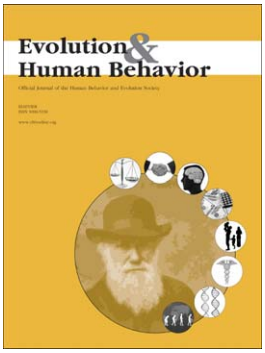

Physically-attractive males increase men's financial risk-taking

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Physically-Attractive Males Increase Men's Financial Risk-Taking

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1. Introduction

Sexual opposite-sex stimuli increase the acceptance of morally-ambiguous behaviors (Ariely & Loewenstein, 2006), the likelihood of accepting unfair offers in the ultimatum game (Wilson & Daly, 1985), and for men in particular, temporal discounting rates (van den Bergh, Dewitte, & Warlop, 2008) and financial risk-taking (Baker & Maner, 2008). Indeed, it is well-established that sexual opposite-sex stimuli arouse heterosexual men and women. However, there is a dearth of research regarding whether sexual *same-sex* stimuli also impact people's judgments and decisions. Perhaps this is because heterosexual individuals are not aroused by the same-sex, and it is arousal that leads to the aforementioned outcomes, making a study of the impact of sexual same-sex stimuli uninteresting or its conclusion foregone. However, as true as it may be, it does not negate the prospect that sexual same-sex stimuli impact people either in other ways as the opposite-sex might or in the same way but to different degrees or due to some alternate process.

The present investigation focuses on how attractive same-sex individuals impact men's financial risk-taking. It was found across four experiments that men who see attractive males take greater financial risks than those who do not. Physical attractiveness was examined because of its importance in social interactions, and it is represented often in advertising. Meanwhile, the study of financial risk-taking has everyday implications, and it was defined as the choice of a risky outcome that offers the possibility of a higher monetary reward with a certain level of risk, over the choice of a certain outcome but with a lower monetary reward, keeping the expected outcomes of both options equal. An evolution-based explanation is proffered and tested for the hypothesized effect. In evolutionary history, men have faced greater intrasexual competition in attracting women as a mating partner. Thus, when the average heterosexual man sees males who

are more physically-attractive than he is, he is motivated to increase his desirability as a mating partner to women, prompting him to accrue money, and taking financial risks helps him to do so.

This research makes an important contribution to the literature. Prior research has examined financial risk-taking primarily by focusing on sexual opposite-sex stimuli (Baker & Maner, 2008). This prior body of work is not irrelevant, of course, but it does not address how a wider set of sexual stimuli also impacts people. For example, advertisements these days do not simply use opposite- but also sexual same-sex stimuli to promote to consumers, including men. Advertising campaigns by Abercrombie & Fitch feature male models in provocative poses. The covers of Men's Health magazine feature male models who are more physically-attractive than the average male subscriber. Thus, it is important to understand how these or other sexual same-sex stimuli impact people. The current research focuses on men and financial risk-taking, but it offers a next step towards understanding how a more varied set of sexual stimuli impacts people's judgments and decisions.

2. Hypothesis Development

People's choices and behaviours have evolved to solve adaptive problems that have arisen throughout evolutionary history. A dominant problem is mating: both men and women have a motivation to increase their reproductive success (Griskevicius et al., 2007; Maner et al., 2005). Generally, there are various differences between how men and women do so (Wilson & Daly, 1985). Intrasexual competition explains this sexual dimorphism (Darwin, 1859). According to intrasexual competition, the victor gains preferential access to mating resources such as the opposite-sex, while losers die as they fail to mate (Buss, 1989; Li et al., 2002). In the context of the sexes, women typically can carry one offspring at a time, but men are largely limited in reproductive success by the number of women that they can impregnate (Trivers,

1972; Wilson & Daly, 1985; Wilson et al., 1996). This means that the number of reproductively-capable men is typically greater than that of women, such that men usually have fewer choices of women as a mating partner (Griskevicius et al., 2012; Li et al,. 2002). Thus, men face greater intrasexual competition, and it is more important for men to appear desirable to the opposite-sex in order to increase their reproductive success.

There are two primary features that women find desirable in men (Landolt, Lalumière, & Quinsey, 1995). One is physical attractiveness. Women look for men with physical features such as muscular strength that signal masculinity and dominance (Frederick & Haselton, 2007). They also choose men based on *hypothesized* physical cues of masculinity such as body scent and facial asymmetry (Gangestad & Thornhill, 1998; Penton-Voak & Perrett, 2000; Penton-Voak et al., 1999). Now, when the average heterosexual man sees attractive males, he likely perceives himself to be less physically-attractive and less desirable as a mating partner to women. Compensatory theories in psychology suggest that this perceived lack should motivate him to increase his desirability as a mating partner to women (Bäckman & Dixon, 1992; Salthouse, 1995). Given that physical attractiveness can not be increased quickly but rather has a large genetic component (Maes et al., 1996; Taylor, Wedell, & Hosken, 2007), men should be motivated to increase their desirability in other ways. This is especially consistent with fluid compensation theory (Tesser, 2000), according to which feelings of dissatisfaction in one domain motivate people in another domain that also achieves the same higher-level goal.

One alternate way for men to increase their desirability as a mating partner to women and to compensate for their perceived lack of physical attractiveness upon seeing attractive males is to increase his financial resources, such as by taking advantage of risky but lucrative financial opportunities (Furnham, 1984). Indeed, women look for men who are not only physically-

attractive but also ones with financial resources that signal relationship commitment, skill, mental acuity, all of which help women's own adaptive problem of taking care of offspring (Buss, 1989; Buss & Schmitt, 1993; Townsend & Levy, 1990). For example, women looking through personal ads have a preference for men with a high income (Campos, Otta, & Siqueria, 2002; Pawlowski & Koziel, 2002). Cross-cultural studies have also noted that men's reproductive success is a function of economic status (Hopcroft, 2006). Even in egalitarian societies, men with greater financial resources have more mating opportunities than those with fewer (Hill & Hurtado, 1996; Low, 1998). These findings suggest that men who see attractive males should take greater financial risks than those who do not because having more money can be quite successful in attracting women as a mating partner.

