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The Impact of Environmental Variability on Perceptions of Parental Ability From Bodily Cues

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THE IMPACT OF ENVIRONMENTAL VARIABILITY ON PERCEPTIONS OF PARENTAL ABILITY FROM BODILY CUES

by

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ABSTRACT

This study aimed to extend work considering how bodily cues appear diagnostic of parental ability. I examined body adiposity and sexually dimorphic features for women (i.e., breast size) and men (i.e., muscularity). I further considered how salience of resource scarcity might heighten perceptions of a potential mate as an effective parent when possessing features that connote underlying resource availability (e.g., body fat). Participants were primed with resource scarcity or a control condition before assessing parental affordances of female and male targets. Targets were orthogonally manipulated to possess high and low levels of adiposity. Female targets were manipulated for breast size and male targets for muscularity. I posited that scarcity-primed participants would perceive high-fat targets as affording more parental opportunities. Similarly, I predicted large-breast female targets to garner more favor given research indicating larger breasts association with nursing ability. Conversely, I predicted scarcity-primed participants would view high-muscularity male targets as more threatening given past work finding muscular men to be perceived as more exploitative and aggressive. Although the prime in the current study failed, results replicated previous findings of high adiposity in female targets being viewed more favorably. A similar effect emerged for small-breast targets. Low-fat male targets appeared to afford more threats and opportunities, and high-muscularity targets were perceived as more threatening. Possible dual signal values of these specific features are explored, and results are discussed from an evolutionary framework.

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CHAPTER I – THE BACKGROUND TO PARENTAL AFFORDANCE JUDGMENTS

Human infants are born highly underdeveloped, even compared to other primates. Such vulnerability presented an adaptive problem that has since required extensive parental investment to facilitate survival to reproductive age. To offset the significant commitment and resources infants require, humans have evolved to form long-term pairbonds, both monogamous and serially monogamous, to increase the likelihood of the biparental investment often necessary for successfully ensuring offspring reach psychosocial, physical, and reproductive maturity (Clutton-Brock, 1991; Del Giudice & Belsky, 2011; Quinlan & Quinlan, 2007). Biparental investment significantly increases human offspring's chances of survival by virtue of having more than one parent available to allocate resources (Geary, 1998). Future reproductive success additionally increases with biparental investment, as men's investment in offspring can significantly reduce the energetic investment into offspring required by mothers (Gettler, 2010). Ultimately, the costs and benefits of a single act of copulation is determined by the chosen mate (Tybur & Gangestad, 2011). Successful reproduction is therefore often contingent upon one's ability to identify a partner not only capable of producing healthy offspring, but able to provide offspring with optimal care to rear them into adulthood (Harris & Uller, 2009).

Identifying a suitable mate is critical for one's investment of metabolic resources towards procuring a partner to yield a greater number of benefits. In accordance with error management theory (Haselton & Buss, 2000), selection would have favored those exhibiting greater judiciousness in selecting a mate. Judiciousness would serve to minimize the likelihood of making costly mating mistakes, which could result in the production of nonviable offspring or a mate unwilling to invest in offspring. This adaptive problem has shaped humans' perceptual acuity in identifying optimal mates, both in short-term and long-term contexts, through physical

features connoting relevant reproductive affordances (Sng et al., 2020). Humans frequently utilize facial and bodily features when selecting desirable mates in both contexts (e.g., Brooks et al., 2015; Brown & Sacco, 2017, 2018; Jones et al., 2018; Frederick & Haselton, 2007).

Research addressing these affordances from physical characteristics has historically been limited to perceptions of fertility and offspring viability that would be at the exclusion of identifying long-term mating affordances. In light of recent suggestions of extending this research into different relational domains (Brown et al., 2021), I propose that such physical cues may nonetheless be utilized to facilitate downstream perceptions of a prospective mate's parental capabilities, thereby highlighting the long-term mating affordances of these features (Sacco et al., 2020; Smith et al., 2012). Affordance judgments of mating quality warrant consideration of the potential costs imposed by heritable fitness cues that could prove detrimental in optimizing biparental investment. The costs of these cues could be particularly salient in ecologically harsh environments that heighten concerns over exploitative or negligent parental behavior (Little et al., 2007). This study sought to extend previous findings demonstrating how humans are efficient in identifying which physical features are perceived as beneficial and detrimental in terms of parental capabilities across different contexts, including ecologically harsh environments.

1.1 Costs and Benefits of Physical Features Desirable for Short-Term Mating

Identifying a partner exhibiting good genes is critical in selecting an optimal mate in both short- and long-term mating (Buss & Schmitt, 1993), with the function of this identification most salient when considering short-term sexual strategies. Employment of such strategies centers around life history strategies that necessitate the best way to survive as well as to pass on their genes through tradeoffs based on perceptions of optimal reproductive timing determined by environmental factors and the nature of parental effort (Hill et al., 2016). When motivated by a

short-term strategy, there is considerable focus on one's current reproductive opportunities to produce the greatest number of offspring to increase the likelihood of one's genes being propagated. However, successful employment of this strategy requires the offspring to inherit good genes and robust immune systems to ensure survival into adulthood. When utilizing a short-term strategy, employing available heuristic cues to good genes is vital to optimize the payoff of the potentially costly single act of copulation. Indeed, men and women frequently emphasize the importance of physical attractiveness, a reliable cue to good genes and fertility, when selecting short-term mates (Li et al., 2013; Li & Kenrick, 2006). Women's prioritization of good genes is especially heightened in this context, given their inherently larger minimal investment of metabolic resources in reproductive (e.g., gestation, lactation) compared to men's (e.g., sperm provision) that positions them to incur more costs from selecting low-quality mates (Trivers, 1972). This would have consequently resulted in heightened acuity toward male features diagnostic of good genes to compensate for this asymmetry (see Brown & Sacco, 2018; Baker & Bellis, 1989).

Sexually dimorphic features are one route through which men and women frequently identify short-term mates. These features are considered highly typical for a given sex, manifesting as feminized features for women and masculinized features for men. Feminized female faces are diagnostic of heightened estrogen that would be indicative of enhanced fertility (Thornhill & Gangestad, 2006). Men additionally find feminized women particularly attractive in short-term contexts (e.g., Bird et al., 2016; Law Smith et al., 2006). Masculinized male faces similarly serve as putative cues to developmentally appropriate levels of testosterone, with men exhibiting such features being deemed particularly attractive in short-term contexts (Jones et al., 2018; Whitehouse et al., 2015). Muscular men are further viewed as particularly attractive in

short-term contexts, given muscularity's own association with testosterone, which fosters perceptions of these men as interested in promiscuity (Brown et al., in press-a; Frederick & Haselton, 2007). When coupled with low body fat, muscularity becomes highly predictive of male reproductive success (Lassek & Gaulin 2009). Physically strong men additionally report enhanced access to mates that would indicate short-term mating success (Gallup et al., 2007). The testosterone implicated in these heritable fitness cues nonetheless presents deleterious effects on physiological function. Masculinized men are hypothesized to be particularly resistant to these testosteronization effects, with their features serving as a display of their immune system's increased capabilities (Folstad & Karter, 1992).

Despite the heritable fitness cues afforded by muscularity, women are nonetheless invoking a tradeoff for short-term mating contexts. Myriad costs emerge for selecting dominant mates in long-term mating contexts due to its association with interpersonal dominance and promiscuity that limits its desirability across contexts (Boothroyd et al., 2008; Gallup et al., 2007). Muscular men's connoted interest in short-term mating could denote disinterest in parental investment and thus likely to divert resources from a given pairbond (Platek & Shackelford, 2006). In fact, men with heightened testosteronization exhibit greater disinterest in fatherhood and marriage (Gray et al., 2002). Men and women further perceive muscular men as exhibiting negative qualities as fathers and ineffective in providing necessary care and even prone to aggressive parenting (Brown et al., in press-b; Sacco et al., 2020). Perceptions of muscular men as imposing costs on offspring could be functional in identifying men who could be more prone to infanticide or child abuse because of their dominant behavioral repertoire.

1.2 Physical Features Desirable for Long-Term Mating

In addition to perceptual acuity toward features indicative of short-term mate quality, humans

similarly exhibit acuity toward features desirable in long-term mating contexts to identify mates capable of satisfying their long-term goals. Selection favored individuals capable of identifying mates' exhibiting heightened investment potential for offspring. When seeking a partner in a long-term context, one apparent signal is through another's altruistic behavior. Prosocial capabilities are broadly communicated through another's altruism, itself highly predictive of lifetime reproductive success (Arnocky et al., 2017). Such behavioral repertoires are similarly diagnostic of greater interest in monogamy and willingness to invest in potential offspring (Barclay, 2010; Brown & Sacco, 2019; Brown et al., 2020; Farrelly, 2013), a preference especially heightened among women when evaluating men as long-term mates (Brown et al., in press-c; Miller, 2007; Phillips et al., 2008). For women, the inference of long-term mate quality elicited from prosocial behavior indicates a man as unlikely to divert resources away from their relationship and potential offspring, whereas the man is granted heightened paternal certainty through a prosocial mate.

Parental abilities are readily inferred through observing another's behavior, yet this requires extended observation. An arguably more efficient method of assessment is via facial and bodily cues. Although sexually dimorphic features largely function to facilitate identification of short-term mates, it is possible that these same cues could be co-opted to identify another's value as a long-term mate. Whereas muscularity connotes heritable fitness in men, it appears detrimental within the context of long-term mating. Additionally, heightened adiposity could be particularly attractive when identifying viable long-term mates despite its traditional conceptualization as undesirable (Tinlin et al., 2013). What is colloquially deemed a "dad bod" exhibits higher levels of adiposity indeed elicits perceptions of greater paternal investment in men, indicating that a certain level of adiposity is more desirable for childcare (McPherson et al.,

2018; Sacco et al., 2020). These levels of adiposity could implicate individuals as warmer and potentially having increased access to resources. Having higher levels of adiposity in central areas is further associated with lower levels of endogenous testosterone (Khaw & Barrett-Connor, 1992), implicating women's preferences for men with higher levels of adiposity as rooted in identifying men less likely to aggress against them or their offspring.

Similar to dimorphic features in men, women's features are diagnostic of long-term capabilities. Women's waist-to-hip ratio is one cue through which individuals make these inferences, where narrower waists relative to the hips are selected readily partly due to perceptions of this feature as connoting fertility (Brooks et al., 2015). Feminized facial features are further perceived as maternal, perceptions stemming from actual interpersonal warmth (Moore et al., 2011). Women with feminine facial features indeed report a greater desire for children (Smith et al., 2012), indicating feminine facial features could facilitate men's identification of mates motivated to care for offspring (Little et al., 2014). Additionally, large breasts are viewed as especially attractive for perceptions of their ability to provide nourishment due to an access of metabolic resources (Dixson et al., 2015; Garza et al., 2020). Much like men's enhanced desirability in long-term contexts, women's body fat could be similarly desirable when identifying viable mates capable of adequate maternal care. Women with higher levels of body fat were perceived as particularly effective parents, which could relate to their own access to metabolic resources necessary for childcare (Sacco et al., 2020).

1.3 Ecological Contingencies in Body Perceptions

Mate preference consists of both context-dependent and -independent factors. Though an innate preference, driven by one's life history strategy, is an already present and driving force in an individual's mate selection process, more context-dependent factors, such as one's ecology,

have the potential to influence these preferences as well. These differential valuations of specific features in prospective mates appear to be the result of distal and proximal goals serving to identify optimal mates for a context (see Durante et al., 2012).

