What Women Say They Want versus What Men Imagine They Do:

A convenient method for characterizing and comparing self-reported and perceived preferences.

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Abstract

Previous research has shown that, in the context of romantic relationships, men preferentially advertise traits such as wealth, status, and ambition while women preferentially advertise physical attractiveness. This finding is somewhat surprising in light of other previous research showing that men and women report these traits to be less important than others such as trustworthiness, intelligence, and warmth. In the current study, we addressed one potential reason for the disconnect, which is that men and women's beliefs about what the other gender prefers are misguided. To address this, we asked participants to both self-report the traits they prefer in a romantic partner and to indicate what they imagine the opposite gender prefers. The results reveal some striking discrepancies between what people want in a potential partner and what the opposite gender imagines they want. In addition, women appear to be better at imagining men's preferences, and we discuss several reasons why this might be the case.

What Women Say They Want versus What Men Imagine They Do

For decades, large surveys have shown that heterosexual men and women around the world report that traits such as wealth, status, or physical attractiveness in a potential romantic partner are relatively less important than traits such as trustworthiness, intelligence, and warmth (e.g. Buss et al., 1990; Fletcher, Simpson, Thomas, & Giles, 1999; Lippa, 2007). However, other studies show that men and women attempt to impress each other with a particular focus on the relatively less important traits. For example, rather than focusing on trustworthiness, intelligence, and warmth, men are particularly likely to display cues indicating wealth or earning potential, such as by advertising their professional status, flashing money, or driving an expensive car. In addition, to derogate rivals, men tell women that their male rivals are poor, lack ambition, or drive cheap cars. Likewise, for women, rather than focusing on trustworthiness, intelligence, and warmth, they attempt to display their physical appeal, and derogate rivals by telling men that their female rivals are fat, have shapeless bodies, or are otherwise physically unattractive (Buss 1988; Buss and Dedden 1990; Campos, Otta, de Oliviera Siqueira, 2002; Cicerello & Sheehan, 1995; Deaux & Hanna, 1984; Fletcher, Simpson, Campbell, & Overall, 2013). Men and women also expect a potential romantic partner to evaluate them more negatively after that potential partner has been exposed to others of the same gender who are, in the case of men, ambitious or independent, and in the case of women, physically attractive (Gutierres, Kenrick, & Partch, 1999). In addition, men and women appear to base their sense of self-worth on wealth, status, and physical attractiveness, respectively (Crocker, Luhtanen, Cooper, & Bouvrette, 2003; Daly, Hogg, Sacks, Smith, & Zimring, 1983; Josephs, Markus, & Tafarodi, 1992). It is unclear just why, in the context of romantic relationships, people preferentially advertise, derogate rivals, and assess their self-worth based on traits other than those that are self-reported to be most important.

Perhaps the most obvious possibility for this disconnect is that men's and women's beliefs about what the other gender prefers are discrepant from self-reported preferences.

To address this possibility, the primary goal of the current study is to investigate discrepancies between men's and women's self-reported preferences about traits in the opposite gender with what people *imagine* are the opposite gender's preferences. A secondary aim is to determine which gender's beliefs about the opposite gender's preferences are closest to the opposite gender's self-reported preferences. To supplement the existing literature's survey data, we developed a novel method to quantify preferences in a way that provides a nuanced characterization of discrepancies between genders.

Method

Three hundred and sixteen American, heterosexual participants (50.9% female, $M_{age} = 38.3$ years, $SD = 11.8$ years; $M_{age\ females} = 38.0$, $M_{age\ males} = 38.5$; similar average age, therefore could be considered potential dating partners) recruited on Mechanical Turk completed an online survey designed to measure what men and women report as preferences in romantic partners of the opposite gender, as well as what they imagine the opposite gender prefers in them.

Before proceeding with the methods, we highlight our novel approach for characterizing preferences. First, when we measure the self-reported and imagined impacts of each trait on a person's desirability as a romantic partner, we do so at multiple levels (i.e., if the trait is "wealth", we ask how one feels about dating a partner whose wealth is far below, somewhat below, somewhat above and far above, average). Measuring impacts at multiple levels allows us to characterize non-linearities in men's and women's self-reported preferences. Second, because the levels are standardized across traits, this allows us to compare impacts on desirability across

different and ordinarily incommensurable trait dimensions; where each dimension is typically

measured on different scales with different standard units of measurement. Finally, we can use

this method to calculate an "importance score" by averaging the absolute impacts across multiple

levels of the trait, which aligns with the lay definition of importance, where a more important

trait is one with a greater impact on desirability. Together, these key aspects allow us to compare

the importance and any nonlinearities of different traits within gender, across gender, and

between self-reported and imagined preferences.

       After reporting their age and gender, each participant answered *two* blocks of questions

regarding 22 different physical/personality traits (one block for self-reported preferences, another

for imagining the opposite gender's preferences). Table 1 displays the list of traits used in the

current study. We randomized the order of the two blocks and 22 trait questions across

participants. Twenty-one of the twenty-two traits were identical for men and women participants.

Only one trait for each gender was different, although complementary; "penis size" as a male

trait and "breast size" as a female trait. All questions were identical for men and women

participants, with the exception of gender words ("he" vs. "she", "him" vs. "her", "men" vs.

"women"). For simplicity, we present the instructions and questions that only female participants

saw.

       The block that aimed to measure participants' self-reported preferences began with

general instructions: "For each of these questions, you will imagine that you learn something

about how a potential romantic partner compares to average for a particular trait and how this

affects your desire to date him. You should imagine that you previously expected he would be

about average among men for each trait." Following that, for each of the 22 traits, we asked the

following: "Imagine discovering that a potential romantic partner was _____, how would

this affect your desire to date him?", with a horizontal response slider (one decimal resolution) anchored on the left side with -2 (much less likely to want to date) and on the right side +2 (much more likely to want to date) (Figure 1). The blank could be filled in with 4 different levels of that particular trait. For example, if the trait were *intelligence*, we asked the participants how more or less likely it would be that they would want to date someone who was 1) "far less intelligent than average", 2) "somewhat less intelligent than average", 3) "somewhat more intelligent than average", and 4) "far more intelligent than average". This block therefore had a total of 88 response sliders (22 traits x 4 levels). Note that we refer to participant responses as "impact scores", because participants are responding to how a trait would impact their willingness to date a person who possesses a certain level of the trait. We use the term "self-reported preferences" to capture the pattern of impact scores across the four levels.

Figure 1. Example of question with accompanying sliders to survey the impact of a potential romantic partner's intelligence on a women's romantic interest in him.

The other block measured what participants imagine members of the opposite gender prefer in a romantic partner. This began with general instructions as follows: "Imagine how heterosexual men would respond to a woman with each trait below, compared with how they would respond to a woman who is average among women for that trait." Then, for each of the 22 traits, we asked participants: "How do you think heterosexual men's desire to date a potential romantic partner is affected if they discover that the woman is _____?" For each trait, the response slider and associated levels were identical to those in the self-reported block (see above). There were a total of 88 response sliders (22 traits x 4 levels). We use the term "imagined preferences" to capture the pattern of imagined impact scores across the four levels.

Analysis

Calculating mean impacts and plotting zigzags

The analyses began with the participants' raw self-reported and imagined impact scores. For each trait, we calculated the mean impact score for each of the four levels (far below average, somewhat below average, somewhat above average, and far above average), as well as for each of the four groups of preferences (those that men self-report, those that women self-report, those that men imagine for women, and those that women imagine for men). For each trait, we therefore calculated sixteen mean impact scores and used them to plot zigzags to visualize impact scores as a function of the different levels, plus average. We plotted average itself with an impact score of 0, as this is our reference point (see Figures 2 through 6 for noteworthy examples). Each plot allows for a visual comparison, and an estimate of the discrepancy, between 1) men's and women's self-reported preferences, or 2) men's self-reported preferences and the preferences women imagine are true for men (and vice versa).

Calculating differences between men's and women's self-reported impact scores

For each trait, we calculated the absolute difference between men's and women's self-reported impact scores for each of the four levels. The average of these scores represents the overall difference between the zigzags, and therefore the overall difference between men's and women's preferences for any particular trait dimension. Analyses of importance and shape, described below, represent higher-level constructs of the zigzags.

Calculating and comparing importance scores

For each gender, we calculated the self-reported and imagined importance of each trait by averaging the absolute values of the mean impact scores across the four levels. In this way, traits with the highest mean absolute impact scores have the highest importance scores. For example, men's self-report data show that a partner's femininity is very important to them (blue line in Figure 2a), while height is much less so (blue line in 2c). Using the importance scores, for each trait we measured discrepancies between men's vs. women's self-reported importance scores, and discrepancies between self-reported vs. imagined importance scores. We calculated the statistical significance of each of these discrepancies using a permutation test that provides a robust alternative to inference based on parametric assumptions. For each test, there were 10,000 permutations—each with the impact scores randomly shuffled at each level across the two comparison groups so as to align with the null hypothesis by breaking any existing structure in the sample data. These tests yielded a *p* value representing the proportion of permutations wherein the resulting difference was at least as extreme as that which we observed in our data.

