

Beauty, Effort, and Misrepresentation: How Beauty Work Affects Judgments of Moral Character and Consumer Preferences

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Women engage in a variety of beauty practices, or “beauty work,” to enhance their physical appearance, such as applying cosmetics, tanning, or exercising. Although the rewards of physical attractiveness are well documented, perceptions of both the women who engage in efforts to enhance their appearance and the high-effort beauty products marketed to them are not well understood. Across seven studies, we demonstrate that consumers judge women who engage in certain types of extensive beauty work as possessing poorer moral character. These judgments occur only for effortful beauty work perceived as transformative (significantly altering appearance) and transient (lasting a relatively short time), such that they emerge within cosmetics and tanning, yet not skincare or exercise. This effect is mediated by the perception that putting high effort into one’s appearance signals a willingness to misrepresent one’s true self, and translates into lower purchase intentions for higher-effort cosmetics. We identify several boundary conditions, including the attractiveness of the woman performing the beauty work and whether the effort is attributed to external norms or causes. In examining how beauty work elicits moral judgments, we also shed light on why effortful cosmetic use is viewed negatively, yet effortful products continue to be commercially successful.

Keywords: aesthetics, beauty, beauty work, effort, cosmetics, moral judgments, true self, innate self

Throughout history, women have gone to great lengths to enhance their physical appearance. Queen

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Elizabeth I inspired a generation of women to coat their faces with lead to achieve the perfect pale complexion, and Victorian ladies removed their ribs to whittle down their waists (Corson 1972/2003). While modern beauty rituals may be less extreme, we continue to see consumers engage in extensive “beauty work,” defined as the beauty practices people perform on themselves to elicit certain benefits within a social hierarchy (Kwan and Trautner 2009). These practices are often effortful, such as popular multistep Korean skincare regimens (Chang 2011) or trends in contouring and strobing, where layers of make-up are carefully applied to highlight facial features (Cardellino 2015). Even mundane routines such as styling hair or applying cosmetics often require significant time and care. Interestingly, while research acknowledges that physical attractiveness can be enhanced through beauty work (Etcoff et al. 2011; Kwan and Trautner 2009), it has not examined how the

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process of attaining beauty is perceived and evaluated, or the implications of these judgments for consumers, the focus of the present work.

The incentives for engaging in effortful beauty work are clear—attractive people are assumed to possess more socially desirable personality traits (Dion, Berscheid, and Walster 1972; Langlois et al. 2000), hold greater interpersonal influence (Dion and Stein 1978), and even earn higher wages (Hamermesh and Biddle 1994; Landy and Sigall 1974). The impact of beauty is particularly resonant for women, as they are often conditioned and pressured to assess and enhance their physical attractiveness (Fredrickson and Roberts 1997; Gimlin 2002). Therefore, like much related research (Kwan and Trautner 2009; Segal-Caspi, Roccas, and Sagiv 2012), we focus on how women in particular are judged for engaging in beauty work.

To date, there has been little examination of how the effort related to a woman's appearance is evaluated. Cosmetic advertisements often extoll the value of making enhanced beauty appear natural (e.g., "Maybe she's born with it. Maybe it's Maybelline"), implicitly suggesting that although people appreciate beauty, they want it to be unadulterated, not the result of extensive effort. In the present research, we propose that effortful beauty work can actually elicit perceptions of poorer moral character when the intended enhancements are seen as misrepresenting one's true self. Importantly, we identify two criteria for effortful beauty work to shape moral inferences: first, the effort must be perceived as transformative (significantly altering appearance), and second, the results of such effort must be seen as transient (enhancing appearance for only a limited period of time). We further show that these judgments also carry over to women's willingness to purchase higher-effort cosmetic products. Moreover, our conceptualization distinguishes misrepresentation from physical vanity, or a mere focus on one's appearance, as a driver of perceived moral character. Finally, we also propose that an awareness of external causes (Kelley 1973) or norms underlying effortful beauty work can dampen the moral attributions people make regarding transformative, transient beauty enhancements.

