**Perception versus Reality: Comparing Subjective Perceptions and Objective Measurements of Attractiveness-Trait Correlations**

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## **Abstract**

The enduring “beauty‑is‑good” debate highlights a striking disconnect: observers consistently infer that attractive individuals possess superior intelligence, health, and social skills, yet objective data reveal only modest or null links between physical attractiveness and these traits. Despite numerous meta‑analyses in the 1990s, inconsistencies persist across trait domains and theoretical accounts. To reconcile disjointed findings and clarify underlying mechanisms, we conducted a systematic review of five decades of empirical research on both perceived and measured associations between physical attractiveness and key psychological traits, with particular focus on intelligence and health. The review is organized into two integrated sections: (1) perceived and measured associations between attractiveness and key trait measures like intelligence, kindness, and social competence; (2) theoretical synthesis drawing on evolutionary psychology, social‑cognitive bias models, assortative‑mating logic, and face‑overgeneralization hypotheses. We find that, beyond small associations with social skills and select health indicators, measured links between attractiveness and core traits are negligible, whereas perceived links are robustly inflated. This pattern implicates potential cognitive biases—adaptive error‑management strategies and overgeneralization of anomalous facial cues—rather than valid phenotypic signaling. We further show how assortative‑mating processes can dilute real trait–beauty correlations and how methodological artifacts may amplify perceptual effects. Finally, we conclude that future studies should continue investigating understudied trait domains and refining current theoretical frameworks.

*Keywords:* attractiveness, stereotypes, beauty-is-good effect, person perception, facial attributions

## **Introduction**

Physical appearance is one of the most immediately accessible cues in social interactions. In 1972, a landmark study by Dion and colleagues (Dion & Walster, 1972) introduced the concept of “what is beautiful is good,” demonstrating that people tend to attribute positive qualities to physically attractive individuals. For example, attractive people are attributed to being more socially desirable and competent. Subsequent research has consistently confirmed that the beauty-is-good effect is both strong and widespread (Eagjy et al., 1991; Feingold, 1992, 2017; Talamas et al., 2016). Alongside these findings, researchers have considered this effect as a stereotype or bias (Lee et al., 2017; Schein et al., 2017), with explanations emerging from fields such as economics, social psychology, and evolutionary psychology.

Early attempts to explain the association between attractiveness and trait attributions emerged from economics (for a review, see Maestripieri et al., 2017). Becker (2010) proposed that differential attributions to attractive versus unattractive individuals are akin to prejudice, describing it as a taste-based discrimination, independent of actual productivity in the labor market. While this account highlights the economic consequences of the beauty-is-good bias, it remains largely descriptive rather than explanatory, offering limited insight into the underlying mechanisms driving such discrimination. More substantial explanations have been developed by social psychologists, primarily through stereotype-based theories. One prominent example is status generalization theory, which proposes that external status characteristics (e.g., attractiveness) are unconsciously used to form expectations about performance (Webster & Driskell, 1978). Similarly, implicit personality theory suggests that people hold cognitive structures—representations of personality traits and their inferential relations—where attractiveness serves as a social category linked to evaluative dimensions like sociability and intellectual competence (Eagjy et al., 1991). These theories emphasize the role of learning like social categorizations in perpetuating the beauty-is-good stereotype. A third perspective, rooted in evolutionary theories, offers an alternative explanation. According to the evolutionary byproduct account, the “beauty premium” in social judgment is an unintended consequence of biases originally evolved for mating and mate selection (Mulford et al., 1998). Unlike economic or social-cognitive explanations, this view suggests that the bias is not purely cultural or learned but may have deep-seated biological underpinnings.

