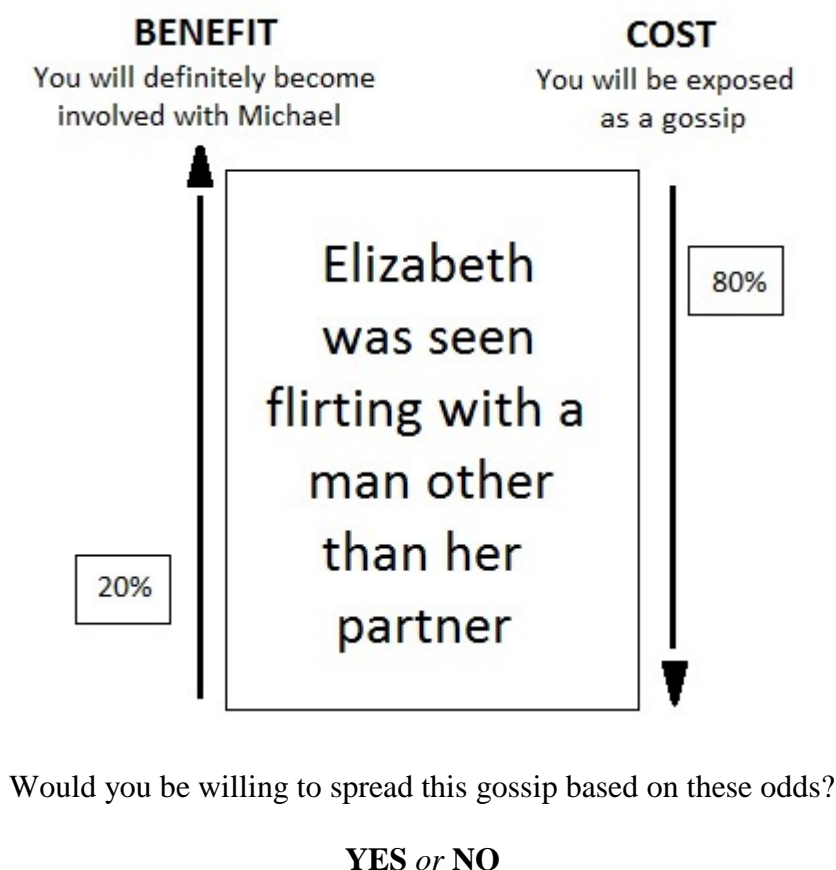
Imagine that you want to become involved in a romantic relationship with a man named Michael. Unfortunately Michael is already involved in a relationship with Elizabeth. In order to attract Michael from Elizabeth you may choose to pass on information about Elizabeth. However, there are both personal costs and benefits associated with sharing such information. For the scenarios below the potential cost of passing on the statements is being exposed as a gossip. This is the only negative personal cost you will accrue by passing on the statement. You will accrue no other costs. Conversely, the potential benefit of passing on the statement is attracting Michael away from Elizabeth and becoming involved in a relationship with him yourself. You will need to weigh up these costs and benefits and indicate at which stage you would be willing to pass on the statement.

Based on this scenario all participants then undertook a series of cost and benefit analyses assessing their willingness to share this gossip. This gossip was based on diminishing the competitor's sexual reputation (specifically, their fidelity to their partner). Participants were asked if they were willing to share three different statements about the competitor, which differed in severity: mild e.g., "Elizabeth was seen flirting with a man other than her partner"; moderate e.g., "Elizabeth was seen kissing a man other than her partner"; and severe e.g., "Elizabeth has been sleeping with a man other than her partner". Again, these

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statements corresponded to sex. Pilot testing conducted on the statements indicated that first, participants did differentiate the severity of each of the statements and second, that the severity ratings of the statements corresponded across male and female conditions.

Participants were then asked if they were willing to share each of the three statements as 11 different levels of cost (ranging from 0% cost and 100% benefit to 100% cost and 0% benefit). Thus, participants were asked to answer 33 cost-benefit analyses, differentiated by both cost and severity. These cost-benefit analyses were shown to participants in a randomly allocated order. Prior to answering these 33 analyses, participants were provided an example cost-benefit analysis with a detailed explanation of the methodology (see Figure 1).



In the above example, you can choose to share the gossip that Elizabeth was seen flirting with a man other than her partner. The cost and benefit figures indicate that you have a 20% chance of definitely becoming involved with Michael and an 80% chance of being exposed as a gossip if you choose to spread the statement.

Based on these odds, if you think that the benefits outweigh the costs you will choose to spread the gossip and answer YES. However, if you think that the costs outweigh the benefits you will choose not to spread the gossip and you will answer NO.

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Figure 1: Example Cost-Benefit Analysis and Methodological Explanation

A final section of the questionnaire asked participants to answer the *Anonymous Relationship Attraction Survey* (Schmitt & Buss, 2001). As part of this scale participants were asked to answer a number of questions about their mate poaching history. An example item from the scale is ‘Have you previously attempted to poach someone?’ This scale was included as a manipulation check of the experimental scenario.

In undertaking statistical analyses, overall gossip willingness was measured by calculating willingness to gossip across all cost-benefit analyses regardless of cost or severity. When examining the influence of cost, severity was controlled across analyses in order to isolate the relationship between cost and willingness to gossip. Conversely, when examining the influence of severity, cost was controlled in order to isolate the relationship between severity and willingness to gossip. While participants answered their willingness to gossip at 11 levels of cost, for conciseness only cost-benefit analyses at 0% cost, 20% cost, 50% cost, 80% cost, and 100% cost will be reported.

Results

Means and standard deviations for both overall willingness to gossip and gossip willingness among males and females are provided in Table 1. Overall, regardless of cost or severity, participants were willing to gossip in approximately 49% of instances. Men were significantly more willing gossip than women, $t(687.30) = 5.83, p < .0005, d = .44$.

Cost. A series of paired sample t-tests were conducted between cost levels to examine gossip willingness based on cost. Participants were significantly more willing to gossip at 20% cost than 50% cost, $t(732) = 9.22, p < .0005, d = .68$; and at 50% cost than 80% cost, $t(732) = 12.89, p < .0005, d = .95$. However, there were no significant differences in willingness to gossip at 0% cost compared to 20% cost, $t(732) = 1.47, p = .14, d = .11$; and at 80% cost compared to 100% cost, $t(732) = 1.91, p = .06, d = .14$.

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A series of independent samples t-tests were conducted to investigate sex differences in gossip willingness based on cost. Men were significantly more willing to gossip at 0% cost, $t(706.56) = 2.82, p = .005, d = .21$; 20% cost, $t(703.35) = 4.57, p < .0005, d = .34$; 50% cost, $t(719.34) = 5.01, p < .0005, d = .37$; 80% cost, $t(731) = 3.66, p < .0005, d = .27$; and 100% cost, $t(731) = 2.40, p = .017, d = .18$, than women.

Severity. A series of paired sample t-tests were conducted to investigate gossip willingness based on severity. Participants were significantly more willing to share mild, $t(732) = 3.22, p = .001, d = .24$; and moderate $t(732) = 4.20, p < .0005, d = .31$, gossip than severe gossip. No difference was found in willingness to share mild gossip compared moderate gossip, $t(732) = -.94, p = .35, d = .07$.

A series of independent samples t-tests were conducted to investigate sex differences in gossip willingness based on severity. Men were significantly more willing to share mild, $t(687.35) = 3.77, p < .0005, d = .29$; moderate, $t(704.62) = 3.15, p = .002, d = .24$; and severe, $t(703.90) = 4.46, p < .0005, d = .34$, gossip than women.

Table 1: *Willingness to Gossip among Males and Females*

	Overall (n = 733)	Male (n = 370)	Female (n = 363)
Gossip	M (SD)	M (SD)	M (SD)
Overall	.49 (.23)	.54 (.20)	.44 (.25)**
Cost			
0%	.64 (.33)	.68 (.30)	.61 (.35)**
20%	.63 (.34)	.69 (.30)	.58 (.36)**
50%	.52 (.35)	.59 (.33)	.46 (.36)**
80%	.34 (.33)	.38 (.34)	.29 (.33)**
100%	.33 (.33)	.36 (.33)	.30 (.33)*
Severity			
Mild	.51 (.28)	.54 (.24)	.47 (.31)**
Moderate	.51 (.28)	.54 (.26)	.48 (.31)**
Severe	.47 (.30)	.52 (.27)	.42 (.32)**

Note. ** $p < .001$; Participants answered willingness to gossip on a dichotomous scale (*No, 0; Yes, 1*), with gossip willingness scores ranging from 0-1. A mean score of 0 indicates that participants were never willing to gossip, while a mean score of 1 indicates that participants were always willing to gossip; Overall indicates willingness to gossip across all 33 cost-benefit analyses, regardless of cost or severity; Cost indicates willingness to gossip at different levels of cost with severity held constant; Severity indicates willingness to gossip at different levels of severity with cost held constant.

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Mate poaching history. Participants who had previously attempted to poach a mate were significantly more willing to gossip than participants who had not previously attempted to poach a mate. A series of independent t-tests found this to be the case both at all levels of cost, with the exception of 100% cost, and at all levels of severity (see Table 2). These findings provide a validation of the measure used in the current study.

Table 2: *Willingness to Gossip among Participants Who Have and Have Not Attempted to Mate Poach*

	Yes (<i>n</i> = 199)	No (<i>n</i> = 530)			
Gossip	<i>M</i> (SD)	<i>M</i> (SD)	<i>t</i>	<i>p</i>	<i>d</i>
Overall	.55 (.20)	.46 (.24)	4.99	<.0005**	.37
Cost					
0%	.70 (.32)	.62 (.33)	2.64	.009*	.20
20%	.73 (.30)	.60 (.35)	4.94	<.0005**	.37
50%	.64 (.32)	.48 (.35)	5.78	<.0005**	.43
80%	.39 (.36)	.32 (.32)	2.40	.07*	.18
100%	.33 (.35)	.32 (.33)	.30	.76	.02
Severity					
Mild	.58 (.24)	.48 (.25)	4.67	<.0005**	.35
Moderate	.58 (.25)	.48 (.29)	4.57	<.0005**	.34
Severe	.52 (.29)	.45 (.31)	3.02	.003*	.22

Note: * $p < .05$; ** $p < .001$; The *df* for all t-tests is 727; Participants were provided a definition of mate poaching [taken from Schmitt and Buss (2001)] and asked if they had previously attempted to mate poach as according to this definition. In interpreting the strength of the *Cohen's d* effect size statistic, Cohen (1992) provided the guidelines that $d = .2$ is indicative of a small effect size, $d = .5$ a medium effect size, and $d = .8$ a large effect size.

Discussion

Supporting hypothesis one, the results indicate that men and women were willing to gossip in mate poaching contexts as a means of derogating a competitor and poaching the competitor's partner. Overall, in approximately 49% of instances, participants were willing to share derogatory sexual reputation gossip about a competitor. This percentage increased to 68% when the statement was mild in severity and sharing the gossip involved few costs for the individual.

In support of hypothesis two, cost also influenced willingness to gossip, with both men and women more willing to gossip at low levels of cost than at high levels of cost. Additionally, the results are indicative of both a cost and benefit threshold in willingness to

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share derogatory gossip about a competitor in mate poaching contexts. Indicative of a cost threshold, there was no difference in how willing participants were to gossip at 0% cost compared to 20% cost. The current findings indicate that even when men and women perceive that there is a minor possibility of being revealed as the gossipers they are just as likely to engage in gossip as when there is no risk. Rather, the benefit that the individual may receive if they share the gossip (becoming involved with a desired mate target) is enough to outweigh this potential cost. Conversely, there was also no difference in willingness to gossip at 80% cost compared to 100% cost, suggesting a benefit threshold. It appears that when there is a four in five chance that the individual will be exposed as the gossipers, sharing the gossip is no longer 'worth it'. The odds are no longer in the individual's favour.

Hypothesis three was partially supported. While there was no difference in willingness to share mild gossip compared to moderate gossip, participants were significantly more willing to share both mild and moderate gossip than severe gossip. This is then suggestive of a severity threshold. As severity increases, it might be expected that the ramifications if the individual was found to be the gossipers will also increase. Sharing severe sexual reputation gossip about a competitor may actually diminish the individual's reputation more so than the competitor's, particularly if it is unknown to gossip receivers whether the gossip is true or untrue (Hess & Hagen, 2002, 2006). In combination these findings are indicative that individuals do use reputation-based gossip strategically as a form informational aggression. In choosing whether to share derogatory gossip about a competitor in poaching contexts, men and women appear to analyse the consequences for their actions in deciding whether the potential benefits for the strategy outweigh the potential costs.

Hypothesis four was not supported. Overall, while both men and women were willing to gossip in order to achieve a desirable mating outcome in a poaching context, men were more willing to engage in the strategy than women. Additionally, men were also more willing to gossip at all levels of cost and at all levels of severity than women. Based on research from

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Campbell (1999) it was hypothesised that as a result of the already high-consequence nature of mate poaching, women would be more likely than men to engage in the low-risk derogation strategy of gossip. However, Campbell's (1999) research may actually provide an explanation for the sex differences found in the current study. Campbell's (1999) contentions about sex differences in indirect aggression are based on traditional attraction contexts. However, derogating a competitor in a poaching context instead of a traditional attraction context increases the possibility of the individual facing negative consequences for their actions (Schmitt & Buss, 2001). As such, while women may perceive indirect aggression (including gossip) as a low-risk derogation strategy in conventional contexts of attraction, changing the context to mate poaching may shift women's perceptions of gossip to a high-risk derogation strategy. This would therefore explain why women were less willing to share derogatory gossip in poaching contexts than men. Additional factors that increase the potential consequences the individual will face for sharing gossip need to be explored in order to test this hypothesis.

Study 2

The results from study 1 are indicative of men and women using gossip strategically to derogate competitors in mate poaching contexts. However, variables not specifically investigated throughout the study, including culture and gossip veracity, may have influenced these results. First, gossip willingness was investigated in the previous study by asking participants if they were willing to share gossip pertaining to a competitor's sexual reputation. However, participants were not provided any information about the veracity of this gossip. Veracity is a key concept in gossip research, as it is one of the main differentiators between gossip and rumour (Rosnow, 1991). Rumour, unlike gossip, is dependent on uncertainty (Rosnow, 1991). While, with gossip, the gossiper must know for certain whether the information is true or untrue, with rumour there is some ambiguity over this information

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(Rosnow, 1991). Few empirical studies have investigated the relationship between veracity and reputation-based gossip. However, it may be important to take veracity into account for a number of reasons.

First, Hess and Hagen (2002, 2006) have proposed that if gossip has evolved as a tool to help individuals' fitness-relevant social strategies, a good gossip strategy should be focused on exploiting information that is accurate rather than false. This is simply because there is a greater chance of finding supporting evidence for true claims than false claims (Hess & Hagen, 2006). If, as the results from study 1 indicate, men and women use reputation-based gossip strategically, individuals should be more willing to share true gossip than untrue gossip.

Second, if the individual is revealed as the gossiper, they are likely to face fewer consequences if they are found to be spreading information that is true rather than untrue (Hess & Hagen, 2006). As a result, veracity may have implications for sex differences in willingness to gossip. For example, the results from study 1 suggest that women perceive gossip as a high-risk derogation strategy in mate poaching contexts and are thus less willing to gossip than men. As an additional high consequence factor, veracity may also influence women's willingness to gossip in poaching contexts. For example, having knowledge that the gossip is true may reduce gossip to a low-risk derogation strategy for women, encouraging them to gossip. Conversely, knowing for certain that the gossip is untrue may increase women's perceptions of the risk of gossiping, making them unlikely to engage in the strategy.

A second variable that may have influenced the results from study 1 is culture. The majority of participants from study 1 identified their nationality as Asian, and specifically, Indian. Having a more culturally-diverse sample would allow the effect of culture on gossip willingness to be analysed. Research indicates that cross-culturally both men and women use intrasexual competition strategies when engaged in mate competition (Buss et al., 1990).

Anthropological records indicate that gossip can (and does) flourish in any society and is not

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hindered by cultural restraints (Arno, 1990; De Backer, 2005). However, few studies have investigated the relationship between culture and reputation-based gossip. Indeed, Mesoudi, Whiten, and Dunbar (2006) have proposed that gossip studies need to be replicated using culturally diverse samples.

In investigating cultural differences in cognition and behaviour, researchers have traditionally categorised societies into individualistic, independent cultures and collectivistic, interdependent cultures (Triandis, 1989). Whereas Australia, the United States, and the United Kingdom are traditionally viewed as individualistic cultures, India, China, and Japan are conversely viewed as collectivistic cultures (Fiske, Kitayama, Markus, & Nisbett, 1998; Wang, Puri, Slaney, Methikalam, & Chadha, 2012). While a somewhat simplistic cultural categorisation, this distinction can be useful in explaining cultural differences in cognition, motivation, and emotion (Markus & Kitayama, 1991). Consequently, as the majority of participants from study 1 were from a collectivistic culture (India) this may have impacted findings. Again, two alternate hypotheses may explain the influence of culture on reputation-based gossip.

There is some evidence that individuals from collectivistic cultures place a higher importance on smooth interpersonal interactions than those from individualistic cultures (Markus & Kitayama, 1991). Conversely, research findings indicate that men and women from individualistic cultures value the promotion of self-goals more so than individuals from collectivistic cultures (Markus & Kitayama, 1991). This suggests that men and women from individualistic cultures may be more willing to share derogatory gossip than individuals from collectivistic cultures in order to achieve a desired mating outcome. Yet, research indicates that cross-culturally, men and women desire high quality mates and engage in intrasexual competition in order to gain access to targets (Buss et al., 1990; Yoshimura, 2004).

Research from Cross and Campbell (2011) investigating the influence of socio-economic status on aggression may provide a more plausible explanation for cultural

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differences in reputation-based gossip. Cross and Campbell (2011) found that for women, in particular, the most intense competition for high quality mates occurs in societies with high levels of resource acquisition stratification. The researchers contend that this is because the potential benefits for engagement in intra-female competition, a desirable mate with resources, peaks in such societies (Cashdan, 1997; Cross & Campbell, 2011). Research findings have indicated that non-Western, collectivistic societies, such as India, have higher levels of economic stratification than Western, individualistic societies, including Australia and the United States (Bosher, Penning-Rowsell, & Tapsell, 2007; Eswaran, Ramaswami, & Wadhwa, 2013). As such, it might be expected that participants from highly stratified societies will be more likely to engage in reputation-based gossip than participants from societies that are less stratified.

The aim of study 2 is then to investigate the influence of culture and veracity on engagement in reputation-based gossip in a mate poaching context. In addition to re-examining hypotheses based on sex, cost, and severity from study 1, two additional hypotheses will be examined in study 2:

H1: Participants will be more willing to share true gossip than untrue gossip.

H2: Participants from collectivistic cultures will be more willing to gossip than participants from individualistic cultures.

Method

Participants and Recruitment

A total of 599 respondents (308 women and 291 men) participated in the study. One hundred and ninety three of these participants were psychology undergraduates from an Australian university, while 406 participants were community members recruited from the Mechanical Turk website. The mean age for women was 25.8 years (SD 8.86, range 17-64), while the mean age for men was 25.4 years (SD 7.98, range 18-66). 216 participants

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identified themselves as being part of an individualistic culture, with the majority (68%) identifying as Australian. Conversely, 337 participants identified themselves as being part of a collectivistic culture, with the majority (66%) identifying as Indian (Triandis, 1989; Wang et al., 2012). Forty-six participants did not indicate their nationality and were excluded from analyses examining the influence of culture on gossip.