Importantly, we recognize that in many cases, observers may not be privy to a woman's actual beauty work effort and instead form inferences of her personality based on outward signals of this effort, such as her physical appearance or make-up use. However, focusing exclusively on observable signals confounds judgments of physical appearance with judgments of the effort that went into generating that appearance. In the present research, we assess consumer perceptions of effortful beauty work through multiple approaches by examining how consumers respond to: 1) different levels of effort based on information about the time or care spent on beauty work, 2) different types of beauty work (cosmetics use, skincare, tanning, exercise),

and 3) different types of products that indirectly convey effortful beauty work (one-step vs. multistep cosmetic kits). By disentangling perceptions of effort from the outcome of that effort, we gain a clearer picture of how perceptions of a woman's beauty work effort shape moral inferences, and answer the call of prior research (Etcoff et al. 2011) to separate the effects of beauty (i.e., physical attractiveness) and beauty enhancement (i.e., beauty work practices).

Our research contributes to the literature in several ways. First, although physical attractiveness confers significant benefits (Dion et al. 1972; Langlois et al. 2000) and women engage in various forms of beauty work (Kwan and Trautner 2009), we are the first to examine how the process of attaining beauty is evaluated. Second, in identifying when and why effortful beauty work elicits inferences of poorer moral character, our research advances a more complete and nuanced view of how women are judged based on their physical appearance. We thus introduce extensive beauty work as an underexplored form of effortful behavior that, like other forms of effort expenditure, is controllable and can elicit observer judgments (Weiner 1986; Weiner and Kukla 1970). Our research also extends work showing that moral inferences can be shaped by information ostensibly unrelated to morality (Tannenbaum, Uhlmann, and Diermeier 2011), such as the effort spent on innocuous consumer behaviors like applying make-up. Finally, in revealing how beauty products requiring higher effort shape purchase intentions, we explore the inherent contradiction of why effortful cosmetic use is viewed negatively, yet effortful products continue to be commercially successful.

CONCEPTUAL FRAMEWORK

Beauty Work and Effort

In contrast to prior research conceptualizing beauty as a biological, fixed trait (Langlois et al. 2000), recent studies acknowledge that physical attractiveness can be changed and enhanced in many ways through beauty work (Etcoff et al. 2011; Kwan and Trautner 2009; Wong and Penner 2016). Kwan and Trautner (2009) describe how women are "held accountable" for norms dictating how their hair, skin, or body shape and size should look, and engage in beauty work to achieve these ideals. In our research, we focus on the behaviors that women can reasonably perform *on themselves* to enhance their appearance, such as styling hair, applying cosmetics, applying self-tanner, or exercising to alter body shape. In doing so, we examine behaviors that are high in controllability and therefore closely linked to inferences of personal responsibility and moral judgments (Olson et al. 2016; Weiner 2000).

Notably, for this initial investigation, we focus explicitly on effort in domains where changes are directly made to the physical face or body (cosmetics, skincare, tanning, exercise) and controllability is exclusively attributed to self

(i.e., external intervention is not present). Thus, we do not examine beauty work performed by others on the self (e.g., getting one's hair done at a salon, undergoing plastic surgery), since the source and controllability of the effort is inherently shared. Further, we do not focus on learning about make-up techniques or shopping for clothing, since engaging in these activities does not directly enhance attractiveness. Similarly, we do not examine dressing up or accessorizing because it may be interpreted as adorning (Schwarz 1979) rather than physically changing a woman's physical face or body. However, we believe our theory can also extend to some of these behaviors, as detailed in the General Discussion.