Empirical studies have largely confirmed the robustness of the beauty-is-good stereotype while offering more nuanced modifications to existing theories. Muthc of this work emerged from a series of meta-analyses conducted in the 1990s. Eagjy et al. (1991) applied implicit personality theory to the beauty-is-good stereotype. By synthesizing previous research, they demonstrated that the effect is not a uniformly generalizable phenomenon but is more pronounced in domains such as social competence and interpersonal ease. A key mechanism they proposed underlying is that attractive individuals elicit more positive reactions from others, thereby reinforcing perceivers’ expectation through behavioral confirmation. While Eagjy et al. acknowledged that the true covariance between attractiveness and social competence may also contribute, they did not provide direct empirical evidence for this link. Subsequent meta-analyses sought to address this gap, prompting reflection on whether the beauty-is-good effect is a pure stereotype or is partially grounded in reality (Feingold, 1992; Jackson et al., 1995; Langlois et al., 2000). For instance, Feingold (1992) explored the relationship between attractiveness and both perceived and measured personality traits. They found minimal to no correlation between attractiveness and measured traits like sociability, dominance, mental health, and intelligence. However, this finding was challenged by Jackson et al.’s (1995) meta-analysis, which identified a significant association between attractiveness and intelligence in children—a finding they interpreted through the lens of expectancy theory (Snyder et al., 1977). Later studies further supported Jackon et al. by providing empirical association between attractiveness and intelligence in broader populations (Zebrowitz et al., 2003).

### **The Current Systematic Review**

Despite decades of research and multiple meta-analyses published since the 1990s, fundamental questions remain regarding the gap between perceived and measured associations between attractiveness and psychological traits. Moreover, this topic remains contentious across various traits, suggesting potential differential mechanisms underlying attractiveness and different traits. In response, new theories have been proposed to explain the covariance between traits and how they are perceived (Conroy-Beam et al., 2019; Kanazawa, 2004; Zebrowitz et al., 2003). This ongoing controversy highlights the need for a comprehensive, systematic review to integrate fragmented findings from the past fifty years of research.

The current review addresses this gap by synthesizing empirical evidence on both perceived and objective associations between physical attractiveness and key psychological traits. While intelligence and health have dominated the literature, we also examine less studied traits to provide a more complete understanding of the topic. The review is structured in two interconnected sections to address current ambiguities in the "beauty-is-good" effect literature. First, we integrate findings concerning both objective trait associations (actual correlations between attractiveness and measured characteristics such as health biomarkers and cognitive ability scores) and perceptual associations (observer attributions of traits including intelligence, kindness, and social competence based on physical appearance). This combined analysis allows for direct comparison between stereotypical beliefs and empirical realities. Second, we evaluated these findings through theoretical lenses, including evolutionary psychology and social cognition frameworks, to winnow out the most probable explanations for previous empirical findings and persistent contradictions in literature. Through this dual approach, the review aims to clarify three key issues: which trait associations reflect genuine correlations versus perceptual biases, which findings show consistent replication versus ongoing contradictions, and which theoretical perspectives best account for the observed patterns. We conclude by identifying critical gaps in the literature and proposing specific directions for future research, with particular attention to understudied trait domains and methodological approaches that could better disentangle confounding relationships.

## **Associations Between Attractiveness and Key Traits**

In this section, we systematically reviewed empirical findings on trait associations with physical attractiveness, beginning with the most extensively studied traits—intelligence and health—before examining less investigated characteristics.

### **Attractiveness and Intelligence**

The relationship between attractiveness and intelligence has been a focal point of theoretical debate. As mentioned above, early meta-analysis yielded equivocal findings, with both negligible correlations and modest associations being reported (Feingold, 1992; Jackson et al., 1995). These inconsistencies prompted Zebrowitz et al. (2002) to propose an integrative developmental model outlining four pathways underlying the attractiveness-intelligence relationship.

The first pathway involves biological influences. Preference for certain facial cues may evolve because they signal intelligence. Evolutionary psychologists have argued that humans have evolved to prefer intelligent mates (Miller & Todd, 1998) and this preference is likely to evolve if intelligence can be readily available based on physical appearance. Besides biological factors, environmental factors like the quality of nutrition that a person receives could contribute to both intelligence and attractiveness. Indeed, better developmental environments predict high attractiveness and intelligence. Higher human facial symmetry, which is related to facial attractiveness, is less disrupt given less developmental insults (Kalick et al., 1998). Regarding intelligence, more predictable and less harsh childhood environment implies slower life history strategy (Figueredo et al., 2007), which contribute to higher intelligence (Dunkel et al., 2021). The remaining two pathways emphasize casual influence between the two traits, including better impression management and the self-fulfilling effect. Contrary to earlier meta-analyses (Feingold, 1992) but supporting the developmental model, Zebrowitz et al. demonstrated consistent attractiveness-intelligence correlations from childhood through middle adulthood.