The more distal, context-independent driving force behind an individual's mate selection is that of their sexual strategy, influenced by one's life history. Life history theory is a theoretical framework used to examine different strategies (including sexual strategies) that humans use in determining allocations of their finite metabolic resources available in order to accomplish both their survival and reproductive goals (Hill et al., 2016). This results in a trade-offs, with the choices an individual makes being what constitutes a life history theory. As such, context-dependent factors such as one's environment are able to shape these trade-offs in proximal capacities. In accordance with life history theory, harsh ecologies drive a faster life history. Those in harsher environments might additionally be driven by a dispositional desire to prioritize mating over parenting to select a mate displaying traditionally attractive traits indicating fecundity (e.g., adiposity; Hill et al., 2013).

The social affordances of these various bodily features exist simultaneously for perceivers who weigh the costs and benefits of affiliating with these individuals. These judgments are frequently the result of identifying whether someone is capable of facilitating or impeding a given goal (Montepare & Zebrowitz, 2006), although it would seem possible for these costs and benefits to fluctuate in salience based on various motivational states (Lasseter et al., in press). For example, many cross-cultural differences exist in mating such that men prefer large breasts versus smaller breasts in accordance with one's ecology such that those in resource-scarce environments prefer larger breasts (Dixson et al., 2011; Nelson & Morrison, 2005; Swami & Tovee, 2013). Effects extend to acute experimental contexts; men experiencing hunger (versus

satiation) also prefer female targets displaying “mature” features (e.g., adiposity; Pettijohn et al., 2009; Saxton et al., 2019) and exhibit heightened acuity toward the nurturing value of large breasts (Garza et al., 2020). This effect emphasizes that individuals are more likely to display a preference for the target that is more indicative of physical and reproductive maturity as well as a greater access to resources., particularly when resources are scarce, given an acute motivation to identify resources (Hill et al., 2013; Nelson & Morrison, 2005). Nonetheless, ecologically contingent mating preferences have yet to be extended to perceptions of parental ability.

Cross cultural differences also exist in preferences for female body fat (Nelson & Morrison, 2005). Men in resource-scare ecologies prefer women with greater levels of body fat compared to those men in resource abundant ecologies who prefer women with low body fat (Anderson et al., 1992; Furnham & Baguma, 1994; Symons, 1979). Indeed, this relationship seems to have some truth as socioeconomic status (SES) and female obesity rates seem to be related. The two are inversely correlated (Sobal & Stunkard, 1989), which further supports the pattern of men’s mate preferences being driven by access to resources. It has also been shown that temporary affective states can produce such variations in mate preferences that mirrors previously discussed cultural norms (Nelson & Morrison, 2005).

Conversely, resource scarcity could reduce the favorability of muscular men in these environments, given both the increased hostility humans exhibit within harsh ecologies (Allen et al., 2016) and considerable physical advantage strong men enjoy during interpersonal conflict (Sell et al., 2012). Salience of resource scarcity and concerns of interpersonal violence heighten women’s aversion to interpersonally dominant male faces, an aversion that would likely translate to bodily features (Borras-Guevara et al., 2017; Little et al., 2007).

CHAPTER II – CURRENT RESEARCH

The overarching theme of the above findings is that individuals are particularly driven to attain a mate with features indicative of an enhanced ability not only to reproduce but to care for potential offspring. This suggests humans are capable of recognizing the various costs and benefits of various physical features in identifying individuals' capabilities as a parent. However, the relative salience of these different affordances would likely be contingent upon concomitant perceptions of these features as likely to facilitate or impede prospective offspring's chances of survival within a given environment. This study investigated how salience of resource scarcity heightens the salience of the opportunities and threats through various bodily features.

2.1 Hypotheses

Given previous work indicating high-fat targets appear to have greater access to resources for parental care (Hill et al., 2013; Sacco et al., 2020), I predicted that the parental opportunities afforded by high-fat targets would be more salient than for low-fat targets **(H1)**. I further predicted this effect to be particularly pronounced among those participants primed with a resource scare environment **(H2)**. Similarly, I predicted that female targets with larger breasts would be viewed as more capable parents compared to those with smaller breasts as they would be perceived as better able to provide for potential offspring (e.g., through breast feeding), but only when low in body fat (Katz et al., 2010) **(H3)**. Conversely, given past work implicating interpersonally dominant men as particularly costly in resource-scarce environments (Brown et al., 2021; Little et al., 2007), I predicted participants primed with resource scarcity will recognize the threats of muscular men in parenting domains more readily than the opportunities **(H4).**

CHAPTER III - METHOD

3.1 Participants

I recruited 216 participants through The University of Southern Mississippi's experiment participation system for partial course credit (24 men, 190 women, 1 other; M_{Age}=20.38, *SD*=5.15; 65.3% White). An a priori power analysis using G*Power (Faul et al., 2007) indicated that 138 participants would adequately detect effects for this mixed-model design (Cohen's f = 0.10, 1 - β = 0.80). This sample size is comparable to past studies that have similarly used this manipulation and were able to detect small effects (*N*s<154; e.g., Hill et al., 2012; Sacco, et al., 2016). The study was a single online session lasting between 10-15 minutes. Data were not analyzed until we attained a minimum sample of 200 participants.

3.2 Methods

3.2.1 Primes

Participants were first either primed with resource scarcity by reading an article concerning economic decline, or a control article of similar length concerning architecture. These primes were previously pretested (Hill et al., 2012), and the resource scarcity prime was shown to elicit a significantly greater economic concern compared to the control prime. Each article was presented for a minimum of two minutes before participants continued to the next task.

3.2.2 Manipulation Check

Following the prime, participants responded to a manipulation check assessing their concerns of impending resource scarcity using three ad hoc items along 7-point scales (e.g., "I worry that I cannot afford the things I need," 1 = *Not at All;* 7 = *Very Much*). They also responded to the PANAS scale assessing general affect to ensure equivalency across manipulations and if differences emerged, to control for their influence (Watson et al., 1998).

3.2.3 Target Bodies

Participants viewed four male and four female computer-generated target bodies varying in bodily dimensions. These bodies were selected from the UCLA Body Matrices (Gray & Frederick 2012). Both matrices had eight levels of body fat, with the male bodies possessing four levels of muscularity and the female bodies possessing four levels of breast size. For both males and female targets, we identified a central body in the matrix to represent the ideal male or female body and selected bodies two units away for each dimension to ensure a high-fat and low-fat body target for both sexes that had either small or large muscles or breasts (see Sacco et al., 2020). Faces were obscured to prevent biasing. Participants evaluated each target in a randomized and counterbalanced order.

3.2.4 Parental Perceptions

Participants evaluated each target utilizing a series of affordance management statements derived from previous measures (Lovejoy et al., 1999). These items will assess the perceived capabilities of social targets to facilitate (e.g., opportunities; "Right now, this person seems like he/she would be attentive to his/her child's needs") and impede (e.g., threats; "Right now, I think this person would likely not provide a safe environment for his/her children") attainment of social goals (Lasseter et al., in press). Items were specific to abilities to provide parental care by identifying potential (in)activation of the nurturing and protecting parental care motivational systems (Buckels et al., 2015; Schaller, 2018).

I used six items for both types of affordances (three for each parental system). They were worded to reflect how participants would perceive each target at the moment of their judgment along 7-point scales with higher scores indicating greater likelihood a given target would present an opportunity or threat (1 = *Not at All*; 7 = *Very Much;* all αs > 0.83). In addition, an item

assessing the target's perceived access to resources was included ("How comfortably do you think that this person lives (e.g., money, food, shelter, etc.?) rated on a 7-point Likert-type scale (1 = *Very uncomfortable*; 7 = *Very comfortable*) to further assess if high-fat target's access to resources influenced perceptions of positive parental ability.

3.3 Procedure

This study was approved by the USM IRB (protocol #: IRB-21-222; Appendix A). After providing informed consent (Appendix B), participants were randomly assigned to one of two between-subjects conditions. They were primed with either resource scarcity or a control state (Appendix C), followed by a manipulation check consisting of three ad hoc items regarding resource concern and the PANAS scale to measure affect (Appendices D and E). Next, participants viewed the manipulated male and female bodies from the UCLA Body Matrices (Appendix F) in dimensions of the opportunities and threats they ostensibly present as parents (Appendix G). Finally, participants provided demographic information (Appendix H) before reading the debriefing form (Appendix I).

CHAPTER IV – RESULTS

4.1 Manipulation Check

My first step was to conduct analyses on the three manipulation check measures. I employed independent samples *t*-tests for positive affect, negative affect, and perceptions of future SES. Table 1 provides all relevant statistical information. None of these outcome measures differed as a function of condition. That is, although participant's affective states were relatively similar across conditions, the manipulation appeared unsuccessful in priming resource scarcity. Though this manipulation failed to impact explicit manipulation check items, primary analyses reported below include condition as a between subjects factor to nonetheless determine if differential assignment to condition impacted perceptions of targets. Models excluding condition are additionally included given the failure of manipulation.

4.2 Primary Analyses

Though male and female targets varied similarly on target body fat, male targets were further manipulated along the dimension of muscularity and female targets along the dimension of breast size. Separate models for male and female targets were thus required. For female targets, the omnibus model was a 2 (Condition: Resource Scarcity vs. Control) × 2 (Target Body Fat: Low vs. High) × 2 (Target Breast Size: Small vs. Large) × 2 (Target Affordance: Threat vs. Opportunity) mixed-model ANOVA with repeated measures over the latter three factors. For male targets, the omnibus model was a 2 (Condition: Resource Scarcity vs. Control) × 2 (Target Body Fat: Low Vs. High) × 2 (Target Muscularity: Low vs. High) × 2 (Target Affordance: Threat vs. Opportunity) mixed-model ANOVA with repeated measures over the latter three factors. Exploratory analyses including race in the model were also conducted[i]. Due to the

complexity in interpreting main effects in these analyses, I reported interactions exclusively in the service of mitigating the likelihood of Type I Errors (Brown et al., in press-a).

4.2.1 Perceptions of Female Target Affordances[ii]

Effects were initially qualified by a Target Body Fat × Target Affordance interaction, $F(1, 214)=35.16$, $p<0.001$, $\eta_p^2=0.141$. Figure 1 provides a graphic representation of this interaction. Simple effects indicated high-fat targets appeared to afford more parenting opportunities ($M=4.91$, $SE=0.07$) than low-fat targets ($M=4.52$, $SE=0.07$), $F(1,214)=32.83$, $p<0.001$, $\eta_p^2=0.133$. See Figure 2. Conversely, low-fat targets appeared more threatening to parenting goals ($M=3.61$, $SE=0.07$) than high-fat targets ($M=3.28$, $SE=.07$), $F(1, 214)=27.61$, $p<0.001$, $\eta_p^2=0.114$. See Figure 3.

Effects were additionally qualified by a Target Body Dimension × Target Affordance interaction $F(1, 214)=6.71$, $p=0.010$, $\eta_p^2=0.030$. See Figure 4. Simple effects indicated small-breasted targets appeared to afford more parenting opportunities ($M=4.79$, $SE=0.07$) than large-breasted targets ($M=4.63$, $SE=0.06$), $F(1, 214)=6.53$, $p=0.011$, $\eta_p^2=0.030$. See Figure 5. Large-breasted targets also appeared to more threatening to parenting goals ($M=3.50$, $SE=0.06$) than small-breasted targets ($M=3.39$, $SE=0.06$), $F(1, 214)=4.00$, $p=0.047$, $\eta_p^2=0.018$. See Figure 6. No other superordinate interactions occurred, prompting no further consideration, Fs>1.61, ps>0.204.