This view of money as instrumental to reproductive success is consistent with the tool theory of money (Lea & Webley, 2006). Money is a literal tool in that you can use a coin to unscrew the battery from the back of watch. It is also a metaphorical tool in that it is a means to achieve one's desires and needs in life. Using money to show off one's fortunes or to signal to others one's prosperity is another means that money is a metaphorical tool (Buchan, 1997; Doyle, 1998). Having money means that one's children can have the best chance at growing up with all of the best opportunities; that one does not have to worry about putting food on the table; and that one can make some career missteps without ruining one's life. Money did not always exist in its current form, of course, but men with greater financial resources have always signaled their wealth, ambition, and social status – all of which are desirable traits that increase men's reproductive success.

This discussion leads to the present hypothesis that men who see attractive males take greater financial risks than those who do not. This hypothesis is in some ways akin to prior

research. For example, an "overabundance" of males in the population increases men's preference for immediate rewards (Griskevicius et al., 2012). However, this prior work focused on non-sexual stimuli and on intertemporal decisions, whereas the present investigation focuses on sexual stimuli and on financial risk-taking. Similarly, sexual female stimuli also increase men's financial risk-taking (Baker & Maner, 2008), just like the current hypothesis with sexual same-sex stimuli. However, the mechanisms differ between prior work and the current research. Prior work suggests that men who see attractive females are motivated by mating competition, and risk-taking is itself a desirable trait that helps reproductive success, whereas the hypothesis here is that men who see attractive males are motivated by the need to compensate for their perceived lack of physical attractiveness, such as by taking greater financial risks.

Yet, might women who see attractive females also take greater financial risks? Intrasexual competition is less fierce for women, so they should not be as motivated to take greater financial risks as men when they see sexual same-sex images. Women's investments in a relationship are primarily her physiological resources such as gestation and lactation, while men's are primarily financial such as wealth, ambition, and status. These differences in the resources that are invested have resulted in different mating preferences between men and women (Kenrick et al., 1993). Women look for men with physical attractiveness and financial resources, while men look for women with beauty and health (Buss, 1989; Buss & Barnes, 1986; Feingold, 1992; Kenrick & Keefe, 1992; Kenrick et al., 1990). Thus, it is possible for women who see attractive females to take greater financial risks, but the phenomenon should occur less often than for men who see attractive males. Moreover, if or when it does occur for women, it is likely due to a different mechanism.

Four experiments are now reported. They find that men who see attractive males take

greater financial risks than those who do not (Experiment 1), and that the greater financial risk-taking for men comes from their need to compensate for their perceived lack of physical attractiveness (Experiment 2). The effect also occurs for men who have a lower income than the average American man (Experiment 3), also indicating a compensatory process. Finally, the effect occurs for men who have a mating motive that heightens their motivation to increase their reproductive success (Experiment 4), situating the current research within an evolutionary basis. To help avoid confusion, when discussing the experiments and in the figures, "men" and "women" refer to the participants, while "male" and "female" refer to the individuals in the sexual images that participants see.

3. Experiment 1: Overall Effect

This experiment was to demonstrate that men who see more attractive males take greater financial risks than those who see less attractive ones. This experiment used a 2 (participants' gender: men, women) × 2 (physical attractiveness: more, less) + 2 (controls: men, women) between-participants design. Here, participants saw either more or less attractive same-sex others (i.e., men saw males, women saw females). They then completed an ostensibly-unrelated financial risk-taking task. In the control conditions, participants did not see sexual images but proceeded onto the main financial risk-taking task.

3.1. Materials and Methods

A total of 180 heterosexual American participants took part in this experiment (mean age of 33.8 years old, 86 men, 94 women). In the four experimental conditions, participants saw images of 10 same-sex individuals who were either more or less attractive than the average man or woman. In the more attractive conditions, the males were taken from ads used by Abercrombie & Fitch, while the females were from Victoria's Secret. In the less attractive

conditions, images were of average males or females who were neither fit nor obese. The images were carefully chosen to ensure that the pose of the individuals were similar, no individuals were nude, none depicted sexual activity, all depicted a single individual, and the images were presented in color. A pre-test with participants from the same pool using the same images of more and less attractive individuals revealed that both men and women perceived the more attractive individuals to be more "good looking" and more "physically-attractive" than the less attractive ones, $p < .001$, $d = 1.53$, and this difference did not depend on gender. In the control conditions, participants did not see the images but proceeded onto the main task, described next.

Afterwards, participants completed an ostensibly-unrelated financial risk-taking task. Here, they received six hypothetical pairs of financial gambles. The first pair was between receiving $100 with .5 probability or else nothing and receiving $50 with certainty; the second was between receiving $10 with .5 probability and receiving $5 with certainty; the third was between receiving $100 with .9 probability and receiving $90 with certainty; the forth was between receiving $1,000 with .9 probability and receiving $900 with certainty; the fifth pair was between receiving $1,000 with .1 probability or else nothing and receiving $100 with certainty; and the sixth and final pair was between receiving $100 with .4 probability or else nothing and receiving $40 with certainty. In each pair, one option was relatively risky while the other was relatively safe, but both had an equal expected outcome. The total number of risky options that participants choose in each pair served as the dependent measure for financial risk-taking, with a higher score indicating greater financial risk-taking.