Despite the empirical support for the linear relationship between intelligence and attractiveness (e.g., through self-fulfilling effect), more complex associations may exist. Building on the good genes hypothesis (Thornhill & Gangestad, 1993, 1999) and the Brunswik lens model (Brunswik, 1956), Zebrowitz et al. proposed the bad genes hypothesis and the face overgeneralization hypothesis (Zebrowitz, 2017; Zebrowitz et al., 2003; Zebrowitz & Rhodes, 2004). The bad genes hypothesis offers a refined perspective on the actual association between intelligence and attractiveness, suggesting that facial attractiveness serves as a valid cue to intelligence primarily at medium-to-low ranges of facial quality. In contrast, the face overgeneralization hypothesis explains perceptual biases, proposing that observers tend to generalize the real (but limited) association across the entire attractiveness spectrum, leading to systematic overgeneralizations of intelligence to attractive faces beyond what is empirically warranted.

An alternative evolutionary perspective, the assortative mating hypothesis (Kanazawa, 2004, 2006), offers distinct explanations for attractiveness-trait correlations. The assortative mating account diverges from aforementioned theories in two fundamental ways. First, it posits that perceived trait-attractiveness associations reflect accurate mate selection mechanisms rather than cognitive stereotypes. Second, it proposes that these correlations emerge extrinsically through social pairing mechanisms rather than intrinsically through shared biological pathways. According to this framework, mate selection occurs through status-maximizing strategies where high-status men pair with highly attractive women, producing offspring who inherit both traits. Recent theoretical extensions have incorporated potential nonlinear relationships in these pairings (Conroy-Beam et al., 2019). The key assumption of the assortative mating account was supported by more recent empirical studies that confirm the assortment of intelligence and attractiveness in long-term relationships, which may propagate these trait correlations across generations through social rather than genetic mechanisms (Dunkel et al., 2019). The theory also explains correlations between attractiveness and other status-relevant traits. For instance, the observed association between male aggression and attractiveness may emerge because aggression facilitates status attainment, which in turn increases mating opportunities with attractive partners (Kanazawa, 2004). This extrinsic mechanism contrasts with intrinsic biological explanations proposed by other evolutionary accounts.

While research on attractiveness and intelligence has generated several productive theoretical frameworks, empirical inconsistencies persist. Notably, a later empirical study did not find significant association between the two traits in either a mini meta-analysis or results based on a large genetic datasets (Mitchem et al., 2015). Similarly, studies examining intelligence-related measures like academic performance have reported null findings (Talamas et al., 2016). However, the robust correlation between perceived intelligence and attractiveness continues to be reliably replicated across studies (Kleisner et al., 2014; Talamas et al., 2016), suggesting a persistent dissociation between actual and perceived trait associations.

Several factors may account for these weak or inconsistent empirical associations. First, methodological approaches may be mismatched to theoretical predictions. While the bad gene hypothesis suggests a nonlinear attractiveness-trait relationship (Zebrowitz & Rhodes, 2004), most studies tested linear relationships and simply reported Pearson’s correlations. Second, the predictive power of the assortative mating hypothesis may vary across mating systems. In polygynous societies where high-status men can partner with multiple attractive women, trait correlations may strengthen through concentrated genetic transmission. Kanazawa (2004) suspected that this may explain why previous meta-analyses only detected weak effect sizes of the correlation, as they included predominantly monogamous Western samples (Jackson et al., 1995; Langlois et al., 2000). A third reason suggests that the cross-trait assortment between attractiveness and intelligence is weak, resulting in weak associations in later generations (Dunkel et al., 2019).

### **Attractiveness and Health**

A second trait of interest is physical health. Similar to intelligence, the association between attractiveness and physical health has yielded inconsistent findings across both theoretical perspectives and empirical studies (De Jager et al., 2018; Kalick et al., 1998; Sheehan & Hamermesh, 2024; Weeden & Sabini, 2005). An early theoretical explanation for this association derived from sexual selection theory, which hypothesizes that the that preferred mate characteristics signal genetic fitness. Expanding on this good genes hypothesis, Thornhill and Gangestad (1999) conceptualize physical health not simply as disease absence, but as the capacity to allocate biological resources toward reproductive fitness. Specifically, Thornhill and Gangestad proposed that genetic heterozygosity enhances immunity and leads to average facial features that are perceived as attractive. Facial symmetry, a key marker of developmental stability, consistently predicts attractiveness across species, as asymmetry often reflects environmental stressors during development. Furthermore, certain facial characteristics (e.g., prominent cheekbones) may function as costly signals requiring substantial biological investments that only healthy individuals can maintain, thereby serving as honest indicators of genetic quality. Supporting this view, Thornhill and Gangestad (2006) found that fluctuating asymmetry, a factor contributing to lower attractiveness, is negatively associated with self-reported respiratory infections.