4.2.2 Perceptions of Male Target Affordances[iii]

Male targets effects were initially qualified by a Target Body Fat × Target Body Dimension interaction, $F(1, 214)=7.33$, $p=0.007$, $\eta_p^2=0.033$. This interaction is graphically represented in Figure 7. Among targets with high levels of muscularity, simple effects indicated

low-fat targets appeared to provide more affordances (M=4.14, SE=0.03) than high-fat targets (M= 4.07, SE=0.03), $F(1, 214)=4.05$, $p=0.045$, $\eta_p^2=0.019$. See Figure 8. That is, both opportunities and threats were similarly salient for high muscularity targets when they had low levels of fat. No differences emerged for high-fat (M=4.05, SE=0.03) and low-fat targets (M=4.11, SE=0.03) low in muscularity, $F(1, 214)=1.33$, $p=0.250$, $\eta_p^2=0.016$.

Effects were additionally qualified by a Target Body Dimension × Target Affordance interaction $F(1, 214)=15.42$, $p<0.001$, $\eta_p^2=0.067$. See Figure 9. Simple effects indicated that low-muscularity targets appeared to afford more parenting opportunities (M=4.44, SE=0.06) than high-muscularity targets (M=4.26, SE=0.06), $F(1, 214)=9.97$, $p=0.002$, $\eta_p^2=0.045$. See Figure 10. Conversely, high-muscularity targets appeared more threatening to parenting goals (M=3.94, SE=0.06) than targets with low-muscularity targets (M=3.72, SE=0.06), $F(1, 214)=16.12$, $p<0.001$, $\eta_p^2=0.070$. See Figure 11. No other superordinate interactions occurred, Fs>2.41, ps>0.123.

4.3 Perceived Lifestyle Comfort

I employed a pair of 2 (Condition: Resource Scarcity vs. Control) × 2 (Target Body Fat: High vs. Low) × 2 (Target Body Dimension: Small vs. Large) mixed-model ANOVAs with repeated measures over the latter two factors. One was for male targets, which considered muscularity for Target Body Dimension. The other was for female targets, which considered breast size for Target Body Dimension. I report main effects in addition to potential interactions below due to the greater simplicity of these models compared to the previously reported results. Exploratory analyses including race in the model were also conducted for these items, but no significant main effects or interactions emerged with race, Fs>0.01, ps>0.100.

4.3.1 Perceived Lifestyle Comfort for Female Targets[iv]

A Target Body Fat main effect indicated high-fat targets were perceived to live more comfortably (M=5.24, SD=1.22) than low-fat targets (M=4.78, SD =1.54), F(1, 214)=29.58, p<0.001, η_p^2=0.121. See Figure 12. A Target Body Dimension main effect indicated large-breasted targets were perceived to live more comfortably (M=5.17, SD =1.34) than small-breasted targets (M=4.85, SD =1.43), F(1, 214)=20.25, p<0.001, η_p^2=0.086. See Figure 13. No superordinate interactions occurred, F(1, 214)>0.20, p>0.10, prompting no further consideration.

4.3.2 Perceived Lifestyle Comfort for Male Targets[v]

A Target Body Fat main effect indicated low-fat targets were perceived as living more comfortably (M=4.97, SD=0.08) than the high-fat targets (M=4.68, SD=0.08), F(1, 214)=8.97, p=0.003, η_p^2=0.040. A Target Body Dimension main effect indicated the high-muscularity targets were perceived as living more comfortably (M=4.91, SD=1.44) than the low-muscularity targets (M=4.73, SD=1.31), F(1,214)=5.90, p=0.016, η_p^2=0.027. These effects were nonetheless subsumed by a Target Body Fat × Target Body Dimension interaction, F(1, 214)=17.81, p<0.001, η_p^2=0.077. See Figure 14. No other superordinate interactions emerged, including condition, prompting no further consideration, F(1, 214)>0.11, p>0.0.204.

Simple effects indicated no difference for low-muscularity targets when comparing them at high levels of fat (M=4.73, SE=0.09) and low levels of fat (M=4.73, SE=0.10),F(1, 214)=0.00, p=1.000, η_p^2=0.00. For high-muscularity, low-fat targets were perceived to live more comfortably (M=5.21, SE=0.10) than high-fat targets (M=4.62, SE=0.10), F(1, 214)=25.31, p<0.001, η_p^2=0.106. See Figure 15.

4.4 Correlations

4.4.1 Female Targets

Considering this finding appeared counterintuitive to my previous finding that large breasts were perceived as more threatening, I explored this effect by correlating perceived lifestyle comfort with perceived parental affordances. I considered these correlations as separate analyses for each target type (see Brown, in press). For large-breasted targets, perceived lifestyle comfort was negatively correlated with perceptions of threat affordances, $|rs|>0.25$, $ps<0.001$. They were further positively correlated with perceptions of perceived affordances, $|rs|>0.42$, $ps<0.001$. These correlations might further evidence large breasts as capable of providing adequate care for offspring, though motivation to invest resources might still be questioned. Correlations for female target's perceived lifestyle comfort and affordances are further reported in Table 2.

4.4.2 Male Targets

Finding no difference for low-muscularity targets prompted me to correlate perceived lifestyle comfort among each male target with perceived parental affordances. For both targets with low-muscularity, perceived lifestyle comfort was negatively correlated with perceptions of threat affordances, $|rs|>0.39$, $ps<0.001$. They positively correlated with perceptions of perceived opportunity affordances,$|rs|>0.46$, $ps<0.001$. That is, as ratings for perceived lifestyle comfort went up for low-fat targets, perceptions of afforded threats went down; conversely, as perceptions of lifestyle comfort increased, the perceived afforded opportunities for low-fat targets went up. Thus, perceivers were able to similarly infer both the potential opportunities and threats for a given target through perceived lifestyle comfort. These correlations might aid in understanding the dual salience of parental threats and opportunities for low-fat male targets with

large muscles. Correlations between perceived lifestyle comfort and affordances for male targets are further explored in Table 3.

CHAPTER V – GENERAL DISCUSSION

Despite the current study offering limited support for several hypotheses, other results provided a conceptual replication and extension of previous work related to parenting affordances of bodily features. First, high-fat female targets were perceived as affording more parental opportunities, an effect that mirrors previous work implicating adiposity as diagnostic of parental ability (Sacco et al., 2020). This connotation could reflect a heuristic association between body fat and access to resources that could implicate a prospective mother as able to invest considerable resources into offspring (Hill et al., 2013a). Conversely, results in this study indicated a perceptual basis for negative evaluations of low body fat in parenting domains. Low-fat women were perceived as affording more threats. Low levels of body fat are attractive, particularly within short-term mating contexts (Tinlin et al., 2013; Lucas et al., 2011); this short-term desirability could position perceivers to view low-fat women as more interested in promiscuous mating strategies and thus disinterested in monogamy or parental care (Brown et al., in press-a).

Contradictory to predictions, targets with small breasts were perceived to afford more parental opportunities compared to targets with large breasts. In fact, large-breasted targets were perceived as affording more threats. This latter finding might be attributed to the possible dual connotation of breast size. Large breasts are considered particularly attractive in short-term mating, ostensibly due to their connotation of good genes that could enhance the inclusive fitness of offspring (Marlowe, 1998). Despite this enhanced fitness, previous research has demonstrated a trade-off wherein cues associated with good genes could be indicative of decreased parental ability (Sacco et al., 2020). Women with large breasts are also perceived to be more interested in short-term mating, which may lead people to see them as unfit as long-term mates and parents

(Zelazniewicz & Pawlowski, 2011). Nonetheless, targets with large breasts were thought to live more comfortably. These contradictory findings were surprising. These contrasting effects might have occurred as a result of female targets with large breasts being perceived to live more comfortably while also being seen as more self-focused, and, consequently, disinterested in disbursing any resources that would disrupt their current lifestyle. This idea would coincide with previous discussion regarding LTM interest.

For male targets, the unique combination of high muscularity and low fat fostered a dual salience of parental opportunities and threats. This finding replicates previous work demonstrating such body types appear costly in prospective fathers as it might connote a greater proclivity toward aggression and disinterest in monogamy (Sacco et al., 2020; Frederick & Haselton, 2007; Gallup et al., 2007). As such, strong bodies might indicate a decreased ability to nurture offspring. For example, corresponding with a greater interest in traditional values, strong men are perceived as more likely to use more aggressive disciplinary strategies with their children (e.g., corporal punishment; Brown et al., in press-b). Strong men indeed report a greater endorsement of aggressive punishments (Urbatsch, 2021), which could serve as a measure of the veridical nature of these inferences.

Despite the salient costs of muscularity, formidable men nonetheless present several benefits in parenting domains. High muscularity is traditionally viewed as an attractive feature due to perceptions of high heritable fitness, and is indeed associated with greater reproductive success (Frederick & Haselton, 2007). Due to the advantage that muscular men would have historically enjoyed in conflict, upper body strength could have subsequently been sexually selected as a primary component of bodily attractiveness (Sell et al., 2017). This advantage could also implicate muscular men as particularly effective in aiding coalitional goals involving

protection (Brown et al., in press; Lukaszewski et al., 2016). Thus, an environmentally motivated trade-off occurs wherein a woman might infer greater costs or benefits of strong men based upon their ecology (e.g., Borras-Guevara et al., 2017). This would allow both the parental opportunities and threats of muscular, low-fat men to become salient. I additionally found that the high-muscularity target at low levels of fat was thought to live more comfortably. It could be the case that these targets were perceived in this way due to men with this body type historically being the most capable of acquiring resources. In a distal context, men's performance as a hunter was critical to his available resources and status (Gurven & von Rueden, 2006), where greater hunting spoils allowed for more reproductive opportunities (Smith, 2004).

Lastly, my experimental manipulation to prime resource scarcity failed. One possible explanation could be due to persistent concerns related to the economic volatility during the COVID-19 pandemic (Altig et al., 2020). Because resource concerns are already high, the prime might not have been strong enough to further manipulate these concerns. Additionally, the prime used has traditionally been used with in-person studies (e.g., Hill et al., 2012; Sacco, Bermond, & Young, 2016), as opposed to online as in the current study. Even though participants were required to view the assigned article for at least two minutes, being online leaves a greater chance of distractions and general inattentiveness for participants (see Newman et al., 2021; Al-Salom & Miller, 2019). Including attention checks in future studies might aid in eliminating inattentive participants.

Modifications could further be made to the items included to assess the prime's efficacy more effectively. For example, the current study erroneously used the original instructions for the PANAS task which participants to rate the extent that they have felt each of the following emotions "this week" (Watson et al., 1988), causing a discrepancy in priming task and

assessment. A more appropriate task following the primes would be to ask the extent they felt each emotion in the current moment. Nonetheless, the fact that the manipulation of resource scarcity failed as indexed by the appropriately worded manipulation check items largely renders the PANAS assessment irrelevant in the current study. However, future research might consider a different measure of affect influence altogether, as the PANAS has garnered recent concern as to its efficacy. PANAS has been criticized for excluding basic emotions that it aims to measure (Cohen et al., 2006). More troublingly, PANAS has high test-retest reliability, creating concern as to how sensitive the scale is to measuring state affect (van de Men, 2019). However, considering the study's large sample size, and that the ad hoc SES items failed, other design alternatives might take priority.