Design and Measures

A similar experimental design to study 1 was employed, with participants initially providing demographic data. After answering these questions participants were asked to respond to the experimental scenario. This was the same experimental scenario as in study 1, however an additional independent variable (veracity) was also measured. Consequently, there were four experimental conditions [sex (male, female) and veracity (true, untrue)]. Men and women were randomly allocated to either true or untrue conditions. Participants were then directed to a version of the hypothetical description of person passage corresponding to their experimental group allocation. As in study 1, participants then undertook 33 cost-benefit analyses, differing in severity and cost, assessing their willingness to gossip. Veracity was tested via a between-subjects design. When undertaking these analyses, participants were informed that either “You know that this information is true” or “You know that this information is untrue” for all of the statements that they viewed. Following this, participants were asked to answer the *Anonymous Relationship Attraction Survey* (Schmitt & Buss, 2001).

Results

Overall, regardless of cost or severity, participants were willing to gossip in approximately 41% of instances. This number rose to 52% when only true statements were considered, but decreased to 31% when untrue statements were separately analysed.

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Veracity. Participants were significantly more willing to share true gossip than untrue gossip. A series of independent t-tests indicated significant differences both at all levels of cost and at all levels of severity in willingness to gossip based on veracity (see Table 3).

Table 3: *Willingness to Share True and Untrue Gossip*

Gossip	True (<i>n</i> = 300)	Untrue (<i>n</i> = 299)	<i>t</i>	<i>p</i>	<i>d</i>
	<i>M</i> (SD)	<i>M</i> (SD)			
Overall	.52 (.24)	.31 (.27)	10.39	<.0005**	.85
Cost					
0%	.72 (.29)	.46 (.37)	10.39	<.0005**	.85
20%	.70 (.31)	.42 (.39)	9.76	<.0005**	.80
50%	.53 (.35)	.29 (.34)	8.70	<.0005**	.71
80%	.36 (.34)	.21 (.30)	5.69	<.0005**	.47
100%	.33(.33)	.21 (.30)	4.78	<.0005**	.39
Severity					
Mild	.46 (.31)	.34 (.29)	5.04	<.0005**	.41
Moderate	.59 (.30)	.31 (.30)	11.55	<.0005**	.95
Severe	.50 (.34)	.28 (.31)	8.26	<.0005**	.68

Note. **Significant at .001; The *df* for all t-tests is 597; Veracity was measured via a between-subjects design with participants randomly allocated to true or untrue conditions.

Sex –veracity. Means and standard deviations for willingness among males and females to share true and untrue gossip are provided in Table 4. Men were significantly more willing to gossip than women, $t(596.46) = 3.11$, $p = .002$, $d = .25$. However, this sex difference was only significant for untrue gossip, $t(297) = 4.09$, $p < .0005$, $d = .47$, and not true gossip, $t(294.47) = .71$, $p = .48$, $d = .08$.

Cost. At 0% cost there was no significant difference in willingness to gossip based on sex, $t(597) = -.08$, $p = .93$, $d = .01$. Additionally, when analysed separately, no significant sex difference was found for true gossip, $t(298) = -.97$, $p = .33$, $d = .11$, or untrue gossip, $t(297) = .81$, $p = .42$, $d = .09$.

At 20% cost there was no significant difference in willingness to gossip based on sex, $t(596.75) = 1.54$, $p = .12$, $d = .13$. However, when true and untrue gossip were analysed separately, men were significantly more willing to share untrue gossip than women, $t(297) = 2.37$, $p = .018$, $d = .28$. Conversely, no significant sex difference was found for true gossip, $t(298) = -.10$, $p = .92$, $d = .01$.

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At 50% cost men were significantly more willing to gossip than women, $t(597) = 3.86$, $p < .0005$, $d = .32$. However, this sex difference was only significant for untrue gossip, $t(290.78) = 4.13$, $p < .0005$, $d = .48$, and not true gossip, $t(298) = 1.87$, $p = .063$, $d = .22$.

At 80% cost men were significantly more willing to gossip than women, $t(597) = 2.21$, $p = .028$, $d = .18$. However, this sex difference was only significant for untrue gossip, $t(276.89) = 3.52$, $p = .001$, $d = .42$, and not true gossip, $t(296.43) = -.47$, $p = .64$, $d = .05$.

At 100% cost men were significantly more willing to gossip than women, $t(597) = 2.89$, $p = .004$, $d = .24$. However, this sex difference was only significant for untrue gossip, $t(286.72) = 3.52$, $p = .001$, $d = .42$, and not true gossip, $t(298) = .88$, $p = .38$, $d = .10$.

Severity. No significant difference was found in willingness to share mild gossip based on sex, $t(597) = 1.71$, $p = .09$, $d = .14$. However, when true and untrue gossip were analysed separately, men were significantly more willing to share untrue, mild gossip than women. $t(297) = 2.71$, $p = .007$, $d = .31$. Conversely, there was no significant sex difference in willingness to share true, mild gossip, $t(298) = -.05$, $p = .96$, $d = .01$.

Men were significantly more willing to share moderate gossip than women, $t(595.96) = 2.45$, $p = .015$, $d = .20$. However, this sex difference was only significant for untrue, moderate gossip, $t(284.03) = 4.65$, $p < .0005$, $d = .55$, and not true, moderate gossip, $t(297.13) = -.52$, $p = .61$, $d = .06$.

Men were significantly more willing to share severe gossip than women, $t(597) = 3.72$, $p < .0005$, $d = .30$. However, this sex difference was only significant for untrue, severe gossip, $t(278.33) = 5.04$, $p = .001$, $d = .60$, and not true, severe gossip, $t(297.14) = .99$, $p = .33$, $d = .11$.

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Table 4: *Willingness among Males and Females to Share True and Untrue Gossip*

	Male			Female		
	Total (<i>n</i> = 291)	True (<i>n</i> = 144)	Untrue (<i>n</i> = 147)	Total (<i>n</i> = 308)	True (<i>n</i> = 156)	Untrue (<i>n</i> = 152)
Gossip	<i>M</i> (SD)	<i>M</i> (SD)	<i>M</i> (SD)	<i>M</i> (SD)	<i>M</i> (SD)	<i>M</i> (SD)
Overall	.45 (.26)	.53 (.21)	.37 (.28)	.38 (.28)	.51 (.26)	.25 (.25)
Cost						
0%	.59 (.35)	.70 (.29)	.48 (.37)	.59 (.36)	.74 (.30)	.45 (.36)
20%	.58 (.36)	.70 (.30)	.47 (.38)	.54 (.39)	.70 (.32)	.37 (.39)
50%	.47 (.35)	.57 (.33)	.37 (.35)	.35 (.37)	.49 (.36)	.21 (.31)
80%	.31 (.32)	.35 (.31)	.28 (.33)	.25 (.33)	.37 (.36)	.14 (.26)
100%	.31 (.32)	.35 (.32)	.27 (.32)	.23 (.32)	.31 (.34)	.15 (.27)
Severity						
Mild	.42 (.30)	.46 (.30)	.39 (.31)	.38 (.30)	.47 (.32)	.30 (.26)
Moderate	.49 (.32)	.58 (.28)	.39 (.32)	.42 (.35)	.60 (.32)	.23 (.27)
Severe	.44 (.33)	.52 (.32)	.37 (.33)	.34 (.35)	.48 (.36)	.19 (.26)

Culture - veracity. Means and standard deviations for willingness among participants from individualistic and collectivistic cultures to share true and untrue gossip are provided in Table 5. Participants from collectivistic cultures were significantly more willing to gossip than participants from individualistic cultures, $t(423.63) = -5.41, p < .0005, d = .53$. However, this cultural difference was only significant for untrue gossip, $t(263.17) = -9.96, p < .0005, d = 1.23$, and not true gossip, $t(274) = .13, p = .90, d = .02$.

Cost. At 0% cost there was no significant difference in willingness to gossip based on culture, $t(411.91) = -.89, p = .38, d = .04$. However, when true and untrue gossip were analysed separately, participants from individualistic cultures were significantly more willing to share true gossip than participants from collectivistic cultures, $t(272.50) = 4.25, p < .0005, d = .51$. Conversely, participants from collectivistic cultures were significantly more willing to share untrue gossip than participants from individualistic cultures, $t(275) = -4.93, p < .0005, d = .59$.

At 20% cost participants from collectivistic cultures were significantly more willing to gossip than participants from individualistic cultures, $t(407.98) = -3.02, p = .003, d = .30$. This cultural difference was significant for both true, $t(274) = 2.18, p = .03, d = .26$, and untrue gossip, $t(275) = -6.87, p < .0005, d = .83$.

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At 50% cost participants from collectivistic cultures were significantly more willing to gossip than participants from individualistic cultures, $t(551) = -5.30, p < .0005, d = .45$. However, this cultural difference was only significant for untrue gossip, $t(270.75) = -8.81, p < .0005, d = 1.07$, and not true gossip, $t(274) = -.74, p = .46, d = .09$.

At 80% cost participants from collectivistic cultures were significantly more willing to gossip than participants from individualistic cultures, $t(512.82) = -6.21, p < .0005, d = .55$. This cultural difference was significant for both true, $t(274) = -1.97, p = .050, d = .24$, and untrue gossip, $t(263.00) = -8.71, p < .0005, d = 1.07$.

At 100% cost participants from collectivistic cultures were significantly more willing to gossip than participants from individualistic cultures, $t(506.59) = -6.25, p < .0005, d = .56$. This cultural difference was significant for both true, $t(274) = -2.49, p = .013, d = .30$, and untrue gossip, $t(274.86) = -7.57, p < .0005, d = .91$.

Severity. Participants from collectivistic cultures were significantly more willing to share mild gossip than participants from individualistic cultures, $t(551) = -7.14, p < .0005, d = .61$. This cultural difference was significant for both true, mild gossip, $t(274) = -3.36, p = .001, d = .41$, and untrue, mild gossip, $t(275) = -7.43, p < .0005, d = .90$.

Participants from collectivistic cultures were significantly more willing to share moderate gossip than participants from individualistic cultures, $t(398.30) = -3.39, p = .001, d = .34$. However, this cultural difference was only significant for untrue, moderate gossip, $t(264.06) = -8.98, p < .0005, d = 1.11$, and not true, moderate gossip, $t(224.73) = 1.73, p = .08, d = .23$.

Participants from collectivistic cultures were significantly more willing to share severe gossip than participants from individualistic cultures, $t(420.28) = -3.97, p < .0005, d = .39$. However, this cultural difference was only significant for untrue, severe gossip, $t(269.64) = -8.83, p < .0005, d = 1.08$, and not true, severe gossip, $t(218.26) = .75, p = .46, d = .10$.

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Table 5: *Willingness among Participants from Individualistic and Collectivistic Cultures to Share True and Untrue Gossip*

	Individualistic			Collectivistic		
	Total (<i>n</i> = 216)	True (<i>n</i> = 111)	Untrue (<i>n</i> = 105)	Total (<i>n</i> = 337)	True (<i>n</i> = 165)	Untrue (<i>n</i> = 172)
Gossip	<i>M</i> (SD)	<i>M</i> (SD)	<i>M</i> (SD)	<i>M</i> (SD)	<i>M</i> (SD)	<i>M</i> (SD)
Overall	.34 (.28)	.52 (.23)	.15 (.20)	.47 (.26)	.52 (.24)	.42 (.26)
Cost						
0%	.58 (.39)	.80 (.23)	.34 (.37)	.61 (.33)	.66 (.32)	.56 (.34)
20%	.50 (.41)	.74 (.29)	.24 (.35)	.60 (.35)	.66 (.33)	.54 (.36)
50%	.31 (.37)	.51 (.37)	.11 (.24)	.48 (.35)	.54 (.34)	.42 (.35)
80%	.19 (.29)	.31 (.32)	.06 (.16)	.35 (.34)	.39 (.34)	.32 (.33)
100%	.17 (.29)	.27 (.32)	.07 (.19)	.34 (.33)	.37 (.34)	.31 (.33)
Severity						
Mild	.30 (.29)	.39 (.31)	.20 (.24)	.48 (.29)	.52 (.30)	.44 (.28)
Moderate	.39 (.36)	.63 (.31)	.15 (.22)	.49 (.30)	.56 (.29)	.43 (.30)
Severe	.32 (.36)	.51 (.36)	.12 (.22)	.44 (.32)	.48 (.32)	.40 (.31)

Discussion

Overall, participants, regardless of sex or culture, were willing to share derogatory gossip about a competitor in order to achieve a desired mating outcome in a poaching context. Participants were also more willing to gossip at low levels of cost than at high levels of cost, and at low levels of severity than at high levels of severity. Again, there was a general trend for men to be more willing to gossip than women in a mate poaching context. These findings support those from study 1, and provide further evidence that men and women are willing to strategically use gossip as a competitor derogation tactic in poaching contexts.

Looking at hypotheses specific to study 2, hypothesis one was supported with participants significantly more willing to share true gossip than untrue gossip. This was found to be the case overall, in addition to at each level of cost and each level of severity. This finding is in line with research from Hess and Hagen (2002, 2006) on the importance of veracity in a good gossip strategy and indicates that in future researchers should take veracity into account when investigating reputation-based gossip.

A number of sex differences also emerged when statements were analysed separately based on veracity. While there was no sex difference in willingness to engage in true gossip, men were significantly more willing to engage in untrue gossip than women. This was also

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found to be the case when the interaction between sex, veracity, and cost was analysed. No sex difference was found in willingness to share true gossip, regardless of the cost. For untrue gossip, men and women also responded similarly when there was no cost for sharing the gossip. However, as the cost of sharing untrue gossip increased men were significantly more willing to gossip than women. Similar results were found when looking at the interaction between sex, veracity, and severity. Again, for true gossip there was no sex difference based on severity. However, men were significantly more willing to share untrue gossip at all levels of severity than women. These results extend on the previous study's findings by considering the influence of an additional high consequence factor (veracity) on men and women's willingness to gossip. Again, in line with research from Campbell (1999), it appears that as the risks associated with gossiping increase women become unwilling to engage in the strategy.

Hypothesis two was also supported; with participants from collectivistic cultures significantly more willing to gossip than participants from individualistic cultures. However, this only occurred for additional high consequence factors. At low levels of consequence there was no cultural difference in willingness to derogate a competitor through gossip. This provides support for an evolutionary explanation of the importance of gossip in mate competition.

There does appear to be an interaction between high consequence factors (veracity, cost, and severity) and culture in willingness to engage in gossip. First, when participants were informed that they would receive no cost for gossiping, participants from individualistic cultures were more willing to share true gossip than participants from collectivistic cultures. Conversely, as cost increased participants from collectivistic cultures were significantly more willing to share true gossip at most levels of cost than participants from individualistic cultures. However, when the gossip was untrue, at all levels of cost participants from collectivistic cultures were significantly more willing to gossip than participants from

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individualistic cultures. Second, for severity, when looking at true gossip, the only cultural difference was for mild statements. Participants from collectivistic cultures were significantly more willing to share mild, true gossip than participants from individualistic cultures.

Conversely, for untrue gossip at all levels of severity participants from collectivistic cultures were more willing to gossip than participants from individualistic cultures.

There may be a number of explanations why no cultural differences were found in willingness to share true gossip that is either moderate or severe. First, it may be that men and women from individualistic cultures feel a moral obligation to share moderate and severe sexual reputation gossip that they know to be true (Fu, Lee, Cameron, & Xu, 2001). Alternatively, participants from individualistic cultures may feel that, even if they are revealed as the person sharing this gossip, the consequences faced by the competitor will be worse than those that they will face (Hess & Hagen, 2002). Additional research is needed to investigate which of these explanations is more likely. Regardless, gossip appears to be an intrasexual competition strategy engaged in by men and women cross-culturally. However, additional, proximal factors also appear to operate in conjunction with distal factors leading to cross-cultural differences in reputation-based gossip in mate poaching contexts.

General Discussion

The current study is the first to show that men and women are willing to share derogatory gossip about competitors in poaching contexts, extending previous research investigating gossip in traditional attraction contexts (De Backer et al., 2007; Sutton & Oaten, 2014). This study also extends previous research by studying the effects of veracity and culture on willingness to gossip. While few studies have taken these variables into account when investigating reputation-based gossip, they appear to strongly influence engagement in the strategy.

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The results from the current study indicate that, in a high consequence situation (mate poaching), men were more willing to gossip than women and participants from collectivistic cultures were more willing to gossip than participants from individualistic cultures. But, this was the case only for additional high consequence factors (e.g., untrue gossip at increased cost). At reduced consequence participants were found to have similar gossip behaviour, regardless of sex or culture.

Utilisation of evolutionary, socio-cultural, and economic psychology research may help to clarify and explain these sex and cultural differences. To first discuss the sex differences, the results indicate both men and women were willing to use gossip strategically in a mate poaching context in order to achieve a desirable mating outcome. This is in line with research that indicates that use of intrasexual competition strategies is important for both men and women, as the overall goal for both sexes is gaining a desirable mating partner (De Backer, 2005; Power, 1998).

Two alternative psychological hypotheses may provide an explanation for the sex differences found in willingness to gossip in this study. From an evolutionary perspective, as a result of evolutionary adaptations designed to secure a woman's reproductive success, women may be less likely to gossip as the consequences for gossiping increase (Campbell, 1999). Rather than engaging in strategies perceived to be high-risk, women may instead choose to engage in low risk-intrasexual competition strategies, such as tactics of self-promotion (Fisher et al., 2009).

Alternatively, according to costly signalling theory, men should be more willing to undertake risky behaviour to achieve a desired mating outcome than women (Hoppe, Moldovanu, & Sela, 2009). A multitude of research has indicated that men are more risk accepting than women (Daly & Wilson, 2001; Wilson & Daly, 1985). Parental investment theory may offer a selectionist rationale for why this risk acceptance occurs (Trivers, 1972). Trivers (1972) defined parental investment as the investment a parent makes in an individual

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child that increases that child's chance of survival to the detriment of the parent's ability to invest in other children. Men and women have historically experienced differential levels of parental investment, with fertilisation and gestation occurring within women, and women spending more time raising and caring for children than men (Bjorklund & Shackelford, 1999; Trivers, 1972). Men successful in mate competition can sire many more children than women can successfully bear (Daly & Wilson, 2001). From an evolutionary perspective, making riskier mating decisions potentially leads to higher pay-offs for men than women and thus, risk acceptance may be an evolutionary adaptation designed to increase a man's reproductive success (Daly & Wilson; Trivers, 1972). As a result, it is proposed that men may have evolved adaptations for intrasexual competition and risk evaluation (Daly & Wilson, 2001).

However, rather than one of these hypotheses exclusively explaining sex differences in risky behaviour, it may be that these two hypotheses are working in conjunction with each other. As the risks for engaging in an intrasexual competition increase women may become risk-avoidant (Campbell, 1999). Conversely, in high-risk mating contexts men may become risk-accepting due to the increased benefits that they may receive as a result of making risking decisions (Daly & Wilson, 2001; Wilson & Daly, 1985). This would then explain why men are more willing than women to use reputation-based gossip to derogate a competitor in a poaching context, but only for additional high consequence factors.

Further, cross-culturally, men and women appear willing to use gossip to derogate competitors. However, the results also indicate cultural differences, particularly in willingness to gossip as consequence increases. Again, a socio-cultural explanation may provide additional reasoning for these findings. As the consequences for sharing gossip increase proximal factors (e.g., the importance of 'marrying up' in collectivistic cultures) may outweigh distal factors and cultural differences may arise (Campbell, 1995; Cross & Campbell, 2011). This explanation would appear to make sense in light of the fact that approximately 70% of participants from the collectivistic group identified as Indian. In

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comparison, approximately 75% of participants from the individualistic group identified as North American. India remains a highly stratified culture, in particular in comparison with America, and some researchers have contended that there is evidence of the caste system still being in effect to a degree in India (Bosher et al., 2007; Eswaran et al., 2013). This then has ramifications for intrasexual competition, with Campbell and Cross (2011) arguing that mate competition for resource-rich mates should be as it's most intense in highly stratified societies. Additionally, according to Gopalkrishnan and Babacan (2007), among individuals who identify as traditionally Indian "there continues to be a celebration of the good woman as against the sexualised other" (p. 521). Using sexual reputation-gossip to derogate a competitor may be particularly damaging in India as it reduces the competitor to the "sexualised other". Consequently, similarly to what occurs with men and women, the potential pay-offs for making riskier mating decisions may outweigh costs for individuals from collectivistic cultures more so than for individuals from individualistic cultures.