While earlier conceptualizations of effort in marketing and psychology have not focused on beauty work as a form of effortful behavior, research in organizational behavior and sociology has documented the high effort or "labor" that some people engage in to enhance their appearance (Witz, Warhurst, and Nickson 2003; Wong and Penner 2016). The practices women perform to enhance their attractiveness can involve high levels of physical and mental exertion, such as strenuous exercise to achieve a slender figure, meticulous skincare regimens, or simply time-consuming make-up and hairstyling practices. As with other forms of effort, consumers choose to expend fewer or greater mental and physical resources on beauty work. Still, research has not investigated how effort related to improving one's appearance is perceived or its implications for consumption. While prior work has focused largely on consumers' appreciation of their own and others' effort pertaining to products, gifts, and displays (Cutright and Samper 2014; Kruger et al. 2004; Morales 2005; Moreau, Bonney, and Herd 2011; Wu et al. 2017), we examine how and why exerting effort on beauty work can negatively affect judgments of moral character.

Moral Trait Inferences, Physical Appearance, and the "True Self"

Across social contexts and evaluation targets, uncovering a person's moral character is of utmost importance in impression formation (Pizarro and Tannenbaum 2011). A person's moral character signals whether that person will be harmful or helpful to others (Brambilla et al. 2011; Wojciszke, Bazinska, and Jaworski 1998) and is fundamental to identity and self-worth (Aquino and Reed 2002). People often make spontaneous inferences of others' morality through observed behaviors on the basis of very little information (Haidt 2001). Even behaviors traditionally unrelated to morality are perceived as diagnostic of a person's moral character. For instance, a CEO candidate who requested a frivolous perk (i.e., a marble table with his face carved into it) was rated more poorly on moral character and expected to make unethical and irresponsible business decisions in the future (Tannenbaum et al. 2011). At a subtler level, those who eat unhealthily are judged as less

moral because they violate Puritan ideals of self-discipline (Stein and Nemeroff 1995), while those who are fit are judged as more moral due to positive associations between morality, physical wellness, and self-control (Baumeister and Exline 2000; Whorton 1982). We propose that certain types of beauty work are also used to determine the probability that a woman is moral because they signal the degree to which she is willing to misrepresent her true physical appearance, as we discuss next.

People often use physical appearance, and attractiveness in particular, to make inferences about others' personalities, attributing socially desirable personality traits to attractive people (Dion et al. 1972; Langlois et al. 2000). Research examining judgments of women shows that these inferences are often made spontaneously (Miller 1988). Given that spontaneously inferred traits are perceived as indicative of an individual's disposition (Van Overwalle, Drenth, and Marsman 1999), and information that reflects a person's stable disposition is seen as diagnostic of that person's true self (Johnson, Robinson, and Mitchell 2004), this suggests that people will also see trait inferences based on physical appearance as implicitly diagnostic of fundamental aspects of the self. We propose that because physical appearance elicits trait inferences and traits are seen as reflecting the true self, a person's unmodified (pre-beauty work) appearance should also be perceived as reflecting underlying aspects of the self. Therefore, certain types of effortful beauty work may be seen as creating a discrepancy between one's true self and the self presented to others. Because effort is inherently controllable (Weiner 1986), we propose effortful beauty work signals a willingness to misrepresent or disguise the true self, and is thus construed as a signal of poorer moral character.

Research examining the influence of cosmetics on facial signals also suggests a link between effortful beauty work and misrepresentation. Etcoff and colleagues (2011) found that heavy, glamorous facial cosmetics enhanced perceptions of women's trustworthiness and likeability when male and female participants viewed photographs of the women for 250 milliseconds, but not when given unlimited time. Under unlimited time, these women were judged as less trustworthy (but not less likeable). These researchers proposed that women are judged based not only on the positive effect cosmetics have on their physical attractiveness, but also on what make-up use says about their personality and character. While the authors did not delve into the mechanism underlying this effect or into perceptions of beauty work more generally, these findings imply that people may reflect upon the effort that goes into a woman's highly made-up face and question the extent to which it represents who she truly is.