Comparing shapes

In addition to calculating importance scores, another construct that is visible in the zigzags is their shape, which relates to their linearity (i.e., whether they peak or plateau, and what could otherwise be considered changes in slope if they were instead functions of continuous variables). For each trait, to establish whether there was a difference in shape between the zigzags representing men's vs. women's self-reported preferences, and between the zigzags representing the self-reported and imagined preferences, we began by rescaling the impact scores from one gender to match the overall importance from the other gender. Specifically, to compare men's vs. women' self-reported preferences, we rescaled men's data so that the importance score matched that of the women. This was achieved by multiplying each mean impact score for men by the ratio of women's self-reported importance over men's self-reported importance (The same rescaling was done when comparing zig-zags between self-reported preferences in one gender with imagined preferences in the other). Having removed any difference in importance, the remaining discrepancy between the zigzags represented only a discrepancy in shape. For example, shapes of self-reports for height are different for men vs. for women, whereas shapes of self-reports for financial debt are the same for men and for women, despite their difference in terms of importance (blue and red lines, respectively in Figure 2a and 2c, respectively). We determined statistically significant shape discrepancies using the same permutation testing paradigm discussed above. Unlike the analyses of importance (above), in which we calculate both importance scores and differences between those importance scores, in these analyses we calculate only discrepancies in shape because there is no shape score.

Asking which gender's beliefs are closer to the opposite gender's self-reports

As a first step, for each of the 22 traits we calculated the absolute difference between the self-reported and imagined mean impact scores, separately for men imagining women's preferences and women imagining men's preferences. We then asked if the mean of these values differed significantly between men and women using a Student's t-test. The gender with the lower mean discrepancy can be said to have outperformed the other, according to the opposite gender's self-reported preferences. In addition, we conducted a Pearson correlation between the self-reported and imagined importance scores for each trait, separately for men imagining women's preferences and women imagining men's preferences. This allowed us to ask which gender appears to better estimate the relative importance of each trait to the opposite gender (according to the opposite gender's self-reports).

Results

Table 1 presents self-reported importance scores for men and women, as well as the discrepancy between the two, for each trait. The traits are ranked in order from most to least discrepant, regardless of the direction of the discrepancy. For each trait we also present the discrepancy between the two genders' shapes. Statistically significant discrepancies are depicted with asterisks.

Trait Dimension	Importance to Women	Imp. to Men	Imp. Discrepancy		Shape Discrep.	
Height	0.7537	0.1910	0.5628	***	0.2239	***
Financial Debt	1.0112	0.6124	0.3988	***	0.0499	
Ambitious	1.0163	0.6723	0.3440	***	0.0487	
Sexual	0.5379	0.8345	-0.2966	***	0.4249	***
Romantic	0.8581	0.6097	0.2484	***	0.0132	
Charitable	0.7110	0.4700	0.2410	***	0.0471	
Breast(Penis) Size	0.5129	0.2787	0.2342	***	0.2547	***
Wealthy	0.5700	0.3484	0.2216	***	0.0528	
Social Status	0.4845	0.2713	0.2132	***	0.0556	
Outgoing	0.4567	0.2550	0.2017	***	0.0519	
Phys. Attractive	0.7927	0.964	-0.1713	***	0.1489	*
Feminine	0.8658	0.7013	0.1645	**	1.4026	***
Funny/Playful	0.9815	0.8345	0.1470	**	0.0692	
Trustworthy	1.4314	1.2900	0.1414	***	0.0520	
Intelligent	1.0716	0.9310	0.1406	**	0.0866	
Educated	0.8932	0.7682	0.1249	**	0.0836	
Warm/Friendly	1.0411	0.9247	0.1165	**	0.1128	*
Nurturing	0.9511	0.8448	0.1062	*	0.0864	
Hygiene	1.1784	1.0742	0.1042	*	0.0745	
Aggressive	0.6064	0.5040	0.1023	~	0.2391	***
Masculine	0.7339	0.8087	-0.0749		1.6174	***
Athletic	0.5870	0.6303	-0.0434		0.1169	~

Table 1. Importance scores of each trait dimension for women and men, the discrepancy between the two genders in importance, and in shape. Traits are ordered from most to least discrepant, regardless of the direction of the discrepancy (+ means more important to women, - means more important to men). The *p*-value significance level of each importance discrepancy and of each shape discrepancy is indicated to the right of each (.1 > ~ > .05 > * > .01 > ** > .001 > *)**

Table 2 presents self-reported importance scores for women alongside the importance scores that men imagine for women, and the discrepancy between the two (top panel; vice versa in bottom panel). Table 2 ranks traits from the highest to the lowest self-reported importance scores. Also presented is the discrepancy between self-reported and imagined importance scores. Statistically significant discrepancies are depicted with asterisks.

The traits most important to women are trustworthiness, hygiene, intelligence and warmth/friendliness. Least important are sexuality, penis size, social status, and least of all, extraversion ("outgoing"). The traits most important to men are trustworthiness, hygiene, physical attractiveness and intelligence. Least important are breast size, social status, extraversion, and least of all, height.

Trait Dimension	Importance to Women	Imagined Imp.	Imp. Discrepancy		Shape Discrep.	
Trustworthy	1.4314	1.1566	-0.2748	***	0.1088	
Hygiene	1.1784	1.1150	-0.0634		0.1362	**
Intelligent	1.0716	0.8856	-0.1859	***	0.1521	*
Warm/Friendly	1.0411	0.9745	-0.0666		0.1319	*
Ambitious	1.0163	1.0166	0.0003		0.1329	*
Financial Debt	1.0112	0.7140	-0.2971	***	0.0737	
Funny/Playful	0.9815	0.9976	0.0161		0.0993	~
Nurturing	0.9511	0.7992	-0.1519	***	0.1085	
Educated	0.8932	0.9139	0.0207		0.0776	
Feminine	0.8658	0.7447	-0.1212	*	0.0962	
Romantic	0.8581	0.9821	0.1240	**	0.0870	
Phys. Attractive	0.7927	1.1463	0.3536	***	0.1741	***
Height	0.7537	0.9477	0.1940	***	0.1059	*
Masculine	0.7339	0.9015	0.1676	***	0.1512	**
Charitable	0.7110	0.6206	-0.0904	*	0.0842	
Aggressive	0.6064	0.3097	-0.2967	***	0.0626	
Athletic	0.5870	0.9816	0.3947	***	0.1840	***
Wealthy	0.5700	1.0902	0.5201	***	0.0976	*
Sexual	0.5379	0.6813	0.1434	**	0.1924	***
Penis Size	0.5129	0.8242	0.3113	***	0.1932	***
Social Status	0.4845	1.0213	0.5368	***	0.1046	*
Outgoing	0.4567	0.7542	0.2975	***	0.1235	*

Trait Dimension	Importance to Men	Imagined Imp.	Imp. Discrepancy		Shape Discrep.	
Trustworthy	1.2900	1.1815	-0.1085	*	0.0787	
Hygiene	1.0742	1.1472	0.0730	~	0.0340	
Phys. Attractive	0.9640	1.3326	0.3686	***	0.0299	
Intelligent	0.9310	0.5059	-0.4251	***	0.2815	***
Warm/Friendly	0.9247	0.9860	0.0613		0.0164	
Nurturing	0.8448	0.7539	-0.0910	*	0.0591	
Funny/Playful	0.8345	0.9182	0.0837	*	0.0200	
Sexual	0.8345	1.2199	0.3854	***	0.0457	
Masculine	0.8087	1.1326	0.3239	***	0.0219	
Educated	0.7682	0.4520	-0.3162	***	0.2612	***
Feminine	0.7013	0.9259	0.2246	***	0.0705	
Ambitious	0.6723	0.5346	-0.1376	**	0.1207	
Athletic	0.6303	0.7957	0.1653	***	0.0322	
Financial Debt	0.6124	0.8699	0.2575	***	0.0251	
Romantic	0.6097	0.3174	-0.2923	***	0.1738	
Aggressive	0.5040	0.7804	0.2764	***	0.0317	
Charitable	0.4700	0.3255	-0.1445	***	0.0629	
Wealthy	0.3484	0.7220	0.3737	***	0.0316	
Breast Size	0.2787	0.8056	0.5269	***	0.0926	*
Social Status	0.2713	0.6536	0.3823	***	0.0535	
Outgoing	0.2550	0.5539	0.2989	***	0.0704	
Height	0.1910	0.2596	0.0687		0.0880	

Table 2. TOP PANEL: Self-reported importance scores for women, importance scores that men imagine for women, and the discrepancy between the two. Traits are ranked from the highest to the lowest self-reported importance scores. Also shown are the discrepancies between self-reported

shapes for woman and the shapes men imagine for women. BOTTOM PANEL: Self-reported importance scores for men, importance scores that women imagine for men, and the discrepancy between the two (same as top panel). The _p_-value significance level of each importance discrepancy and of each shape discrepancy is indicated to the right of each (.1 > ~ > .05 > * > .01 > ** > .001 > *)**