There are, however, some limitations associated with the study methodology that may limit interpretation of these findings. An initial limitation is that in the real world individuals don't have access to actual levels of cost and benefit in making mating decisions. Consequently, the scenario for this study is somewhat contrived. However, relationship research does indicate that individuals often subconsciously analyse the costs and benefits associated with making mating decisions (Boksem, & Tops, 2008; Miller, & Todd, 1998). Further, while the current experimental scenario may have reduced external validity, this study is the first to investigate reputation-based gossip in a mate poaching context. As such, it was perhaps necessary to use hypothetical scenarios and measures to initially show that individuals are willing to use gossip strategically in this non-traditional attraction setting. On the basis of current significant findings, future research could perhaps investigate this area utilising a methodology with a higher level of external validity.

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This study also only considered willingness to share sexual reputation gossip and not gossip based on other content. Research had indicated that, in traditional mate attraction contexts at least, individuals do choose to gossip about additional areas of reputation (including physical appearance, social information, and intellectual gossip; De Backer, et al., 2007; Sutton & Oaten, 2014), with Fisher and Cox (2009) showing that perceptions of physical appearance can be manipulated through derogatory statements. Additionally, Hess and Hagen (2002) have stated that additional hard-to-prove elements of reputation (including fertility and childcare ability) should be the focus of a gossip derogation strategy. While gossiping about a competitor's alleged sexual infidelity may prove particularly effective in a poaching context (Bringle & Buunk, 1991), in future it may be useful to consider willingness to gossip about other reputational elements.

In addition, the sampling method used in this study (Mechanical Turk – a convenience sample of internet-users) may indicate sample representativeness issues (Shitka & Sargis, 2006). This is because web users, and particularly those who opt-in to online studies, may not be representative of the general population (Chang & Krosnick, 2009). A growing number of researchers have suggested that the use of Mechanical-Turk may lead to numerous methodological benefits (including rapid, inexpensive, and high quality data recruitment) that potentially outweigh this limitation (Burhmester, Kwang, & Gosling, 2011; Mason & Suri, 2011). Nevertheless, on the basis of the current findings, future researchers should aim to explore the role of gossip in mate poaching utilising community-based, heterogeneous samples.

In considering the sample characteristics from both Study 1 and Study 2, it is important to note that only heterosexual men and women participated in this study. There were two reasons for this. First, relatively few studies have investigated reputation-based gossip and therefore, as a new research area, it is important that samples be large enough to generalise to the broader population. Focusing on heterosexual participants only enabled the

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obtainment of large, and thus generalisable, samples across both studies. Second, the majority of participants who identified as being from a collectivistic culture across both studies 1 and 2 were Indian. As Agoramoorthy and Minna (2007) have noted, at a cultural level there is a widespread discrimination of homosexuality in India. As a result, Indian participants can be wary of identifying as homosexual in psychological research studies. Focusing only on heterosexual participants enabled the obtainment of large sample of Indian participants, and thus for cross-cultural hypotheses to be tested in the current research. On the basis of the current results, however, future researchers should aim to investigate reputation-based gossip in non-heterosexual populations.

In future it would also be useful to analyse gossip from the perspective of the mate target. This is because an effective competitor derogation strategy has two components (Buss & Dedden, 1990). First, as the current study has shown, the individual must be willing to engage in the strategy. Second, however, the strategy must manipulate and diminish the target's perceptions of the competitor (Buss & Dedden, 1990). This second goal may be difficult to achieve in poaching contexts, however. This is because the derogations need to be effective in diminishing the target's opinion of the competitor, their partner, to the degree that the target chooses to leave their relationship with the competitor (Buss & Dedden, 1990; Schmitt & Buss, 2001). Further, it would also be useful to investigate how learning that the individual is the gossip affects the target's perceptions of the individual. Researchers have previously proposed that men and women will face additional consequences if found to be derogating in poaching contexts than in traditional attraction contexts (Schmitt & Buss, 2001). However, the consequences for the individual if they are found to be engaging in reputation-based gossip in order to mate poach are currently untested.

In conclusion, the results from this study indicate that, cross-culturally, men and women are willing to use gossip strategically in order to achieve a desired outcome in a mate poaching context. However, manipulation of gossip cost, severity, and veracity were all found

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to influence willingness to gossip leading to both sex and cultural differences. While all men and women may not be created equal in the mating game, it appears that individuals are willing to use gossip in poaching contexts in order to get what they want and gain access to a desired target.

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CHAPTER 4

***They said what?! Exploring the consequences of hearing
derogatory gossip about one's partner***

**Manuscript submitted to the Journal of Social and Personal
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Abstract

Previous research has indicated that men and women are willing to use gossip strategically to derogate a romantic competitor and poach the competitor's relationship partner (Sutton & Oaten, 2014b). However, the effectiveness of gossip insofar as influencing the romantic target's perceptions of their partner remained untested. The present study investigated male and female responses to a short, hypothetical scenario. The target was asked to imagine they had heard gossip about their partner's alleged sexual infidelity and then answered a series of open-ended questions assessing the influence of hearing this gossip on their self-perceptions, and their perceptions of their partner, and their relationship. Some men and women reported positive relational consequences, while others reported no changes in their relational perceptions. However, the majority of participants stated that hearing this gossip would lead to a variety of negative relational outcomes, ranging from expressions of negative communication, to relational conflict, and, for a sizeable proportion of men and women, relationship termination. Despite this, targets generally stated that they would not retaliate aggressively against the gossipier. Research findings suggest that gossip is a low-risk and effective strategy for intrasexual competition.

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In his song *Devil's Radio* musician George Harrison (1987) suggested that “gossip is merely the devil’s radio” (track 7). However, despite the negative connotations often associated with it, gossip may actually be a beneficial and enjoyable behaviour for men and women to engage in throughout their lives. Studies indicate that gossip is uniquely human, universal, and apparent even in the conversational patterns of young children (Baumeister, Zhang, & Vohs, 2004; Bloom, 2004). Additionally, researchers have suggested that the behaviour may have numerous functions both in childhood and adulthood. Such functions range from a means for social control (Gluckman, 1963), to reputation management (De Backer, Nelissen, & Fisher, 2007), and even as a tool for evaluation (Fine, 1977). While Harrison (1987) might not have been a fan, gossip appears to be a useful behaviour that has evolved for a number of functional purposes.

From a psychological perspective, gossip is defined as a conversational exchange of positive or negative information about third parties who are absent from the discussion (Foster, 2004). Evolutionary psychologists investigating the functional purposes of the behaviour have narrowed this definition by differentiating between strategy-learning gossip and reputation-based gossip. While strategy-learning gossip considers gossip as a social learning tool (Baumeister et al., 2004), reputation-based gossip considers gossip as a method for intrasexual competition (De Backer, 2005).

When competing intrasexually, same-sex individuals vie for access to quality mate targets (Cox & Fisher, 2008). The main reason why men and women employ strategies, such as gossip, when involved in intrasexual competition is due to intense rivalry for mates with desirable qualities (including physical beauty, resources, and emotional stability; Buss, 1988b; Buss et al., 1990). Compared to the many who wish to become involved with them, individuals who possess these attributes are in relatively short-supply. By engaging in intrasexual strategies when involved in mate competition, men and women are able to gain a potential mating advantage over romantic competitors and thus gain access to desirable

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romantic targets (Cox & Fisher, 2008). Researchers have suggested that usage of reputation-based gossip may enable an individual to self-promote to a target while simultaneously derogating competitors (De Backer et al., 2007; Power, 1998). Gossip may therefore be a beneficial method of intrasexual competition, allowing individuals to compete effectively with competitors and achieve a desired mating outcome.

The majority of studies investigating reputation-based gossip have framed it within traditional attraction contexts. Here, traditional mate attraction signifies the mate competition that occurs between available mates (Schmitt & Buss, 2001). Reported findings suggest that both men and women are willing to use gossip strategically in mate competition to learn about, and diminish the reputation of, competitors (Massar, Buunk, & Rempt, 2011, Sutton & Oaten, 2014a). Fewer studies have, however, focused on usage of reputation-based gossip in non-traditional attraction contexts. Yet, there may be additional benefits for employment of gossip in such settings, and particularly when attempting to mate poach, over and above those found in conventional mating settings.

Mate poaching occurs when the individual attempts to become involved with a target who is already involved in a relationship (Schmitt & Buss, 2001). Large-scale, cross-cultural studies have found that the behaviour occurs universally, with up to 60% of men and 40% of women stating that they have previously attempted to poach a target (Schmitt et al., 2004). One of the reasons why reputation-based gossip may be effective in poaching contexts is because it is an indirect aggression strategy. As a result, the individual is able to circuitously derogate a competitor's reputation whilst maintaining their own. In a mate poaching context the competitor is the target's relationship partner. While men and women are unlikely to increase their desirability by using direct derogation strategies against the competitor, gossip is a covert form of derogation, and thus this problem is bypassed (Buss & Dedden, 1990). Additionally, in conventional attraction settings the individual may be competing with numerous competitors, some of whom the individual may not even be aware of, for access to

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the target. A benefit of mate poaching is that the competitor is a single, identifiable person; the target's partner. This consequently simplifies mate competition and enables the individual to use gossip as a form of informational attack against the competitor's reputation (Hess & Hagen, 2002; Fisher, Shaw, Worth, Smith, & Reeve, 2010).

Researchers investigating intrasexual competition have tended to explore strategies from the perspective of the individual (Buss & Dedden, 1990). Indeed, researchers investigating usage of reputation-based gossip in mate poaching contexts have only studied individual willingness to undertake this strategy (Sutton & Oaten, 2014b). Utilising a cost-benefit methodology, Sutton and Oaten (2014b) found that, cross-culturally, men and women were willing to share gossip strategically to derogate a competitor and poach the competitor's partner. However, at higher levels of potential consequence (e.g., for untrue gossip), men reported a greater preparedness to gossip than women and participants from collectivistic cultures also reported a greater preparedness to gossip than participants from individualistic cultures (Sutton & Oaten, 2014b).

The abovementioned results are demonstrative of a willingness by both men and women to engage in gossip in poaching contexts; however they do not inform whether such a strategy is effective. This is because a successful derogation strategy involves two components. First, and as Sutton and Oaten (2014b) have demonstrated, individuals must be willing to use the strategy to derogate competitors. However, importantly, the derogations must also influence and devalue the target's perceptions of their partner (Buss & Dedden, 1990; Fisher et al., 2010). Demonstrating this second component is of particular importance when attempting to assess the effectiveness of reputation-based gossip in mate poaching contexts. That is, derogations must diminish the target's perceptions of their partner to the extent that the target might be willing to leave the relationship and become involved with the derogator (Buss & Dedden, 1990). It might be expected that hearing negative gossip about their partner will lead to a variety of negative relational outcomes for the target (Bringle &

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Buunk, 1991). However, to date, the consequences of reputation-based gossip from the perspective of the target are yet to be tested.

Schmitt (2002) investigated the factors that moderate general tactic effectiveness judgements in mate competition. Numerous variables including participant sex, attraction setting, and strategy type were reported to affect the perceived success of self-promotion and competitor derogation tactics. First, women were generally perceived as more successful than men when using appearance-based attraction tactics, with men conversely perceived as more successful than women when using resource-based attraction tactics (Buss, 1988b; Tooke & Camire, 1991). This was found to be the case in both traditional and non-traditional attraction contexts (Schmitt, 2002). Second, these sex differences were obtained for both self-promotion and competitor derogation-related strategies (Schmitt, 2002). However, sex differences in resource-based tactics were more sizeable for derogation strategies (with men utilising these tactics more often than women), with sex differences in physical appearance-related tactics more sizeable for promotion strategies (with women, conversely, utilising these tactics more often than men).

Researchers investigating the effectiveness of competitor derogation in conventional attraction contexts have found that sharing pejorative statements about a competitor's attractiveness successfully manipulates a target's views of the competitor's appearance (Fisher & Cox, 2009). However, as Sutton and Oaten (2014b) noted, appearance-based derogations may not prove as effective in poaching contexts. A central reason for this is because physical appearance is an easily proven and quickly verifiable element of reputation (Hess & Hagen, 2002). Rather, Sutton and Oaten (2014b) chose to focus on willingness to share sexual reputation gossip about a competitor's fidelity (an element of reputation that is harder to objectively verify; Hess & Hagen, 2002) in mate poaching contexts. Extending on the existing research, this study will investigate if hearing gossip about their partner's alleged sexual infidelity manipulates the target's perceptions of their partner and their relationship.

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In addition to investigating how derogations influence the target's perceptions of their partner, it is also important to investigate if these derogations influence the target's perceptions of the individual (here, the derogator). As an indirect aggression strategy, the potential risks for sharing gossip are minimised. However, there is still the possibility that the individual will be revealed as the derogator (Fisher et al., 2010). If this does occur, it is likely that the target's perceptions of the individual will be reduced, with the individual facing possible retaliation from both the target and the target's partner (Schmitt & Shackelford, 2003).

Previous research has investigated male and female perceptions of derogators who are competing in traditional attraction contexts (Fisher & Cox, 2009; Fisher et al., 2010). Fisher and colleagues (2010) investigated perceptions of females who shared derogatory statements about a female competitor's appearance, sexuality, and personality. As expected, regardless of the derogation content, female perceptions of the female derogator were reduced on numerous traits including friendliness, kindness, trustworthiness, and overall desirability. Likewise, male perceptions about the female derogator were reduced on friendliness, kindness, and trustworthiness. However, learning that a female was derogating other females did not alter male perceptions on physical attractiveness and promiscuity, and their willingness to become involved in a short-term sexual relationship, or long-term relationship with the derogator (Fisher et al., 2010).

Fisher et al.'s (2010) study indicates that, while both men and women diminish their perceptions of women who derogate, men's perceptions are reduced on traits related to the derogator's personality only, with views of the derogator's desirability as a potential mate unaltered. In combination with previous research investigating target perceptions of derogation strategies (Fisher, Cox, & Gordon, 2009; Schmitt, 2002), this suggests that gossip will function as a low-risk and effective tactic for intrasexual competition. However, as Fisher and colleagues (2010) utilised a female-only sample, male and female perceptions of male

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derogators remain unknown. Further, as their study investigated perceptions of derogators in traditional attraction contexts, it is also unknown how individuals who derogate in poaching contexts are perceived. It might be expected that men and women who derogate competitors in order to mate poach will face a number of repercussions over and above those traditionally faced by derogators (Schmitt & Buss, 2001).

As this research area has not previously been investigated in great detail, the current study is exploratory in nature. According to Pinsonneault and Kraemer (1993), the aim of exploratory research is to familiarise oneself with a topic and learn preliminarily concepts about it. As such, and in keeping with the methodological goals of exploratory research, this study will not test for specific hypotheses. Instead, this study will attempt to investigate the broad range of responses occurring in the population in interest (in this case, the behaviours that the target engages in after hearing negative gossip about their partner) and refine measurement concepts (Pinsonneault & Kraemer, 1993). Of particular interest are the target's perceptions about their partner and their relationship. This study will also assess the target's perceptions of the derogator. Based on previous research, it is expected that hearing such gossip will manipulate and diminish the target's perceptions of their partner. However, it is also expected that perceptions of the derogator, if exposed as such, will also be diminished and that the target may choose to retaliate against the derogator.

Method

Participants

A total of 260 undergraduate, psychology students (199 women and 61 men) participated in the study. The mean age for women was 22.9 years (SD 5.05, range 19-51), while the mean age for was men 22.8 years (SD 4.46, range 20-49). The majority (74%) of participants identified their nationality as being Australian. Of the remaining participants, 14% identified as Asian, 7% as European, 2% as North American, 2% as South American,

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1% as Middle Eastern, and 1% as African. Approximately 54% of participants stated that they were currently involved in a relationship: 41% in a relationship (not living with their partner), 8% living with their partner, and 5% married. Conversely, 46% of participants stated that they were currently not involved in a relationship: 45% single and 1% divorced and single. Finally, the majority of participants (96%) stated that they were not parents.

Procedure

The survey was completed anonymously and participants were not asked to provide any identifying information. First, participants recorded demographic information including age, sex, nationality, relationship status, and parental status. Second, participants read a one-paragraph long hypothetical scenario asking them to imagine that they had heard derogatory information about their partner:

Imagine that you have heard someone spreading negative information about your relationship partner. They have been passing on information about your partner's sexual reputation (e.g., that s/he sleeps around and is unfaithful). Think about this experience in terms of the feelings and emotions involved. Imagine the event as if you were right there experiencing it.

Third, participants answered eight open-ended questions about the influence of this gossip on their self-perceptions and their feelings toward their partner, their relationship, and the gossipier (see Appendix 1). Fourth, participants answered the *Anonymous Relationship Attraction Survey* (Schmitt & Buss, 2001), which measures previous engagement in mate poaching. An example item from the scale is 'Have you previously attempted to poach someone?'

In line with previous research (e.g. McAndrew, Bell, & Garcia, 2007; McAndrew & Milenkovic, 2002) both the experimental scenario and open-ended questions referred to someone 'passing on information' rather than gossiping. This was done in order to minimise the influence of the negative connotations traditionally associated with gossip on participant responses (De Backer, 2005).

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A thematic analysis was undertaken to analyse qualitative data. Thematic analysis has been described in the psychological literature as a widely-used, accessible, and theoretically-flexible approach for identifying, analysing, and reporting themes within qualitative data (Braun & Clarke, 2006). One of the benefits of employing this data management technique when analysing qualitative data is that it is both flexible and allows for the preservation of the data set in rich detail (Braun & Clarke, 2006).

The analysis of the qualitative data was completed in two stages. Coder one initially reviewed all transcripts using a bottom-up thematic analysis approach (Braun & Clark, 2006). Coder one then developed a clear and concise coding scheme, aiming to provide an informative and inclusive number of discriminatory themes. A reliability analysis was performed using a second coder blind to the hypotheses of the study. One-third of the data was randomly selected and analysed by the second coder. As a result of the structured coding scheme provided by coder one, coder two required minimal rater training. Cohen's kappa was calculated for each question category to measure interrater reliability. The reliabilities were acceptable, with a mean kappa of .71. There was a 94% agreement between the coders in thematic categorisation of the data. Coder one and coder two then discussed and resolved all disagreements. In combination, this approach is indicative a high level of interrater reliability.

When presenting results, the most common themes for each question are presented in turn. The number and percentage of total participants (out of 260) who responded with the theme are also provided. When sex differences are discussed the number and percentage of women (out of 199) and men (out of 61) who responded with the theme are stipulated. Example responses for all key themes are provided in Appendix 2.

Results

General feelings. All participants were able to describe their feelings as a result of hearing this gossip. Participants stated that they would feel angry (N = 49, 19%), upset (N =

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23, 9%), hurt (N = 16, 6%), questioning (N = 13, 5%), and betrayed (N = 13, 5%). Men and women provided similar responses to this question.

Relationship length. Two hundred and eight (80%) participants reported that the length of their relationship would impact how they felt as a result of hearing this gossip, while 52 (20%) reported that it would not. Participants who specified that relationship length would impact their feelings stated that they would trust a long-term partner more than a short-term partner (N = 50, 19%), and know a long-term partner better (N = 31, 12%). However, participants also felt that hearing this gossip about a long-term partner would increase feelings of betrayal (N = 35, 13%), hurt (N = 12, 5%), and anger (N = 8, 3%). Conversely, participants stated that in a short-term relationship there would be less trust (N = 48, 18%), more insecurity (N = 42, 16%), and less knowledge of their partner (N = 29, 11%), and that they would be more likely to believe the gossip (N = 16, 6%). Men and women provided similar responses to this question.