Beauty Work, Misrepresentation, and Morality

We argue that changes to appearance resulting from extensive effort must possess two characteristics to be

perceived as misrepresentative, and hence affect perceived moral character. First, the beauty work must be perceived as intending to create a discrepancy between a woman's unadulterated physical appearance and her appearance resulting from effortful beauty work, or what we call a transformative change. Second, the beauty work must result in transient or unenduring change, signaling that it is a superficial "disguise" as opposed to an actual change. Importantly, transformativeness and transience lie on a continuum, so the distinction between the low and high ends of these dimensions are matters of degree, rather than discrete categories.

Transformativeness. Consistent with the notion that people consider the magnitude of ethical transgressions (Jones 1991; see also Gino and Bazerman 2009), we expect that engaging in high versus low levels of beauty work leads to more negative inferences of moral character exclusively when the effort results in apparent, detectable changes, because only these are perceived as misrepresentative. Thus, if a woman spends significant effort on her appearance using moisturizer or facial masks but does not look immediately different as a result, perceived misrepresentation and morality should be unaffected. Similarly, if a naturally beautiful woman has an extensive cosmetics routine, she may not be perceived as misrepresenting herself to the same degree as a less naturally attractive woman because her resulting enhanced appearance is not very discrepant from her original attractive appearance. In this sense, we argue that negative judgments of moral character do not stem from an aversion to excessive (vs. appropriate) amounts of beauty work, but rather result from the discrepancy that effortful beauty work signals. If this intention of creating a discrepancy between a woman's pre- and post-beauty work appearance is not evident, her moral character will not be judged more negatively.

Transience. Second, we reason that if a woman's beauty is unenduring, it will be perceived as a superficial change, and hence, not a true representation of who she is. This is consistent with other research on the self, which differentiates superficial change from a true alteration (Tice 1992). Thus, high effort aimed at temporary increases in attractiveness should lead to perceptions of misrepresentation. This distinction is important because it captures much of women's beauty work, such as styling hair and applying make-up. Although spending a lot of effort on hair and make-up typically increases attractiveness (and indeed, such promises are heavily marketed to women), these changes are temporary and physical appearance returns to its original state once hair is wet or make-up is washed off. In contrast, behaviors that lead to more enduring changes, such as exercise to obtain a more attractive figure, will not be seen as misrepresentative of a woman's true appearance. As a result, only more transient,

temporary changes should elicit higher perceptions of misrepresentation and more negative judgments of moral character.

In describing misrepresentation, we also make clear that perceived misrepresentation and moral character are distinct: misrepresentation captures the degree to which one is presenting a discrepant version from the innate self to others in the context of physical attractiveness, while perceived morality captures the whole of a woman's moral character across various contexts.