Self-Reports: Differences between men's and women's impact scores

The four traits with the greatest gender differences in impact scores are femininity (Figure 2a), masculinity (Figure 2b), height (Figure 2c) and financial debt (Figure 2d). (Note that these differences are calculated as the mean of the absolute values of the differences between men and women across the four levels, and are not shown in Table 1 or 2.) Interestingly, what drives these large differences varies across the four traits. Specifically, femininity and masculinity are very important to both men and women, but unsurprisingly, they have reversed shapes. Height is discrepant because it is important to women but hardly important at all to men. Financial debt is important to, and takes the same shape for, both genders, but is still more important to women than to men.
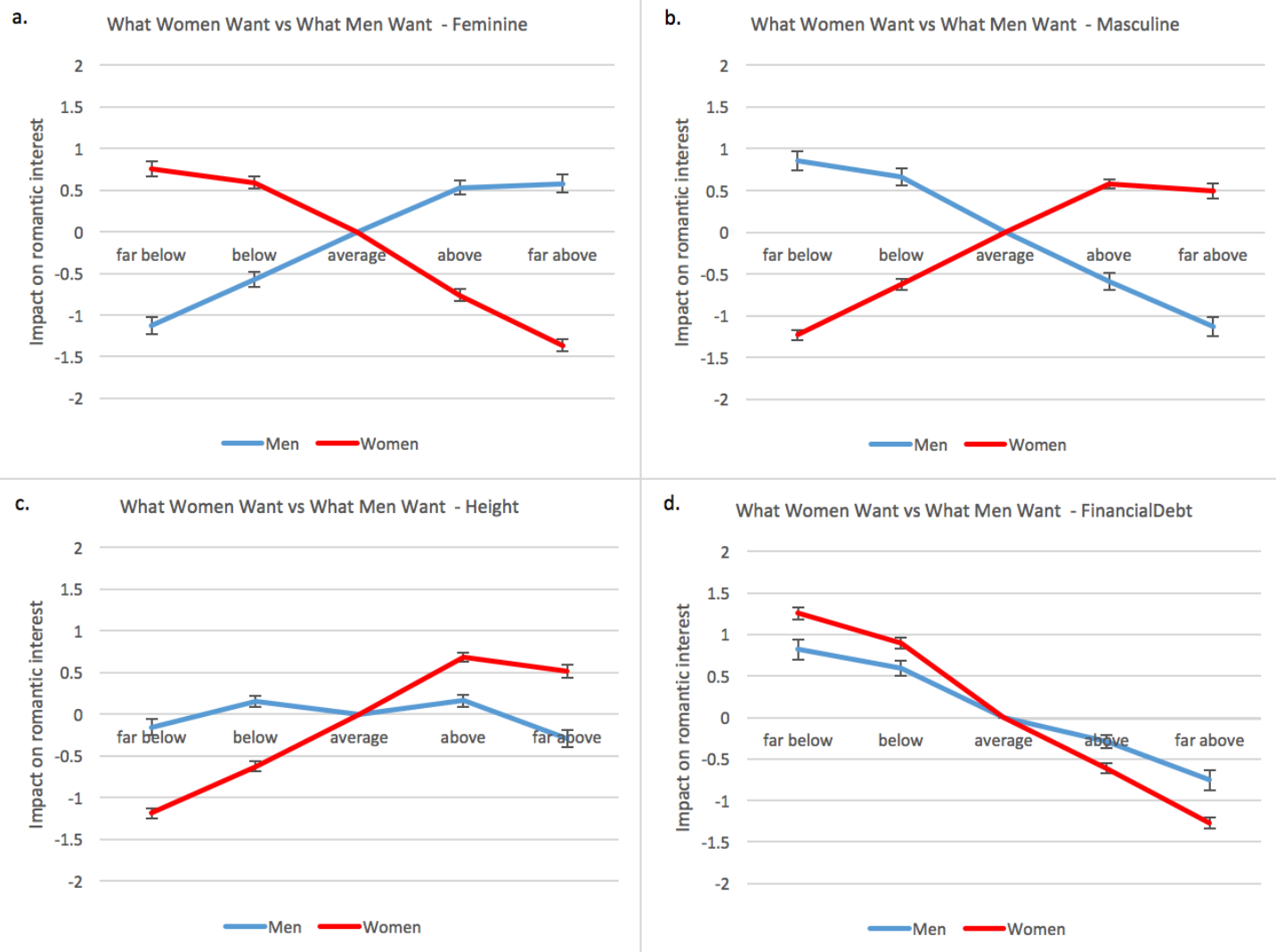
Figure 2. The impact on women's and men's romantic interest in a romantic partner as a function of his or her standing on four traits relative to average; as reported by women (red lines) and men (blue lines). Of the 22 traits covered, (a) through (d) show, in descending order, the four with the largest gender differences. (a) femininity, (b) masculinity, (c) height, and (d) financial debt. The error bars at each point show the standard error of the mean.

Self-Reports: Discrepancies between men's and women's importance scores

The traits with the greatest gender differences in importance scores are height and financial debt (already shown in Figure 2), followed by how ambitious (Figure 3a) and sexual (Figure 3b) a romantic partner tends to be. Interestingly, while the shapes for ambition are the same for men and women, the shapes for sexuality differ between men and women. In Figure 3d,

we add in a plot for physical attractiveness because it is a trait often raised is discussions of

gender differences (e.g., Li et al., 2002). Consistent with previous research, the current study

finds that data from men rank physical attractiveness higher in importance (3rd place among 22

traits) than data from women (12th place). See Table 2. We return to a description of most and

least important traits in the section on discrepancies between self-reported importance scores for

one gender vs. those imagined the other gender, below.

In addition to asking which individual traits are most discrepant, we asked whether the

relative importance of each trait is similar between men and women by conducting a Pearson

correlation between self-reported importance scores for men versus women. Results indicate

significant correlation ($r(20) = .78$, $p < .001$). Thus, despite the above-described discrepancies

for individual traits, the relative importance of traits is quite similar between genders.
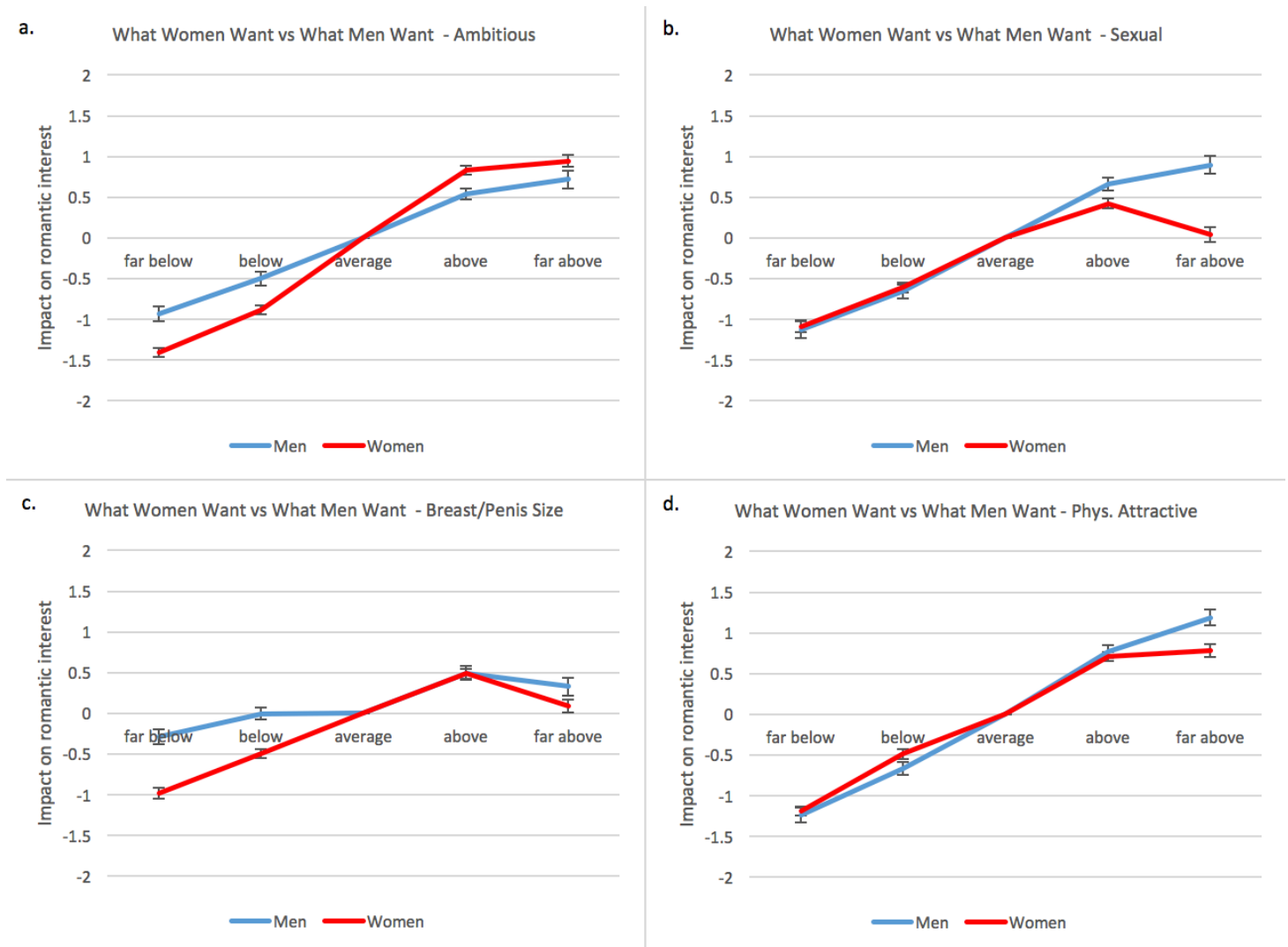
Figure 3. The impact on women's and men's romantic interest in a romantic partner as a function of his or her standing on four traits relative to average; as reported by women (red lines) and men (blue lines). Of the 22 traits covered, (a) through (d) show gender differences in the importance and shapes of (a) ambition, (b) how sexual, (c) height, and (d) financial debt. The error bars at each point show the standard error of the mean.