Gossip source. Two hundred and thirty (88%) participants stated that it would make a difference to them if they knew the gossip source, while 22 (8%) stated that it would not. Eight (4%) participants did not provide an answer to this question. Participants who felt that knowing the source of the gossip would make a difference stated that it would inform them as to the truth (N = 44, 17%), and the reliability and validity of the gossip (N = 21, 8%), provide insight into the motivations (N = 18, 7%), and believability of the gossiper (N = 16, 6%), and help to answer questions about why the gossip was being spread (N = 16, 6%). Women were more likely than men to state that knowing the source of the gossip would inform as to the reliability and validity (women: N = 19, 10%; men: N = 2, 3%) and believability (women: N = 16, 8%; men: N = 0, 0%) of the gossip.

Gossip veracity. Two hundred and thirty-four (90%) participants reported that gossip veracity would make a difference to them, while 26 (10%) participants reported that it would not. Participants who said that gossip veracity would make a difference stated that if the

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gossip was known to be true they would feel hurt (N = 28, 11%), angry at their partner (N = 26, 10%), and embarrassed (N = 14, 5%), and that this would indicate that their partner had been unfaithful (N = 23, 9%), and would lead to relationship dissolution (N = 24, 9%).

Conversely, some participants stated that if the gossip was known to be untrue they would feel angry at the gossipier (N = 42, 16%) and hurt (N = 19, 7%), while others stated their feelings would remain unchanged (N = 19, 7%). Participants also stated that they would question why this untrue gossip was being spread (N = 26, 10%). When referring to gossip known to be true, men (N = 10, 16%) were more likely than women (N = 14, 7%) to state that they would terminate the relationship as a result of this gossip. Conversely, women (N = 13, 7%) were more likely than men (N = 1, 2%) to state that they would feel embarrassed. When referring to gossip known to be untrue, women were more likely than men to state that they would feel angry at the gossipier (women: N = 40, 20%; men: N = 2, 3%) and hurt (women: N = 19, 10%; men: N = 0, 0%). However, women (N = 19, 10%) were also more likely than men (N = 0, 0%) to report that their feelings toward their partner would remain unchanged.

Feelings toward partner. All participants were able to describe how they would feel about their partners as a result of hearing this gossip. Participants reported that they would feel less trusting towards their partner (N = 29, 11%), questioning (N = 21, 8%), unsure (N = 21, 8%), angry (N = 18, 7%), and suspicious (N = 13, 5%). However, men (N = 4, 7%) were more likely than women (N = 2, 1%) to state that they would feel no differently towards their partner after hearing this gossip.

Reasons why. Two hundred and forty-eight (95%) participants were able to identify at least one reason why this gossip was being spread, while 12 (5%) were not. Of the participants who could identify a reason why the gossip was being spread, participants stated that it was due to jealousy (N = 47, 18%), dislike for either myself or my partner (N = 16, 6%), revenge (N = 15, 6%), because the gossip was true (N = 15, 6%), to break up the relationship (N = 15, 6%), and to hurt myself, my relationship, or my partner (N = 12, 5%). Men were

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more likely than women to state that this gossip may have been spread due to dislike of either myself or my partner (men: N = 7, 11%; women: N = 9, 5%).

Retaliation. One hundred and fifty-one (58%) participants stated that they would retaliate after hearing this gossip, while 109 (42%) stated that they would not. Of the participants who stated that they would retaliate, responses included confronting (N = 39, 15%), questioning (N = 30, 12%), and speaking to the gossipier (N = 13, 5%), and asking the gossipier to stop spreading the information (N = 6, 2%). When responding aggressively, participants stated that they would either retaliate physically, by punching the gossipier (N = 5, 2%) or indirectly, by spreading return gossip about the gossipier (N = 2, 1%). Men were more likely than women to retaliate by speaking to the gossipier (men: N = 9, 15%; women: N = 4, 2%) and with physical aggression (men: N = 4, 7%; women: N = 1, 0.5%). Conversely, women (N = 34, 17%) were more likely than men (N = 5, 8%) to confront the gossipier.

Positive consequences. Two hundred and forty (92%) participants were able to identify at least one positive consequence of hearing this gossip, while 20 (8%) were not. Of those who were able to identify a positive consequence, participants stated that they would have increased trust in their partner (N = 55, 21%), a stronger relationship (N = 38, 15%), increased communication and talking (N = 36, 14%), increased closeness with their partner (N = 22, 8%), and increased openness in the relationship (N = 12, 5%). Men were more likely than women to state that hearing this gossip would lead to a stronger relationship (men: N = 13, 21%; women: N = 25, 13%) and increased communication (men: N = 14, 23%; women: N = 22, 11%). Conversely, women (N = 45, 23%) were more likely than men (N = 10, 16%) to state that a positive consequence of this gossip would be increased trust in their partner.

Negative consequences. Two hundred and forty-one (93%) participants were able to identify at least one negative consequence of hearing this gossip, while 19 (7%) were not. Of those who were able to identify a negative consequence, responses included decreased trust (N = 60, 23%), termination of the relationship (N = 36, 14%), relationship conflict (N = 19,

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7%), questioning (N = 10, 4%), and insecurity (N = 10, 4%). Men (N = 18, 30%) were more likely than women (N = 42, 21%) to state that a negative consequence would be decreased trust. Conversely, women (N = 10, 5%) were more likely than men (N = 0, 0%) to state that a negative consequence would be questioning.

Short-term consequences. Two hundred and twenty-six (87%) participants were able to identify at least one short-term consequence of hearing this gossip, while 34 (13%) were not. Of those who were able to identify a short-term consequence, participants stated that there would be decreased trust (N = 25, 10%), a fight (N = 16, 6%), anger (N = 16, 6%), arguments (N = 16, 6%), and dissolution of the relationship (N = 7, 3%). Conversely, participants also stated that a positive short-term consequence would be increased closeness with their partner (N = 4, 2%). Men were more likely than women to state that a short-term consequence would be decreased trust (men: N = 10, 16%; women: N = 15, 8%), a fight (men: N = 9, 15%; women: N = 7, 4%), and anger (men: N = 9, 15%; women: N = 7, 4%).

Long-term consequences. Two hundred and sixteen (83%) participants were able to identify at least one long-term consequence of hearing this gossip, while 44 (17%) were not. Of those who were able to identify a long-term consequence, participants reported that there would be decreased trust in their partner (N = 80, 31%), dissolution of the relationship (N = 64, 25%), and friendship breakdown (N = 12, 5%). Conversely, positive long-term consequences included a strengthened relationship (N = 26, 10%) and increased trust in one's partner (N = 9, 3%). Men (N = 18, 30%) were more likely than women (N = 46, 23%) to state that a long-term consequence would be dissolution of their relationship. Conversely, women were more likely than men to state that hearing this gossip would lead to decreased trust in their partner (women: N = 64, 32%; men: N = 16, 26%), but also a strengthened relationship (women: N = 38, 19%, men: N = 8, 13%).

Discussion

The results from this study indicate that hearing negative gossip about one's partner influences men and women's self-perceptions, feelings toward their partners, and feelings about their relationships. Participants reported that they would feel a variety of negative emotions as a result of this gossip, including anger, hurt, and betrayal. This was particularly the case when the target was asked how this gossip would affect their feelings toward their partner. While a small percentage of men and women stated that their feelings would remain unchanged, the majority reported that they would feel negatively toward their partner, displaying emotions including distrust, suspicion, and anger. However, these emotions were found to differ as a function of relationship length. Under a long-term relationship scenario participants reported that they would be less likely to believe the gossip and feel more positively toward their partner than if the relationship was short-term. While some sex differences were found, in line with previous research investigating relational jealousy (Buunk, 1995), men and women tended to react similarly as a result of hearing this gossip.

Participants also provided detailed information about the specific consequences that they felt would occur as a result of this gossip. For the most part these consequences also tended to be indicative of negative outcomes. In the short-term, participants tended to report that hearing this gossip might lead to decreased trust, a fight, and anger. While few participants stated that a short-term consequence would be relationship dissolution, even less reported that it would lead to a closer relationship. Relational consequences tended to be even worse in the long-term, however. Over a quarter of men and over a fifth of women stated that a long-term consequence would be relationship termination. In addition, when participants were expressly asked about negative consequences a variety of negative outcomes were provided ranging from decreased trust, to relational conflict, and relationship dissolution.

One of the main aims of a competitor derogation strategy is to influence and diminish the target's perceptions of the competitor (Buss & Dedden, 1990). In a mate poaching

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scenario, it is hoped that this will then lead to the target leaving their relationship and becoming involved with the derogator (Schmitt & Buss, 2001). The results from the present study indicate that, for some participants, a consequence of hearing this gossip would be relationship dissolution. In such cases, gossip is thus an extremely effective method for competitor derogation.

However, even in cases where participants didn't explicitly state that this gossip would lead to relational breakdown, it may lead to a weaker relationship and relational conflict. This is because the emotions and behaviours participants stated they would engage in tended to be indicative of negative affect, diminished communication, and relational dissatisfaction and conflict (Bringle & Buunk, 1991; Guerrero, 2004; Guerrero & Anderson, 1998). Reactions including distrust, suspicion, anger, and hurt are characteristics traditionally associated with suspicious jealousy (Bringle & Buunk, 1991; Guerrero, 2004). Suspicious jealousy often occurs when an individual believes that their partner has been unfaithful and yet has no hard evidence to back their suspicions up (Bringle & Buunk, 1991). As a result, this can lead the jealous individual to engage in a variety of behaviours to confirm their suspicions, including increased vigilance and snooping (Bringle & Buunk, 1991). Further, it can be difficult to regain trust that has previously been lost (Buunk & Hupka, 1987). Research indicates that the emotions and behaviours associated with suspicious jealousy are negatively associated with relationship happiness and endurance, and positively associated with discussion of relationship termination (Anderson, Eloy, Guerrero, & Spitzberg, 1995). Thus, while not initially leading to relationship dissolution, hearing this derogatory gossip about their partner may lead to cracks occurring in the target's relationship, which may in turn lead to their relationship being terminated.

This is the first study to investigate how hearing negative gossip about their partner influences the target's perceptions of their partner and relationship. It appears that simply hearing derogatory gossip about their partner (with no other information provided - e.g.,

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statement veracity) leads to detrimental relational consequences for the target. Error management theory might provide an explanation for why hearing derogatory gossip leads to negative relational outcomes (Haselton & Buss, 2000, 2003). It has been argued that humans possess a jealousy bias, which functions to over-infer infidelity (Buss, 2002). Paul, Foss, and Galloway (1993) investigated perceptions of spousal infidelity and reported that 36% of men and 14% of women were unable to state with certainty that their partner was not currently cheating on them. Buss (2002) claims that sexual jealousy may have evolved as a mate guarding strategy, aimed at stopping a partner's defection from the relationship. While sexual infidelity can be costly for both men and women, men are particularly threatened by the prospect of infidelity as it jeopardises their paternity (Buss, Larsen, Westen, & Semmelroth, 1992). Thus, uncertainty over a partner's fidelity, by men in particular, may be an evolved adaption designed to overcome problems related to the concealment of sexual infidelity and the threat of paternity uncertainty (Buss, 2002).

The results from the current study are interesting because they provide further support for the idea of an evolved jealousy bias (Buss, 2002). Simply hearing sexual infidelity gossip led both men and women to behave in ways associated with negative relational outcomes. Hearing negative gossip about a partner resulted in the activation of jealousy bias mechanisms. Consistent with previous research (Paul et al., 1993), men were more likely to have jealousy bias mechanisms activated than women. Consequently, men were also more willing to terminate their relationships than women.

It is important to note, however, that the consequences of this gossip were not always negative. First, 19% of women and 13% of men reported that hearing this gossip about their partner would strengthen their relationship in the long-term. Second, when explicitly asked about positive outcomes, participants tended to state it might lead to a stronger relationship, with increased trust, communication, closeness, and openness. Third, other participants reported that hearing this gossip would lead to no changes in their feelings toward their

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partner and their relationship. Fourth, some researchers have suggested that displays of relational jealousy may act as a signal that partners appreciate and value one another, and that they view the relationship as something that should be preserved and maintained (Anderson et al., 1995). For the most part however, jealousy is not a positive relational indicator (Buss, 1988a), and hearing derogatory information about their partner will lead to negative, not positive, outcomes for the target.

A second aim of this study was to assess how learning that an individual is sharing derogatory gossip about the target's partner influences the target's perceptions of the gossiper. Previous research has indicated that both men and women decrease their perceptions of women if they are revealed as a derogator, although men's perceptions of the derogator's status as a potential target remain unchanged (Fisher et al., 2010). The current findings indicate that after hearing negative gossip about their partners, targets tend to focus their emotions on themselves and their partners. When asked about willingness to retaliate to the gossiper, approximately 40% of participants stated that they would not retaliate in any way. When a participant did choose to retaliate, their retaliations tended to be non-aggressive, and included responses such as confronting, questioning, and speaking to the derogator. In comparison, aggressive responses (including physical and indirect aggression) against the derogator tended to occur rarely. However, supporting existing research (Condry & Ross, 1985; Gladue, 1991), men were more likely to indicate that they would retaliate aggressively against the derogator than women.

In line with previous studies, men and women were asked about their perceptions of, and willingness to retaliate against, the derogator (Fisher et al., 2010). However, one of the benefits of gossip is that it is an indirect aggression strategy, and as such, reduces the risk of the individual being exposed as the derogator. The present findings indicate that, even if the target does become aware that the individual is the initial gossip source, this does not necessarily lead to negative consequences for the individual. When asked about the effects of

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knowing the gossip, participants tended to state that this would inform as to the truthfulness, reliability and validity, and believability of the gossip. In line with previous research (Hess & Hagen, 2002), when the gossip was a trusted individual (e.g., a close friend or family member), participants tended to assert that the gossip would likely be true and believable. Conversely, if the gossip was not a trusted individual (e.g., a previous partner), participants were less likely to believe the gossip to be true. This perhaps suggests that reputation-based gossip will be most effective as an intrasexual competition strategy when it is used by a friend of the target. This finding ties in with research from relationship psychologists investigating friendship and sexual attraction. Research has indicated that sexual attraction often occurs in cross-sex friendships (Kaplan & Keys, 1997), with proximity and familiarity also being central features of attraction (Ebbesen, Kjos, & Konečni, 1976; Moreland & Beach, 1992). Attraction to a cross-sex friend can still continue even after the friend becomes involved in a relationship with another individual (Reeder, 2000), with a recent study finding that men and women perceive that friendship increases the likelihood of a successful mate poaching attempt while decreasing the likelihood of incurring the risks often associated with mate poaching (Mogilski & Wade, 2013). Taken with these findings, the results from the present study suggest that gossip may be an extremely effective mate poaching strategy when used by a cross-sex friend to derogate a target's partner.

The findings from this study suggest that gossip may prove even more effective in mate competition than previously thought. However, there were some limitations associated with the methodology that may influence interpretation and suggest avenues for future research. An initial limitation is that, while approximately 55% of participants in the study were currently involved a relationship, 45% were not. As a result of this, almost half of the participants were discussing the relational outcomes of a hypothetical relationship, and as such this may have affected how they responded. However, while a point to be noted, this limitation does not necessarily void this study's findings. This study is the first to explore

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perceptions of hearing derogatory gossip about a partner. Thus, as this research was exploratory in nature, the responses provided by a large, qualitative sample of participants suggest directions and hypotheses for future research. Additionally, there is some evidence that men and women actually have a fairly good awareness of how they will respond in real-life attraction and relational contexts even when invoking hypothetical scenarios (Cooper & Sheldon, 2002; Kurzban & Weeden, 2005, 2007). On the basis of the present findings however, future research should focus on investigating perceptions of men and women currently involved in relationships. It would also be useful for future research to employ a mixed methodology (Creswell, 2003), in order to control and assess for variables including relationship length and relational satisfaction. In addition, one of the goals of an exploratory study is to develop methods and concepts for future research that are more systematic and detailed (Pinsonneault & Kraemer, 1993). Finally, as this research was exploratory in nature, only heterosexual men and women were sampled in order to obtain a large, and thus generalisable, sample. In extending the present findings, future researchers investigating reputation-based gossip from the perspective of the mate target would then benefit from using descriptive and explanatory research methods, testing for directional hypotheses, and utilising samples comprising homosexual men and women.

A second limitation may be the variability of the participants in the study. The majority of participants from the present sample were young, Australian, university undergraduate students and may not be representative of the wider community. In future it might be useful for researchers to focus on recruiting cross-cultural and age-diverse samples. The reasons for this are twofold. First, previous research investigating willingness to share derogatory gossip about a competitor is suggestive of cultural differences in this behaviour (Sutton & Oaten, 2014b). Utilising culturally diverse samples would allow researchers to establish if these cultural differences follow when investigating reputation-based gossip from the perspective of the target. Second, the average age of participants in the present sample was

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relatively young, at approximately 23 years. Fisher and colleagues (2010) have pointed out that this is an age when individuals are likely to be making mating decisions and becoming involved in intrasexual competition. However, as the current research investigated mate poaching, in future it may be useful to employ an older sample that are more likely to be involved in long-term, committed relationships.

In conjunction with previous studies (Sutton & Oaten, 2014b), the present research indicates that reputation-based gossip is an ideal competition strategy, particularly for usage in mate poaching scenarios. However, there may be one final factor that hinders usage of reputation-based gossip as a competition strategy. The potential for retaliation from the competitor, the victim of the gossip, may lead to this strategy becoming high-risk and no longer cost-effective for the individual (the gossiper). The present findings suggest that the target is generally unwilling to respond aggressively to hearing negative gossip about their partner. However, previous research has indicated the main instigator for physical aggression among females is derogation of another female's sexual reputation (Campbell, 1986). This suggests an additional avenue for future research; to explore the consequences of reputation-based gossip from the perspective of the competitor (the derogated individual).

The current findings expand on previous research and provide insight as to the role of gossip as a strategy for intrasexual competition. According to Buss and Dedden (1990) a successful and effective competition strategy is a two-part process. Previous research has indicated that men and women are willing to share derogatory gossip about a competitor in order to achieve a desired mating outcome (Sutton & Oaten, 2014b). The present study, however, has enabled that second step to be explored. If the target hears derogatory gossip about their partner, this appears to manipulate and diminish their perceptions of their partner, leading to a variety of negative relational outcomes for the target. Despite this, even if the individual is revealed as the person derogating the target's partner, they are unlikely to face aggressive consequences from the target. Thus, this study suggests that reputation-based

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gossip is both a low-risk and effective strategy for men and women to engage in when attempting to mate poach. Using gossip to derogate a target's partner appears to lead to negative relational outcomes for the target, with few consequences for the individual.

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Appendix 1

1. How would you personally feel as a result of hearing this information about your partner?
2. Would it make a difference to you how long you had been with your partner when you heard this information? If yes, why?
3. Would it make a difference to you if you were aware of the source of this information? If yes, why?
4. Would it make a difference to you if this information about your partner was true or false? If yes, why?
5. How would hearing this information make you feel about your partner?
6. Why do you think that this information was being passed on?
7. Do you think that you would retaliate in any way to this information? If yes, how would you retaliate?
8. What consequences (positive, negative, short-term, and long-term) would hearing this information have for your relationship?