3.2. Results

A 2 × 2 ANOVA between participants' gender and physical attractiveness yielded a significant main effect of physical attractiveness on financial risk-taking. Participants who saw

more attractive individuals took greater financial risks than those who saw less attractive ones (M_{more} = 1.56, *S.D.* = 1.45 vs. M_{less} = .85, *S.D.* = 1.20), $F(1, 140) = 10.10$, $p < .01$, $d = .54$. Crucially, this main effect was qualified by the significant two-way interaction, $F(1, 140) = 8.13$, $p < .01$, $d = .48$. Men who saw more attractive males took greater financial risks than those who saw less attractive ones (M_{more} = 1.76, *S.D.* = 1.43 vs. M_{less} = .44, *S.D.* = .72), $t(72) = 4.80$, $p < .001$, $d = 1.13$. However, women who saw more attractive females took a similar amount of financial risks as those who saw less attractive ones (M_{more} = 1.29, *S.D.* = 1.47 vs. M_{less} = 1.22, *S.D.* = 1.42), $p = .84$.

Insert Figure 1 about Here

Participants in the control conditions scored $M = 1.80$, *S.D.* = 1.66 on financial risk-taking on average, with men scoring $M = .67$, *S.D.* = 1.16 and women scoring $M = 1.17$, *S.D.* = 1.86 in particular. Planned contrasts revealed that men who saw more attractive males took greater financial risks than those in the control condition, $t(52) = 2.43$ $p = .02$, $d = .54$, but those who saw less attractive males took a similar amount of risks as those in the control condition, $p = .43$. Women who saw more attractive females scored similar as those in the control condition, $p = .77$, and so did those who saw less attractive females, $p = .90$. Figure 1 presents the findings in all six conditions, including the two control ones.

3.3. Discussion

Men who see more attractive males take greater financial risks, not that those who see less attractive ones take fewer. The inclusion of the control condition led to this conclusion. Meanwhile, women who see either more or less attractive females take a similar amount of

financial risks. However, this experiment manipulated the physical attractiveness of the same-sex others, and so it did not yet offer evidence for the hypothesized compensatory mechanism. Thus, Experiment 2 was conducted to shed light on the underlying mechanism. The subsequent experiments also presented participants with only attractive (vs. less attractive) individuals, with other moderators or manipulations as necessary in order to examine the compensatory process that underlies (Experiments 2 and 3) and the evolutionary basis for the effect (Experiment 4) more closely.

4. Experiment 2: Physical Attractiveness

This experiment was to test the compensatory mechanism that underlies the effect demonstrated thus far. The procedure was largely similar to Experiment 1. However, participants saw attractive (not less attractive) same-sex individuals. Participants' perceived physical attractiveness of themselves relative to these attractive same-sex others was also measured. If it were a compensatory mechanism that leads to the greater financial risk-taking for men, then the effect should be stronger for those who perceive their physical attractiveness to be lacking and have a need to compensate for this perceived lack, but it should attenuate for those who see themselves as physically-attractive and have less of a need to compensate. This experiment used a 2 (participants' gender: men, women) × (physical attractiveness) between-participants design. Physical attractiveness was a continuous measure of how physically-attractive that participants perceived themselves to be.

4.1. Materials and Methods

A total of 84 heterosexual American participants took part in this experiment (mean age of 33.7 years old, 41 men, 43 women). Participants saw 10 images of attractive same-sex individuals. Afterwards, they completed the same financial risk-taking task as before. Finally,

participants indicated their own physical attractiveness relative to the same-sex others that they earlier saw on two separate measures, each on 9-point scales: "I am less physically-attractive"-"I am more physically-attractive"; and "I am less fit"-"I am more fit".

4.2. Results

The two physical attractiveness measures were averaged (r = .85, p < .001) to form a single measure, with lower scores indicating that they perceived their own physical attractiveness to be lacking. The data were submitted to a multiple regression analysis with gender, physical attractiveness (standardized), and their interaction as the independent variables, and financial risk-taking as the dependent variable. There was no effect of gender (p = .48) but an effect of physical attractiveness (β = -.518, *S.E.* = .262, p < .01). Crucially, the interaction was significant (β = .580, *S.E.* = .322, p < .01). For men, the lower their perceived physical attractiveness, the greater their financial risk-taking (β = -.382, *S.E.* = .284, p < .02). For women, their physical attractiveness did not moderate their financial risk-taking (p = .10). Figure 2 presents the interaction at ±1 *S.D.* on participants' perceived physical attractiveness of themselves.

Insert Figure 2 about Here

4.3. Discussion

The greater financial risk-taking for men only occurred for those who perceive themselves to be less physically-attractive, at least relative to the models, implying that the effect comes from the need for men to compensate for their perceived lack of physical attractiveness. This is consistent with the view that both physical attractiveness and accruing financial resources are two desirable traits for men to possess (Landolt et al., 1995). With these findings in mind, a

third experiment was designed to shed light on the underlying mechanism differently. A variable that moderates men's perceived desirability of themselves as a mating partner to women should also moderate their financial risk-taking upon seeing attractive same-sex others.

5. Experiment 3: Relative Income

This experiment was to test the compensatory mechanism by manipulating men's perceived income relative to the average American man. This experiment only presented attractive individuals to participants, but the individuals were of either the same- or opposite-sex. Participants' relative income was manipulated beforehand. Men who see attractive males should especially take greater financial risks when they perceive their relative income to be low. Their perceived lack of financial resources should heighten their motivation to increase their desirability as a mating partner to women by accruing financial resources that they perceive that they do not have. In contrast, men who perceive their relative income to be high should feel that they have the necessary financial resources, attenuating their need to accrue more of it. Thus, men's relative income should moderate the impact of seeing attractive males on their greater financial risk-taking.