Self-Reports: Discrepancies between men's and women's shapes

The traits with the greatest gender differences in shapes are masculinity and femininity (already shown in Figure 2), followed by sexuality (already shown in Figure 3) and breast/penis size (Figure 3c).

Discrepancies between women's self-reported importance scores vs. those imagined by men for women

We begin with the traits most and least important to women and the traits men imagine are most and least important to women. We then examine the discrepancies in importance and shape between women's self-reported preferences and what men imagine are women's preferences. The four traits most important to women are trustworthiness (Figure 4a), hygiene (Figure 4b), intelligence (Figure 4c), and warmth/friendliness (Figure 4d). The four traits least important to women are sexuality (Figure 5a), penis size (Figure 5b), social status (Figure 5c), and least of all, extraversion ("outgoing", Figure 5d). The four traits men imagine are most important to women are trustworthiness, physical attractiveness, hygiene, and wealth. The four traits men imagine are least important to women are financial debt, sexuality, charitableness, and least of all, aggressiveness.

Note that in Figures 4 and 5, which plot data for traits that are most and least important to women, respectively, we also plot data for what men imagine for women, even though these traits may or may not be the ones that are most discrepant between the two genders. We do this simply to capitalize on showing more of our data. In the next section, which focuses on the largest discrepancies between women's self-reported importance scores vs. those imagined by men for women, we refer to already-presented figures that demonstrate these large discrepancies or we present new figures.
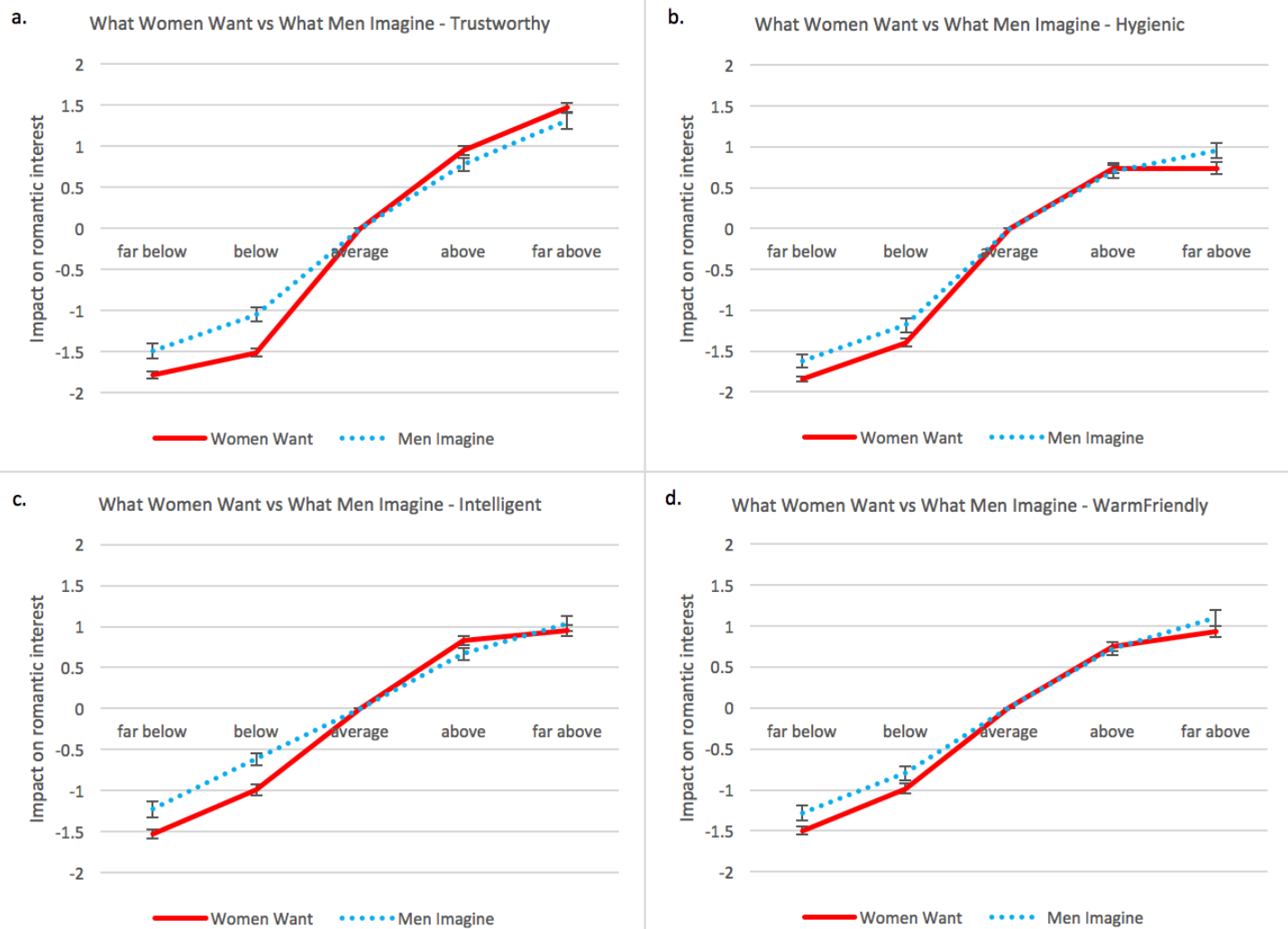
Figure 4. The impact on women's romantic interest in a hypothetical man as a function of his standing on four traits relative to average; as reported by women (solid lines) and as imagined by men (dotted lines). Of the 22 traits covered, (a) through (d) show, in descending order, the four that women indicated are most important. The impact of various levels of (a) trustworthiness, (b) hygiene, (c) intelligence, and (d) warmth/friendliness is shown. The differences between points on the solid and dotted lines show the discrepancy between the impacts that men imagine and that women report. The error bars at each point show the standard error of the mean.
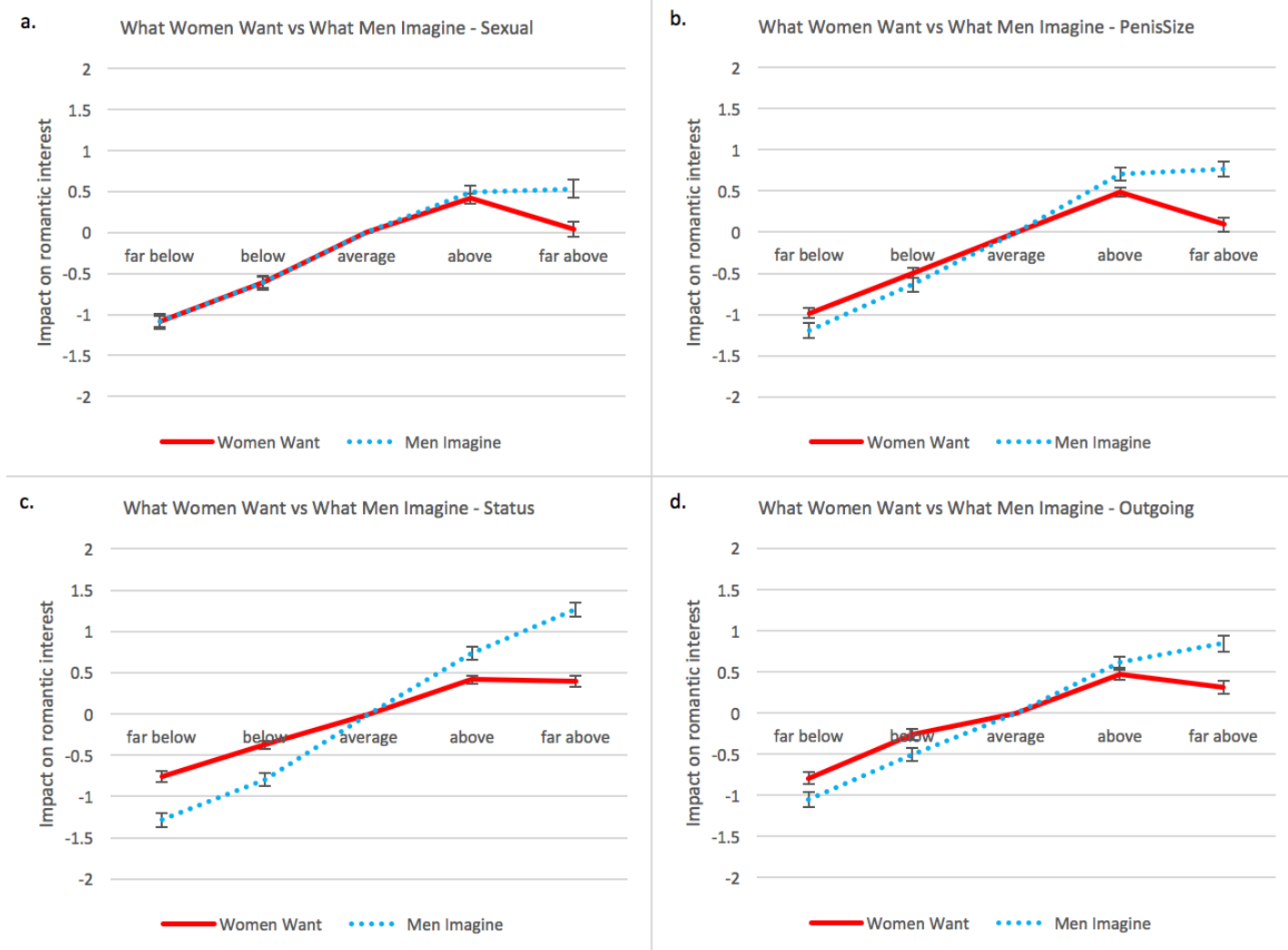
Figure 5. The impact on women's romantic interest in a hypothetical man as a function of his standing on four traits relative to average; as reported by women (solid lines) and as imagined by men (dotted lines). Of the 22 traits covered, (a) through (d) show, in descending order, the four that women indicated are least important. The impact of various levels of (a) sexuality, (b) penis size, (c) social status, and (d) extraversion ("outgoing") is shown. The differences between points on the solid and dotted lines show the discrepancy between the impacts that men imagine and that women report. The error bars at each point show the standard error of the mean.