However, empirical support for these theoretical predictions remains equivocal. Kalick et al. (1998) examining health data across diverse age groups, found no reliable association between facial attractiveness and actual health outcomes. Given the considerable association between facial attractiveness and perceived health, the authors concluded that mistakenly rated attractive people as healthier. Subsequent research has continued to produce mixed results regarding whether physical attractiveness genuinely signals health (Weeden & Sabini, 2005), highlighting the need for more nuanced theoretical frameworks and rigorous measurement approaches.

Indeed, several theoretical perspectives have suggested that facial attractiveness may not reliably signal fitness-related qualities. From the standpoint of Fisherian runaway selection, a genetic covariance between preference and trait can generate a positive feedback loop in which ornamental features become progressively exaggerated in the population regardless of their impact on survival. Once a trait confers a mating advantage due to preference, selection will amplify that trait to extreme forms, even if it incurs viability costs (Enquist & Arak, 1993). Consequently, attractive facial characteristics could proliferate through sexual selection without any underlying connection to physiological health. In a similar vein, the perceptual‐bias or sensory‐exploitation model posits that sexual signals evolve to capitalize on preexisting neural or cognitive predispositions in the perceiver (Fisher, 1999). If humans possess an innate preference for certain visual features—such as symmetry or contrast—then facial traits that exploit these biases will be favored by mate choice irrespective of their diagnostic value for health. Under this framework, the elaboration of aesthetic features is driven by sensory biases rather than honest signaling of condition.

Taken together, these models predict that attractiveness can evolve as an aesthetic ornament decoupled from honest indicators of fitness. The absence of a robust correlation between objective health measures and perceived facial attractiveness, therefore, aligns with some theoretical expectations.

While these evolutionary models demonstrate how attractiveness can evolve independently of fitness indicators, they have simultaneously spurred the development of more nuanced theoretical frameworks. Rather than dismissing all potential attractiveness-health associations, these theoretical insights have motivated researchers to examine more complex, non-linear relationships. This theoretical progression mirrors developments in intelligence research, where the refutation of the good genes hypothesis led to formulation of the bad genes hypothesis. Zebrowitz and Rhodes (2004) applied Brunswik’s lens model to test the hypothesis predicts that unattractive faces reliably signal low fitness, while high attractiveness does not necessarily indicate superior fitness. To further account for the perceptual correlation, the anomalous face overgeneralization hypothesis predicts that perceivers overgeneralize their sensitivity to anomalous cues across all attractiveness levels. Their analysis revealed that specific facial characteristics, including attractiveness, averageness, symmetry, and masculinity, only predicted poorer health and lower intelligence for faces below median attractiveness. However, observers consistently applied these cues when evaluating all faces, leading to accurate judgments for unattractive individuals but systematic overgeneralizations for attractive ones. This pattern supports an evolutionary account in which selection pressures to avoid mates with “bad genes” heighten sensitivity to unattractive cues, while a perceptual overgeneralization mechanism leads observers to apply these cues indiscriminately, irrespective of actual fitness.

Besides research on facial attractiveness, the association between health and other morphological indicators has also been investigated. A seminal study by Singh (1993) demonstrated that women’s waist‑to‑hip ratio (WHR), a marker of youthfulness, reproductive endocrinology, and long‑term health, was rated by men as more attractive, healthier, and higher in reproductive value when lower, suggesting WHR can serve as an honest signal of fertility and well‑being. Subsequent studies have supported the predictive validity of WHR as an indicator of cardiovascular risk, although its predictive power may not surpass that of waist circumference (Dobbelsteyn et al., 2001). Recent investigations have revealed greater complexity in these relationships. A body‑composition study found that the fat mass judged most attractive in women was below both the level deemed healthiest and the physiologically healthy range. In contrast, men’s optimal fat and muscle mass aligned with health parameters. Therefore, attractiveness standards, especially for women, can diverge from objective health benchmarks (Brierley et al., 2016). The results suggest that cultural influences, such as the "thin ideal" for women, may further influence the divergence between the perceived and measured health-attractiveness association.