5.1 Limitations and Future Directions

Various limitations are apparent in the current study that warrant future investigation. Most notably, the current study saw a failure of the manipulation. Future studies might consider a different prime for resource scarcity. For example, one such prime might be to have participants view a brief slide show describing either impending resource scarcity or general negative affect condition describing declining college grades as a control (Hill et al., 2012). The former prime has specifically been shown to effectively activate concerns of resource scarcity using bogus statistics about a recession, whereas the control prime serves to facilitate negative affect in participants similar to that of the resource scarcity prime without activating resource concerns. This prime might also have greater efficacy in being more relatable for college students by discussing grades compared to architecture as is used in the prime for the current study. Additionally, it would be beneficial for future researchers to include a measure of socio-

economic status (SES) to determine whether the effects of the manipulation could be specific to a certain social class.

It might also benefit future research to explore other primes that activate one's parental care system. As acute activation of one's parental care system heightens monogamous intent (Beall & Schaller, 2019) as well as vigilance towards potential threats (Gilead & Liberman, 2014). One such prime might be to have participants view photographs of human infants or puppies (i.e., control), as young children's neotenous features have been shown to elicit parental tenderness (Woo & Schaller, 2020). Additionally, priming participants with a disease threat could further explain perceptions of parental ability, particularly as it pertains to the saliency of the current pandemic. Previous research has demonstrated men's sensitivity to pathogen disgust to be positively corelated with mate preferences such that those higher in pathogen disgust indicate a preference for partners with lower levels of body fat (Fisher et al., 2013). Similarly, priming participants with their roles as caregivers increases their prejudice towards potentially threatening others (Gilead. & Liberman, 2014). Thus, positive perceptions of high body fat targets might decrease given the association of fat with poor health (Fisher et al., 2013). Conversely, because acute disease threats decrease one's proclivity toward short-term mating (Moran et al., in press), it could also be the case that if one is seen to be a more suitable long-term mate (i.e., through high adiposity), these positive perceptions might increase.

For female targets, it would behoove future researchers to elucidate perceptions of target breast size. One possible way might be to include a measure of sociosexual orientation as a potential moderator for perceptions of breast size, as mate preferences are context-dependent (Anderson et al., 1992). For example, men that report an unrestricted sociosexuality indicate a heightened preference for large breasts (Buss & Schmitt, 1993; Gangestead & Simpson, 2000).

Unrestricted sexual strategies are characterized by short-term relationships with a greater number of partners compared to someone with a restricted sociosexuality. This mating goal drives those with unrestricted sexual behaviors to display stronger interest in cues that signal heightened fertility, health, and willingness to engage in short-term mating (Zelazniewcz & Pawlowski, 2011). Thus, perceptions of afforded opportunities and threats of large versus small breasts might be determined by the participant's mating goals, indexed by their sociosexual orientation.

As for the consideration of male targets, due to the perceptions of both greater parental opportunities and threats, additional studies should serve to tease apart these perceptions. Drawing upon Parental Investment theory (Trivers, 1972), men's inherently more extrinsic care for offspring has evolved to present itself in multiple ways. Broadly, men invest in offspring directly (e.g., carrying, grooming) and indirectly (e.g., protection, resource acquisition; Kleiman & Malcolm, 1981), both of which are critical in men's value as a parent. It could be that participants, according to their needs in a mate, view men with high muscularity paired with low body fat as able to offer more indirect provisioning opportunities, presenting a worthy trade-off with the cooccurring perceived threat of dominance. This would coincide with the correlations found between perceived lifestyle comfort and affordances for male targets.

Finally, as I obtained participants from an undergraduate university sample, the generalizability of these perceptions is limited. As an alternative to priming activation of the parental care system, collecting a more generally representative sample, particularly considering a sample wherein participants would be in an age range that is more likely to have concern regarding parental investment (e.g., Krems et al., 2017), might further elucidate the value of these perceptions of others parental ability as those individuals would have adopted heightened precautionary attitudes (Kerry & Murray, 2019).

5.2 Conclusion

Given the importance of finding a long-term mate capable of the biparental investment necessary for offspring survival, humans have become particularly adept at identifying physical features that connote such ability. Additionally, these perceptions appear to be context dependent such that one's environment shapes mating goals and consequently perceptions of potential mates. While the current study was unable to elucidate these perceptions as they relate to one's environment, it was able to replicate many previous findings regarding inferences of parental ability through bodily cues, such as high fat female targets being viewed more favorably as parents and high muscularity male targets seen as more threatening. The extent to which these inferences are shaped by environment should be further investigated in future research.

APPENDIX A – Tables

Table 1. Statistical information for manipulation check items

	Scarcity	Neutral	*t*	Cohen's *d*	*p*	α
Positive Affect	3.12 (0.74)	2.93 (0.76)	1.73	0.24	.494	0.87
Negative Affect	2.27 (0.76)	2.43 (0.81)	-1.48	-0.20	.382	0.86
SES	4.77 (1.51)	4.75 (1.42)	0.09	0.01	.359	0.83

Table 2. Correlation table for perceived lifestyle comfort and affordances for female targets

Perceived Lifestyle Comfort		Perceived Parental Threats	Perceived Parental Opportunities
High Body Fat, Small Breasts	Pearson Correlation	-.358**	.428**
	Sig. (2-tailed)	<.001	<.001
	N	216	216
High Body Fat, Large Breasts	Pearson Correlation	-.345**	.420**
	Sig. (2-tailed)	<.001	<.001
	N	216	216
Low Body Fat, Small Breasts	Pearson Correlation	-.205**	.437**
	Sig. (2-tailed)	.002	<.001
	N	216	216
Low Body Fat, Large Breasts	Pearson Correlation	-.248**	.276**
	Sig. (2-tailed)	<.001	<.001
	N	216	216

**. Correlation is significant at the 0.01 level (2-tailed).

Perceived lifestyle comfort for female targets with high body fat and small breasts was negatively correlated with perceptions of threat affordances ($r(214)=-0.358$, $p<0.001$) and positively correlated with perceptions of perceived affordances ($r(214)=0.428$, $p<0.001$).

Perceived lifestyle comfort for female targets with high body fat and large breasts was negatively correlated with perceptions of threat affordances ($r(214)=-0.345$, $p<0.001$) and positively correlated with perceptions of perceived affordances ($r(214)=0.420$, $p<0.001$).

Perceived lifestyle comfort for female targets with low body fat and small breasts was negatively correlated with perceptions of threat affordances ($r(214)=-0.205$, $p<0.002$) and positively correlated with perceptions of perceived affordances ($r(214)=0.437$, $p<0.001$).

Perceived lifestyle comfort for female targets with low body fat and large breasts was negatively correlated with perceptions of threat affordances ($r(214)=-0.248$, $p<0.001$) and positively correlated with perceptions of perceived affordances ($r(214)=0.276$, $p<0.001$).

Table 3. Correlation table for perceived lifestyle comfort and affordances for male targets

Perceived Lifestyle Comfort		Perceived Parental Threats	Perceived Parental Opportunities
High Body Fat, Small Muscles	Pearson Correlation	-.385**	.529**
	Sig. (2-tailed)	<.001	<.001
	N	216	216
High Body Fat, Large Muscles	Pearson Correlation	-.376**	.490**
	Sig. (2-tailed)	<.001	<.001
	N	216	216
Low Body Fat, Small Muscles	Pearson Correlation	-.336**	.458**
	Sig. (2-tailed)	.002	<.001
	N	216	216
Low Body Fat, Large Muscles	Pearson Correlation	-.107**	.351**
	Sig. (2-tailed)	.115	<.001
	N	216	216

**. Correlation is significant at the 0.01 level (2-tailed).

Perceived lifestyle comfort for male targets with high body fat and small muscles was negatively correlated with perceptions of threat affordances ($r(214)=-0.385$, $p<0.001$) and positively correlated with perceptions of perceived affordances ($r(214)=0.529$, $p<0.001$).

Perceived lifestyle comfort for male targets with high body fat and large muscles was negatively correlated with perceptions of threat affordances ($r(214)=-0.376$, $p<0.001$) and positively correlated with perceptions of perceived affordances ($r(214)=0.490$, $p<0.001$).

Perceived lifestyle comfort for male targets with low body fat and small muscles was negatively correlated with perceptions of threat affordances ($r(214)=-0.336$, $p<0.001$) and positively correlated with perceptions of perceived affordances ($r(214)=0.458$, $p<0.001$).

Perceived lifestyle comfort for male targets with low body fat and large muscles was positively correlated with perceptions of perceived affordances ($r(214)=0.351$, $p<0.001$). Lifestyle comfort was not correlated with perceived threat ($r(214)=-0.107$, $p=0.115$).

APPENDIX B – Study Appendices

Appendix A

IRB Approval Form

Date: 8-24-2021

IRB #: IRB-21-222

Title: The Impact of Environmental Resource Variability on Perceptions of Parental Ability Through Bodily Cues

Creation Date: 5-14-2021

End Date:

Status: Approved

Principal Investigator: Kaitlyn Holifield

Review Board: Associate Chair

Sponsor:

Submission Type Initia	Review Type Expedited	Decision Approved

Key Study Contacts

Member Donald Sacco	Role Co-Principal Investigator	Contact donald.sacco@usm.edu

Member Kaitlyn Holifield	Role Primary Contact	Contact Kaitlyn.boykin@usm.edu
Member Kaitlyn Holifield	Role Principal Investigator	Contact Kaitlyn.boykin@usm.edu

Initial Submission

Appendix B

Parenting Perceptions Consent Form

1. You are invited to take part in a research study conducted by Kaitlyn Boykin under the supervision of Dr. Don Sacco in the School of Psychology. Any questions or concerns regarding this research may be directed to Don Sacco (Owings-McQuagge Hall; Room 220A; 601.266.6747; Donald.Sacco@usm.edu). This project and this consent form have been reviewed by the Institutional Review Board, which ensures that research projects involving human participants follow federal regulations. Any questions or concerns about your rights as a research participant should be directed to the Chair of the Institutional Review Board, The University of Southern Mississippi, Box 5125, Hattiesburg, MS 39406, (601) 266-5997.

2. This study is interested in interpersonal perception. You will be asked to evaluate your perceptions of a series of bodies, answer questionnaires, and provide demographic information. Please complete this study using a full screen on a computer or laptop. Do not participate using a tablet or phone.

3. You are free to discontinue your participation in this study at any time without penalty or loss of benefits. You may also freely decline to answer any of the questions asked of you.

4. The responses that you provide today will be kept completely confidential. At no time will your name or any other identifying information be associated with any of the data that you generate today. It will never be possible to identify you personally in any report of this research. Within these restrictions, results of the study will be made available to you upon request.

5. The risks associated with participation in this study are not greater than those ordinarily encountered in daily life, although you may feel mild emotional discomfort in various stages of

the experiment. If you feel that you are distressed at any time while participating in this research, you should notify the researcher immediately. Your participation in this study does not guarantee any beneficial results. However, it will aid in your understanding of how psychological research is conducted as well as contribute to the general knowledge in the field. You will also receive .5 SONA credits as compensation for your participation in the current study.

6. You are free to discontinue your participation in this study at any time without penalty or loss of benefits. You may also freely decline to answer any of the questions asked of you.