With regard to the traits with the largest *discrepancies* in importance, the two that men appear to *over*estimate the most (according to women's self-reports) are social status (Figure 5c) and wealth (Figure 8b; Figure 8 shows some of the largest overall or single-point discrepancies between self-reported and imagined impact that are not already included in Figures 4 through 7,

which highlight importance rather than discrepancies). The two that men appear to underestimate the most are aggressiveness (Figure 8a) and trustworthiness (Figure 4a). With regard to the traits with the largest discrepancies in shape, the two that men appear to most poorly estimate are penis size and sexuality (for both traits, men imagine that women's impact scores would peak and plateau between "somewhat above average" and "far above average", but women's impact scores are lower for "far above average" than for "somewhat above average").

Interestingly, when we looked at each level (ranging from far below to far above average) separately, the largest single-level discrepancies between women's self-reports and what men imagine for women involve men overestimating the positive impacts of being far above average in status (Figure 5c) and far above average in athleticism (not shown in Figures). See Supplementary Materials.

Discrepancies between men's self-reported importance scores vs. those imagined by women for men

We begin with the traits most and least important to men and those that women imagine are most and least important to men. We then examine the discrepancies in importance and shape between men's self-reported preferences and what women imagine are men's preferences. The four traits most important to men are trustworthiness (Figure 6a), hygiene (Figure 6b), physical attractiveness (Figure 6c), and intelligence (Figure 6d). The four traits least important to men are breast size (Figure 7a), social status (Figure 7b), extraversion (Figure 7c), and least of all, height (Figure 5d). The four traits women imagine to be most important to men are physical attractiveness, sexuality, trustworthiness, and hygiene. The four traits women imagine are least important to men are education, charitableness, "romanticness", and least of all, height. Note

that, as was the case in Figures 4 and 5, the plots showing traits that are most and least important

to men also plot data for what women imagine for men, in order to capitalize on showing more

of our data.

With regard to the traits with the largest *discrepancies* in importance, the two that women

appear to *over*estimate the most (according to men's self-reports) are breast size (Figure 7a) and

physical attractiveness (Figure 7b). The two that women appear to most *under*estimate are

intelligence (Figure 6d) and education (Figure not shown). With regard to the traits with the

largest discrepancies in *shape*, the two that women appear to most poorly estimate are

intelligence and education (for both traits, women imagine that men's impact scores would

decline between "somewhat above average" and "far above average", but men's impact scores

are, in fact, greater for "far above average" than for "somewhat above average").

Interestingly, when we looked at each level (ranging from far below to far above average)

separately, the largest single-level discrepancies between men's self-reports and what women

imagine for men involve women overestimating the positive impacts of being far above average

in breast size (Figure 7a) and underestimating the positive impact of being far above average in

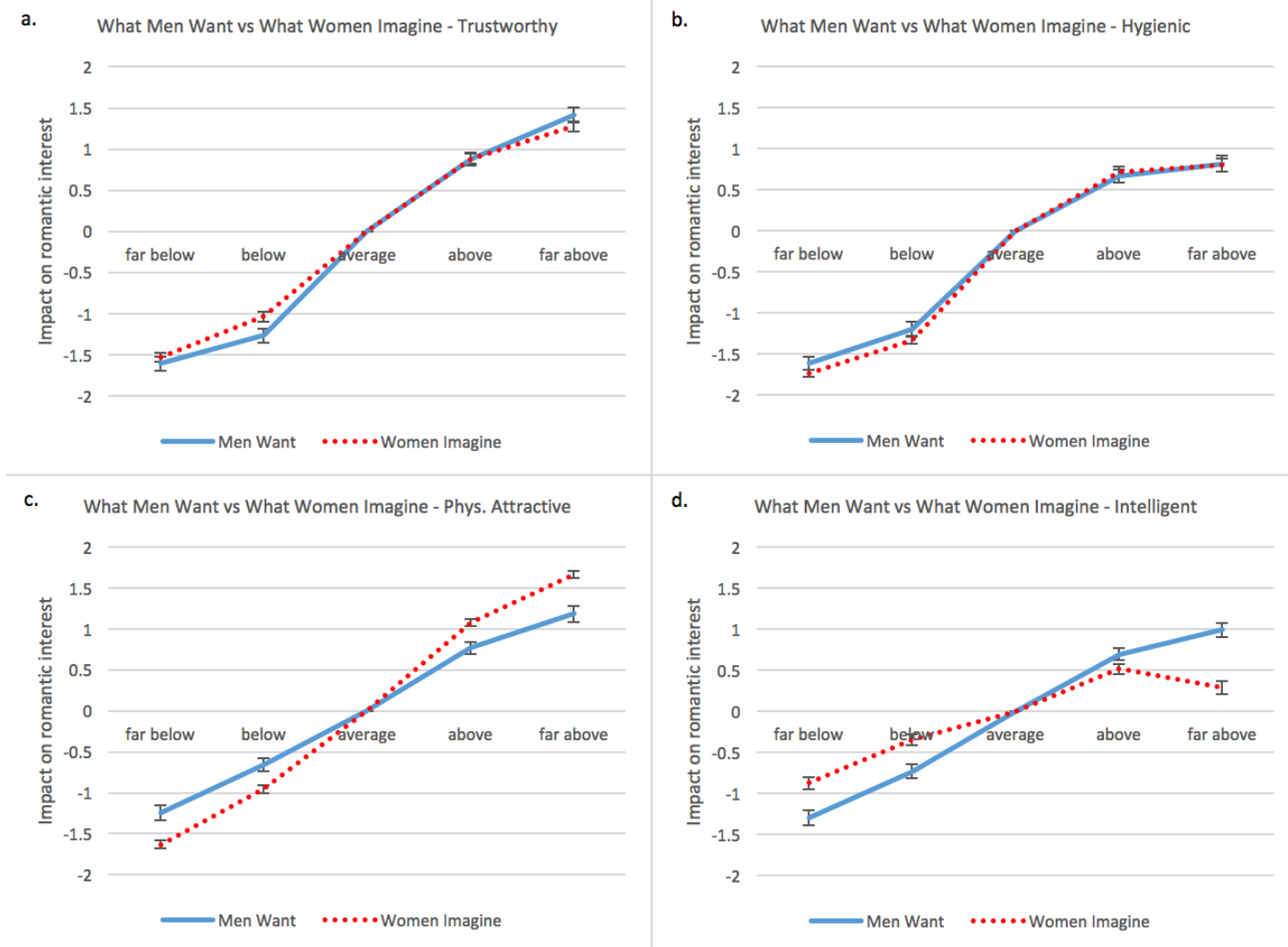intelligence (Figure 6d). See Supplementary Materials.