Research on bodily morphological indicators offers new insights for understanding facial attractiveness-health associations. Facial attractiveness may, in part, serve as an indirect cue to more reliable morphological indicators, particularly body mass index (BMI), WHR, and facial adiposity. In women, a WHR of approximately 0.70 and a BMI in the low‑normal range are both rated as most attractive and correlate with reproductive health, lower cardiovascular risk, and greater longevity (Weeden & Sabini, 2005). Observers appear sensitive to subtle facial cues such as cheek‑fat distribution and jawline definition that covary with overall body composition.

Facial adiposity emerges as particularly diagnostic: perceived facial adiposity correlates with actual BMI/body fat (*r* = .71) and follows a quadratic pattern in which both extremes predict poorer health and lower attractiveness (De Jager et al., 2018). Moreover, sex differences in preferred body composition—women’s optimal fat mass falling below healthy ranges versus men’s alignment with health‑optimal parameters—highlight how cultural ideals can skew attractiveness judgments (Brierley et al., 2016). Future studies employing three‑dimensional facial imaging alongside precise BMI, WHR, and body fat measures will help disentangle honest health signals from culturally mediated preferences.

### **Attractiveness and Other Traits**

Beyond the extensively studied domain of intelligence and health, early studies have also examined both perceptual stereotypes and actual empirical associations between attractiveness and a broad range of social traits (Eagjy et al., 1991; Feingold, 1992). Perhaps the most comprehensive study is the meta-analyses conducted by Feingold (1992). Based on exhausted review of established empirical evidence, the author first revealed a robust “beauty‑is‑good” stereotype: individuals judged as physically attractive are perceived to be warmer and socially skilled, with medium‑sized effects for sociability, dominance, and general mental health than their less attractive counterparts. In contrast, correlational studies show that objective physical attractiveness is only trivially related to personality and cognitive measures, with the sole exception of a modest link to social skills (*r* = .23). Although attractive individuals do report slightly lower loneliness, reduced general social anxiety, greater popularity, and enhanced social comfort, these effect sizes remain small compared to the perceptual attributions. Moreover, self‑rated attractiveness correlates more strongly with self‑esteem and related self‑concept facets (*r* = .30) and with sociability, dominance, and mental health (*r* = .22–.26), underscoring that subjective perceptions of beauty are more closely tied to global self‑evaluations than are external judgments.

## **Comparing Perceived and Measured Associations Between Attractiveness and Key Traits**

Combining the solid relationship between attractiveness and perceived traits (Eagjy et al., 1991; Feingold, 1992) with evidence regarding actual trait associations, we now evaluate their discrepancies and whether individuals systematically overestimate or underestimate these associations.

Even without quantitative synthesis like meta-analysis, a clear pattern of correlation inflation emerges in perceived versus actual trait associations. Take intelligence as an example, observable correlations between measured intelligence and attractiveness are reported by the proponents of real associations (Kanazawa, 2011; Zebrowitz et al., 2003; Zebrowitz & Rhodes, 2004). However, these correlations are consistently modest in magnitude. For example, Kanazawa (2011) found the correlation ranging from .126 in the United State to .381 in the United Kingdom. The disparity becomes particularly striking in more recent study: Talamas et al. (2016) found an exceptionally strong correlation between attractiveness and perceived intelligence (r = .81), while the association between attractiveness and academic performance (as a proxy for intelligence) was negligible (r = .03) and statistically non-significant. This pattern suggests substantial systematic overestimation of actual trait associations in social perception.

Similar inflations are observed in health judgments. For example, Zebrowitz and Rhodes (2004) reported the perceived health has a strong correlation with facial attractiveness around .42 to .54, while the correlation for measured health ranged from -.03 to .30. Although more recent studies lend more support for genuine attractiveness-health association, these findings primarily reveal longevity disadvantages among less attractive individuals (Sheehan & Hamermesh, 2024), a pattern consistent with the bad gene hypothesis (Zebrowitz & Rhodes, 2004).