Participants also completed the Self-Perceived Mating Value Scale (SPMVS; Landolt et al., 1995), which assesses how people perceive themselves in terms of their desirability as a mating partner to the opposite-sex. Crucially, the SPMVS is based on the assumption that perceived desirability of oneself is based largely on two factors – physical attractiveness and financial resources. This is consistent with the propositions that both physical attractiveness and financial resources are two desirable traits that women look for in men as a mating partner, and that accruing financial resources can compensate for men's perceived lack of physical attractiveness. Men with lower relative incomes who see attractive males should score low on the

SPMVS, and this low perceived desirability of oneself (mating value) should mediate their financial risk-taking. This experiment used a 2 (participants' gender: men, women) × 2 (sexual images: male, female) × 2 (relative income: lower, higher) between-participants design.

5.1. Materials and Methods

A total of 346 heterosexual American participants recruited took part in this experiment (mean age of 33.1 years old, 166 men, 182 women). Participants first randomly received a manipulation of either a high or low relative income that has been successfully used by prior research (Sharma & Alter, 2012). The instructions were as follows and the respective conditions are in brackets:

> Please recall a situation in which you were financially [worse/ better] off in comparison to other [men/women] around you. It can be any time when you felt your financial position was relatively [worse/better] than theirs. Please describe in detail the context of this situation in which you felt financially [worse/better] off in comparison to your peers. What happened? How did you feel about being [worse/better] off, etc.? Please try to be as descriptive as possible but focus specifically on aspects related to being [worse/better] off than other [men/women] financially.

All participants received five minutes to describe their respective situation in as much detail as possible. Afterwards, they received either attractive same- or opposite-sex individuals. That is, men and women saw either attractive males or females. All participants then completed the same financial risk-taking task as before.

To assess their perception of how desirable to the opposite-sex that they perceived themselves, participants indicated their agreement to the following six statements taken from the SPMVS: (1) Members of the opposite-sex that I like tend to like me back; (2) Members of the opposite-sex notice me; (3) I receive many compliments from members of the opposite-sex; (4) I receive sexual invitations from members of the opposite-sex; (5) Members of the opposite-sex

are attracted to me; and (6) I can have as many sexual partners as I choose (1 = Strongly Disagree, 9 = Strongly Agree).

5.2. Results

Insert Figure 3 about Here

Financial risk-taking. A 2 × 2 × 2 ANOVA on financial risk-taking revealed a three-way interaction, $F(1, 314) = 4.63$, $p < .04$, $d = .25$. Figure 3 presents the interaction. To explore the data further, separate analyses were conducted for men and women. For men, there was a two-way interaction between sexual images and relative income, $F(1, 150) = 12.32$, $p < .01$, $d = .57$. Those who saw attractive males took greater financial risks when their perceived relative income was lower than higher ($M_{lower} = 1.72$, *S.D.* = 1.03 vs. $M_{higher} = .64$, *S.D.* = .60), $t(84) = 4.34$, $p < .001$, $d = .94$. However, those who saw attractive females took a similar amount of financial risks whether their perceived relative income was lower or higher ($M_{lower} = .88$, *S.D.* = 1.03 vs. $M_{higher} = 1.17$, *S.D.* = .60, $p = .34$). Planned contrasts indicated that for men who perceived their relative income to be lower, those who saw attractive males took greater financial risks than those who saw attractive females, $t(58) = 2.27$, $p < .03$, $d = .59$. For women, there was no two-way interaction between sexual images and relative income, $p = .65$. An expanded discussion of these findings for women will be presented later.

Perceived desirability. The six measures on the SPMVS were averaged ($\alpha = .91$), with lower scores indicating a lower perceived desirability of oneself. A 2 × 2 × 2 ANOVA on this measure did not reveal a three-way interaction, $p = .28$. However, most crucially, men who perceived their relative income to be lower and saw attractive males perceived themselves as less

desirable than those whose relative income was manipulated to be higher (M_{lower} = 4.16, *S.D.* = 2.35 vs. M_{higher} = 5.48, *S.D.* = 1.39), $t(84) = 3.27$, $p < .01$, $d = .71$. The differences in the other conditions were not significant: for men whose relative income was manipulated to be lower or higher and saw attractive females, $p = .47$; for women whose relative income was manipulated as either lower or higher and saw either attractive males or females, *p*s > .18.

Insert Figure 4 about Here

Mediation analysis. The results were submitted into a moderated mediation analysis – specifically, Model 12 of the bootstrapping protocol by Preacher and Hayes (2008). This model assesses the indirect effect of participants' gender through perceived desirability on financial risk-taking, with sexual images moderating the direct effects of participants' gender on perceived desirability as well as on financial risk-taking, and relative income moderating each of these effects. The indirect effect of the highest order interaction was estimated to lie between .004 and .043 (5,000 samples, 95% C.I.), meaning that moderated mediation was successful. Men who perceived their relative income to be lower and saw attractive males perceived themselves to be less desirable to the opposite-sex, increasing their financial risk-taking (β = -.003, *S.E.* = .010, $p < .01$). The other interactions of sexual images (male, female) and relative income (lower, higher) did not reveal significant mediation effects. Figure 4 presents the statistical model for the moderated mediation analysis.

5.3. Discussion

The previous experiment found that men who perceive themselves to be less physically-attractive take greater financial risks than those who perceive themselves to be more. The current

experiment found that men who have fewer financial resources take greater financial risks than those who have more because they perceive themselves as less desirable. The experiments together are consistent with the view that physical attractiveness and financial resources are desirable traits that men should possess or at least signal to women (Landolt et al., 1995). They also indicate that the effect is compensation-driven. That is, men who see themselves as less desirable – either in terms of physical attractiveness or financial resources – are motivated to take greater financial risks upon seeing attractive males.

Moreover, for men who perceive their relative income to be lower, those who see attractive males take greater financial risks than those who see attractive females. Recall that men who see attractive females also take greater financial risks than those who do not (Baker & Maner, 2008). The current research indicates that the greater financial risk-taking is stronger for men who see attractive same- than opposite-sex others. To an extent, the current effect is also based on intrasexual competition just like prior research. However, to pinpoint the exact mechanism, the greater financial risk-taking from seeing attractive males occurs for men because they compensate for their perceived lack of physical attractiveness, such as by accruing financial resources and taking greater financial risks. In contrast, the mechanism from prior work is that seeing attractive females stimulates competition, and risk-taking is itself a desirable trait that helps reproductive success.