Figure 6. The impact on men's romantic interest in a hypothetical woman as a function of her standing on four traits relative to average; as reported by men (solid lines) and as imagined by women (dotted lines). Of the 22 traits covered, (a) through (d) show, in descending order, the four that men indicated are most important. The impact of various levels of (a) trustworthiness, (b) hygiene, (c) attractiveness, and (d) Intelligence is shown. The differences between points on the solid and dotted lines show the discrepancy between the impacts that women imagine and that men report. The error bars at each point show the standard error of the mean.
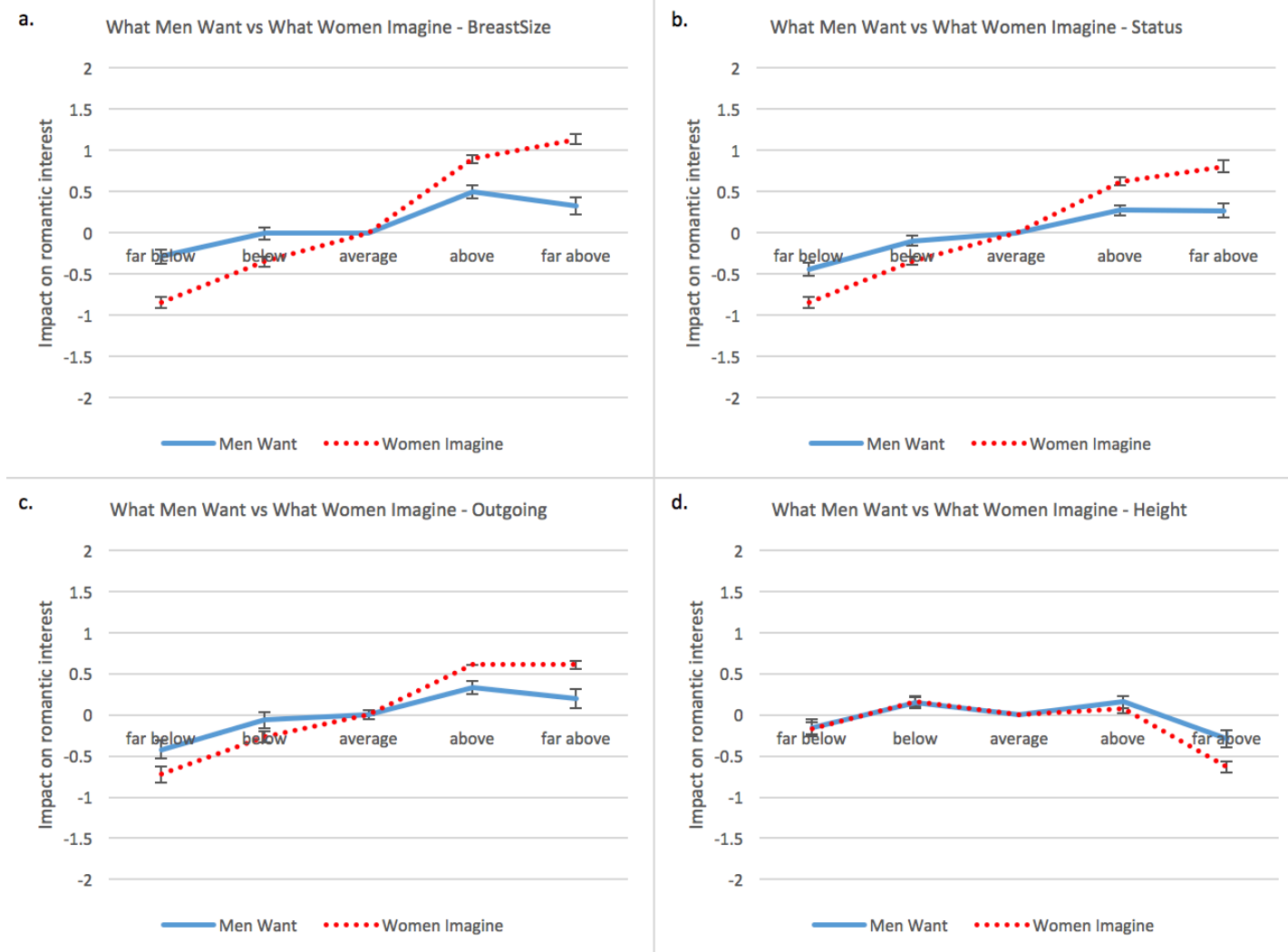
Figure 7. The impact on men's romantic interest in a hypothetical woman as a function of her standing on four traits relative to average; as reported by men (solid lines) and as imagined by women (dotted lines). Of the 22 traits covered, (a) through (d) show, in descending order, the four that men indicated are least important. The impact of various levels of (a) breast size, (b) social status, (c) extraversion ("outgoing"), and (d) height is shown. The differences between points on the solid and dotted lines show the discrepancy between the impacts that women imagine and that men report. The error bars at each point show the standard error of the mean.

a.

What Women Want vs What Men Imagine - Aggressive

b.

What Women Want vs What Men Imagine - Wealth

c.

What Men Want vs What Women Imagine - Sexual

d.

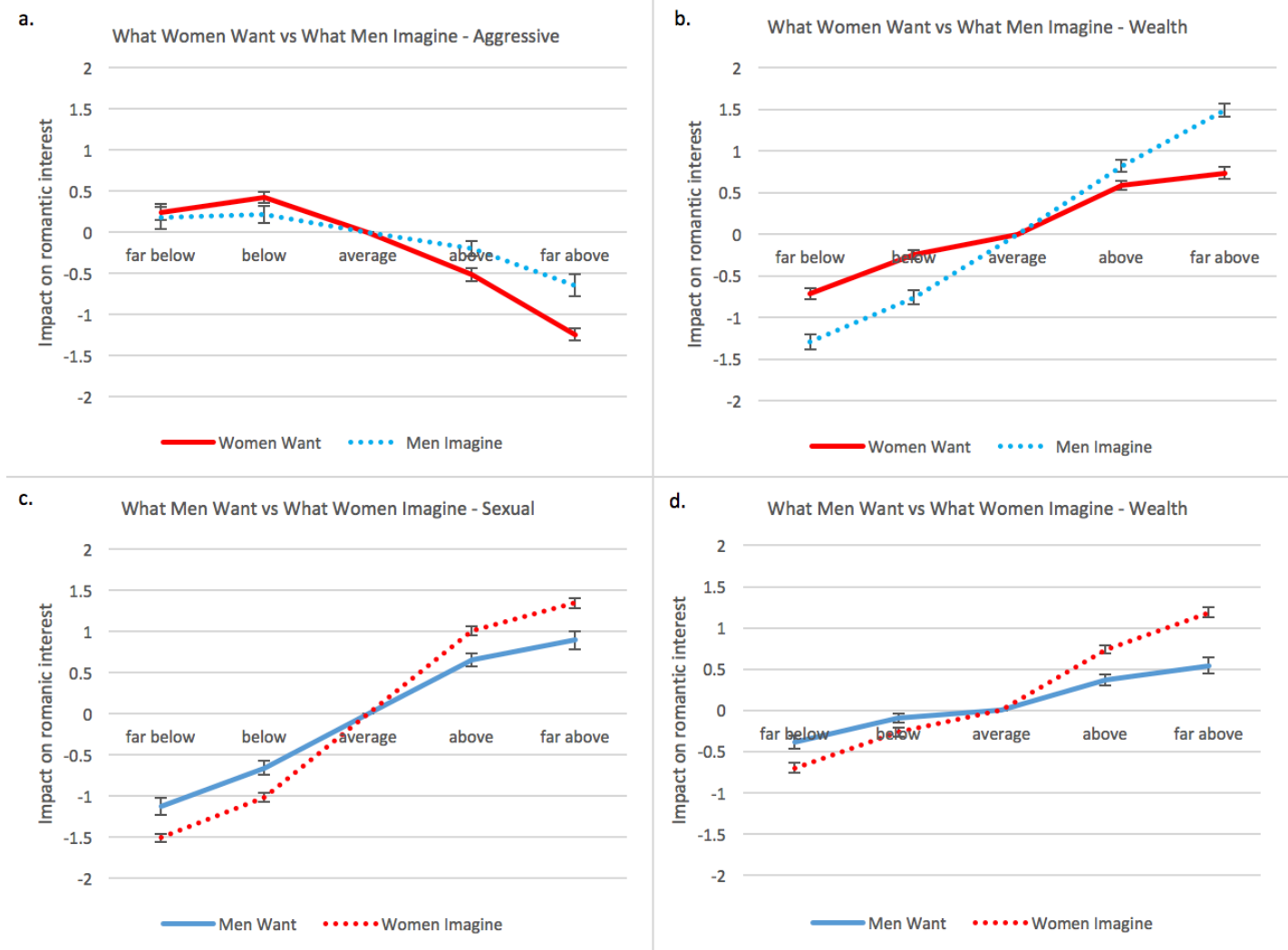**What Men Want vs What Women Imagine - Wealth**

Figure 8. The impact on women's—(a) & (b)—and men's—(c) & (d)—romantic interest in a hypothetical romantic partner as a function of his or her standing on four traits relative to average; as self-reported (solid lines) and as imagined by the opposite gender (dotted lines). Traits (a) through (d) show some of the largest overall or single-point discrepancies between self-reported and imagined impact that are not already included in Figures 4 through 7, which highlighted importance rather than discrepancies. Graph (a) shows the impact of various levels of a man's aggressiveness on women's interest, (b) shows the impact of a man's wealth on women's interest, (c) shows the impact of a woman's sexuality on men's interest, and (d) shows the impact of a woman's wealth on men's interest. The differences between points on the solid and dotted lines show the discrepancy between the imagined and real impacts on romantic interest. The error bars at each point show the standard error of the mean.

Which gender's beliefs are closer to the opposite gender's self-reports?