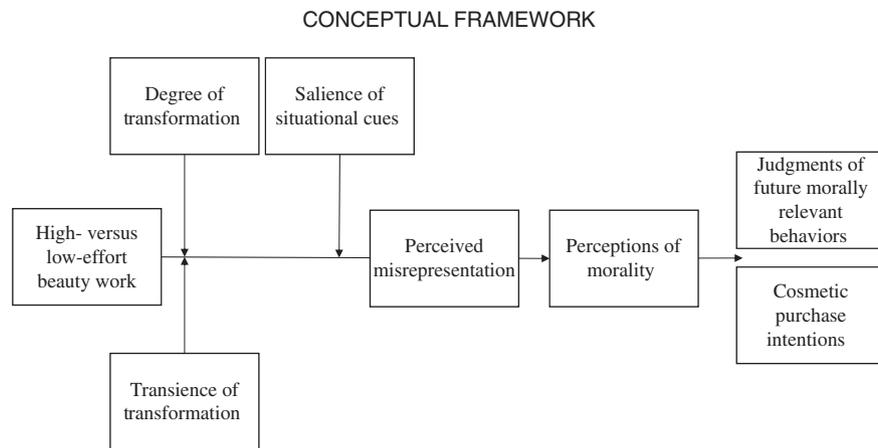
Salience of External Causes

Importantly, we propose that there are boundary conditions to this effect. People tend to attribute the causes of behaviors to internal, dispositional factors because situational forces are often difficult to see or are physically removed from the behavior (Gilbert and Malone 1995; Jones and Davis 1965). However, if a compelling situational reason or norm driving the behavior is made salient, these dispositional attributions can be mitigated (Kelley 1973). Skowronski and Carlston's (1987, 1989) cue-diagnostics approach proposes that behaviors vary in how diagnostic they are in determining internal characteristics because observers recognize that behaviors and dispositions are not perfectly correlated (e.g., not all people who steal are dishonest; see also Reeder and Brewer 1979). We propose that although people may be inclined to attribute a woman's effortful beauty work to her internal desire to misrepresent herself, highlighting external cues, such as social expectations or norms requiring effortful beauty work, will decrease the likelihood that beauty work will be attributed to internal causes. For example, while people may initially assume that a woman who spends 90 minutes on hair and make-up before a casual get-together is trying to misrepresent herself, they are less likely to infer this when informed of a normative cue driving her behavior, such as the presence of a potential employer.

Beauty Work and Beauty Products

Notably, our focus on beauty-related effort has strong resonance in marketing given that numerous beauty products are promoted as having transformative, appearance-enhancing abilities. We expect that because certain types of effortful beauty work, such as applying make-up, are viewed negatively, users of beauty products requiring high effort should be perceived as misrepresenting themselves and hence possessing poorer moral character. This negative association should lead consumers to avoid such products (White and Dahl 2006). Thus, women should be less interested in purchasing high- (vs. low-) effort cosmetics. Still, given the success and size of the cosmetics industry, it is also important to understand when women are less

FIGURE 1



likely to eschew high-effort beauty products. Consistent with our theorizing, we propose that when an ad frames a cosmetic product as facilitating a situational goal, such as making a good first impression, this framing should also mitigate the tendency to view the product's customers as less moral, and hence reduce the rejection of beauty products requiring high effort.

We test our conceptual model (figure 1) and its implications for cosmetic purchase intentions across seven studies. Studies 1A and 1B show that effortful beauty work elicits spontaneous trait inferences and negatively affects judgments of moral traits and behaviors. Studies 2, 3, and 4 examine our criteria of transformation and transience as levers of perceived misrepresentation. Studies 3 and 4 also reveal downstream consequences of specific types of effortful beauty work on judgments of future morally relevant behaviors. Lastly, study 5 examines how the salience of external causes serves as a boundary condition for the negative effort-morality link, while study 6 reveals downstream implications for consumers' willingness to purchase high-effort beauty products.

STUDY 1A

Study 1A tests our prediction that people view extensive beauty work as indicative of poorer moral character. We ask participants to read a vignette containing numerous details about a woman named Jenna, including her beauty routine, which is described as requiring high effort, low effort, or neither (i.e., no effort information is given). Across all conditions, Jenna is described as wanting to look good and feel positive about the way she looks. Notably, to reduce potential demand effects, we measure moral judgments indirectly by asking participants to consider Jenna's suitability as a potential colleague and rate her likelihood

of engaging in both immoral and filler workplace behaviors without considering specific traits (we examine specific traits in study 1B). We expect participants to rate Jenna as more likely to engage in immoral (but not filler) workplace behaviors in the high-effort versus low-effort and control conditions.

Method

One hundred fifty-six undergraduate students (39.7% female, $M_{\text{Age}} = 21.8$) at Arizona State University participated in this study for course credit. The study used a 3 (effort: high, low, control; between) \times 2 (behavior domains: immoral, filler; within) mixed design. Participants were randomly assigned to read one of three vignettes about Jenna and to form an impression of her. The vignettes gave a number of details about Jenna, including her job, weekend activities, and typical morning routine. Embedded in these details was information that Jenna usually spends about an hour and 45 minutes (high effort) or 10 minutes (low effort) on her daily grooming routine (hair and make-up; see appendix A for stimuli). The times were approximately equidistant from the pretested median of 60 minutes that women were expected to spend on daily grooming.¹ No effort information was included in the control condition. To dampen differences due to vanity inferences, Jenna was described as wanting to look and feel good about her appearance across all conditions. Importantly, a pretest revealed our morning routine