At the same time, there is a finding from this experiment that can not yet be explained. Women who see attractive females take greater financial risks than those who see attractive males (M_{females} = 1.28, *S.D.* = 1.58 vs. M_{males} = .56, *S.D.* = .80), $t(166) = 3.68$, $p < .001$, $d = .57$. Now, this experiment did not manipulate the physical attractiveness of either the individuals used in the images or its self-perception among participants, but it is likely that women who see more

attractive females also take greater financial risks than those who see less attractive females. This, then, reveals an incongruity between the current and the previous two experiments that found no such effect. The current experiment may offer evidence for the notion that intrasexual competition is less fierce for women, such that it is possible that women who see attractive females also take greater financial risks than those who do not, but the effect should be less pronounced (thus, it did not occur previously), and it likely occurs due to a different mechanism. Indeed, manipulating women's relative income in this experiment did not moderate their financial risk-taking upon seeing attractive females, suggesting that they, if they do take greater financial risks, likely do so for some alternate reason.

6. Experiment 4: Mating Motive

Having established the compensatory mechanism that drives the effect for men who see attractive males, the final experiment sought to demonstrate that the effect has an evolutionary basis. According to evolutionary psychologists, there are seven fundamental motives that determine how humans behave and think (Griskevicius & Kenrick, 2013). Two particular motives are manipulated in this experiment. When a *mating motive* is heightened, people are motivated to increase their desirability as a mating partner to women in order to increase their reproductive success. When a *self-protection motive* is heightened, people are motivated to secure themselves against personal loss. Thus, if the mating motive drives financial risk-taking for men who see attractive males, those with a mating motive heightened should take greater financial risk-taking, but not for men with a self-protection motive heightened. This experiment used a 2 (participants' gender: male, female) × 2 (motive: mating, self-protection) between-participants design.

6.1. Materials and Methods

A total of 210 heterosexual American participants took part in this experiment (mean age of 33.3 years old, 96 men, 114 women). They first received either the mating or self-protection motive manipulation, which prior work has used before successfully (Griskevicius et al., 2007; Sundie et al., 2011). In the mating motive condition, participants imagined meeting a desirable person of the opposite-sex. As the situation unfolded, they imagined spending a romantic day with that person and the night ended with a passionate kiss. In the self-protection motive condition, participants imagined being alone in a house late at night. As the situation unfolded, they imagined hearing noises outside and believed that someone was trying to enter the house. The lengths of the two scenarios were similar. All participants had five minutes to read the scenario and imagine it, with instructions to do so as vividly as possible, consistent with prior research. Afterwards, participants received the images of attractive same-sex (vs. opposite-sex) individuals as before.

Participants then received a different financial risk-taking task from before. Here, they were given $100,000 to invest in either a mutual fund or a stock for five years. The mutual fund, which was relatively risk-averse, had a 90% probability of returning $18,000 and a 10% chance of losing $37,000, while the stock, which was relatively risk-seeking, had a 50% chance of returning $50,000 and a 50% chance of losing $25,000. Thus, the expected utilities were not equal, but the stock was relatively more risk-seeking. Participants made a clear choice for one of the two investment products in which to invest the entirety of the $100,000. They also indicated their relative preference between the two investment products (1 = Strongly Prefer the Mutual Fund, 9 = Strongly Prefer the Stock).

6.2. Results

Investment choice. The Chi-square was for participants' choice of investment product. Men in the mating motive condition were more likely to invest in the stock than those in the self-protection motive condition (44% vs. 23.9%), $\chi^2(1) = 4.29$, $p < .04$. However, women in the mating motive condition were similar in their investment choice as those in the self-protection motive condition (32.7% vs. 35.5%), $\chi^2(1) = .10$, $p = .75$.

Insert Figure 5 about Here

Investment preference. A 2 × 2 ANOVA revealed a two-way interaction between participants' gender and motive on their relative preference between the two investment products, $F(1, 206) = 2.68$, $p < .04$. Figure 5 presents the interaction. Men in the mating motive condition preferred the stock more than those in the self-protection motive condition ($M_{\text{mating}} = 5.12$, *S.D.* = 2.59 vs. $M_{\text{self-protection}} = 3.87$, *S.D.* = 2.55), $t(94) = 2.38$, $p < .02$. However, women in the mating motive condition were similar in their investment preference as those in the self-protection motive condition ($M_{\text{mating}} = 3.98$, *S.D.* = 2.50 vs. $M_{\text{self-protection}} = 4.26$, *S.D.* = 2.55), $t(112) = .59$, $p = .56$. These findings verify those from the Chi-square analysis that sexual same-sex images increased men's financial risk-taking when they have a mating, not another, motive heightened.

6.3. Discussion

The findings support an evolution-based account for why men who see attractive males take greater financial risk-taking than those who do not. The effect that all four experiments have found is due to a mating motive, in that men who see attractive males take greater financial risks

because they have a motivation to increase their desirability as a mating partner to women – a motivation that this experiment heightened. Thus, the previous experiments suggested that accruing financial resources can compensate for men's perceived lack of physical attractiveness, while this experiment demonstrated that these motivations are evolution-based. Finally, this experiment also found that women who see attractive females do not take greater financial risks, consistent with the findings from Experiment 1 and 2, again suggesting that not only that intrasexual competition between women is less fierce, but that the dynamics of their greater financial risk-taking, if it does occur, are different.