We begin by comparing men's and women's average absolute discrepancy between self-reported and imagined importance scores across all 22 traits (i.e., comparing the absolute values

of the "importance discrepancy" scores in the top vs. bottom tables of Table 2). Averaged across the 22 traits, the mean for women (.245 +/- XX) and men (.210 +/- XX) is not different ($t(42) =$ .786, p = .436, two-tailed test) suggesting that one gender's imagined importance scores are no less discrepant than the other's. We then did the same analysis for shape discrepancies. Averaged across the 22 traits, the mean shape discrepancy for men imagining women (0.122 +/- .039) is significantly higher than for women imagining men (.077 +/- .07) ($t(42) = 2.51$, $p = .016$, two-tailed test). Additionally, the percentage of traits for which the imagined and self-reported shapes are significantly discrepant (i.e., p < 0.05) is significantly higher for men imagining women (13 of 22, 59.1%) than women imagining men (3 of 22, 13.6%) ($X^2 (1) = 9.82$, $p = .002$). This pair of results suggests that, in terms of imagining the zigzag shape of the opposite gender's preferences, women are more accurate, according to men's self-reports.

Finally, to investigate how well each gender understands the relative importance of each trait to the opposite gender, we conducted Pearson correlations between self-reported importances of traits to men vs. those imagined for men by women, and vice versa. While the correlation for women imagining men is significant (r(20) = .62, $p < .002$), the correlation for men imagining women is not (r(20) = .39, $p = .080$, although this is marginally significant). Therefore, despite the fact that women are no more or less accurate than men when it comes to imagining actual importance scores (see above), this correlation result suggests that women may be better (according to the comparison with each gender's self-reports) at imagining the *relative importance of traits* for men.

We entertained the possibility that the larger correlation for women imagining men than men imagining women is explainable by a difference in variance between men and women in importance scores from self-report. However, the variance in men's importance scores ($s^2_{men} =$

0.0845) is not significantly different from that in women's importance scores (s^2_{women} = 0.0641) ($F(21)$ = .759, p = .267, one-tailed test based on the prediction that women would be lower than men). We also measured variance *within* each trait for men and women, and found that the mean variance across the 22 traits was similar for men (.262 +/- XX) and women (.254 +/- XX) (t(42) = 2.02, p = .586, two-tailed test).

Interestingly, because there is a high correlation between men's and women's self-reported importance scores (r = 0.78, see above), both men and women could better imagine the *relative importance of traits* for the opposite gender if they were to substitute their own preferences for those they imagine to be true for the opposite gender. Also, despite the correlation between men's and women's self-reported importance scores, there is no correlation between the importance scores men imagine for women and those that women imagine for men, with ($r(20)$ = .20, p = .381).

Discussion

Consistent with previous research (e.g., Buss et al., 1990, Fletcher et al. 1999, Lippa, 2007), our analyses of self-reports show that trustworthiness, warmth, and intelligence are among the most important trait dimensions to both men and women alike. Our results also show support for classic gender differences (e.g., Buss, 1989; Fletcher, Tither, O'Loughlin, Friesen, & Overall, 2004; Geary, 2010; Kenrick & Keefe, 1992; Li, Bailey, Kenrick, & Linsenmeiser, 2002; Lippa 2000; Sprecher, Sullivan, & Hatfield, 1994), wherein physical attractiveness is particularly important to men, but less so to women, and ambition is particularly important to women, but not to men. Interestingly, however, wealth and status—traits that are sometimes related to ambition (e.g., Judge & Kammeyer-Mueller, 2012)—rank low in importance to both genders. There were

two other places of note where we observed something unexpected. First, hygiene is very

important to both genders (second only to trustworthiness), which is surprising given that this is

not a trait dimension typically considered in the romantic interest literature. Second, despite the

fact that traits such as penis/breast size and social status receive a large amount of cultural

attention (e.g., Herzog, 2018; Martin, 2013), they are quite low-ranking in importance for the

men and women in our study,

The novel aspect of the current study is that it compared self-reported preferences with

preferences imagined by the opposite gender, within the same population. Generally, traits that

previous literature shows men and women typically emphasize to impress each other and

derogate rivals (wealth and status displayed by men, physical attractiveness displayed by

women: Buss 1988, Buss & Dedden 1990, Campos et al., 2002; Cicerello & Sheehan, 1995;

Deaux & Hanna, 1984) are, in our results, the same traits whose importance to the opposite

gender men and women seem to most overestimate. However, this characterization of the

comparison between previous literature and our results is overly simplistic. If each gender's self-

reported preferences act as our guide, then despite women overestimating the importance of

physical attractiveness to men, they are certainly not misguided in their efforts to impress men

along this dimension. Indeed, men's self-reports indicate that a woman's physical attractiveness

is indeed among the most important traits for them. Nevertheless, by overestimating that trait's

importance, women may inadvertently emphasize their physical attractiveness at the expense of

opportunities to highlight other similarly important traits, the importance of which they

underestimate; namely intelligence and trustworthiness. Similarly, men's efforts to signal

ambition to attract women are not misguided. Indeed, women's self-reports indicate that a man's

ambition is important, and men neither underestimate nor overestimate it. By contrast, however,

men's efforts to signal wealth and status do seem to be misguided; men overestimate the

importance of these traits to women more so than they do for any other trait. Men may

emphasize their wealth and status at the expense of highlighting traits that are more important,

and the importance of which they underestimate; namely intelligence and trustworthiness.

Secondary analyses revealed that what women imagine is true for men is less discrepant

than what men imagine for women (based on the opposite gender's self-report). Specifically,

shape discrepancies are lower for women imagining men than vice versa, and the correlation

between self-reported and imagined importance (across traits) is greater for women imagining

men than vice versa. This suggests that women, compared to men, better understand the relative

importance of each trait to the opposite gender, as well as the character of its impact. Additional

analyses suggested that our results did not derive from differences in variance between men's

and women's preferences (see results). A number of other reasons may lead to this result, not the

least of which is the possibility that women are more familiar with men's preferences than vice

versa because of greater interpersonal accuracy.

Although little is known about potential gender differences regarding inferring or

otherwise coming to know others' preferences, in the case of measures of interpersonal accuracy,

women outperform men (Hall, Gunnery, Horgan, 2016). These measures have included emotion

judgments (e.g., Buzby 1924; Hall 1978; Thompson & Voyer, 2014) state and trait inferences

(e.g., Murphy, Hall, & Colvin, 2003, Ambady, Hallahan, & Rosenthal, 1995, Letzring, 2010;

Vogt & Colvin, 2003) and appearance and behavior recall (e.g., Hall & Schmid Mast, 2008;

Horgan, McGrath, & Long, 2009, Hall, Murphy, & Mast 2006). Across multiple modalities (e.g.,

voice, body, face), and across time, culture, age group, and target gender, females more

accurately and more quickly infer the meanings of affective cues. In addition, research on

accuracy in reading romantic interest in behavior (e.g., Abbey, 1982,), suggests that men

substantially overestimate women's sexual interest, frequently perceiving interest from women

where none exists (Farris, Treat, Viken, & McFall, 2008). Men's bias (Buss & Haselton, 2000)

or greater relative difficulty in reading women's interest could lead to it being more difficult for

men to learn women's preferences.

An alternative interpretation of the discrepancies in our data is based on questioning the

veracity of the self-reports. It is possible that men and women do *not* actually overestimate the

importance of traits to the opposite gender (for example, the importance of a man's wealth and

status to women and the importance of a woman's physical appearance to men), but that instead

the opposite gender misreports the importance of these traits for themselves. Misreporting may

be unintentional if people are simply mistaken about their own preferences (e.g., Perilloux and

Kurzban, 2015; but c.f. Murray et al. 2017). Or, misreporting may be intentional in an effort to

be coy. For example, a persistent cultural belief holds that it is "unladylike" for women to be

overtly sexual (Berbary, 2012). This notion could potentially encourage women to under-report

the importance of traits such as penis size and sexuality. In such a case, men, more so than

women, would be expected to overestimate the importance of these traits to the opposite gender.

Yet, according to results of the current study, men overestimate the importance of these

dimensions *less* so than do women. In addition, we note that women self-report that penis size is

more important than do men for breast size, and so they do not appear coy in reporting their

sexual preferences (although women do report sexuality to be less important than do men). This

pattern of results seems to suggest that men's underperformance is not simply due to women

under-reporting the importance of traits related to sex.

Even if women do not misreport preferences in their self-reports when taking surveys, they may still be less than forthright in interpersonally expressing their interest out in the real world. One study (Place, Todd, Penke, & Asendorpf, 2009) found it to be more difficult for both males and females to accurately read romantic interest cues of women than of men, suggesting that the difference is due, in part, to women being less expressive in social settings about their interest in men. This tendency has potential to stifle men's ability to learn about what appeals to women.

Another possibility is that women's preferences might be misrepresented in the media, which then leads to misperceptions in the culture. Popular books and movies could mislead men by, for example, centering romance narratives around men of high status and wealth; examples include *Pretty Woman* (1990), *Fifty Shades of Gray* (2015), and *Crazy Rich Asians* (2018). However, there is no shortage of media depicting men's interest in physically attractive women, which seems a likely contributing cause of women's tendency to overestimate the importance of traits like breast-size and physical appearance more generally. Still, to account for the underperformance of men imagining women in the current study, it may be that the media's depiction of men's romantic interests is closer to the truth than is the media's depiction of women's interests.