7. By clicking "Consent" below, you are indicating that you understand your participation is voluntary, that your responses will be kept confidential, and that you are at least 18 years of age.

If you consent to these procedures, please click the button labeled "**Consent**" below and click "**Continue**" to start. If you do not consent, please close the window now.

Appendix C

Economic Recession Prime

Worst Economic Crisis Since '30s With No End in Sight By MORGAN JAMESTON, Senior Times Writer

Five months ago

Jonathan Pierce had a stable, well-paying job. Having earned a college degree, Jon was doing well at age 25. He even believed he was about to be promoted. Today, however, Jon is yet again standing in the dreary unemployment line downtown. "I didn't think this could happen to me," he mutters while shaking his head. "I have a college degree and I can't even get a job interview, let alone a job. I'm facing foreclosure on my house, and I just don't know where the money is going to come from."

This depressing scene is not unique. Unemployment lines are beginning to spread across the country. "The early numbers are staggering," notes Oliver Windsor, the head of the U.S. Economic Commission. And it's not just blue-collar jobs like construction and food service that are being cut. It's the white-collar jobs like management and office work that are being hit the hardest. According to Windsor, "the best-case scenario looks like a recession. The worst-case scenario is a depression similar to that in the 1930s." Unfortunately, there is little that the government can do to remedy the situation. As every economist knows, changing the interest rates might slow the bleeding, but it can't fix the underlying structural problems. The impending economic crisis is only the beginning of the new reality faced by Americans and there is no end in sight.

After decades of economic growth, experts agree that the U.S. is on the verge of an economic shift. "The economy of the 21st century is fundamentally different from that in the past," explains Dr. Patricia Wharton, chair of the panel for U.S. Economic Stability. "The sad truth is that this generation is certain to be the first generation to do worse than their parents—and their children will likely be even worse off. The housing bubbles, skyrocketing energy prices, a massive trade deficit, and the credit crisis only begin to scratch the surface of our economic problems."

The fact that younger Americans should expect to have little economic advancement is only part of the imminent economic disaster. Skyrocketing worldwide population growth and scarcity of natural resources are both working together to transform the U.S. economy. To understand how these factors are changing life for Americans, Oliver Windsor, one of 80 leading scientists who contributed to the government report, reminds us of the basics: “There are literally billions of people out there competing with each other. And these people are not just competing for jobs. The truth is that they’re competing for food, water, and air.”

The underlying fact is that our planet simply cannot support tens of billions of people. While it may be difficult for some to even imagine that the U.S. might one day be in poverty, the world in the 21st century is highly inter-connected. Things that happen in China, India, and Africa have tremendous consequences for what happens in the rest of the world. And as necessities like safe food, drinkable water, and breathable air become scarcer and expensive, the world as we know it will become a very different place. Watching Jonathan Pierce wait in the unemployment line downtown, one can’t help but be reminded of the Great Depression—a time in American history that most people only remember from their history classes. The images of the Depression are difficult to erase: Malnourished children begging for food, people standing in line for days just to get a slice of bread and a cup of soup, everyone struggling to feed themselves and their families. The sad truth for people like Jonathan Pierce and countless others is that losing a job is only the beginning. Tough times are ahead.

Control Prime

Bandish the Bland: The Glass Box Is So Last Century By ERIC FELTON, Senior Times Writer

Five months ago

This week saw a building by famed modernist architect Ludwig Mies van der Rohe succumb to the wrecking ball, making room at the Illinois Institute of Technology for a commuter rail station. A few fevered bloggers complained, but the preservationists yawned. Perhaps that's because the building was a dumpy brick shed devoid of interest or import. Or perhaps it's because the Mies style doesn't seem endangered at the moment. We're seeing a resurgence of mid-century modernism, from "Mad Men" fashions to sparse interiors displaying Le Corbusier sofas. But the trademark glass-and-steel boxes of modern architecture didn't need a comeback. They've never left: Cities continue to toss them up in all their stark, anonymous severity. Will architects ever give us something new? Sure, we get some wild edifice-expressions, whether the crumpled-paper shapes of Frank Gehry or the off-kilter polyhedral of Rem Koolhaas. But even when today's architects escape the old box-on-stilts of the International Style, they stick to the one unwritten law of modern architecture: Thou Shalt Not Ornament.

Sleek surfaces of class, metal, concrete or stone can be broken up by structural geometry- Mies himself was in the habit of welding steel I-beams to the exterior of his buildings to delineate the framework underneath. But there's no room in the International Style or its many cookie-cutter cousins for the integrated decorations that, for countless years, and in countless cultures, were thought to be an essential part of buildings. No carved-stone swags or florid ironwork, no fussy moldings or extraneous curlicues, no bas-relief motifs or scrolls, no anthemion or acanthus. Homebuyers may look for the "period detail" that makes a house pleasing to the eye and spirit- it's a prime selling point in real-estate listings – but the glass-and-steel boys who dominate urban design remain devoted to a dogma that denounces such things as corrupt and impure. It is only natural for styles to swing from one extreme to another, and after the riotous ticky-tack of high Victorian style you can't blame anyone for having wanted some clean, straight lines.

Novelist and arbiter of taste Edith Wharton called for “clearing away bric-a-brac on the sound principle that “a small quantity of ornament, properly applied, will produce farm more effect than ten times its amount used in the wrong way.” The inventor of the skyscraper, Louis Sullivan, suggested in 1892 that it would be a good idea to take a break from ornament for a while in order to remember how to make “buildings well-formed and comely in the nude.” But Sullivan didn’t want to eliminate ornament altogether, he just wanted to get it under control and showed how to do it with the iron foliation around the first floors of Chicago’s Carson Pirie Scott department store. By contrast, the radical modernists wanted to scrape structures clean of ornament altogether, like a landscaper who tames a wild, overgrown garden by paving it over. And that’s where we still are today. The postmodernists tried to reintroduce ornament of a sort- in the case of Philip Johnson’s AT&T building, by sticking a Chippendale top on a midtown Manhattan skyscraper. Bu these were half-hearted, ironic gestures, too feeble to dislodge the anti-ornament aesthetic. It’s hard to get the pendulum swinging back when it’s stuck under all that raw concrete.

Appendix D

1. At this very moment, I have strong concerns about my finances in the future.
2. I’m currently worried that I will not have enough money if trends continue.
3. Right now, I want to start saving money immediately.

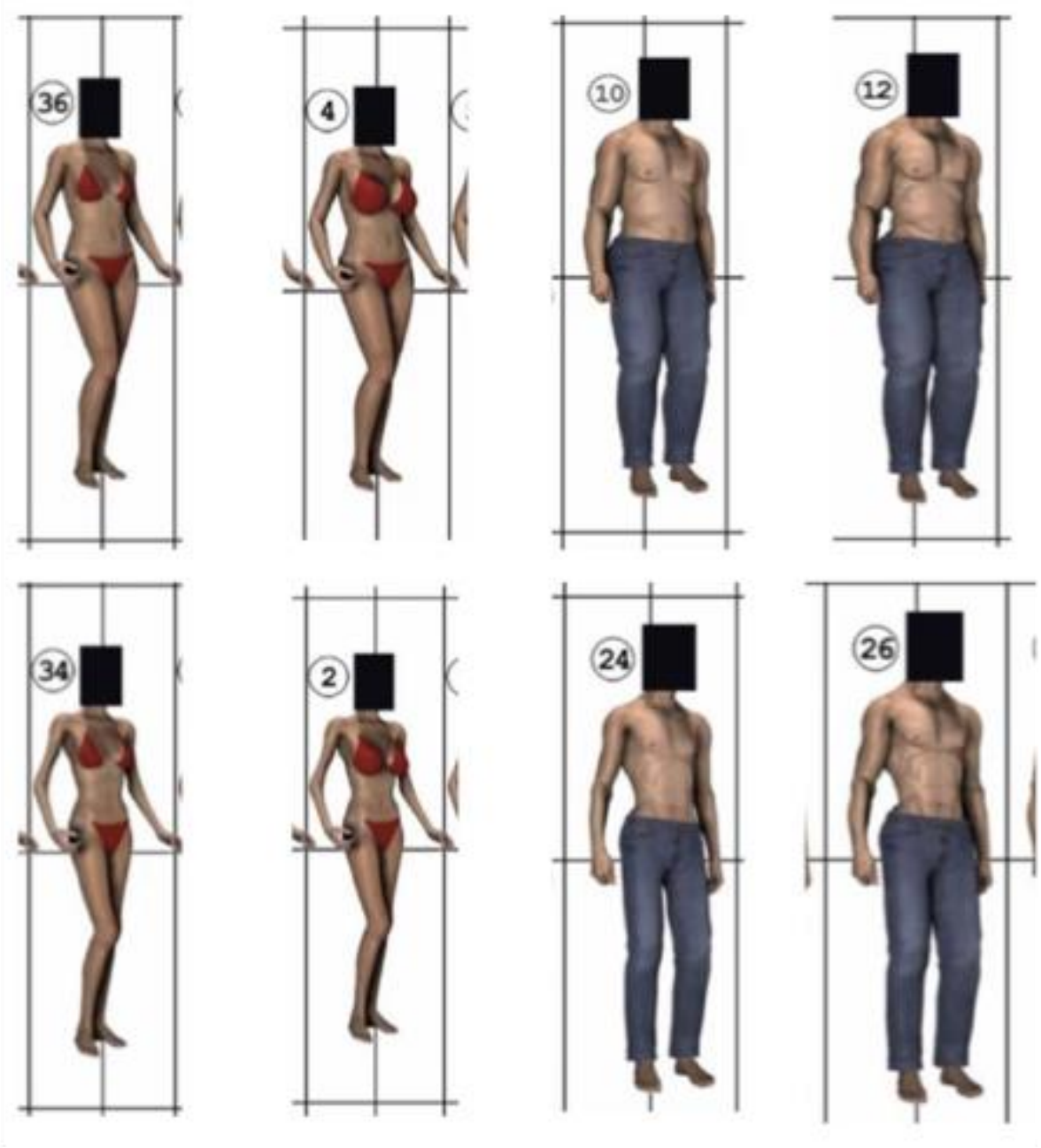
Appendix E

Positive and Negative Affect Schedules (PANAS-SF)

Indicate the extent you have felt this way over the past week.

1. Interested
2. Distressed
3. Excited
4. Upset
5. Strong
6. Guilty
7. Scared
8. Hostile
9. Enthusiastic
10. Proud
11. Irritable
12. Alert
13. Ashamed
14. Inspired
15. Nervous
16. Determined
17. Attentive
18. Jittery
19. Active
20. Afraid

Appendix F



Appendix F. Social targets varying in high (top row) and low body fat (bottom row), with small (left column) and large breasts (right column) for female targets and small (left column) and large muscles (right column) for male targets (presented in Sacco, Holifield, Drea, Brown, & Macchione, 2020; courtesy of Gray & Frederick, 2012).

Appendix G

1. Right now, I think that this person would grab or handle a child roughly (threat 1).
2. Right now, I think that this person would likely want to avoid his/her child, and leave him/her by themselves (threat 2).
3. Right now, I think that this person would enjoy spending quality time with his/her child (opportunity 1).
4. Right now, I think that this person would likely comfort his/her child if their child was upset (opportunity 2).
5. Right now, this person seems like he/she would be attentive to his/her child's needs (opportunity 3).
6. Right now, I think this person would likely not provide a safe environment for his/her children (threat 3).
7. Right now, I think that this person would be patient when teaching his/her child a new task (opportunity 4).
8. Right now, I think this person would be quick to verbally scold their child for a minor offense (threat 4).
9. Right now, I think that this person would use physical punishment with their child (threat 5)
10. Right now, this person seems as if they would lose their temper with their child (threat 6).
11. Right now, this person seems like they would be affectionate towards their child (opportunity 5).
12. Right now, this person seems like they would praise their child (opportunity 6).