7. General Discussion

Men who see attractive males take greater financial risks than those who do not. In evolutionary history, men have faced greater intrasexual competition in attracting women as a mating partner. Thus, when the average heterosexual man sees an attractive male, he is motivated to increase his desirability, prompting him to accrue money and taking greater financial risks. Across four experiments, men who see attractive males take greater financial risks than those who do not (Experiment 1) when (1) they perceive their physical attractiveness to be lacking (Experiment 2), (2) they have a lower income than the average American man (Experiment 3), and (3) they have a mating motive that heightens their instinct to increase their desirability as a mating partner to women (Experiment 4). The greater financial risk-taking is compensation-based – the greater financial risk-taking is driven by the need for men to compensate for their perceived lack of physical attractiveness, and accruing financial resources is one way to do so.

The current research is consistent the literature regarding social comparison theory and idealized images, both of which lead to similar predictions (Leit, Gray, & Pope, 2002; Myers &

Biocca, 1992). This literature also suggests (but it has not been empirically demonstrated yet) that men who see attractive males take greater financial risks. However, they do not explain *why* men's upward social comparison to attractive males would increase financial risk-taking. Thus, the current research offers an evolution-based prescriptive explanation that goes beyond a descriptive one. Indeed, reproductive success is a major adaptive problem for sexually-reproducing organism. However, it should be noted that both physical attractiveness and financial resources are not necessary, but they merely confer *advantages*. Indeed, women can raise children without a man's financial resources, whether this may be because that man has passed away, has left to look for another mating partner, of a temporary loss of a job, or that the man has chosen not to invest. Reproductive success without financial resources was likely much lower in history than today, but this does not negate the fact that physical attractiveness and financial resources are *not* necessities.

Meanwhile, there are several unanswered questions. The sexual same-sex images that participants saw stimulated (men's) intrasexual competition, but they were non-nude and non-sexually-explicit. It may be that overtly-explicit or erotic material may not increase financial risk-taking due to disgust, especially among heterosexual men. It may also be unlikely that homosexual men who see individuals of either sex might take greater financial risks. Intrasexual competition is likely less of a concern for them, and so they are unlikely to perceive a same-sex individual, even if he is more attractive, to be an intrasexual competitor. Yet, homosexual men who see attractive males may also take greater financial risks when they perceive that these other males are homosexual, instigating the intrasexual competition that drives heterosexual men who see attractive heterosexual males. Clearly, more research is needed to examine these intriguing possibilities.

Perhaps more importantly for future research is whether women who see attractive females also take greater financial risks. Contradictory evidence was found between the four experiments. Women who see attractive females may take greater financial risks, but the effect is likely weaker and due to some alternate process. It would be worthwhile to consider this further. Indeed, women also face intrasexual competition, just that they face less of it. What women find desirable in men is also different from what men find desirable in women. For example, women find men who are physically-attractive and have financial resources to be desirable (Landolt et al., 1995), but men find women who are fertile and youthful to be desirable (Buss, 1989; Buss & Barnes, 1986; Feingold, 1992; Kenrick & Keefe, 1992; Kenrick et al., 1990). Thus, women who see attractive females may make choices or take behaviors that signal their fertility or beauty to men. It is unlikely that taking financial risks can help in this regard, but taking risks or acting in ways that achieve the appearance of youth may be how they compensate for their perceived lack of physical attractiveness. The current research does not preclude the possibility that women who see attractive females also take risks or act in different ways as the focus here was on men and financial risk-taking. It is clear that more research is needed to explore how sexual same-sex stimuli also impact women.

In sum, prior work on sexual images and financial risk-taking has focused largely on sexual opposite-sex images. This prior work is important, but it does not explain how a wider array of sexual stimuli impacts people. Because heterosexual individuals are not aroused by other same-sex individuals, the foregone conclusion may have been that sexual same-sex stimuli have little or no meaningful impact. Yet, as both sexual same- and opposite-sex stimuli are prevalent in everyday life, such as in advertising, it is important to understand how sexual same-sex stimuli also impact people. Despite the current emphasis on men and financial risk-taking, and a lack of

an answer yet for women, the present investigation sets the stage for future research to study how sexual same-sex stimuli impact people more broadly.

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Figure 1

Experiment 1: Interaction between Participants' Gender and Physical Attractiveness on Financial Risk-Taking