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Appendix 2

Example Responses for Key Themes

Question	Theme	Example Response
General Feelings	Anger	I would feel angry.
	Upset	Upset at the person spreading the information.
	Hurt	I would feel very hurt.
	Questioning	I would be questioning whether the rumours are true or not.
	Betrayed	Although I wouldn't believe the rumours I would still feel betrayed.
Relationship Length	Trust more	The longer the relationships been the more I would've trust and gotten used to the trust and built on it.
	Know better	If you were in a long-term relationship you should probably know your partner's history.
	Increased betrayal	The longer we'd been together I'd feel more betrayed if it were true.
	Increased hurt	I guess the longer you're with them, the stronger bond you have so it may hurt a bit more.
	Increased anger	I would be more angry in a long-term relationship which I viewed as a commitment.
	Less trust	I would not trust a new partner as much.
	More insecurity	If the relationship was still in the early period it would make me feel more insecure.
	Less knowledge	Earlier in your relationship less about your partner is known.
	Increased gossip believability	If I had not been with them very long and had not known them very long there would be a greater chance that I might think it is true.
Gossip Source	Inform truth	You would know what type of person they are – if they are truthful and a friend.
	Inform reliability and validity	It would only increase or decrease the validity and reliability of the information given.
	Motivations	Only for knowledge of possible motivations for spreading the gossip.
	Believability	That is, if they were a trusted source, one of my close friends, I would be more likely to believe it.
	Questions of why	May make it easier to figure out why the person made up the rumour.
Gossip Veracity	Hurt	I'd be pretty devastated if it were and would feel hurt by both parties (though could understand in certain circumstance) why it wasn't said straight to me.
	Angry at partner	If they were cheating it would make me angry towards my partner.
	Embarrassed	If it was true I would feel embarrassed.
	Unfaithful	If it's true then it's something serious because he was very unfaithful.
	Relationship dissolution	If it is true, I would break up with him, because I can't be with someone who's unfaithful.
	Angry at gossipers	If it were not true, I'd be angry with the gossipers, but not with my partner.
	Unchanged	If it was false, nothing would change.
	Question why	If it was false I would go after the person spreading the rumours to find out why they had come up with such a lie.
Feelings Toward Partner	Less trusting	I would feel less trustful of him.
	Questioning	Would question why someone would spread such a thing.
	Unsure	Unsure of the real nature of the person I'm with.
	Angry	I think the natural reaction would be to feel angry.

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Reasons Why	Suspicious	I would get more suspicious.
	Jealousy	They were jealous of our relationship.
	Dislike	They disliked my partner or me.
	Revenge	Someone may be acting out of revenge for an incident they deemed to be hurtful to them.
	Gossip was true	If it were true then someone might want the information out there if he was lying about it.
Retaliation	Break up relationship	It could be someone who is envious of the relationship and so now wants to break it up.
	Hurt	To hurt my partner.
	Confronting	Both he and I would probably confront the source.
	Questioning	Question the person who had said this.
	Speaking to the gossip	Speak to the person spreading it.
Positive consequences	Stop spreading gossip	Tell them to stop.
	Punching gossip	I would punch the rumour spreader.
	Indirectly	Spread rumours about this person.
	Increased trust	Strengthen our trust for each other.
	Stronger relationship	Work on the relationship and make it stronger.
Negative consequences	Increased communication	Increase communication.
	Increased closeness	May bring us closer together.
	Increased openness	It would encourage openness.
	Decreased trust	Lose trust.
	Relationship termination	If true would lead to relationship breakdown.
Short-term consequences	Relationship conflict	Conflict would accentuate.
	Questioning	Questioning trustworthiness.
	Insecurity	It might make me more insecure.
	Decreased trust	Less trust.
	Fight	We could have a fight.
Long-term consequences	Anger	Anger.
	Arguments	Arguments may arise as a result of the gossip still being talked about.
	Relationship dissolution	A split or breakup.
	Increased closeness	Feeling closer by fighting the gossip.
	Decreased trust	Trust issues.
	Relationship dissolution	Break up.
	Friendship breakdown	No longer friends with gossip.
	Strengthened relationship	Possible strengthening of relationship.
	Increased trust	Being more trusting of partner.

CHAPTER 5

***Reputation and retaliation:* The consequences of gossip for
the derogated individual**

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Abstract

Research findings indicate that gossip is an effective derogation strategy for usage in mate poaching contexts (Sutton & Oaten, 2014a, 2014b). However, it remains unknown how the derogated individual reacts to hearing negative gossip being spread about their reputation. The aim of this study was to investigate the mate retention strategies that the derogated individual enacts as a result of hearing this gossip. Study 1 tested willingness to engage in retaliatory behaviour. Men and women were generally unwilling to retaliate to the gossipers aggressively, with social norms constraining aggressive responses. Study 2 tested retention strategies more broadly. Derogated individuals were found to preferentially enact intersexual manipulations directed toward their partners after hearing this gossip.

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In the social economy of today, reputation can be thought of as a currency, with a good reputation increasing an individual's value and a bad reputation leaving an individual socially bankrupt. Indeed, Solove (2007) suggested that "our reputation is one of our most cherished assets" (p. 30). Gossip may enable men and women to either increase or decrease the value of another's reputation. Thus, gossip can be thought of as a form of informational aggression, with considerable and potentially lifelong consequences (Hess & Hagen, 2002).

Previous research has indicated that gossip functions as an effective derogation strategy in poaching contexts (Sutton & Oaten, 2014a, 2014b). Sutton and Oaten (2014a) initially investigated if men and women were willing to use gossip strategically to attract a romantic target from their existing partnership. They found that, cross-culturally, both men and women were willing to share derogatory gossip about a desired target's current relationship partner in order to poach the target (Sutton & Oaten, 2014a). In a second study, Sutton and Oaten (2014b) investigated reputation-based gossip from the perspective of the target. It was reported that hearing gossip about their partner's alleged sexual infidelity effectively manipulated the target's self-perceptions and their perceptions of their partner and their relationship. The majority of male and female targets reported that hearing such gossip would lead to numerous negative relational consequences, ranging from expressions of diminished affect, to interpersonal conflict, and even relationship breakdown (Sutton & Oaten, 2014b).

Buss and Dedden (1990) propose a two-step model for any successful competitor derogation strategy. First, men and women must be willing to engage in the behaviour – here, reputation-based gossip. Second, the behaviour needs to produce the desired outcome – e.g., altering (for the worse) the target's perceptions of their partner. The findings from Sutton and Oaten (2014a, 2014b) suggest that reputation-based gossip is an effective mate poaching strategy. That is, men and women reported a willingness to engage in the behaviour and the behaviour successfully decreased the target's perceptions of their partner (Sutton & Oaten,

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2014a, 2014b). However, poaching strategies involve three main players: the individual (here, the gossip), the target, and the target's partner (here, the derogated individual). The presence of mate retention suggests that successfully poaching a target may involve additional complications beyond Buss and Dedden's (1990) two-step model (Buss, 2002). In particular, it may be important to consider the poaching attempt from the perspective of the derogated individual.

The derogated individual has already achieved the ultimate aim of mate competition, becoming involved with a desirable target (Cox & Fisher, 2008). As such, if the derogated individual perceives that the gossip is attempting to poach their partner (the target) they are unlikely to simply let their partner leave without a fight. Mate retention – a suite of behaviours enacted to safeguard a relationship (Buss, 1988) – may allow the derogated individual to render the gossip's poaching attempt futile and maintain their relationship with the target over the longer term. Typical mate retention tactics include complimenting a partner on their appearance, emotionally manipulating a partner, and becoming violent against potential rivals (Buss, 1988). If the derogated individual does not recognise that the gossip is attempting to mate poach they may fail to enact mate retention tactics. As a result, the gossip's poaching attempt may prove successful, with the derogated individual potentially facing a variety of negative repercussions including relationship termination, reputational damage, emotional anguish, and economic losses (Buss, 2002).

Buss (1988) has suggested that successfully retaining a partner may also involve a two-step process. First, the derogated individual needs to deflect mate poaching attempts by would-be poachers. Second, any attempts from their partner to leave the relationship also need to be stopped by the derogated individual (Buss, Shackelford, Choe, Buunk, & Dijkstra, 2000). Engaging in mate retention may enable the derogated individual to achieve both of these objectives (Buss, 2002).

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Mate retention can involve both intrasexual manipulations (e.g., engaging in retaliatory derogation behaviours against rivals) and intersexual manipulations (e.g., engaging in positive inducement behaviours toward a partner; Buss, 1988). Mate retention research indicates that men and women involved in committed relationships should remain vigilant for potential mate poaching attempts by rivals (Buss, 1998). Consequently, hearing negative gossip about their own reputation may prime the derogated individual for a potential mate poaching attempt. If the derogated individual believes that this negative gossip will threaten their relationship, they may engage in both intersexual and intrasexual manipulations in order to retain their partner.

First, the derogated individual may enact intrasexual manipulations (e.g., retaliation directed toward the gossipers). Intrasexual manipulations could include tactics such as intrasexual threats “I stared coldly at a man who was looking at my partner” (Buss, 1988, p. 299) or violence against rivals “I got my friends to beat up someone who was interested in my partner” (Buss, 1988, p. 299). Under these circumstances, it may be unwise for the gossipers to persist with their derogation efforts. The costs associated with gossiping may outweigh the potential benefits of a successful poaching attempt. However, intrasexual manipulations could also take the form of derogating one’s mate “I told other men my partner was a pain” (Buss, 1988, p. 299). The aim of this retaliation tactic is for the individual to reduce the worth of their partner, such that the potential poacher discontinues their poaching attempt and the individual is able to retain access to their partner. While derogation of one’s mate may indicate to the gossipers that they should walk away from the competition rather than become involved with a sub-par mate, previous research has judged this retention tactic to be relatively ineffective (Buss, 1988).

Second, and conversely, the derogated individual might choose to enact intersexual manipulations (e.g., positive inducements directed toward their partner). Intersexual manipulations can include tactics such as love and care “I complimented my partner on her

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appearance” (Buss, 1988, p.298) and resource display “I bought my partner an expensive gift” (Buss, 1988, p. 298). While this strategy may result in few consequences for the gossiper, it may also make the target unwilling to leave their relationship with the derogated individual. Indeed, previously research has indicated that both men and women perceive positive inducement tactics as the most effective mate retention tactics, considerably more so than intrasexual manipulations (Buss, 1988).

However, it remains unknown whether hearing negative gossip about their reputation activates the practice of mate retention for the derogated individual. Accordingly, the aim of this study is to investigate whether the derogated individual engages in mate retention strategies – e.g., intrasexual vs. intersexual, as a result of hearing negative gossip being shared about their reputation. In line with Sutton and Oaten’s previous work (2014a, 2014b), gossip content in this study will be based on sexual reputation (specifically, alleged sexual infidelity). The reasons for this are twofold. First, sexual reputation is an element of reputation that is often intentionally concealed and hard to objectively verify (Hess & Hagen, 2002). Second, gossip content based on sexual infidelity should prove particularly damaging in mate poaching contexts (Bringle & Buunk, 1991; Sutton & Oaten, 2014b).

Study 1

One of the reasons that reputation-based gossip is low-risk and effective in poaching contexts is because it is an indirect method of aggression. That is, the gossiper can potentially manipulate and decrease the derogated individual’s reputation while preserving their own (Campbell, 2004; De Backer, 2005). It also means that the possibility of being exposed as the gossiper is reduced (Campbell, 2004). However, no intrasexual competition strategy is foolproof. Despite gossip being an indirect method of aggression, there is always the possibility that the gossiper will be exposed as such (Fisher, Shaw, Worth, Smith, & Reeve,

2010). Gossip may shift from a low-risk to a high-risk derogation strategy should the derogated individual choose to retaliate aggressively against the gossipier.

Studies investigating competitor derogation have shed some light on the expected behaviours that the derogated individual might enact. For example, Fisher and colleagues (2010) investigated male and female perceptions of female derogators. It was found that both men and women decreased their perceptions of the derogator, although men's willingness to become involved in a relationship with the derogator remained unchanged (Fisher et al., 2010). Sutton and Oaten (2014b) extended this research by investigating whether the target would retaliate as a result of hearing derogatory gossip being spread about their partner. It was reported that male and female targets focused their attentions on themselves and their partners, rather than the gossipier. When explicitly asked if they would retaliate in any way to this gossip, approximately 40% of men and women stated that they would not. However, of the 60% of targets who stated that they would retaliate, the behaviours typically endorsed tended to be non-aggressive, with few men and women specifying that they would engage in aggressive (either indirect or physical) actions against the gossipier (Sutton & Oaten, 2014b). In combination, these results indicate that, while men and women decrease their perceptions of derogators, they are generally unwilling to respond aggressively toward them. However, currently no study has investigated how the derogated individual might react as a result of hearing this negative gossip. It might be expected that, as the gossip is diminishing their reputation, the derogated individual will be more willing than the target to retaliate aggressively.

Hess and Hagen (2006) conducted a study investigating aggressive retaliatory behaviours following provocation among young adults. It was reported that women were significantly more likely to respond to provoking stimuli with indirect methods of aggression than with physical aggression. In comparison, men were equally likely to respond to the provocation with indirect aggression as with physical aggression (Hess & Hagen, 2006). Hess

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and Hagen (2006) also measured the social appropriateness of retaliating to provocation.

Beliefs about the appropriateness of retaliation were found to constrain both men and women's aggressive responses. The researchers contended that one of the reasons men and women reported similar beliefs about the appropriateness of aggression, even following provocation, may be due to the consequences involved (Hess & Hagen, 2006). Involvement in physical aggression can lead to harsh penalties in adulthood. Due to these severe penalties, even though men and women may *want* to retaliate to provocation with physical aggression, they may not perceive it as an acceptable response. Consequently, indirect aggression becomes the most viable and socially sanctioned method of retaliation for men and women in adulthood (Hess & Hagen, 2006).

The results from Hess and Hagen's (2006) study indicate that social norms do not support physical retaliation following provocation in adulthood. However, the provoking event adopted in that study focused on social loafing and lying. It might be expected that the derogated individual will engage in different retaliations when the provocation is based on a more personally relevant event – e.g., when the gossip, as part of their poaching strategy, is attempting to attack the derogated individual's reputation with gossip. Social norms may still, however, regulate how the derogated individual might react toward the gossip (Huesmann, Guerra, Miller, & Zelli, 1992). When engaging in intrasexual manipulations, the derogated individual is acting in the service of protecting their relationship. Consequently, aggressive methods of retaliation (either physical or indirect) may be more socially sanctioned in such contexts (Buss & Shackelford, 1997b). In line with this, Campbell (1986) has found that the primary instigator for physical aggression among women is the sharing of derogatory gossip about another woman's sexual reputation. It appears that spreading such gossip may escalate retaliation from indirect to physical methods of aggression. However, data from Campbell's (1986) study were collected in 1979 and the participant sample included women from both youth detention centres and prisons. Accordingly, this sample is not likely to be representative

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of how women in the wider community typically respond upon hearing derogatory sexual reputation gossip about themselves. Additionally, as Campbell's (1986) study only sampled women, it remains unknown how men might react to hearing such gossip.

The current research is exploratory in nature, and as a result, the overarching goal of this study is to investigate preliminary ideas, discover likely responses, and refine measurement concepts (Pinsonneault & Kraemer, 1993). Study 1 specifically aims to investigate the retaliatory behaviours that the derogated individual engages in after hearing negative gossip being shared about their sexual reputation. If reputation-based gossip does function as a low-risk mate poaching strategy, then the derogated individual should be unwilling to respond aggressively toward the gossiper. Additionally, beliefs about the social appropriateness of retaliation following provocation should not be supportive of aggression in such contexts.

Method

Participants and Recruitment

A total of 169 respondents (82 women and 87 men) participated in the study. The mean age for women was 32.8 years (SD 10.64, range 18-70), while the mean age for men was 28.8 years (SD 7.15, range 18-46). The majority of participants (88%) identified as North American. Of the remaining participants, 10% identified as Asian, 1% as European, and 1% as South American. In terms of relationship status, 36% of participants stated that they were married, 15% living with their partner, 38% in a relationship (but not living with their partner), and 11% single. Finally, 69% of participants stated that they were not parents.

Procedure

Participants filled out a short, anonymous, online questionnaire. An advertisement was placed on online crowd-sourcing site M-Turk, with participants paid a nominal fee for their

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participation in the study. Participants initially read an information form and recorded demographic information including age, sex, nationality, sexual orientation, relationship status, and parental status. Following this, participants read a one-paragraph long, hypothetical scenario, adapted from Sutton and Oaten (2014b), asking them to imagine that they had heard gossip being shared about their alleged sexual infidelity:

Imagine that you have overheard someone talking about and spreading negative information about you. They have been passing on information about your sexual reputation (e.g., that you sleep around and are unfaithful). Think about the feelings and emotions that you would experience after hearing such information about yourself.

Participants then answered the *Retaliatory Behavior Scale* adapted from Hess and Hagen (2006). Participants were asked how willing they would be to engage in eight different retaliatory behaviours as a result of hearing this gossip including: BEFRIEND, befriend the gossip; DISCUSS, rationally discuss with the gossip why they were spreading this gossip; GOSSIP, spread gossip about the gossip; IFPUNCH, threaten to punch the gossip if they continue to spread this gossip; NOTHING, walk away from the gossip and do nothing; PUNCH, punch the gossip; TELLOTHERS, tell others that the gossip is false; and TELLPARTNER, tell their partner that the gossip is false. Finally, ANGER was also measured in order to ensure that participants were responding to the hypothetical scenario as intended. Participants recorded their answers on a 10-point Likert scale with anchors *extremely unwilling* and *extremely willing*. Hess and Hagen (2006) have stated that a benefit of this free choice paradigm is that it enables participants to provide answers about their willingness to engage in numerous, non-mutually exclusive retaliatory behaviours.

Second, retaliatory behavior in response to the experimental scenario was then measured using a forced choice paradigm. Participants were asked whether they would be more likely to attack the gossip physically or attack the gossip's reputation.

Third, again utilising the adapted *Retaliatory Behavior Scale* (Hess & Hagen, 2006), participants were asked about the social appropriateness of engaging in each of the eight

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retaliatory behaviours. Participants again recorded their answers on a 10-point Likert scale with anchors *extremely inappropriate* and *extremely appropriate*.

Results

Willingness to engage in retaliatory behaviours: Free choice. A series of independent samples t-tests were conducted to investigate sex differences in willingness to engage in retaliatory behaviours (see Table 1). Women had a significantly higher willingness to tell others that the gossip was false than men.

Table 1: *Willingness to Engage in Retaliatory Behaviours among Males and Females*

Retaliation	Male (<i>n</i> = 87)	Female (<i>n</i> = 82)	<i>t</i>	<i>p</i>	<i>d</i>
	<i>M</i> (SD)	<i>M</i> (SD)			
1. TELLPARTNER	8.54 (1.99)	8.74 (2.19)	-.63	.53	.10
2. TELLOthers	7.85 (2.25)	8.65 (2.07)	-2.39	.018*	.37
3. DISCUSS	7.01 (2.76)	7.48 (2.33)	-1.18	.24	.18
4. IFPUNCH	5.76 (3.25)	6.02 (2.94)	-.56	.58	.09
5. PUNCH	5.48 (3.06)	5.79 (3.17)	-.65	.52	.10
6. GOSSIP	5.01 (3.08)	5.45 (3.08)	-.93	.36	.14
7. NOTHING	4.30 (2.75)	4.41 (2.62)	-.28	.78	.04
8. BEFRIEND	3.07 (2.95)	3.32 (3.01)	-.54	.59	.08

Note. *Significant at .05; The *df* for all t-tests is 167; Retaliations are ranked in order of willingness to engage in the behaviour; Responses were recorded on a 10-point Likert scale with anchors (1) *extremely unwilling* and (10) *extremely willing*; In interpreting the strength of the *Cohen's d* effect size statistic, Cohen (1992) provided the guidelines that *d* = .2 is indicative of a small effect size, *d* = .5 a medium effect size, and *d* = .8 a large effect size.

Appropriateness of engaging in retaliatory behaviour: Free choice. A series of independent samples t-tests indicated that there was no significant sex difference in belief of the appropriateness of engaging in the retaliatory behaviour for any of the acts (see Table 2).

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Table 2: *Appropriateness of Engaging in Retaliatory Behaviours among Males and Females*

Retaliation	Male (n = 87)	Female (n =82)	<i>t</i>	<i>p</i>	<i>d</i>
	<i>M</i> (SD)	<i>M</i> (SD)			
1. TELLPARTNER	9.13 (1.61)	8.94 (1.89)	.70	.49	.11
2. TELLOthers	8.92 (1.76)	8.74 (1.80)	.64	.52	.10
3. DISCUSS	8.30 (2.18)	8.32 (2.21)	-.05	.96	.01
4. NOTHING	6.14 (2.84)	5.61 (2.88)	1.20	.23	.19
5. GOSSIP	4.26 (2.56)	3.57 (2.50)	1.77	.08	.29
6. PUNCH	3.80 (3.03)	3.56 (2.89)	.53	.59	.08
7. IFPUNCH	3.99 (2.98)	3.35 (2.73)	1.44	.15	.22
8. BEFRIEND	3.16 (2.51)	3.76 (2.68)	-1.49	.14	.23

Note. The *df* for all t-tests is 167; Retaliations are ranked in order of belief of appropriateness of engaging in the behaviour; Responses were recorded on a 10-point Likert scale with anchors (1) *extremely inappropriate* and (10) *extremely appropriate*.