Appendix H

Demographics

What is your sex?

Male

Female

Other

What is your age (in whole numbers)?

What is your ethnicity?

African-American/Black

Asian/Asian-American

Caucasian/White

Hispanic/Latino

Other

What is your marital status?

Single

In a relationship

What is your sexual orientation?

Bisexual

Heterosexual

Homosexual

Other

Do you have children?

Yes

No

Appendix I

Debriefing

Thank you for participating in today's study. We hope you found your experience interesting and enjoyable.

In this study, we were interested in how an individual's perception of a person would shift when presented with bodies or faces with varying sexually dimorphic bodily or facial features. In this study, we predicted that people would rate males with features manipulated to be more masculine higher in professional efficacy (Dixon & Brooks, 2013), while females with more feminine features would be rated higher in relational and parental efficacy (Singh et al., 2010).

Because this research in ongoing, we ask that you not reveal any details of the study to those that might also participate (e.g., classmates or friends). Revealing details could influence a participant's responses in the experiment, disrupting the nature of the study. If a peer does ask about the study, you can just tell them that you were a participant in a study about social perceptions.

If you have any further questions, feel free to contact the experimenter listed on your consent form (Kaitlyn Boykin, kaitlyn.boykin@usm.edu). For further reading on related research, you can get more information from:

Dixson, B. J., & Brooks, R. C. (2013). The role of facial hair in women's perceptions of men's attractiveness, health, masculinity and parenting abilities. Evolution and Human Behavior, 34, 236–241.

Singh, D., Dixson, B. J., Jessop, T. S., Morgan, B., & Dixson, A. F. (2010). Cross-cultural consensus for waist–hip ratio and women's attractiveness. Evolution and Human Behavior, 31, 176–181.

APPENDIX C - Figures

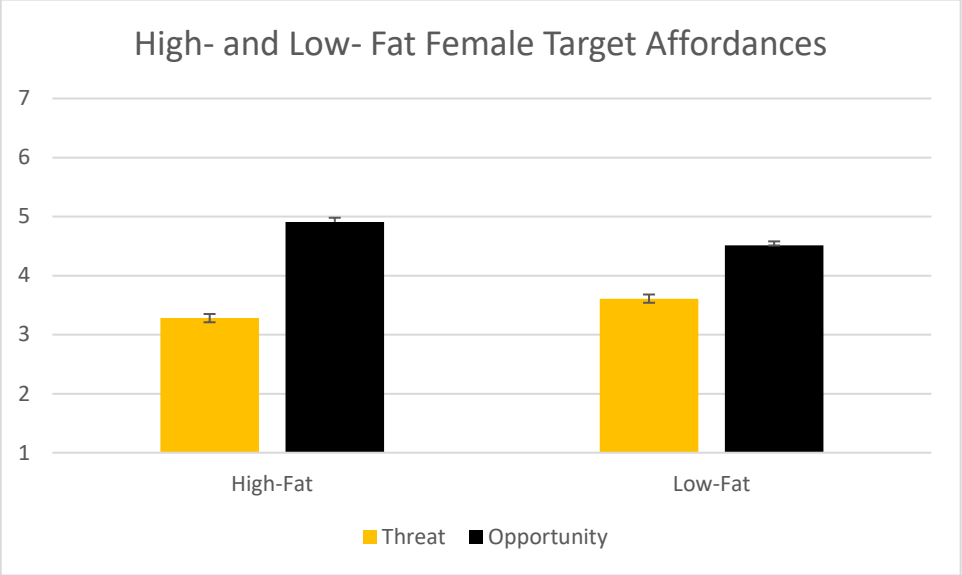


Figure 1. Perceived threat and opportunity parental affordances among high- and low-fat female targets (with standard error bars).

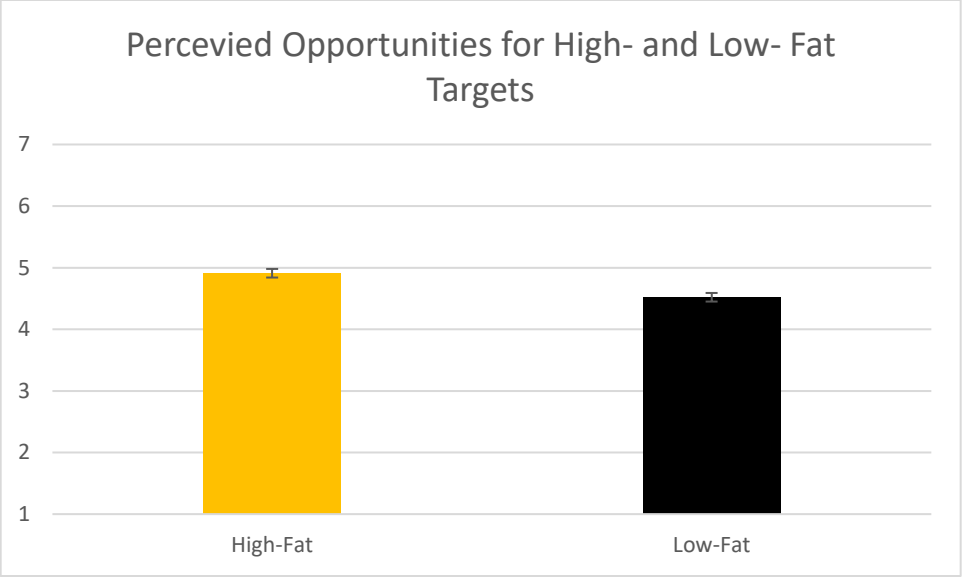


Figure 2. Perceived opportunities among high- and low-fat female targets (with standard error bars).

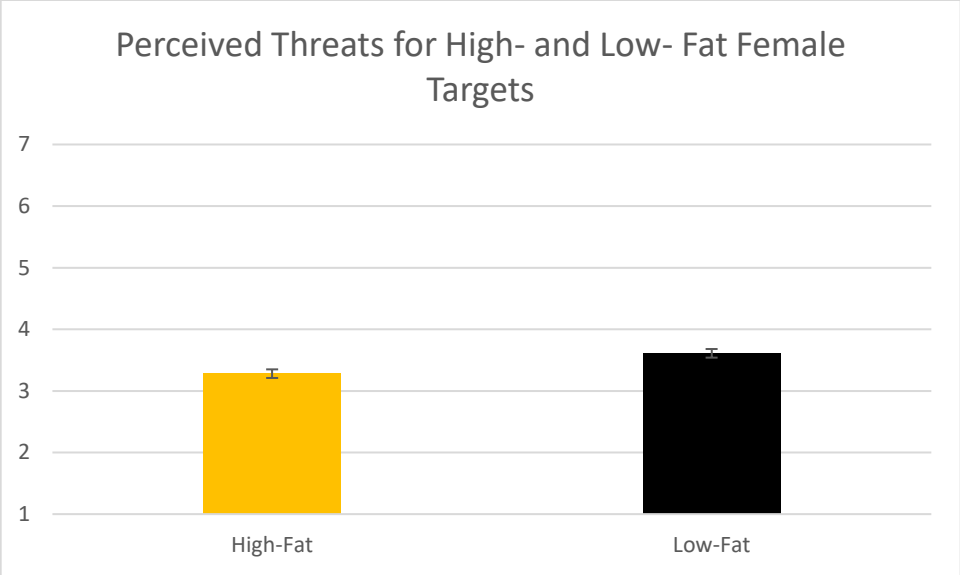


Figure 3. Perceived threats among high- and low-fat female targets (with standard error bars).

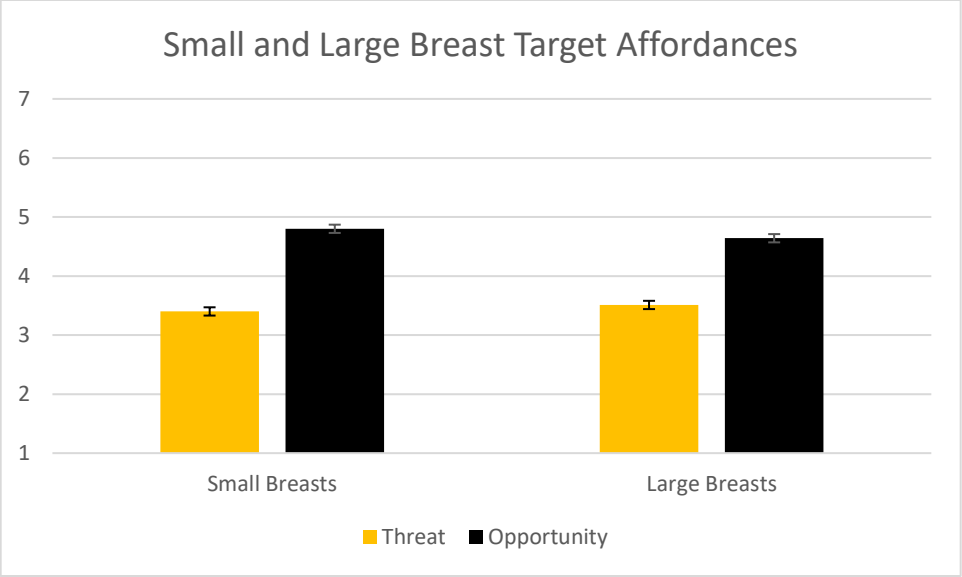


Figure 4. Perceived threat and opportunity parental affordances among female targets with small and large breasts (with standard error bars).

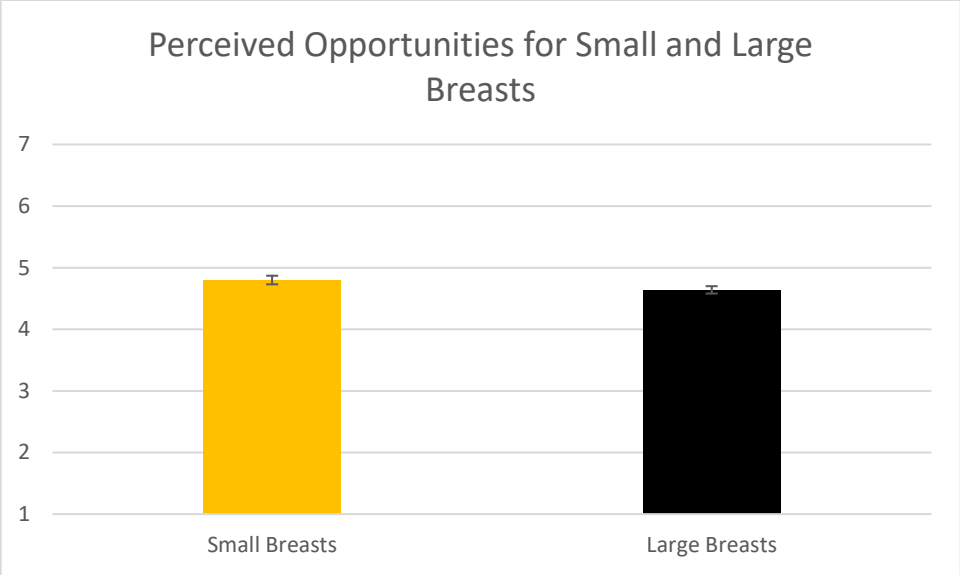


Figure 5. Perceived opportunities among female targets with small and large breasts (with standard error bars).