The findings of current study and the broad applicability of its methodological paradigm notwithstanding, the current study has important limitations. While we meant for our set of trait dimensions to be broad and inclusive, it is certainly not exhaustive. There may be other important traits we unintentionally excluded here for which the differences between men's and women's conceptions and reality are unlike the differences shown here. In addition, our sample

of online participants, which includes residents from all over the United States, may differ in important ways from the broader population of American adults. We nevertheless would argue that the results are generalizable enough to be insightful.

A further limitation is that we use only one conception of importance, while other reasonable conceptions are possible. For example, a different conception of importance could aim to provide increased weight to more central levels of each trait given that levels nearer to the mean average are likely to occur with greater frequency under a normal distribution. This way, greater importance would reflect greater frequency of impact rather than reflecting total impact integrated uniformly across each dimension. A final noticeable limitation is that we posed each question to participants within the context of an implicit all-else-being-equal approach. This has the advantage of isolating each variable, but unfortunately it also means that we cannot capture interactions that may exist between different levels of different traits. For example, the importance of wealth might differ depending on somebody's physical attractiveness, such that a person's overall desirability could be less dependent on their wealth if they are good-looking. Interactions of this sort may be a fruitful avenue for future research in the area.

References

Abbey, A. (1982). Sex differences in attributions for friendly behavior: Do males misperceive

females' friendliness?. *Journal of Personality and Social Psychology*, *42*(5), 830.

Ambady, N., Hallahan, M., & Rosenthal, R. (1995). On judging and being judged accurately in

zero-acquaintance situations. *Journal of Personality and Social Psychology*, *69*(3), 518.

Berbary, L. A. (2012). "Don't Be a Whore, That's Not Ladylike" Discursive Discipline and

Sorority Women's Gendered Subjectivity. Qualitative Inquiry, 18(7), 606-625.

Buss, D. M. (1988). The evolution of human intrasexual competition: tactics of mate attraction.

Journal of Personality and Social Psychology, *54*, 616–628.

Buss, D. M. (1989). Sex differences in human mate preferences: evolutionary hypotheses tested

in 37 cultures. *Behavioral and Brain Sciences*, *12*, 1–49.

Buss, D. M., & Dedden, L. A. (1990). Derogation of competitors. *Journal of Social and Personal

Relationships*, *7*, 395–422.

Buss, D. M., Abbott, M., Angleitner, A., Asherian, A., Biaggio, A., Blancoe-Villasenor, A. *et al*.,

(1990). International preferences in selecting mates: a study of 37 cultures. *Journal of

Cross-Cultural Psychology*, *21*, 5–47.

Buzby, D. E. (1924). The interpretation of facial expression. *The American Journal of

Psychology*, 602-604.

Campos, L., Otta, E., & de Oliveira Siqueira, J. (2002). Sex differences in mate selection

strategies: content analyses and response to personal advertisements in Brazil. *Evolution

and Human Behavior*, *23*, 395–406.

Cicerello, A., & Sheehan, E. P. (1995). Personal advertisements: a content analysis. *Journal of

Social Behavior and Personality*, *10*, 751–756.

Crocker, J., Luhtanen, R. K., Cooper, M. L., & Bouvrette, A. (2003). Contingencies of self-
worth in college students: theory and measurement. *Journal of Personality and Social
Psychology*, *85*, 894–908.

Daly, J. A., Hogg, E., Sacks, D., Smith, M., & Zimring, L. (1983). Sex and relationship affect
social self-grooming. *Journal of Non-verbal Behavior*, *7*, 183–189.

Deaux, K., & Hanna, R. (1984). Courtship in the personals column: the influence of gender and
sexual orientation. *Sex Roles*, *11*, 363–375.

Farris, C., Treat, T. A., Viken, R. J., & McFall, R. M. (2008). Sexual coercion and the
misperception of sexual intent. *Clinical psychology review*, *28*(1), 48-66.

Fletcher, G. J., Simpson, J. A., Campbell, L., & Overall, N. C. (2013). *The science of intimate
relationships* (Vol. 323). Malden, MA: Wiley-Blackwell.

Fletcher, G. J. O., Simpson, J. A., Thomas, G., & Giles, L. (1999). Ideals in intimate
relationships. *Journal of Personality and Social Psychology*, *76*, 72–89.

Fletcher, G. J. O., Tither, J. M., O'Loughlin, C., Friesen, M., & Overall, N. (2004). Warm and
homely or cold and beautiful? Sex differences in trading off traits in mate selection.
Personality and Social Psychology Bulletin, *30*, 659–672.

Geary, D. C. (2010). *Male, Female: the Evolution of Human Sex Differences* (2nd ed).
Washington, DC: American Psychological Association.

Gutierres, S. E., Kenrick, D. T., & Partch, J. J. (1999). Beauty, dominance, and the mating game:
contrast effects in self-assessment reflect gender differences in mate selection.
Personality and Social Psychology Bulletin, *25*, 1126–1134.

Hall, J. A. (1978). Gender effects in decoding nonverbal cues. *Psychological bulletin*, *85*(4), 845.

Hall, J. A., Gunnery, S. D., & Horgan, T. G. (2016). 15 Gender differences in interpersonal

    accuracy. *The social psychology of perceiving others accurately*, 309.

Hall, J. A., Murphy, N. A., & Mast, M. S. (2006). Recall of nonverbal cues: Exploring a new

    definition of interpersonal sensitivity. *Journal of Nonverbal Behavior*, *30*(4), 141-155.

Hall, J. A., & Schmid Mast, M. (2008). Are women always more interpersonally sensitive than

    men? Impact of goals and content domain. *Personality and Social Psychology*

    Bulletin, *34*(1), 144-155.

Haselton, M. G., & Buss, D. M. (2000). Error management theory: A new perspective on biases

    in cross-sex mind reading. *Journal of personality and social psychology*, *78*(1), 81.

Herzog, S. (2018, July 10). Professor speaks out after shutting down penis size study amid

    backlash. *USA Today*. Retrieved from https://www.usatoday.com/story/news/nation-

    now/2018/07/10/professor-shuts-down-penis-size-study-after-receiving-hate-

    mail/773429002/

Horgan, T. G., McGrath, M. P., & Long, J. A. (2009). The relevance of people versus objects in

    explaining females' advantage over males in appearance accuracy. *Sex Roles*, *60*(11-12),

    890-899.

Josephs, R. A., Markus, H. R., & Tafarodi, R. W. (1992). Gender and self-esteem. *Journal of*

    Personality and Social Psychology, *63*, 391–402.

Judge, T. A., & Kammeyer-Mueller, J. D. (2012). On the value of aiming high: The causes and

    consequences of ambition. Journal of Applied Psychology, 97(4), 758.

Kenrick, D. T., & Keefe, R. C. (1992). Age preferences in mates reflect sex differences in human

    reproductive strategies. *Behavioral and Brain Sciences*, *15*, 75–133.

Letzring, T. D. (2010). The effects of judge-target gender and ethnicity similarity on the

  accuracy of personality judgments. *Social Psychology*.

Li, N. P., Bailey, J. M., Kenrick, D. T., & Linsenmeiser, J. A. W. (2002). The necessities and

  luxuries of mate preferences: testing the tradeoffs. *Journal of Personality and Social

  Psychology*, *82*, 947–955.

Lippa, R. A. (2000). Gender-related traits in gay men, lesbian women, and heterosexual men and

  women: the virtual identity of homosexual-heterosexual diagnosticity and gender

  diagnosticity. *Journal of Personality*, *68*, 899–926.

Lippa, R. A. (2007). The preferred traits of mates in a cross-national study of hetero- sexual and

  homosexual men and women: an examination of biological and cultural influences.

  Archives of Sexual Behavior, *36*, 193–-208.

Martin, R. D. (2013, January 13). Penis Size Matters. *Psychology Today*. Retrieved from

  https://www.psychologytoday.com/us/blog/how-we-do-it/201501/penis-size-matters

Murphy, N. A., Hall, J. A., & Colvin, C. R. (2003). Accurate intelligence assessments in social

  interactions: Mediators and gender effects. *Journal of Personality*, *71*(3), 465-493.

Murray, D. R., Murphy, S. C., von Hippel, W., Trivers, R., & Haselton, M. G. (2017). A

  preregistered study of competing predictions suggests that men do overestimate women's

  sexual intent. *Psychological science*, *28*(2), 253-255.

Perilloux, C., & Kurzban, R. (2015). Do men overperceive women's sexual

  interest?. *Psychological Science*, *26*(1), 70-77.

Place, S. S., Todd, P. M., Penke, L., & Asendorpf, J. B. (2009). The ability to judge the romantic

  interest of others. *Psychological Science*, *20*(1), 22-26.

Sprecher, S., Sullivan, Q., & Hatfield, E. (1994). Mate selection preferences: gender differences examined in a national sample. *Journal of Personality and Social Psychology*, *66*, 1074–1080.

Thompson, A. E., & Voyer, D. (2014). Sex differences in the ability to recognise non-verbal displays of emotion: A meta-analysis. *Cognition and Emotion*, *28*(7), 1164-1195.

Vogt, D. S., & Randall Colvin, C. (2003). Interpersonal orientation and the accuracy of personality judgments. *Journal of personality*, *71*(2), 267-295.