Notably, attractiveness appears to function as a more valid phenotypic health marker than intelligence, with multiple studies demonstrating modest but reliable associations (Bulczak & Gugushvili, 2023; Nedelec & Beaver, 2014; Sheehan & Hamermesh, 2024; Zebrowitz & Rhodes, 2004). These collective findings suggest that while the "beauty-is-good" effect operates primarily as a social stereotype, its foundation may include some accurate signaling capacity - particularly for detecting health risks rather than assessing superior fitness.

### **Theoretical Explanations for the Perception-Reality Discrepancy**

In this section, we examine why established theories either successfully predicted or failed to account for the discrepancy between measured and perceived associations. Based on this analysis, we identify unresolved questions within the theoretical framework and suggest promising directions for future research.

#### ***Re-evaluating the Assortative Mating Hypothesis***

Based on the available evidence, we first re-evaluate the assortative mating hypothesis (Kanazawa, 2004, 2011). The theory represents a particularly influential account, as it extends beyond intelligence to explain attractiveness associations with various status-relevant traits. The theory follows a syllogistic structure that ensures logical coherence in its predictions. However, we argue that the theory could still be inaccurate due to some implicit assumptions that may not be satisfied. We agree that all of the four assumptions of the theory could be true, with more intelligent male are more likely to obtain higher social status (assumption 1), higher status males are more likely to mate with more attractive females (assumption 2), and both traits are heritable (assumption 3 and 4).

While these assumptions may hold individually, there is a crucial limitation in the theory's implicit premise of trait exclusivity. For example, there are numerous traits that can help males acquire high social status. In reality, multiple alternative traits including intelligence, aggression, and social dominance can contribute similarly to male mate value (Conroy-Beam et al., 2019). The mating process typically involves matching overall mate value rather than specific traits. As such, an attractive female could pair with a highly intelligent but less aggressive male, or conversely with a highly aggressive but less intelligent male, or with a male demonstrating moderate levels of both traits.

This compensatory mating pattern means that positive trait-attractiveness correlations emerging in some pairs will be offset by negative correlations in others. At the population level, these opposing effects likely cancel out, potentially explaining the weak or null correlations observed empirically. This framework suggests the assortative mating hypothesis may overestimate trait-specific correlations by neglecting the multidimensional nature of mate value and the compensatory mechanisms in partner selection. Future studies could further test this theory by comparing the trait correlation in societies with different mating systems and examining the offsets between different traits that are crucial in mate selection.

#### ***Error Management as the Mechanism Underlying Perceptual Biases***

While this compensatory mating explanation accounts for weak empirical correlations between attractiveness and key traits, it cannot explain the robust perceptual inflation observed in attractiveness stereotypes. Therefore, a separate mechanism may underpin the beauty-is-good stereotype. Current evidence most strongly supports the face overgeneralization hypothesis (Zebrowitz, 2017; Zebrowitz et al., 2003; Zebrowitz & Rhodes, 2004). According to Zebrowitz and colleagues, our tendency to perceive unattractive faces as unfriendly, unhealthy, or unintelligent arises from an anomalous‐face overgeneralization mechanism. Evolutionarily, it was critical to detect individuals with “bad genes,” whose facial features (e.g., marked asymmetry) reliably signaled low health or cognitive fitness. Neural‐network models show that faces deviating from the average activate the same units trained to detect pathological anomalies, and this activation predicts human judgments of lower sociability, warmth, health, and intelligence—even when those faces are perfectly healthy adults (Zebrowitz et al., 2003). In other words, because the system evolved to avoid truly unfit mates, it overgeneralizes negative trait impressions to any face bearing a slight resemblance to an anomaly—that is, to unattractive faces.

This overgeneralization fits neatly with Error Management Theory (EMT) (Haselton & Buss, 2000; Lewis et al., 2022), which holds that cognitive adaptations are tuned to minimize the more costly error when false positives and false negatives carry asymmetrical fitness costs. EMT predicts that, in mate selection, falsely rejecting a healthy individual (a “false positive” in unfitness detection) is far less costly than falsely accepting an unfit one. Thus, by biasing our perceptions toward seeing unattractive faces as unfit (e.g., erroneously attributing unfriendliness or low intelligence), we are making the less costly mistake. This systematic bias mirrors EMT’s core logic: psychological mechanisms evolve predictable errors that reduce net fitness loss when different types of mistakes have unequal consequences.