Willingness compared with appropriateness. A series of paired sample t-tests were undertaken to investigate if there were differences between willingness to engage in retaliatory behaviours and belief of the appropriateness of doing so (see Table 3). Willingness to engage in acts was significantly higher than beliefs of the appropriateness of doing so for a number of retaliatory behaviours including threatening the gossip, punching the gossip, and gossiping about the gossip. Conversely, belief of the appropriateness of engaging in acts was significantly higher than willingness to do so for retaliatory behaviours including telling one's partner that the gossip is untruthful, telling others that the gossip is untruthful, confronting and rationally discussing the matter with the gossip, and walking away from the gossip and doing nothing. There was no significant difference between willingness to befriend the gossip and belief of the appropriateness of engaging in the act.

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Table 3: *Willingness and Appropriateness of Engaging in Retaliatory Behaviours*

Retaliation	Willingness (<i>n</i> = 169)	Appropriateness (<i>n</i> = 169)	<i>t</i>	<i>p</i>	<i>d</i>
	<i>M</i> (SD)	<i>M</i> (SD)			
1. TELLPARTNER	8.65 (2.07)	9.06 (1.71)	-2.69	.008*	.42
2. TELLOTHERS	8.31 (2.11)	8.84 (1.77)	-3.56	<.0005**	.55
3. DISCUSS	7.23 (2.56)	8.32 (2.18)	-5.83	<.0005**	.90
4. IFPUNCH	5.93 (3.09)	3.68 (2.88)	9.60	<.0005**	1.49
5. PUNCH	5.67 (3.10)	3.69 (2.97)	9.88	<.0005**	1.53
6. GOSSIP	5.25 (3.09)	3.93 (2.55)	5.25	<.0005**	.81
7. NOTHING	4.29 (2.64)	5.86 (2.86)	-8.00	<.0005**	1.24
8. BEFRIEND	3.19 (2.98)	3.43 (2.62)	-1.06	.29	.16

Note. *Significant at .05; **Significant at .001; The *df* for all t-tests is 166; Responses for both willingness and appropriateness were recorded on a 10-point Likert scale. For willingness anchors were (1) *extremely unwilling* and (10) *extremely willing*. For appropriateness anchors were (1) *extremely inappropriate* and (10) *extremely appropriate*.

Willingness to engage in retaliatory behaviours: Forced choice. Utilising a forced choice methodology, 65% of participants stated that they felt more compelled to attack the reputation of the gossipier, while 35% of participants stated that they felt more compelled to attack the gossipier physically. 57.5% of men stated that they felt more compelled to attack the reputation of the gossipier, while 42.5% of men stated that they felt more compelled to attack the gossipier physically. Conversely, 72.5% of women stated that they felt more compelled to attack the reputation of the gossipier, while 27.5% of women stated that they felt more compelled to attack gossipier physically.

The results indicate that there is a significant relationship between sex and desire to attack the gossipier either physically or indirectly, $\chi^2(1, N = 167) = 4.12, p = .042$. Men were significantly less likely than expected to state that they would attack the reputation of the gossipier and significantly more likely than expected to state that they would attack the gossipier physically. Conversely, women were significantly less likely than expected to state that they would attack the gossipier physically and significantly more likely than expected to say that they would attack the gossipier's reputation.

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Manipulation check. Participants indicated that the scenario did make them feel angry [$M = 8.48 + (2.04)$], suggesting that they were responding to the experimental scenario as intended.

Discussion

Using a free choice paradigm, the results indicate that the most common retaliatory responses against the gossip were non-aggressive responses, with the least common response involving befriending the gossip. Men and women tended to respond similarly in their willingness to retaliate against the gossip. In line with previous research on emotional expressivity (Ashmore, 1990), women were more likely than men to want to tell others that the gossip is untruthful. Regardless, for men and women, willingness to retaliate aggressively (either indirectly or physically) against the gossip was less common than either telling others that the gossip is untruthful or rationally discussing the issue with the gossip. This finding contrasts research from Campbell (1986), who found that provocation in the form of derogatory sexual reputation gossip may escalate retaliation to physical aggression. However, as has been discussed, Campbell's (1986) sample may have led to ungeneralisable results.

When explicitly asked if they would prefer to respond to the gossip with physical aggression or indirect aggression, both men and women preferred to retaliate indirectly. However, in line with previous research investigating sex differences in aggression (Condry & Ross, 1985; Hess & Hagen, 2006), men were more likely to retaliate with physical methods of aggression than women.

A similar pattern of results was found when investigating beliefs of the appropriateness of engaging in retaliatory behaviours against the gossip. Again, men and women indicated that they felt that non-aggressive retaliations were more appropriate than aggressive responses, with befriending the gossip reported to be the least appropriate course of action. The current findings are consistent with research investigating the social

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appropriateness of retaliating to social loafing and lying (Hess & Hagen, 2006). However, they contrast with research hypothesising that aggressive retaliation may be socially sanctioned in mate retention contexts (Buss & Shackelford, 1997b). This study was the first to investigate usage of reputation-based gossip as a strategy for mate poaching from the perspective of the derogated individual. It appears that, even when the derogated individual is attempting to defend their reputation and protect their relationship from the consequences of this negative gossip, aggressive retaliation is not viewed as socially appropriate.

No sex difference was found in beliefs of the appropriateness of engaging in retaliatory behaviours against the gossipier. This perhaps indicates that the social norms surrounding retaliation are similar for both men and women, supporting research from Hess and Hagen (2006). However, a number of significant findings were obtained when willingness to engage in retaliatory behaviours was compared with beliefs of the appropriateness of doing so. As this research is exploratory in nature, these variables were compared in order to investigate if the derogated individual's beliefs about the appropriateness of retaliation influence their willingness to engage in retaliatory behaviours. For non-aggressive responses (including telling both their partner and others that the gossip is untruthful, rationally discussing the issue with the gossipier, or walking away and doing nothing), the derogated individual's belief of the appropriateness of engaging in the act was significantly higher than their willingness to do so. In comparison, for aggressive responses (including threatening to punch, punching, or gossiping about the gossipier), the derogated individual's willingness to engage in the act was significantly higher than their belief of the appropriateness of doing so. The only behaviour that showed no difference between willingness and appropriateness was befriending the gossipier – derogated individuals were not willing to befriend the gossipier, nor did they report that it was appropriate to do so. Research from Hess and Hagen (2006) may help to provide an explanation for these results. The researchers suggest that, while men and women have an underlying disposition to

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retaliate to provocation aggressively, social norms regulate and constrain such behaviour. As such, while the derogated individual may want to retaliate aggressively against the gossip, they may feel that it is inappropriate to do so. As Huesmann and Guerra (1997) propose, and as the present findings indicate, the social norms surrounding aggression and aggressive behaviour should be highly correlated.

Study 2

The results from Study 1 suggest that the derogated individual is unwilling to respond to the gossip aggressively. In conjunction with previous research (Sutton & Oaten, 2014a, 2014b), this provides further evidence of the effectiveness of gossip as a derogation strategy for usage in mate poaching contexts. The intrasexual manipulations that derogated individuals were willing to engage in (e.g., rationally discussing the issue with the gossip or telling others that the gossip is untrue) are unlikely to act as a deterrent to the gossip, especially in the face of the potential mating pay-offs that they may enjoy if they continue with their derogation strategy.

However, Study 1 only measured willingness to engage in intrasexual retention tactics (and, in particular, retaliatory behaviours). As such, the intersexual retention tactics the derogated individual may engage in remain untested. Researchers have suggested that a good mate retention strategy should comprise both deflecting intrasexual competitors as well as stopping a partner's defection from the partnership (Buss, 2002). The results from study 1 indicate that the derogated individual is unwilling to retaliate aggressively against the gossip. However, it might be that the derogated individual preferentially focuses on intersexual tactics, for example being extra loving and caring toward their partner. If usage of such tactics deters the derogated individual's partner from leaving the relationship the gossip's mate poaching attempt will be still be unsuccessful.

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The Mate Retention Inventory (MRI; Buss, 1988) has been utilised by a number of researchers in order to investigate the strategies that men and women engage in when attempting to retain a partner (e.g., Kardum, Hudek-Knežević, & Gračanin, 2006; Shackelford, Goetz, & Buss, 2005; Shackelford, Goetz, Buss, Euler, & Hoier, 2005). The MRI is a reliable and valid measure of mate retention (Buss, 1988; Buss & Shackelford, 1997a). The scale measures both intrasexual and intersexual manipulations, and comprises of 19 retention tactics, which range from vigilance to violence (Buss, 1998). The MRI has been utilised in research investigating the similarity between self-report and partner-report of mate retention (Shackelford et al., 2005a), and with cross-cultural (e.g., de Miguel & Buss, 2011; Kaighobadi, Shackelford, & Buss, 2010), and homosexual samples (e.g., VanderLaan & Vasey, 2008).

Cross-culturally, a number of sex differences have been found in mate retention, as measured by the MRI. Men are more likely than women to perform tactics including mate concealment, submission and debasement, possessive ornamentation, resource display, intrasexual threats, and violence against competitors (Buss, 1988; Buss & Shackelford, 1997a). In comparison, women are more likely than men to engage in retention tactics including appearance enhancement, verbal possession signals, punish mate's infidelity threat, and jealousy induction (de Miguel & Buss, 2011; Kardum et al., 2006). Further, these sex differences have been found to be relatively stable over time (Kaighobadi et al., 2010). Despite these differences, overall, men and women do tend to engage in very similar retention strategies when protecting their relationship (Buss, 1988). For example, few sex differences have been found in usage of retention tactics including vigilance, love and care, monopolisation of time, and commitment manipulation (Buss, 1988).

However, studies utilising the MRI have tended to investigate general willingness to engage in these strategies, without introducing a specific relational threat (e.g., de Miguel & Buss, 2011; Kardum et al., 2006; Starratt, Shackelford, Goetz, & McKibbin, 2007). Men and

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women have been found to engage in mate retention tactics (e.g., being loving and caring) simply as a function of being involved in a relationship (Buss, 1988). However, mate retention is also expected to increase in line with the individual's beliefs of increased threat to their relationship (Buss, 2002; Buss & Shackelford, 1997a). For example, if the derogated individual hears negative gossip being shared about their sexual reputation, this may lead them to believe that their relationship is under threat. Indeed, as has been discussed, the derogated individual should have good reason to hold such a belief. Previous research has indicated that if the target hears negative sexual reputation gossip about their partner's fidelity this often leads to a variety of negative relational outcomes for the couple (Sutton & Oaten, 2014b). If hearing negative gossip about their sexual reputation does lead to the derogated individual perceiving that their relationship is under threat then the derogated individual should engage in additional mate retention strategies beyond what they normally would. However, this hypothesis has not been empirically tested.

Buss and Shackelford (1997a) have previously investigated how perceived likelihood of spousal infidelity affects mate retention. Men and women were asked to fill out a measure indicating their beliefs of spousal infidelity over the next year. Results on this measure were then correlated with findings from the MRI. The researchers found that when men believe that there is an increased probability of spousal infidelity in the future they are more likely to engage in behaviours including mate concealment, punishment of a mate's infidelity, and competitor derogation, relative to men who do not share this same belief (Buss & Shackelford, 1997a). In comparison, perceptions of future spousal infidelity were not found to affect women's retention strategies. However, Buss and Shackelford (1997a) measured the relationship between beliefs of future spousal infidelity and engagement in mate retention. As such, it remains unknown if the introduction of a perceived threat to the relationship in the current context leads to changes in mate retention.

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Therefore, the aim of study two is to investigate the intrasexual and intersexual mate retention strategies men and women engage in after hearing gossip being shared about their alleged sexual infidelity. In particular, the effect of a relational threat induction (hearing negative gossip about their sexual reputation) on the derogated individual's usage of mate retention tactics will be investigated.

Method

Participants and Recruitment

A total of 175 respondents (93 women and 82 men) participated in the study. The mean age for women was 30.9 years (SD 8.72, range 19-54), while the mean age for men was 28.7 years (SD 9.84, range 18-63). The majority (94%) of participants identified as North American. Of the remaining participants, 4% identified as Asian, 1% as European, and 1% as African. In terms of relationship status, 33% of participants stated that they were married, 17% living with their partner, 41% in a relationship (but not living with their partner), and 9% single. Finally, 63% of participants stated that they were not parents.

Procedure

Participants, recruited via M-Turk, filled out a short, anonymous, online questionnaire. Utilising the same methodology as with study 1, participants initially read an information form and filled out demographic information. Participants were then advised to read a short, hypothetical scenario asking them to imagine that they had heard derogatory gossip being shared about their alleged sexual infidelity.

In contrast to study one, participants were then asked to answer the *Mate Retention Inventory-Short Form (MRI-SF)* (Buss, Shackelford, & McKibbin, 2007). The MRI-SF assesses the likelihood of participants engaging in 19 mate retention tactics with two items used per tactic. The MRI-SF has been found to have similar reliabilities to the MRI and, due to its efficiency, is ideal for use in both basic and applied research (Buss et al., 2007). Alpha

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reliabilities for each of the tactic composites varied from $\alpha = .54$ to $\alpha = .83$, indicating a high level of reliability across tactics (see Appendix). When answering the MRI, participants are generally asked how frequently they have performed each tactic within the past year using a 4-point ordinal scale with anchors *never*, *rarely*, *sometimes*, and *often* (Buss, 1988).

However, the current study is investigating likelihood of undertaking each of the tactics as a result of hearing gossip about oneself. As providing deterministic answers (e.g., I will never perform this act) on future-oriented actions may lead to unreliable results (Steinberg, 2009), participants provided their answers to the MRI on a 7-point Likert scale with anchors *extremely unlikely* and *extremely likely*.

Results

Means and standard deviations for likelihood of engaging in mate retention tactics among males and females are provided in Table 4. A series of paired samples t-tests were undertaken in order to compare participant likelihood of engaging in a series of mate retention tactics. Overall, participants were significantly more willing to engage in intersexual manipulations than intrasexual manipulations, $t(174) = 8.92, p < .0005, d = 1.35$. For intersexual manipulations, participants were significantly more likely to engage in positive inducements than either intersexual negative inducements, $t(174) = 15.38, p < .0005, d = 2.33$; or direct guarding, $t(174) = 16.97, p < .0005, d = 2.57$.

Participants were also significantly more likely to engage in intersexual negative inducements than direct guarding, $t(174) = 7.76, p < .0005, d = 1.18$. For intrasexual manipulations, participants were significantly more likely to engage in public signals of possession than intrasexual negative inducements, $t(174) = 14.20, p < .0005, d = 2.15$. However, participants were significantly more likely to engage in intersexual negative inducements than intrasexual negative inducements, $t(174) = 12.65, p < .0005, d = 1.92$.

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Sex Differences. A series of independent samples t-tests were undertaken to investigate sex differences in mate retention tactics. Overall, men were significantly more likely to engage in mate retention than women, $t(173) = 2.43, p = .016, d = .37$. For mate retention domains, men were also significantly more likely to engage in intersexual manipulations than women, $t(173) = 3.00, p = .003, d = .46$. However, no sex differences were found in likelihood of engaging in intrasexual manipulations, $t(173) = 1.70, p = .09, d = .26$. Some slightly different patterns of results were found when looking at the mate retention categories. For example, men were significantly more likely to engage in positive inducements than women, $t(173) = 4.65, p < .0005, d = .71$. However, no sex differences were found in likelihood of engaging in direct guarding, $t(173) = .48, p = .63, d = .07$; intersexual negative inducements, $t(173) = 1.68, p = .095, d = .26$; public signals of possession, $t(173) = 1.74, p = .08, d = .26$; or intrasexual negative inducements, $t(173) = 1.02, p = .31, d = .16$. Finally, men were also significantly more likely than women to engage mate retention tactics including emotional manipulation, $t(173) = 2.25, p = .026, d = .34$; commitment manipulation, $t(173) = 2.43, p = .016, d = .37$; resource display, $t(173) = 3.75, p < .0005, d = .57$; sexual inducements, $t(173) = 6.14, p < .0005, d = .93$; love and care $t(169.92) = 2.72, p = .007, d = .42$; submission and debasement, $t(173) = 4.68, p < .0005, d = .71$; possessive ornamentation, $t(173) = 3.11, p = .002, d = .47$; and violence against rivals, $t(162.81) = 2.28, p = .024, d = .36$.

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Table 4: *Likelihood of Engaging in Mate Retention Tactics among Males and Females*

Scale	Overall (n = 175)	Male (n = 82)	Female (n = 93)
	M (SD)	M (SD)	M (SD)
Overall mean	3.16 (1.04)	3.36 (.99)	2.98 (1.06)*
Dom 1: Intersexual manipulations	3.36 (1.06)	3.61 (.94)	3.14 (1.11)*
Cat 1: Direct guarding	2.47 (1.26)	2.52 (1.21)	2.43 (1.30)
Tac 1: Vigilance	2.92 (1.59)	2.90 (1.49)	2.94 (1.68)
Tac 2: Concealment of mate	2.26 (1.39)	2.37 (1.32)	2.17 (1.45)
Tac 3: Monopolization of time	2.23 (1.39)	2.30 (1.37)	2.18 (1.42)
Cat 2: Intersexual negative inducements	2.97 (1.17)	3.13 (1.14)	2.83 (1.19)
Tac 4: Jealousy induction	1.79 (1.24)	1.93 (1.19)	1.67 (1.27)
Tac 5: Punish mate's infidelity	3.89 (1.76)	3.73 (1.64)	4.03 (1.86)
Tac 6: Emotional manipulation	2.64 (1.62)	2.93 (1.68)	2.38 (1.53)*
Tac 7: Commitment manipulation	3.56 (1.69)	3.89 (1.71)	3.27 (1.64)*
Tac 8: Derogation of competitors	2.96 (1.59)	3.16 (1.49)	2.79 (1.66)
Cat 3: Positive inducements	4.29 (1.30)	4.75 (1.12)	3.88 (1.32)**
Tac 9: Resource display	3.99 (1.62)	4.46 (1.43)	3.57 (1.67)**
Tac 10: Sexual inducements	4.12 (1.71)	4.88 (1.37)	3.44 (1.70)**
Tac 11: Appearance enhancement	4.92 (1.48)	5.10 (1.27)	4.76 (1.63)
Tac 12: Love and care	5.32 (1.43)	5.62 (1.20)	5.05 (1.56)*
Tac 13: Submission and debasement	3.09 (1.63)	3.67 (1.53)	2.58 (1.55)**
Dom 2: Intrasexual manipulations	2.95 (1.11)	3.10 (1.09)	2.81 (1.12)
Cat 4: Public signals of possession	3.75 (1.51)	3.96 (1.43)	3.56 (1.55)
Tac 14: Verbal possession signals	3.55 (1.71)	3.55 (1.63)	3.55 (1.78)
Tac 15: Physical possession signals	4.59 (1.75)	4.77 (1.58)	4.42 (1.89)
Tac 16: Possessive ornamentation	3.11 (1.82)	3.55 (1.75)	2.72 (1.81)*
Cat 5: Intrasexual negative inducements	2.15 (1.15)	2.24 (1.14)	2.06 (1.16)
Tac 17: Derogation of mate	1.86 (1.21)	1.95 (1.17)	1.82 (1.24)
Tac 18: Intrasexual threats	2.79 (1.83)	2.79 (1.65)	2.80 (1.99)
Tac 19: Violence against rivals	1.76 (1.20)	1.98 (1.26)	1.57 (1.11)*

Note. *Significant at .05; **Significant at .001; Responses were recorded on a 7-point Likert scale with anchors (1) *extremely unlikely* and (7) *extremely likely*.