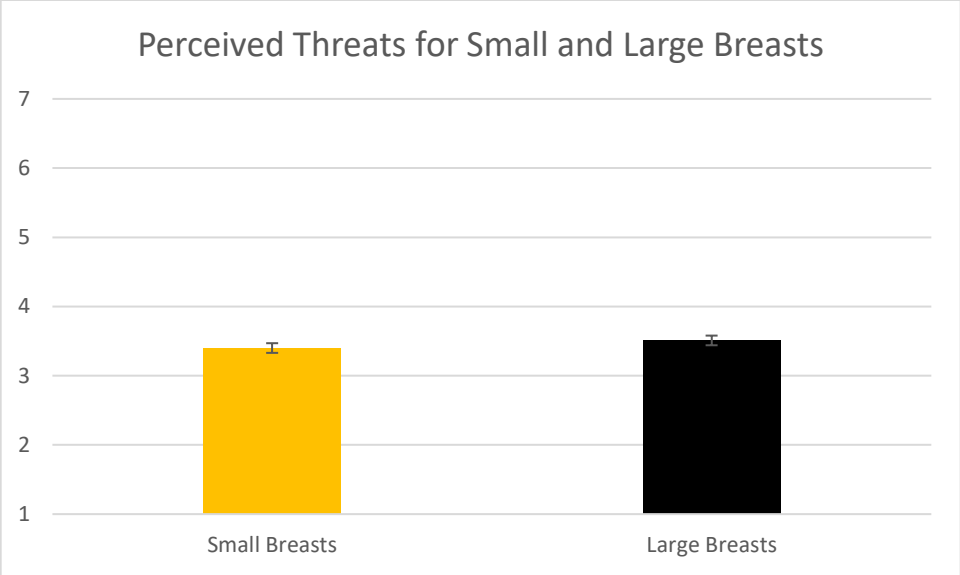


Figure 6. Perceived threats among female targets with small and large breasts (with standard error bars).

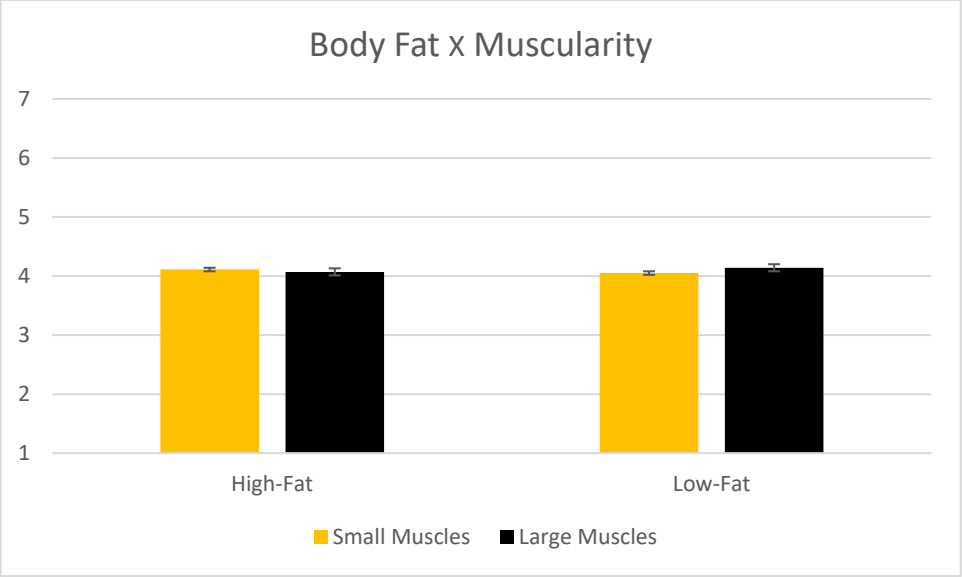


Figure 7. Perceptions of high- and low-fat male targets across high and low levels of muscularity (with standard error bars).

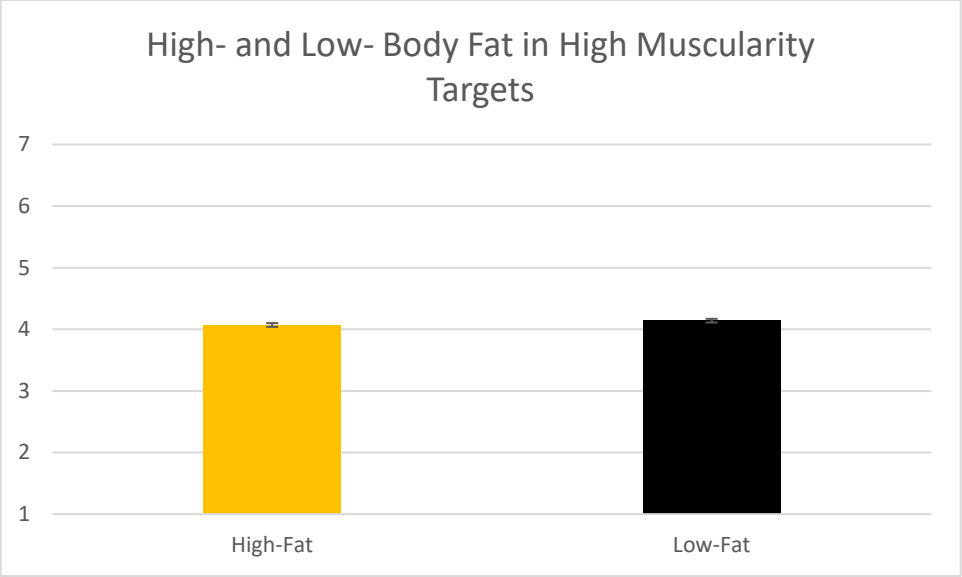


Figure 8. Perceptions of male targets high in muscularity across high and low levels of body fat (with standard error bars).

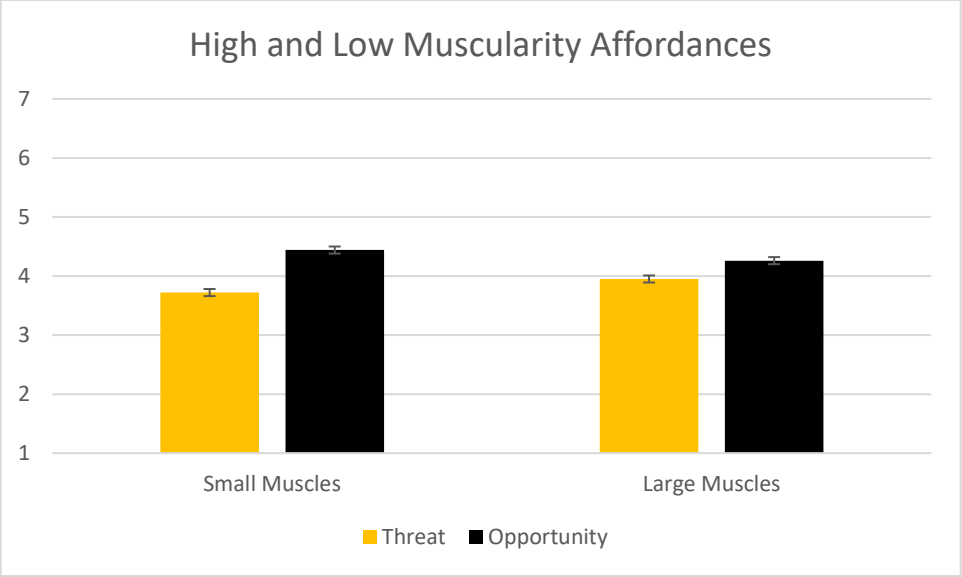


Figure 9. Perceived threat and opportunity parental affordances among male targets with high and low levels of muscularity (with standard error bars).

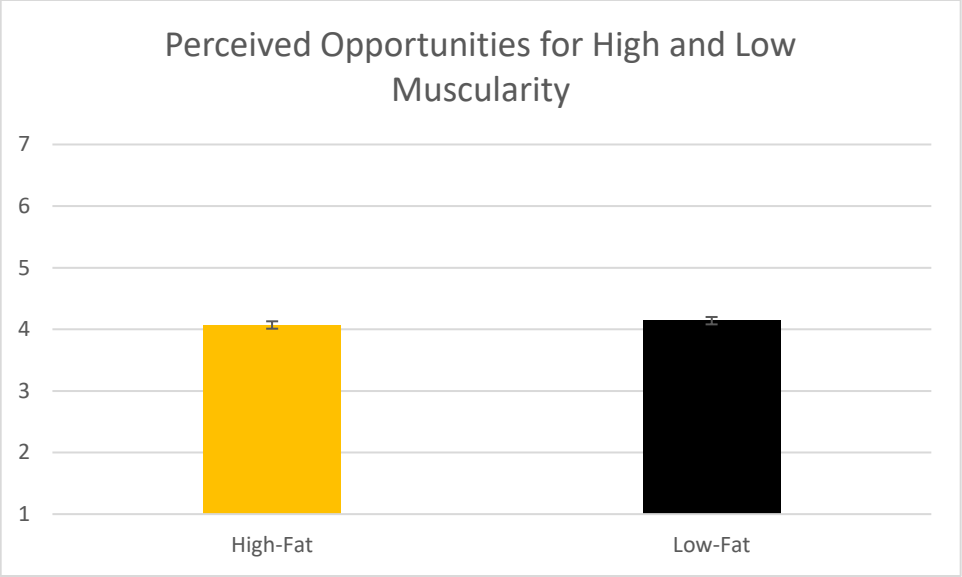


Figure 10. Perceived opportunities among male targets with high and low levels of muscularity (with standard error bars).

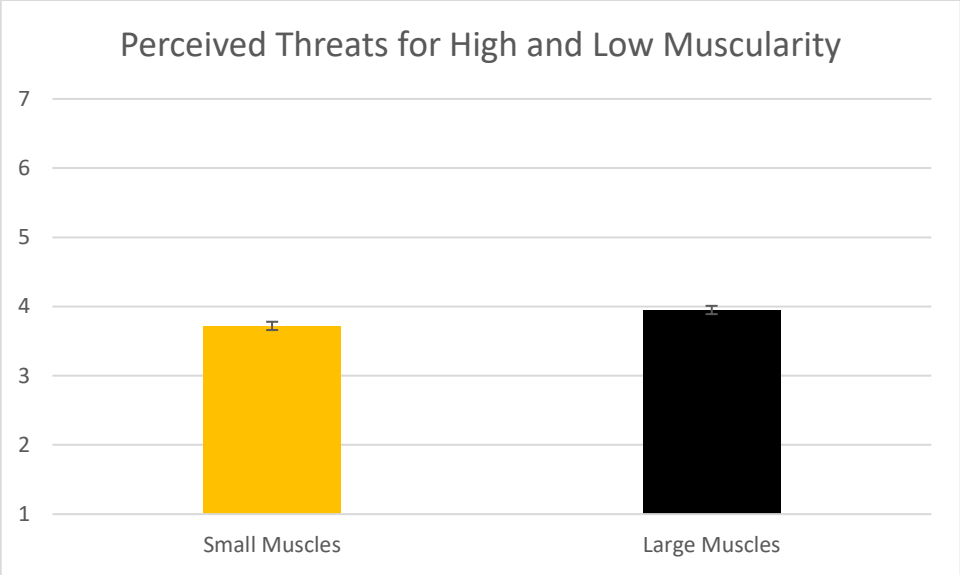


Figure 11. Perceived threats among male targets with high and low levels of muscularity (with standard error bars).