#### ***The Beauty-is-Good Effect as Methodological Artifact***

We also raised an alternative perspective suggesting the beauty-is-good stereotype may partially reflect methodological artifacts rather than meaningful psychological associations.

Several measurement challenges complicate the interpretation of attractiveness research findings. First, attractiveness is an ill‑defined, abstract construct with relatively low interrater agreement, averaging only 37% agreement across raters (Kramer et al., 2018). When perceivers must infer multiple uncertain traits from scant cues, they could overly rely on the available cues, inflating correlations between perceived attributes. This aligns with the fact that most empirical studies rely on fixed, static facial images, which eliminates richer social cues including dynamic expressions, body language, vocal characteristics, and contextual information (Kleisner et al., 2014; Talamas et al., 2016; Zebrowitz & Rhodes, 2004). Without a clear definition of attractiveness, ratings may simply reflect perception of certain facial features (Cunningham et al., 1990), and judgments of abstract traits like intelligence become self-reinforcing: facial features influence ability estimates, which then feed back into attractiveness evaluations. More recent evidence from Lu and Lin (2024) illustrates this dynamic using a sparse network representation of associations among social inferences. As shown in Figure 1, beyond physical cues, perceptions of attractiveness are strongly informed by inferences related to youthfulness, extraversion, intellect, and aesthetic sensitivity. Therefore, although correlations between attractiveness and physiological indicators such as health can provide valid external cues within certain parameter ranges (Zebrowitz & Rhodes, 2004), there is no compelling evidence that analogous perceptual signals reliably convey complex psychological traits like intelligence—which typically require behavioral observation and formal assessment for accurate evaluation.

**Figure 1**

*The Egocentric Network of Attractiveness*

背景图案

AI 生成的内容可能不正确。

If facial appearance does convey meaningful information about psychological traits, such associations are likely limited in scope and potentially constrained by sexual dimorphism. For example, Kleisner et al. (2014) found that IQ scores significantly influence perceived intelligence in male faces, suggesting either sex‑specific genetic associations with steroid hormones or adaptive benefits for women in assessing male intelligence during mate selection. Similar sex-specific associations have been documented for health-related trait judgments (Mengelkoch et al., 2022).

Given these methodological concerns, future research should develop standardized, multi-item measures of attractiveness to reduce measurement error. More rigorous psychometric tools would enable examination of divergent validity, clarifying whether attractiveness represents a distinct construct rather than merely reflecting a composition of perceived traits like intelligence.

## **Conclusion**

In closing, our review reveals a clear and consistent pattern: while physical attractiveness powerfully shapes others’ impressions and foster the “beauty‑is‑good” halo across social, cognitive, and health domains, the actual links between attractiveness and key traits are, at best, modest. Aside from small but reliable associations with social comfort and some health indicators, objective measures of intelligence, personality, and most physiological outcomes show little to no relationship with facial appeal. This striking gap underscores that the beauty‑is‑good phenomenon is possibly driven more by cognitive biases like stereotypic expectations, overgeneralization of anomalous facial cues, and adaptive error‑management than by valid phenotypic signaling. A comprehensive theoretical framework must therefore reconcile the potency of these perceptual mechanisms with the limited empirical evidence for attractiveness as a marker of underlying fitness, charting new directions for research into when—and why—our judgments of beauty diverge so markedly from reality.

A second contribution of this review is its systematic elimination of competing explanations for the discrepancy between perceived and measured associations. By reevaluating the assortative‑mating hypothesis, we show how mate‑value matching can dilute any single trait–attractiveness correlation, accounting for the near‑zero findings in actual data. We also highlight the face‑overgeneralization hypothesis as a compelling mechanism for inflated perceptual correlations, and we raise the possibility that methodological and psychological artifacts underlie the phenomenon as a whole. Together, these insights narrow the field’s theoretical options and point toward integrated models that combine mating theory, cognitive‑bias frameworks, and rigorous measurement approaches. Only by weaving these perspectives into a unified account can future research unravel the true interplay between beauty and bona fide fitness.

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