Discussion

The results indicate that the derogated individual is significantly more likely to engage in intersexual manipulations than intrasexual manipulations upon hearing negative gossip being shared about their reputation. In particular, men and women indicated a willingness to engage in intersexual positive inducements over other intersexual categories, including direct guarding and negative inducements. This finding is consistent with previous research suggesting that, given limited time and energy, engaging in positive inducement tactics instead of negative intersexual tactics will lead to a more favourable retention outcome (Goetz et al., 2005).

For intrasexual categories, the results indicate that men and women are significantly more likely to engage in public signals of partner possession than intrasexual negative

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inducements. This finding is consistent with the findings from Study 1. Again, it appears that even when attempting to retain their partner, the derogated individual is unwilling to respond to the gossip aggressively. Finally, the results from Study 2 indicate that when the derogated individual does choose to engage in negative inducement retention behaviours, they are significantly more likely to direct these behaviours toward their partner than toward the gossip. Researchers have contended that engaging in intersexual negative inducement behaviours (negative behaviours against one's partner) may lead to relational conflict (Goetz et al., 2005). As such, the derogated individual's attempts to retain their partnership after hearing this gossip may actually backfire and instead lead to negative relational consequences. In combination, the results from both studies provide evidence that reputation-based gossip is a low-risk strategy for the gossip to engage in when attempting to mate poach. As a result of hearing negative gossip being shared about their sexual reputation, the derogated individual generally chooses to focus their attentions inward on their partner and their relationship rather than outward on the gossip. It appears that derogated individuals prefer to invest energies in the service of stopping any defection attempts by their partners rather than deflecting any mate poaching attempts by the gossip.

Overall, men were significantly more likely to engage in mate retention strategies than women as a result of hearing this derogatory gossip. However when intersexual and intrasexual manipulations were analysed separately, this sex difference was only found for intersexual manipulations. This is consistent with the results from Study 1, which found no sex differences in the intrasexual retaliatory behaviours men and women directed toward the gossip.

Previous research has suggested that, while men use some retention tactics more often than women, women will likewise use other tactics more often than men (Buss, 2002; Buss & Shackelford, 1997a). However, the results from the present study suggest that hearing negative gossip about oneself may lead to some unique relational consequences. When sex

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differences were found in this study, it was men who were significantly more likely to engage in retention tactics than women.

In analysing retention categories, men were significantly more likely to engage in positive inducement behaviours toward their partners than women. This finding is at odds with de Miguel and Buss' (2011) contention that men and women should be equally likely to use displays of love in order to retain a partner. In line with previous research, men were more likely than women to perform a range of mate retention tactics including resource display, submission and debasement, possessive ornamentation, and violence against rivals (Buss, 1988; Buss & Shackelford, 1997a). However, men were also more likely than women to engage in tactics including emotional manipulation, commitment manipulation, sexual inducements, and love and care. In contrast to previous research (de Miguel & Buss, 2011; Kardum et al., 2006) women were no more likely than men to perform retention tactics including appearance enhancement, verbal possession signals, punish mate's infidelity threat, and jealousy induction.

There are perhaps two alternate explanations for these unique sex differences. First, the results may be a methodological artefact. While previous research has asked participants about their past enactment of mate retention tactics utilising a four-point ordinal scale, the current research asked participants their likelihood of enacting these tactics using a seven-point Likert scale. The reason for this methodological change was that, due to this study being the first to assess how a retention strategy is affected by a relational threat, future likelihood of engaging in mate retention was measured. As using an ordinal scale with definitive anchors at each point in such instances may lead to unreliable results, a Likert-scale was utilised instead. However, Likert scales are generally less sensitive to sex differences than scales containing fewer points and with definitive anchors (Hess & Hagen, 2006). As such, the current findings are unlikely a result of the scale measurement used.

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Additionally, rather than being asked how often they have engaged in retention acts in the past, this study instead asked participants about their likelihood of engaging in retention tactics in the future. As such, it may be that men overestimate their likelihood of engaging in future tactics of mate retention, or conversely, that women underestimate their likelihood of engaging in future mate retention. Women are more likely than men to underestimate their abilities (Carr, Thomas, & Mednick, 1985) and have lower expectations of success on future tasks (Gitelson, Petersen, Tobin-Richards, 1985). However, it is unknown if this sex difference extends to expectations of engaging in interpersonal behaviours, such as mate retention. While this may be a potential explanation for the sex differences found in the current study, it doesn't necessarily explain why these sex differences were only found for some retention tactics. Why would women underestimate their future likelihood of engaging in some retention tactics, but not others?

A second, more likely explanation is that having a specific relational threat may lead men and women to enact different retention tactics to those engaged in when they do not feel that their relationships are under threat. Studies utilising the MRI have previously investigated general instances of mate retention. This study is the first to investigate how mate retention is influenced by the derogated individual's heightened beliefs of a threat to their partnership. While this may this help to explain the differences between the present findings and previous research, it does not in and of itself explain why these sex differences occurred. Perceiving a threat to the relationship is expected to increase men and women's retention efforts, not necessarily change them (Buss & Shackelford, 1997a; Starratt et al., 2007).

It may be the case that the specific type of threat (gossip about the derogated individual's alleged sexual infidelity) caused these sex differences to occur. Previous research has indicated that men feel more threatened by sexual infidelity, with women, conversely, more threatened at the thought of emotional infidelity (Buss, Larsen, Westen, & Semmelroth, 1992). This finding may help to explain why men are more willing to engage in mate

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retention than women after hearing gossip about their alleged sexual infidelity. Men may believe that this gossip will be more threatening to their partnership, and thus may employ additional retention tactics in order to stop their partner from straying.

This contention is consistent with research from Buss and Shackelford (1997a) who found that men engage in additional retention strategies when they believe that their partner may be unfaithful in the future, while women do not. As such, it appears that when a man hears gossip about his alleged sexual infidelity this leads to the activation of his mate retention mechanisms. In particular, the current findings indicate that, under such circumstances, men are more likely than women to engage in intersexual positive inducement tactics; behaviours research has indicated are associated with positive retention outcomes (Goetz et al., 2005). It appears that hearing this gossip does not activate the same retention mechanisms in women, in part perhaps due to women not being as threatened at the thought of sexual infidelity as men.

General Discussion

The aim of this study was to investigate if hearing derogatory gossip being shared about their sexual reputation activates the derogated individual's mate retention mechanisms. Previous research is suggestive of reputation-based gossip being a low-risk and effective competition strategy for use in mate poaching contexts (Sutton & Oaten, 2014a, 2014b). However, it was unknown whether the derogated individual would engage in retention tactics (either intersexual or intrasexual) after hearing this negative gossip. If the derogated individual responded aggressively toward the gossipier as a result of this gossip, this might shift gossip from a low-risk to a high-risk derogation strategy for the gossipier. As such, despite the potential benefits (becoming involved with a desirable target) would-be poachers may be unwilling to engage in reputation-based gossip when involved in competition. Conversely, if the derogated individual engaged in intersexual manipulations as a result of

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hearing this gossip, their partner may be unwilling to leave the relationship, again rendering the poaching attempt unsuccessful.

Study 1 found that men and women were generally unwilling to retaliate aggressively toward the gossip. The results indicate that participants believe that aggressive retaliations are inappropriate in adulthood, even in retention contexts, with these beliefs about social norms constraining aggressive behaviour. Study 2 extended these results, finding that derogated individuals were significantly more likely to engage in intersexual than intrasexual manipulations after hearing this negative gossip. Men and women were also more likely to engage in positive rather than negative retention tactics towards their partners. When men and women did engage in intrasexual manipulations, again they were more likely to act in a non-aggressive than aggressive manner toward the gossip. In sum, these findings provide further evidence that gossip may be an effective competition strategy for use in mate poaching contexts.

However, the current study does have some limitations that may affect interpretation of these findings. First, previous research has suggested that when the target hears negative sexual reputation gossip about their partner, this often leads to a variety of negative relational outcomes for the target (Sutton & Oaten, 2014b). The present results indicate that, after hearing alleged sexual infidelity gossip about their reputation, the derogated individual engages in a variety of retention tactics aimed at stopping their partner, the target, defecting from the relationship. However, it is unknown if these retention tactics decrease or stop the negative relational outcomes that would otherwise occur as a result of the target hearing this gossip about their partner. In future, it would be useful to explore the effectiveness of these retention efforts from the perspective of the target. If the employment of these retention tactics by the derogated individual is unsuccessful in stopping the target from manipulating and decreasing their perceptions of the derogated individual, this then indicates that reputation-based gossip is an extremely successful mate poaching strategy (Buss et al., 2000).

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Second, while approximately 90% of participants in both Study 1 and Study 2 were involved in a relationship, belief of partner infidelity and relationship commitment were not measured. Research from Buss and Shackelford (1997a) has shown that belief of future spousal infidelity increases mate retention efforts by men but not women. However, a recent study from de Miguel and Buss (2011) found that men and women involved in committed relationships tend to use retention tactics including commitment manipulation, love and care, and resource display more frequently than those in less committed relationships. In future it might be useful to include measures of relationship perceptions in order to investigate the effects these have on mate retention following a relationship threat induction.

Third, the usage of web-based convenience samples (via Mechanical Turk) in the current study may be indicative of sample representativeness issues. In line with previous research (Buhrmester, Kwang, & Gosling, 2011; Mason & Suri, 2011) Mechanical Turk was utilised for data recruitment as it allows for the efficient and inexpensive collection of high-quality, survey-based data. However, there is some evidence that web-based, opt-in behavioural study samples are not representative of the general population and that data collected from such samples need to be interpreted with caution (Chang & Krosnick, 2009; Shitka & Sargis, 2006). Consequently, future researchers investigating competitor derogation from the perspective of the derogated individual would benefit from recruiting broad, community-based samples.

Fourth, the current research was exploratory in nature. While in and of itself this is not a methodological limitation of the current study, it does suggest avenues for future research. Relatively few studies have investigated reputation-based gossip, particularly within the context of mate poaching (Sutton & Oaten, 2014b). As such, an exploratory research methodology was chosen for the present study to allow for the discovery, familiarisation, and refinement of research concepts (Pinsonneault & Kraemer, 1993). In addition, it is important that exploratory work is generalisable to a broad population. Consequently, this study chose

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to focus on heterosexual men and women only in order to obtain a large sample of participants. However, it is important that researchers view exploratory studies as an initial, development stage of research and use the findings from such studies to develop systematic and detailed future studies. On the basis of the present findings, future research investigating reputation-based gossip from the perspective of all three members of the mate competition triad should be descriptive, explanatory, and hypothesis-driven. In addition, this work should focus on investigating samples comprising homosexual men and women.

Overall, the present results provide additional support for the efficacy of reputation-based gossip as a strategy for intrasexual competition, particularly for usage in poaching contexts. Previous research findings indicate that men and women are willing to use gossip as a form of competitor derogation in poaching contexts (Sutton & Oaten, 2014a). This gossip is also effective in decreasing the target's perceptions of their partner (Sutton & Oaten, 2014b). The present study extended this research by examining the mate retention strategies that the derogated individual engages in after hearing negative gossip being spread about their reputation. As an indirect method of aggression, the risks for gossiping are minimised in comparison to other derogation strategies. However, even if the gossiper is revealed as such, the current findings indicate they are unlikely to face aggressive retaliations from the derogated individual. Social norms do not appear to support aggressive behaviour, even in mate retention contexts. Rather, after hearing negative gossip about their reputation, the derogated individual tends to focus their retention efforts inward on their partner and their relationship. As a result, this research confirms that gossip is a low-risk competition strategy for would-be poachers to employ in mate poaching contexts.

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Appendix

Example Items and Reliabilities (Cronbach's α) of MRI-SF

Scale	Example Item	Total	Male	Female
Dom 1: Intersexual manipulations		.93	.92	.94
Cat 1: Direct guarding		.86	.86	.87
Tac 1: Vigilance	"Snooped through my partner's personal belongings"	.70	.66	.78
Tac 2: Concealment of mate	"Took my partner away from a gathering where other men were around"	.76	.67	.81
Tac 3: Monopolization of time	"Spent all my free time with my partner so that she could not meet anyone else"	.82	.86	.80
Cat 2: Intersexual negative inducements		.85	.84	.86
Tac 4: Jealousy induction	"Talked to another women at a partner to make my partner jealous"	.91	.88	.93
Tac 5: Punish mate's infidelity	"Became angry when my partner flirted too much"	.64	.57	.69
Tac 6: Emotional manipulation	"Pleaded that I could not live without my partner"	.80	.81	.79
Tac 7: Commitment manipulation	"Told my partner that we needed a total commitment to each other"	.54	.52	.56
Tac 8: Derogation of competitors	"Pointed out to my partner the flaws of another man"	.79	.72	.83
Cat 3: Positive inducements		.91	.90	.91
Tac 9: Resource display	"Bought my partner an expensive gift"	.75	.74	.73
Tac 10: Sexual inducements	"Performed sexual favors to keep my partner around"	.68	.45	.71
Tac 11: Appearance enhancement	"Made myself extra attractive for my partner"	.83	.77	.87
Tac 12: Love and care	"Complimented my partner on her appearance"	.74	.68	.76
Tac 13 Submission and debasement	"Gave in to my partner's every wish"	.87	.80	.90
Dom 2 Intrasexual manipulations		.87	.87	.86
Cat 4: Public signals of possession		.87	.87	.87
Tac 14: Verbal possession signals	"Told my same-sex friends how much my partner and I were in love"	.74	.73	.76
Tac 15: Physical possession signals	"Put my arm around my partner in front of others"	.87	.85	.88
Tac 16: Possessive ornamentation	"Asked my partner to wear my ring"	.77	.71	.81
Cat 5: Intrasexual negative inducements		.83	.85	.82
Tac 17: Derogation of mate	"Told other men my partner was a pain"	.77	.83	.73
Tac 18: Intrasexual threats	"Stared coldly at a man who was looking at my partner"	.93	.88	.96
Tac 19: Violence against rivals	"Got my friends to beat up someone who was interested in my partner"	.64	.63	.63

CHAPTER 6
GENERAL DISCUSSION

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This dissertation forms a clear contribution to the evolutionary psychological investigation of intrasexual competition strategies, and specifically, reputation-based gossip. The overarching aim of this thesis was twofold: (1) to investigate whether gossip is used as a strategy for intrasexual competition in both traditional and non-traditional attraction settings; and (2) to investigate the effectiveness of gossip as strategy for intrasexual competition in both traditional and non-traditional attraction settings. The term traditional is used to denote intrasexual competition that is centred on available mates. In comparison, the term non-traditional signifies mate competition where one or more of the competitors are currently mated (Schmitt & Buss, 2001).

Reputation-based gossip – A model

This thesis aimed to conceptualise and explore the role of gossip as an intrasexual competition strategy for all members of the mate competition triad; the individual, the competitor, and the target. From a theoretical perspective, gossip should function as an effective competition strategy as it potentially allows the individual to learn about and manipulate the reputations of all members of this triad (De Backer, 2005). As conceptualised in the following model (see Figure 1), reputation-based gossip potentially enables the individual to simultaneously derogate a competitor, self-promote to a target, and learn about the reputations of both a target and a competitor. As a result, gossip appears to be an ideal strategy for the individual to employ when involved in mate competition. However, as discussed in Chapter 1, few empirical studies had previously investigated gossip as a strategy for intrasexual competition. This thesis extended this theoretical framework by investigating reputation-based gossip empirically from the perspective of all members of the mate competition triad.

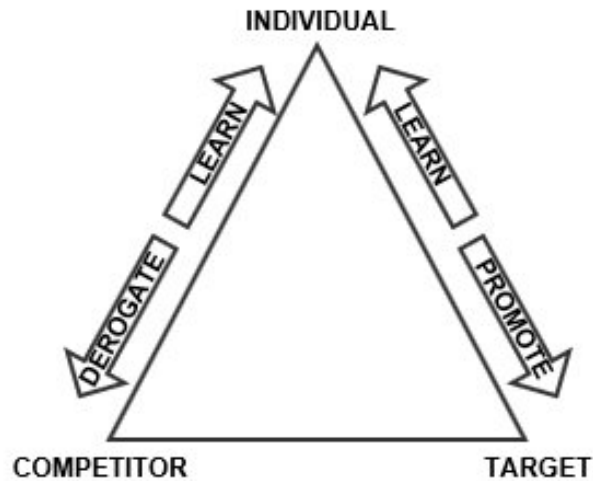


Figure 1: A Model of Reputation-Based Gossip and the Mate Competition Triad

Thesis overview

Chapter 1 aimed to provide a comprehensive and thorough literature review of reputation-based gossip. Founded on a review of the empirical research, this chapter analysed the various factors that influence both willingness to engage in gossip in mate competition, and the success of a gossip strategy. A number of gaps in the literature were identified and four main directions for future research outlined. These included additional exploration of the variables that influence reputation-based gossip, utilisation of heterogeneous samples comprising both men and women, differentiation of active and passive components of gossip, and exploration of gossip from the perspective of all three members of the mate competition triad. These four directions formed the foundation of this dissertation and were explored in subsequent chapters.

Chapter 2 focused on the first on these avenues for prospective research by investigating the demographic variables that influence a woman's tendency to gossip. Age, relationship status, and parental status were all found to influence gossip tendencies, with young, unmarried, and childless women reporting the highest gossip tendencies. However, parental status was found to be the best predictor of both a woman's overall tendency to

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gossip, and her tendency to specifically engage in physical appearance and social information gossip.

Chapter 3 also investigated willingness to engage in reputation-based gossip, but specifically within the non-traditional attraction context of mate poaching. As a form of indirect aggression, gossip is ideally suited to usage in poaching contexts; enabling the individual to derogate a competitor covertly, and thus escape potential repercussions from both the romantic target and the romantic competitor (Buss & Dedden, 1990; Schmitt & Buss, 1996). However, the role of gossip as a derogation strategy had not previously been studied within this context. Within both collectivistic and individualistic cultures, men and women were willing to strategically share derogatory gossip about a competitor to gain a favourable poaching outcome. However, as the potential consequences for sharing this gossip increased (e.g., when the gossip was untrue and at high cost) men were more willing to gossip than women, and participants from collectivistic cultures were more willing to gossip than participants from individualistic cultures.

The results from Chapter 3 show that gossip satisfies the first step in Buss and Dedden's (1990) two-step model for a successful competitor derogation strategy. Chapter 4 aimed to show that gossip also satisfied the second step in this model, by investigating reputation-based gossip from the perspective of the target. The target was asked how hearing gossip about their partner's alleged sexual infidelity would influence their self-perceptions and their perceptions of their partner and their relationship. Some individuals stated that hearing this gossip would lead to either no changes or to positive relational consequences. However, the majority of men and women specified that hearing this gossip would lead to negative relational outcomes, including distributive communication, relational conflict, and even relationship dissolution. Despite this, targets were generally unwilling to retaliate aggressively against the gossipier, preferring to focus their emotions on themselves and their partners.

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In combination, the results from Chapters 3 and 4 suggest that gossip functions as a successful competitor derogation strategy in poaching contexts. However, the existence of mate retention indicates that achieving a successful mating outcome may not necessarily be this straightforward (Buss, 1988). The aim of Chapter 5 was to investigate the role of gossip as a derogation strategy in poaching contexts from the perspective of the remaining member of the mate competition triad, the competitor (the derogated individual). Men and women were generally unwilling to respond to the gossipers with either physical or indirect aggression, with social norms constraining aggressive retaliations. Rather, derogated individuals preferentially focused on intersexual retention strategies – specifically, positive inducement tactics – as a result of hearing this gossip.