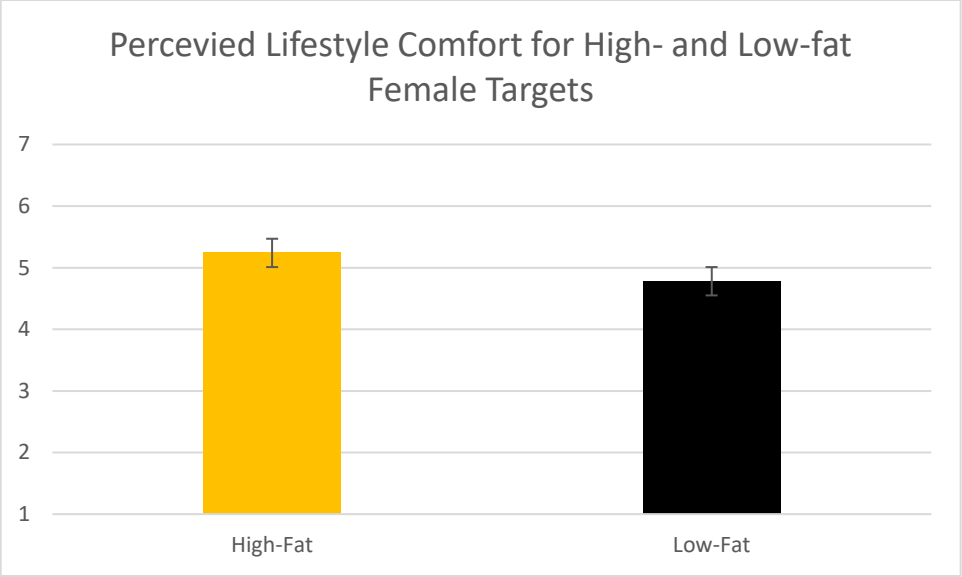


Figure 12. Perceived lifestyle comfort among high- and low-fat female targets (with standard error bars).

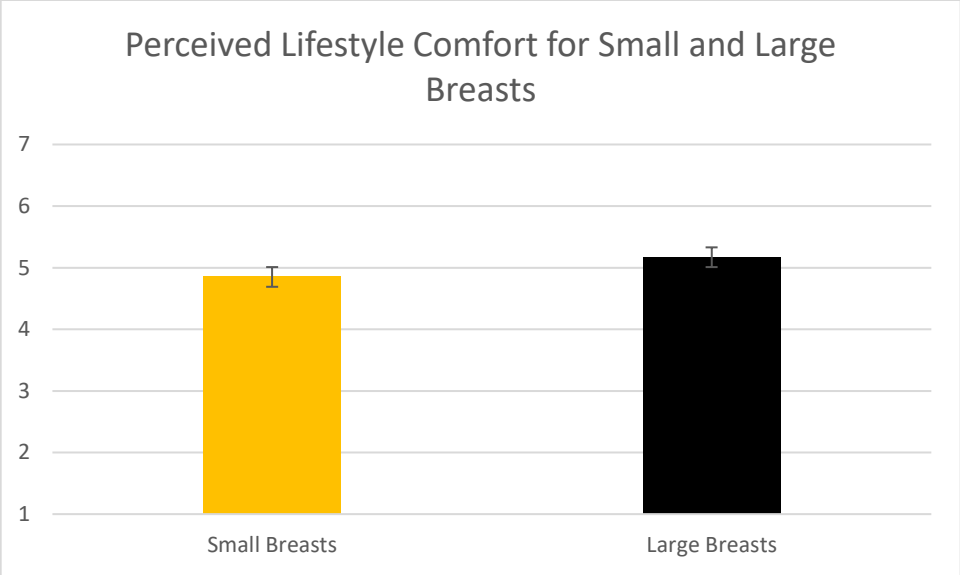


Figure 13. Perceived lifestyle comfort among female targets with small or large breasts (with standard error bars).

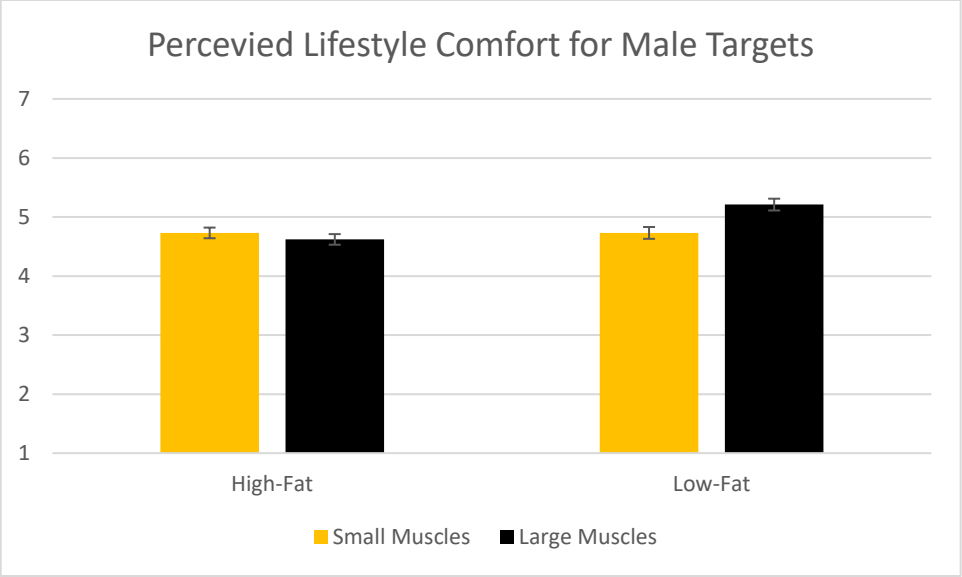


Figure 14. Perceived lifestyle comfort among high- and low-fat male targets with either low or high muscularity (with standard error bars).

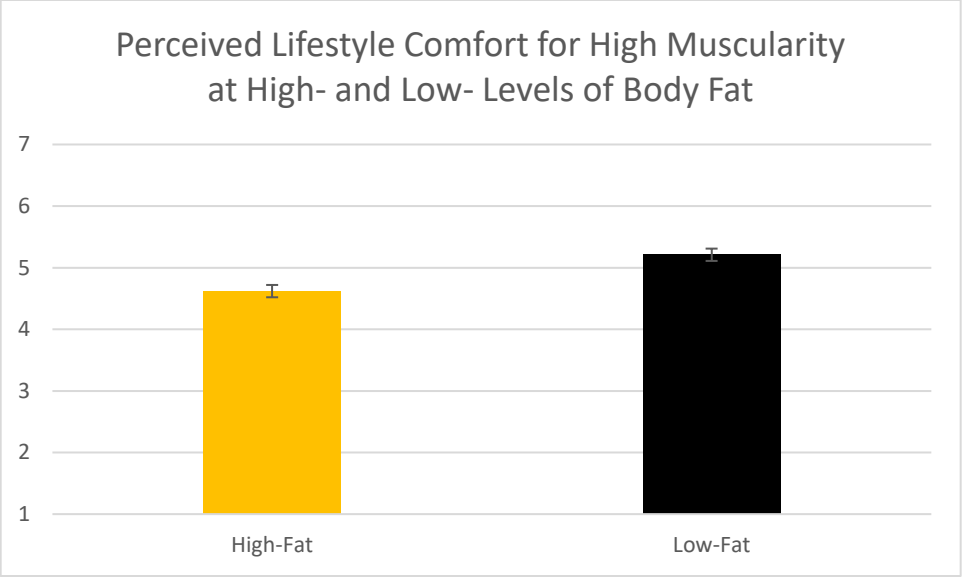


Figure 15. Perceived lifestyle comfort among high- and low-fat male targets with high muscularity (with standard error bars).

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[i] For female targets, a Target Body Fat x Target Body Dimension x Condition x Race four-way and Target Affordance x Condition x Race three-way interaction occurred $F(1, 214)>4.38$, $p<0.014$, $\eta_p^2>0.040$. In decomposing these interactions black participants in the resource condition more readily identified the opportunities (M=4.63, SD=0.18) for female targets than threats (M=3.61, SD=0.18), and favored high body-fat targets with small breast (M=4.25, SD=0.11) rather than large breasts (M=3.91, SD=0.08). Opportunities for female targets were similarly more salient among white participants, though at a slightly reduced magnitude, Fs>7.86, ps<0.007.

For male targets, a Target Body Dimension x Target Affordance x Condition x Race four-way interaction occurred $F(1, 214)=4.12$, $p=0.018$, $\eta_p^2=0.037$. Decomposing this interaction revealed that opportunities (M=4.39, SD=0.11) were more readily inferred than threats (M=3.83, SD=0.12) for targets low in muscularity among white participants in the control condition. Opportunities (M=4.60, SD=0.11) were also more salient than threats (M=3.57, SD=0.12) for low muscularity targets in the resource scare condition, Fs>6.46, ps<0.012.

[ii] Both of the observed effects remained significant when excluding condition from the model, Fs>6.74, ps<0.011.

[iii] All observed effects remained significant when excluding condition from the model, Fs>7.35, ps<0.007.

[iv] A Target Body Fat main effect emerged in a model excluding condition as well where high-fat targets were perceived to live more comfortably (M=5.24, SD=1.22) than low-fat targets (M=4.78, SD =1.54), $F(1, 214)=29.70$, $p<0.001$, $\eta_p^2=0.121$. The Target Body Dimension main effect was also present in analyses without condition where large-breasted targets were again perceived to live more comfortably (M=5.17, SD =1.34) than small-breasted targets (M=4.85, SD =1.43), $F(1, 214)=20.32$, $p<0.001$, $\eta_p^2=0.086$. The Target Body Fat × Target Body Dimension interaction was not significant, $F(1, 214)=0.98$, $p=0.322$, $\eta_p^2=0.005$.

[v] A Target Body Fat main effect showed that low-fat targets were perceived as living more comfortably (M=4.97, SD=1.44) than the high-fat targets (M=4.68, SD=1.39), $F(1, 214)=9.00$, $p=0.003$, $\eta_p^2=0.040$, in a model without condition as well. Additionally, a target Body Dimension main effect indicated high-muscularity targets were perceived as living more comfortably (M=4.91, SD=1.44) than the low-muscularity targets (M=4.73, SD=1.31), $F(1, 214)=5.89$, $p=0.016$, $\eta_p^2=0.027$, even without condition included in the model. These effects were again subsumed by a Target Body Fat × Target Body Dimension interaction, $F(1, 214)=17.88$, $p<0.001$, $\eta_p^2=0.077$. Simple effects indicated no difference emerged for low-muscularity targets when comparing them at high levels of fat (M=4.73, SE=0.09) and low levels of fat (M=4.73, SE=0.10), $F(1, 214)=0.00$, $p>0.999$, $\eta_p^2<0.001$. For high-muscularity in the model without condition, low-fat targets were perceived to live more comfortably (M=5.21, SE=0.10) than high-fat targets (M=4.62, SE=0.10), $F(1, 214)=25.40$, $p<0.001$, $\eta_p^2=0.106$.