1 We asked 40 women ($M_{\text{Age}} = 36$) how much time they believed other women usually spent on grooming routines each day. Results revealed a mean of 56.85 (SD = 32.94) minutes and a median of 60 minutes. The 5th and 95th percentiles were 10 minutes and 120 minutes, respectively. This number (60 minutes) is also consistent with a 2014 national survey revealing women spend about 55 minutes per day on their appearance (Mannino 2014).

vignette was similarly high in realism across all three conditions.²

Immediately after the vignette, participants were asked to imagine they were a hiring manager putting together a project team. In considering whether Jenna would be a good candidate for the team, they were asked to assess how likely she would be to participate in three job-related immoral behaviors (inflate her expense report, lie on her resume, take office supplies; Gino, Norton, and Ariely 2010), and three filler behaviors (organize a group happy hour, water the office plants, have a positive attitude about a work project; 1 = Not likely, 7 = Very likely). Lastly, as a manipulation check, participants rated how much effort Jenna put into getting ready each morning (1 = Very low effort, 7 = Very high effort).

Results and Discussion

Effort Manipulation Check. We found the predicted effect of effort ($F(2, 153) = 64.33, p < .0001$): the high- (vs. low-) effort conditions garnered higher effort ratings ($M_{\text{High}} = 6.21, M_{\text{Low}} = 3.56; F(1, 153) = 125.49, p < .0001$), with the control condition in between ($M_{\text{Control}} = 5.25$) and significantly different from the high- ($F(1, 153) = 16.47, p < .0001$) and low-effort conditions ($F(1, 153) = 51.03, p < .0001$). See web appendix F for full tables of all study means and SDs.

Immoral Behaviors. We conducted a 3 (effort: low, high, control; between) \times 2 (behavior domain: immoral, filler; within) mixed-model ANOVA on Jenna's anticipated behaviors. There were main effects of both effort ($F(2, 153) = 4.98, p < .01$) and behavior domain ($F(1, 153) = 711.98, p < .0001$), which were qualified by a significant effort \times behavior domain interaction ($F(2, 153) = 3.61, p = .03$). As predicted, participants rated Jenna as more likely to participate in immoral behaviors when she had a high- (vs. low-) effort beauty routine ($M_{\text{High}} = 3.30, M_{\text{Low}} = 2.72; t(1, 153) = 3.55, p < .001$). The same pattern emerged when comparing the high-effort and control conditions ($M_{\text{Control}} = 2.74; t(153) = -3.39, p < .001$). There was no difference between the control and low-effort conditions ($t(153) = .16, p = .88$). Importantly, analysis of the filler behaviors showed no differences across the three effort conditions ($M_{\text{High}} = 5.32, M_{\text{Control}} = 5.13, M_{\text{Low}} = 5.30$; all contrasts $p > .25$). Of note, here and across all studies, analyses fully crossing gender with effort and behavior domain did not reveal any three-way interactions,

so we collapse across this variable and do not discuss it further.

Discussion. Study 1A shows that effortful beauty work negatively affects inferences of a woman's moral character. We disentangle negative judgments of morality from a more general sense of disapproval by showing that effort had no effect on morality-unrelated behaviors. These results also show the specificity of this effect; it did not emerge when Jenna put very little effort in her appearance or without effort information. Of note, although we did not ask about traits in this study so as not to influence our focal measures, another study with a control condition focusing solely on traits revealed similar results (see web appendix A). We also examine traits in study 1B, assessing the spontaneity of moral inferences through implicit cognitive associations.