Limitations and directions for future research

In reflecting on the overarching limitations of the current research program it may be necessary to consider the theoretical underpinnings of this dissertation. Chapter 1 presented a thorough literature review of gossip as a means of providing a sound theoretical foundation for this thesis. However, in spite of this attempt to provide a strong basis for the research program, there may be some problems associated with the underlying premise of the current thesis. These problems centre on two main areas; gossip and evolutionary psychology.

First, this thesis aimed to investigate reputation-based gossip. However, for some researchers gossip should not be a subject area that is open to investigation. As was discussed in Chapter 1, Paul Bloom (2004) has previously stated that researchers should resist questioning the origins and functions of gossip. The reason Bloom (2004) contends this is because of his belief that gossip is an unnatural and arbitrary category and that research investigating the phenomenon is consequently likely to be superficial and descriptive. Over the past five decades numerous researchers have obviously disagreed with this contention, utilising innovative and diverse methodologies to investigate gossip. In addition, in keeping

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Bloom's (2004) criticism of gossip in mind, this thesis aimed to provide a thorough, considered, and in-depth investigation of the role of gossip in intrasexual competition by utilising large, heterogeneous samples and employing both quantitative and qualitative methodologies. Nevertheless, criticisms of the study of gossip are a good reminder for researchers that the empirical study of gossip needs to be detailed and rich in order to scratch beneath the surface of the phenomenon.

Second, this thesis utilised principles from evolutionary psychology as a means of investigating the underlying functions and purpose of gossip. Proponents of the use of evolutionary theory principles in psychology suggest that the theory provides tools that enable an explanation for the origins of psychological, strategic, and behavioural adaptations in humans (Confer et al., 2010). However, detractors of the field suggest that evolutionary psychological hypotheses cannot be falsified, that evolutionary psychology ignores the influence of learning and socialisation, and that culture is not taken into account under an evolutionary paradigm (Confer et al., 2010). Evolutionary psychological researchers have provided responses to these criticisms. It is suggested that, as was done throughout this thesis, evolutionary psychological hypotheses are tested by formulating testable predictions about the design features of the phenomenon of interest (Ketelaar & Ellis, 2000). In addition, researchers suggest that evolutionary psychology does not ignore social, learning, and cultural explanations of behaviour, but rather that distal (evolutionary) explanations of behaviour instead interact with proximal (social and cultural) behavioural explanations (Confer et al., 2010). This is perhaps best explained with reference to the results from Chapter 3 of this thesis. While cross-culturally, both men and women were willing to engage in reputation-based gossip (providing an evolutionary explanation of the underlying functions of the behaviour), participants from collectivistic cultures were significantly more willing to gossip than participants from individualistic cultures (suggesting that proximal factors interact with, and at times override, distal explanations of behaviour). Again, while not necessarily

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taking away from the current results, these criticisms of evolutionary psychology act as a reminder for future researchers utilising evolutionary principles to both consider the design features of the behaviour of interest and to also reflect on the relationship between distal and proximal factors in explaining the functions and purpose of the behaviour.

In addition to these potential theoretical limitations, it may also be useful to consider potential methodological limitations of the current research program. Each of the empirical chapters in this thesis outlined limitations relevant to their specific methodologies. However, some global methodological limitations were identified that may limit interpretation or suggest alternative explanations for the current findings. First, all of the studies undertaken for this dissertation based their experimental methodologies on hypothetical scenarios. Accordingly, the present research may be low in external validity, leading to questions about the applicability of these findings to real-world contexts. Harris (2002), for example, has been particularly critical about the usage of hypothetical scenarios in studies, such as those discussed throughout this dissertation, that examine the effects of infidelity. Harris (2002) suggests that participant reactions to a hypothetical infidelity scenario are inconsistent with responses to a mate's real infidelity. An explanation for this inconsistency is that, when reading a hypothetical scenario about a mate's infidelity, participants often find it difficult to think of either an actual relationship or of their own past experiences of relationship infidelity. As a result, it is suggested that, rather than providing their actual emotional reactions to an event, participants instead respond to hypothetical scenarios with reference to attitudes and beliefs that are unrelated to their real life experiences (Harris, 2002).

However, while the usage of hypothetical scenarios may present a significant methodological limitation, Cooper and Sheldon (2002) have noted that over half of the studies investigating close relationships in the past 70 years have utilised this methodology. As such, this dissertation is not alone in focusing on this experimental methodology. In addition, a number of benefits are gained from employing hypothetical scenarios when exploring gossip.

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As gossip can be a subtle and confidential behaviour it can be difficult to study empirically (Wert & Salovey, 2004), and gossip studied in naturalistic settings may face ethical concerns (Foster, 2004). Furthermore, by employing hypothetical gossip scenario methodologies throughout, this dissertation was able to pursue new research directions, in large samples both economically and efficiently. Finally, there is some evidence that participants do respond to hypothetical attraction and relationship scenarios similarly as in real-life contexts (Kurzban & Weeden, 2005, 2007). As such, while future researchers may benefit from utilising more naturalistic methodologies when studying gossip, the current approach does not devalue the findings of this dissertation.

Second, and relatedly, all of the findings from the current research came from self-report questionnaires. This may be problematic because people might be reluctant to accurately report on such socially undesirable activities as gossip, competitor derogation, and mate poaching (Davies, Shackelford, & Hass, 2010; Fisher, Cox, & Gordon, 2009; Nevo & Nevo, 1993). The questionnaires utilised in this dissertation aimed to bypass or minimise this problem by avoiding mention of gossip in their methodologies [e.g., the *TGQ* (utilised in Chapter 1) does not use the word gossip throughout; Nevo, Nevo, & Derech-Zehavi, 1994]. Additionally, conducting the research online meant that participants were able to answer the surveys privately and anonymously. More importantly, while social desirability is a concern for research utilising self-report questionnaires, there is reason to believe that its influence on the current findings is minimal. In Chapters 3, 4, and 5 (chapters investigating mate poaching), participants were asked if they had previously attempted to mate poach. Across the five empirical studies outlined in these three chapters, approximately 28% of participants reported that they had previously attempted to poach a partner. It seems unlikely that participants would state that they had previously attempted to mate poach whilst being unwilling to respond to a hypothetical scenario investigating mate poaching (Davies et al., 2010). Nevertheless, on the basis of the present findings it may be useful for future research to

CHAPTER 6: GENERAL DISCUSSION

utilise more objective methodologies when investigating the role of gossip in mate competition.

Third, the usage of convenience samples in empirical studies throughout this thesis, and in particular, the use of Mechanical Turk as a data recruitment method (as seen in Chapters 3 and 5) represents an issue that may limit interpretation of the current results. There are both benefits and limitations of utilising convenience samples of web users in psychological research. A central issue relates to sample representativeness; internet-users are not archetypal of the general population (Shitka & Sargis, 2006), with research indicating both demographic (Hargittai, 2007) and personality-based (Chang & Krosnick, 2009) differences between web users and non-users. However, Buhrmester, Kwang, and Gosling (2011), have pointed out the numerous benefits of recruiting a sample sourced through Mechanical Turk. These include that such samples are usually more demographically diverse than typical psychology convenience samples, that participants can be recruited rapidly and inexpensively, and that the quality of data obtained through Mechanical Turk appear to be comparable to data obtained through traditional sampling methods. Nevertheless, the sample representativeness of Mechanical Turk users remains problematic and future researchers should aim to investigate reputation-based gossip in community-based, generalisable samples.

Fourth, Chapters 3, 4, and 5 of this thesis investigated sex differences in the consequences of sharing derogatory sexual reputation gossip. Men were found to have a higher likelihood than women of sharing gossip about a competitor, terminating their relationships after hearing gossip about their relationship partners, and engaging in mate retention after hearing gossip being spread about their reputations. Explanations for these sex differences were provided in each of their corresponding chapters. However, in considering an overarching explanation for these sex differences, it may be that the results were influenced by the specific type of gossip investigated; sexual reputation gossip (and particularly, gossip pertaining to sexual infidelity). The reason that the current research focused on sexual

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reputation gossip is because it can be difficult to verify and is an element of reputation that should be particularly pertinent in mate poaching contexts (Bringle & Buunk, 1991; Hess & Hagen, 2002). However, researchers investigating sex differences in relational jealousy have contended that men are more distressed at the thought of a partner's sexual infidelity, with women, conversely, more distressed at the notion of emotional infidelity (Buss, Larsen, Westen, & Semmelroth, 1992). Thus, this may offer an explanation for why men were found to have heightened reactions for sexual infidelity gossip relative to women. In addition, it also suggests that the sex differences reported in this thesis may be specific to sexual infidelity gossip and will not be found with other gossip content. Researchers including DeSteno and Salovey (1996) and Harris and Christenfeld (1996) have suggested that sex differences in relational jealousy may be a methodological artefact, only occurring when forced choice measures are used in studies. Regardless, in future it might be useful for researchers to investigate how gossip based on alternative content, particularly gossip that manipulates emotional infidelity, influences men and women's responses to gossip scenarios.

It would also be useful for future researchers to investigate reputation-based gossip in online contexts. The reasons reputation-based gossip may be ideally suited to online contexts were outlined in Chapter 1. Such reasons included the anonymity and depersonalising nature of online communications (Bargh & McKenna, 2004; Smith et al., 2008), in addition to the fact that information shared online can be widespread, retrievable, and archival (Piazza & Bering, 2009; Solove, 2007). However, it is unknown whether these unique advantages outweigh the potential disadvantages of gossiping online, such as the increased chance that the individual will be exposed as the gossip source (Piazza & Bering, 2009; Solove, 2007). As Piazza and Bering (2009) have pointed out, utilisation of evolutionary psychological principles may allow for a distal explanation of internet behaviour. With the continued growth of the internet and social networking sites, it would be useful for future research to focus on investigating the influence of context (online versus offline) on a gossip strategy.

Implications and concluding thoughts

This dissertation clarifies the role of gossip in mate competition by extending previous research in a number of ways. While researchers had previously only investigated reputation-based gossip in traditional attraction contexts, the current research explored the function of gossip in both conventional and non-conventional (mate poaching and mate retention) contexts. This research was also the first to investigate the influence of a broad-range of variables (including parental status, veracity, and culture) on reputation-based gossip. This dissertation indicates that a gossip strategy involves numerous consequences for the individual, the target, and the competitor and outlines the importance of studying intrasexual competition from the perspective of all three members of the mate competition triad. The majority of research investigating intrasexual competition focuses on individual willingness to engage in the strategy (Massar, Buunk, & Rempt, 2011; Schmitt & Buss, 1996). However, as the present results indicate, willingness alone does not necessarily tell the full story. For example, even when the individual is willing to engage in competition, if derogation strategies fail to change the target's perception of their partner, or if the target's partner chooses to retaliate aggressively, the poaching attempts may be rendered futile. Therefore, the current findings suggest that a successful intrasexual competition strategy is dependent on many components.

Musician John Lydon (2012) suggested that "Gossip is a very dangerous tool. We should be more wary of the gossiper, and not the gossip they're trying to relay to you" (para. 25). Yet, the research findings presented in this thesis indicate that competitors should be wary of both the gossip and the gossiper. It was found that men and women are willing to engage in reputation-based gossip, and that it is effective in manipulating and diminishing the target's perceptions of the competitor. Despite this, even if the individual is exposed as the gossiper, they appear to face few consequences from either the target or the competitor.

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Gossip thus appears to be a low-risk and effective strategy for intrasexual competition, particularly for usage in mate poaching contexts.

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APPENDICES

FINAL ETHICS APPROVALS

From: **Ethics Secretariat** <ethics.secretariat@mq.edu.au>
Date: Mon, Jun 21, 2010 at 1:29 PM
Subject: Ethics application Reference: 5201000657- Final Approval
To: megan.oaten@mq.edu.au
Cc: katelin.sutton@mq.edu.au

Dear Dr Oaten

Re: Factors involved in romantic and sexual attraction

Thank you for your recent correspondence. Your response has addressed the issues raised by the Human Research Ethics Committee and you may now commence your research.

The following personnel are authorised to conduct this research:

Dr Megan Oaten – Chief Investigator/Supervisor

Miss Katelin Sutton- Co Investigator

Please note the following standard requirements of approval:

1. The approval of this project is **conditional** upon your continuing compliance with the National Statement on Ethical Conduct in Human Research (2007).
2. Approval will be for a period of five (5) years subject to the provision of annual reports. **Your first progress report is due on 21/06/2011.**

If you complete the work earlier than you had planned you must submit a Final Report as soon as the work is completed. If the project has been discontinued or not commenced for any reason, you are also required to submit a Final Report for the project.

Progress reports and Final Reports are available at the following website:

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms

3. If the project has run for more than five (5) years you cannot renew approval for the project. You will need to complete and submit a Final Report and submit a new application for the project. (The five year limit on renewal of approvals allows the Committee to fully re-review research in an environment where legislation, guidelines and requirements are continually changing, for example, new child protection and privacy laws).

4. All amendments to the project must be reviewed and approved by the Committee before implementation. Please complete and submit a Request for Amendment Form available at the following website:

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms

5. Please notify the Committee immediately in the event of any adverse effects on participants or of any unforeseen events that affect the continued ethical acceptability of the project.

6. At all times you are responsible for the ethical conduct of your research in accordance with the guidelines established by the University. This information is available at the following websites:

<http://www.mq.edu.au/policy/>

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/policy

If you will be applying for or have applied for internal or external funding for the above project it is your responsibility to provide the Macquarie University's Research Grants Management Assistant with a copy of this email as soon as possible. Internal and External funding agencies will not be informed that you have final approval for your project and funds will not be released until the Research Grants Management Assistant has received a copy of this email.

If you need to provide a hard copy letter of Final Approval to an external organisation as evidence that you have Final Approval, please do not hesitate to contact the Ethics Secretariat at the address below.

Please retain a copy of this email as this is your official notification of final ethics approval.

Yours sincerely

Dr Karolyn White

Director of Research Ethics

Chair, Human Research Ethics Committee

Office of the Deputy Vice Chancellor (Research)

Ethics Secretariat

Research Office
Level 3, Research HUB, Building C5C
Macquarie University
NSW 2109

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Fax: [+61 2 9850 4465](tel:+61298504465)

Email:

For Enquiries: ethics.secretariat@mq.edu.au

From: **Ethics Secretariat** <ethics.secretariat@mq.edu.au>
Date: Mon, Jun 21, 2010 at 1:51 PM
Subject: Ethics application Reference: 5201000658- Final Approval
To: Megan Oaten <megan.oaten@mq.edu.au>
Cc: Katelin Sutton <katelin.sutton@mq.edu.au>

Dear Dr Oaten

Re: Factors involved in romantic and sexual attraction 2

Thank you for your recent correspondence. Your response has addressed the issues raised by the Human Research Ethics Committee and you may now commence your research.

The following personnel are authorised to conduct this research:

Dr Megan Oaten – Chief Investigator/Supervisor

Miss Katelin Sutton- Co Investigator

Please note the following standard requirements of approval:

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Please retain a copy of this email as this is your official notification of final ethics approval.

Yours sincerely

Dr Karolyn White

Director of Research Ethics

Chair, Human Research Ethics Committee

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Email:

For Enquiries: ethics.secretariat@mq.edu.au

From: **Ethics Secretariat** <ethics.secretariat@mq.edu.au>
Date: 1 August 2011 14:18
Subject: HS Final Approval - Case (Ref: 5201100609)
To: Dr Trevor Case <trevor.case@mq.edu.au>
Cc: Dr Megan Oaten <megan.oaten@mq.edu.au>, Miss Katelin Amy Sutton
<katelin.sutton@students.mq.edu.au>

Dear Dr Case,

Re: "Gossip and mate poaching"

The above application was reviewed by The Faculty of Human Sciences Human Research Ethics Sub-Committee. The Sub-Committee wishes to thank you for a thorough and well prepared application. Approval of the above application is granted and you may now proceed with your research.

The following personnel are authorised to conduct this research:

Dr Trevor Case - Chief Investigator
Dr Megan Oaten - Co-Investigator
Miss Katelin Amy Sutton - Co-Investigator

Please note the following standard requirements of approval:

1. The approval of this project is conditional upon your continuing compliance with the National Statement on Ethical Conduct in Human Research (2007).
2. Approval will be for a period of five (5) years subject to the provision of annual reports. Your first progress report is due on 1st July 2012.

If you complete the work earlier than you had planned you must submit a Final Report as soon as the work is completed. If the project has been discontinued or not commenced for any reason, you are also required to submit a Final Report for the project.

Progress reports and Final Reports are available at the following website:

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms

3. If the project has run for more than five (5) years you cannot renew approval for the project. You will need to complete and submit a Final Report and submit a new application for the project. (The five year limit on renewal of approvals allows the Sub-Committee to fully re-review research in an environment where legislation, guidelines and requirements are continually changing, for example, new child protection and privacy laws).
4. All amendments to the project must be reviewed and approved by the Sub-Committee before implementation. Please complete and submit a Request for Amendment Form available at the following website:

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms

5. Please notify the Sub-Committee immediately in the event of any adverse effects on participants or of any unforeseen events that affect the

continued ethical acceptability of the project.

6. At all times you are responsible for the ethical conduct of your research in accordance with the guidelines established by the University. This information is available at the following websites:

<http://www.mq.edu.au/policy>

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/policy

If you will be applying for or have applied for internal or external funding for the above project it is your responsibility to provide the Macquarie University's Research Grants Management Assistant with a copy of this email as soon as possible. Internal and External funding agencies will not be informed that you have final approval for your project and funds will not be released until the Research Grants Management Assistant has received a copy of this email.

If you need to provide a hard copy letter of Final Approval to an external organisation as evidence that you have Final Approval, please do not hesitate to contact the Ethics Secretariat at the address below.

Please retain a copy of this email as this is your official notification of final ethics approval.

Yours sincerely,

Dr Peter Roger
Chair
Faculty of Human Sciences Ethics Review Sub-Committee
Human Research Ethics Committee

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From: **Fhs Ethics** <fhs.ethics@mq.edu.au>
Date: Tue, Aug 14, 2012 at 2:45 PM
Subject: RE: HS Ethics Final Approval - Oaten (Ref: 5201200173)(Condition met)
To: Dr Megan Oaten <megan.oaten@mq.edu.au>
Cc: Miss Katelin Sutton <katelin.sutton@mq.edu.au>

Dear Dr Oaten,

Re: "The consequences of spreading relationship information"

Thank you for your recent correspondence. Your response has addressed the issues raised by the Faculty of Human Sciences Human Research Ethics Sub-Committee and you may now commence your research.

This research meets the requirements of the National Statement on Ethical Conduct in Human Research (2007). The National Statement is available at the following web site:

<http://www.nhmrc.gov.au/files/nhmrc/publications/attachments/e72.pdf>.

The following personnel are authorised to conduct this research:

Dr Megan Oaten
Miss Katelin Sutton

Please note the following standard requirements of approval:

1. The approval of this project is conditional upon your continuing compliance with the National Statement on Ethical Conduct in Human Research (2007).
2. Approval will be for a period of five (5) years subject to the provision of annual reports.

Progress Report 1 Due: 7 May 2013
Progress Report 2 Due: 7 May 2014
Progress Report 3 Due: 7 May 2015
Progress Report 4 Due: 7 May 2016
Final Report Due: 7 May 2017

NB. If you complete the work earlier than you had planned you must submit a Final Report as soon as the work is completed. If the project has been discontinued or not commenced for any reason, you are also required to submit a Final Report for the project.

Progress reports and Final Reports are available at the following website: http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms

3. If the project has run for more than five (5) years you cannot renew approval for the project. You will need to complete and submit a Final Report and submit a new application for the project. (The five year limit on renewal of approvals allows the Sub-Committee to fully re-review research in an environment where legislation, guidelines and requirements are continually changing, for example, new child protection and privacy laws).
4. All amendments to the project must be reviewed and approved by the Sub-Committee before implementation. Please complete and submit a Request for Amendment Form available at the following website:

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms

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Please retain a copy of this email as this is your official notification of final ethics approval.

Please do not hesitate to contact FHS Ethics if you have any concerns or questions.

Kind regards,

FHS Ethics

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