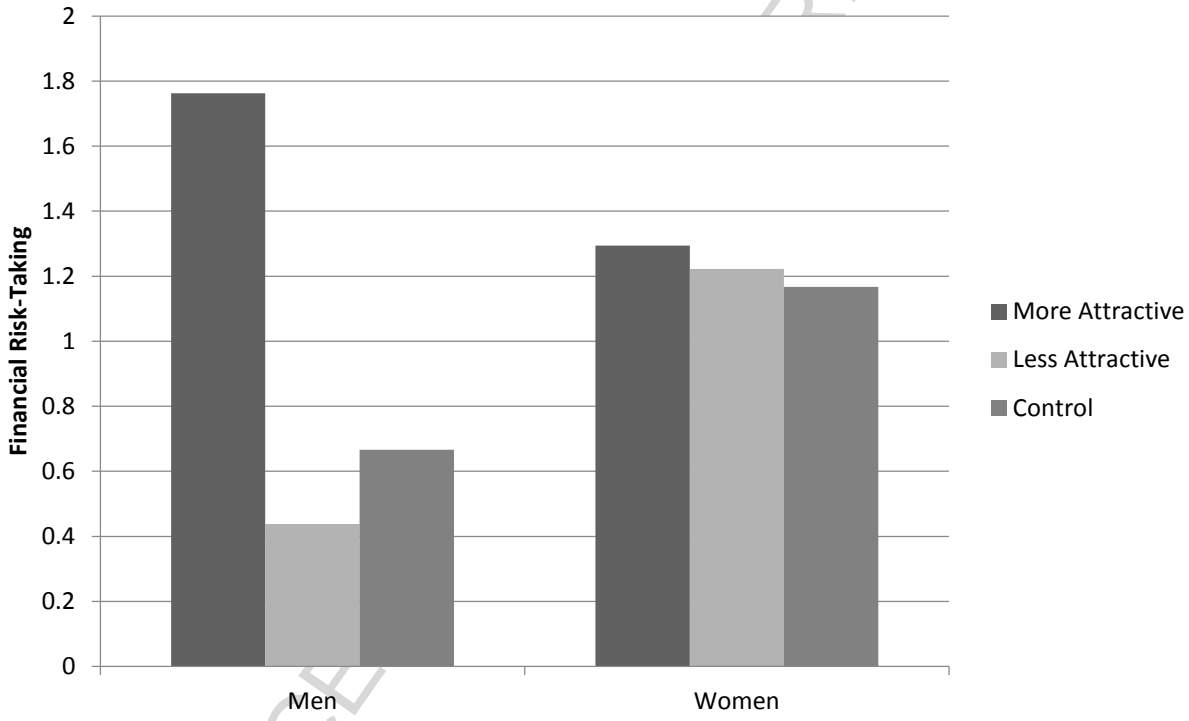


Figure 2

Experiment 2: Interaction between Participants' Gender and Physical Attractiveness of Themselves on Financial Risk-Taking

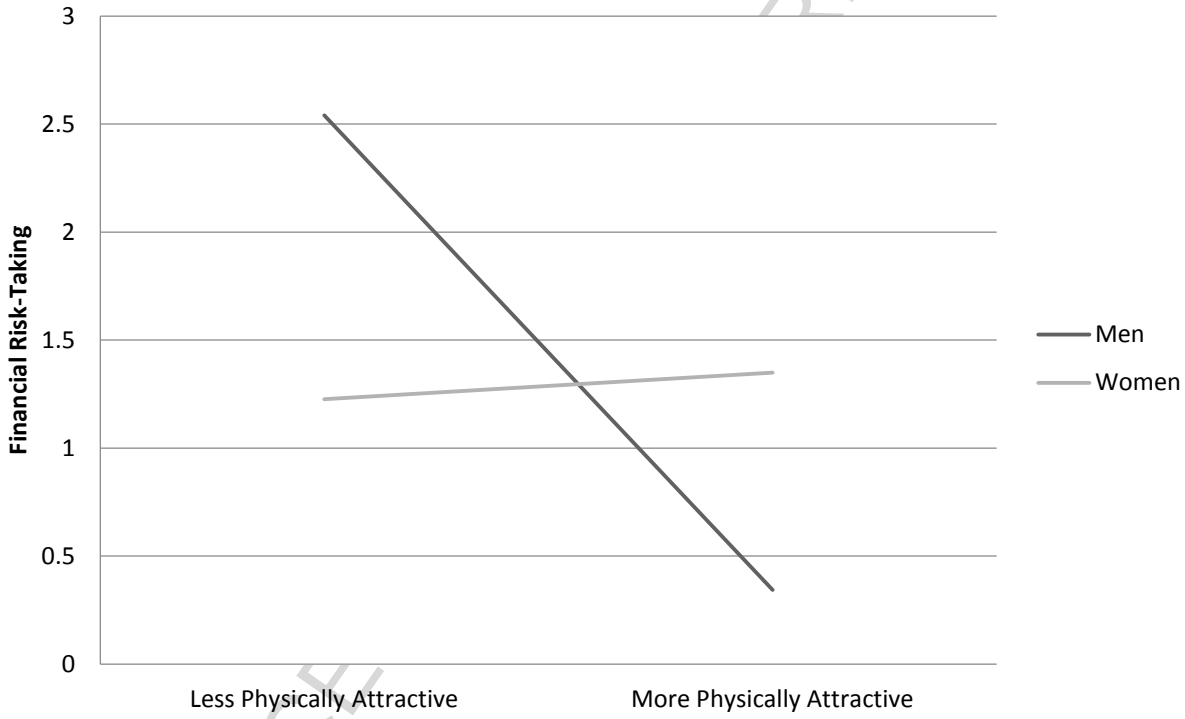


Figure 3

Experiment 3: Interaction between Participants' Gender and Relative Income on Financial Risk-Taking

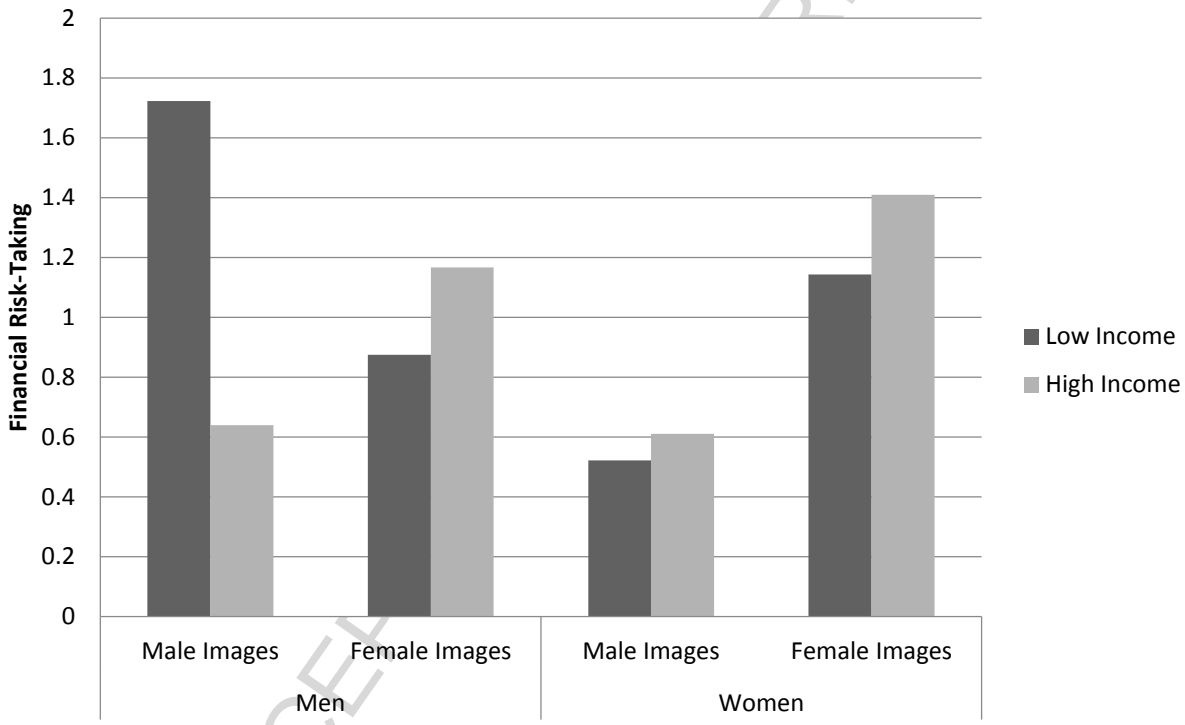
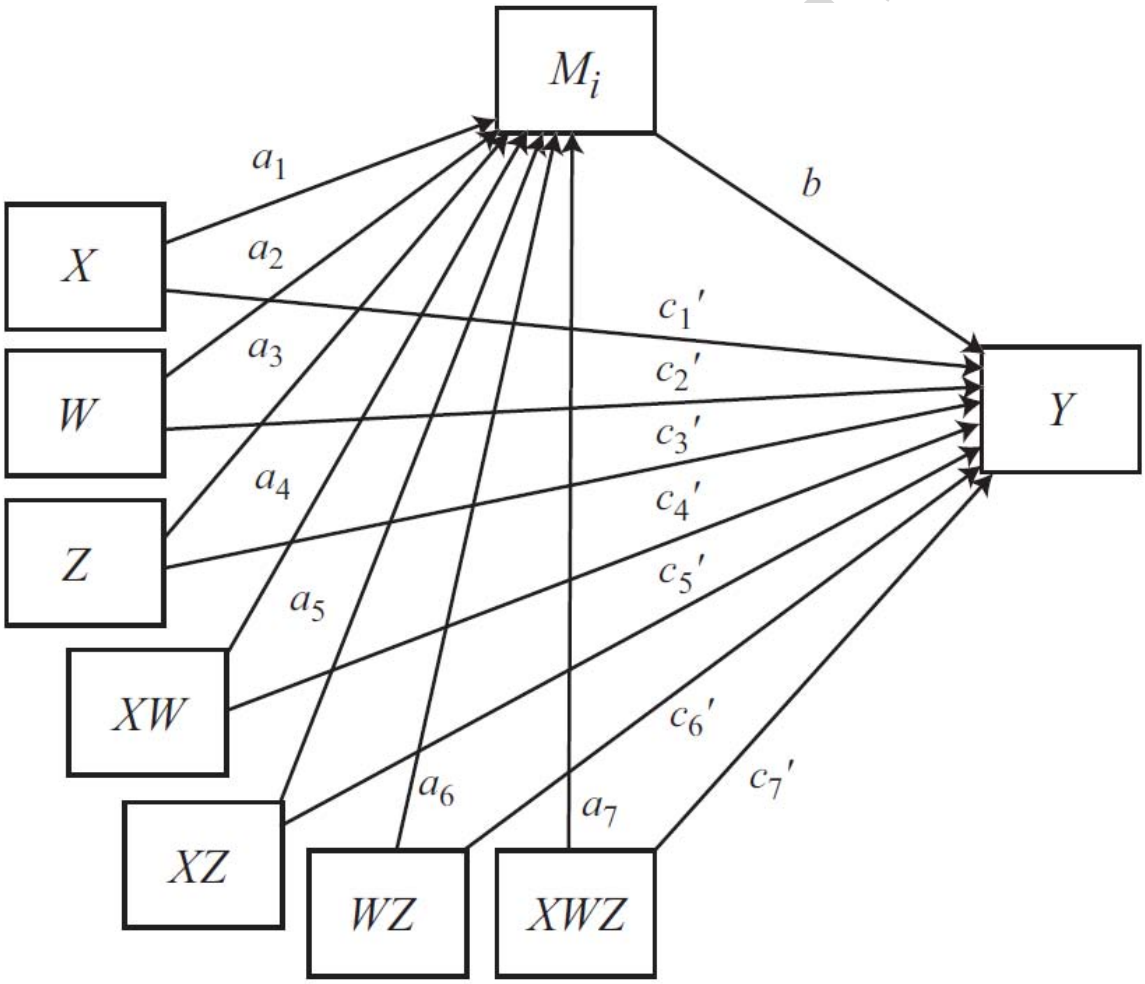


Figure 4

Experiment 3: Statistical Model of the Moderated Mediation Analysis



Variables: X = Men participants; Y = Financial risk-taking; M = Perceived mating value; W = Sexual male images; Z = Relative income

Regression co-efficients: a_1 = -.84*; a_2 = -.92*; a_3 = .13; a_4 = -.40; a_5 = .38; a_6 = .57*; a_7 = .23; b = .54*; c_1' = .02; c_2' = .47*; c_3' = -.11; c_4' = .68*; c_5' = -.30*; c_6' = -.40*; c_7' = -.30*, where * p < .05. The conditional indirect effect of X on Y through M = $(a_1 + a_4W + a_5Z + a_7WZ)b$. As per Preacher and Hayes (2008), Model 12, the conditional direct effect of X on Y = $c_1' + c_4'W + c_5'Z + c_7'WZ$.

Figure 5

Experiment 4: Interaction between Participants' Gender and Fundamental Motive on Financial Risk-Taking