STUDY 1B

A long line of research shows that people spontaneously infer the dispositional characteristics of others, even if they have no specific goals and often without conscious awareness (Van Overwalle, Drenth, and Marsman 1999; see Uleman, Newman, and Moskowitz 1996 for a review). If consumers spontaneously infer lower morality from effortful beauty work, an implicit measure of cognitive association should demonstrate a weaker relationship between those who engage in high- (vs. low-) effort beauty work and moral traits. Further, this weaker relationship should be limited to moral (and not merely positive) traits. In this study, we ask participants to perform a modified version of Markus's (1977) "Me/Not-Me" categorization task. Specifically, after reading a vignette about Jenna, participants indicate as quickly as possible whether four moral and four filler traits are descriptive of her, allowing us to capture spontaneous moral inferences in two ways. First, we measure the speed with which people assess Jenna's morality, as people should be slower to respond when moral traits are less accessible (Bargh and Chartrand 2000; Bargh, McKenna, and Fitzsimons 2002). If participants spontaneously infer lower morality from higher- (vs. lower-) effort beauty work, they should take longer to categorize Jenna on moral traits, but not filler traits. Second, we capture participants' immediate classification to minimize effects additional processing might have on dispositional judgments (Uleman et al. 1996). Here, participants should be less likely to categorize the moral traits as descriptive of Jenna when she engages in higher- (vs. lower-) effort beauty work, but the filler traits should be unaffected.

Method

Four hundred Amazon Mechanical Turk (AMT) participants (47.0% female, $M_{\text{Age}} = 35.8$) completed this study and were randomly assigned to a 2 (effort: high, low;

2 One hundred fifty-two MTurk participants were assigned to the control, low-effort, and high-effort conditions, and read similar morning routine vignettes. They were then asked, "How similar is Jenna to someone you know?" (Not at all similar = 1, Very similar = 7) as well as "How realistic is this scenario?" (Not at all realistic = 1, Very realistic = 7). The mean levels of similarity and realism were high ($M_{\text{Similarity}} = 4.98; M_{\text{Realism}} = 6.01$), and did not differ across conditions ($p = .85$ for similarity; $p = .77$ for realism).

between) \times 2 (trait: moral, positive filler; within) mixed-design experiment. Participants read a vignette about Jenna highly similar to that of study 1A but with slight changes in verbiage (see appendix B), and with no control condition. After reading the vignette, participants were informed they would be completing a categorization task based on personality traits. Participants were asked to sort as quickly as possible whether several traits were representative of Jenna (“Jenna”) or not (“Not Jenna”) by pressing either the F or J key, which advanced participants to the next trait. The first two traits participants sorted (active, talkative) served as practice trials. Next, they were presented with eight traits (four moral and four filler) in random order. Two of the moral items captured global evaluations of morality (moral, ethical; Goodwin, Piazza, and Rozin 2014) and two captured more implicit associations with morality (genuine, sincere; Walker and Hennig 2004). The four filler traits (competent, sociable, skillful, happy) were positive personality traits identified as less relevant to morality (Goodwin et al. 2014; Rosenberg, Nelson, and Vivekananthan 1968). For each trait, we recorded whether participants sorted the trait as “Jenna” (coded as 1) or “Not Jenna” (coded as 0) and the time they took to sort each trait. Next, as a manipulation check, participants rated how much effort Jenna put into getting ready each morning (1 = Very low effort, 7 = Very high effort).

Results and Discussion

Manipulation Check. Our manipulation was successful; a one-way ANOVA revealed that Jenna was perceived as engaging in more effort in the high- versus low-effort condition ($M_{\text{High}} = 6.42$ vs. $M_{\text{Low}} = 3.43$; $F(1, 398) = 658.03$, $p < .0001$).

Trait Sorting. We conducted a logistic regression for repeated measures with effort (high vs. low; between) and trait type (positive moral vs. positive filler; within) as the independent variables and proportion of traits categorized as representative of Jenna as the dependent variable. We found main effects of effort ($Z = -3.18$, $p < .01$) and trait type ($Z = -3.63$, $p < .001$), which were qualified by an effort \times trait type interaction ($Z = 5.26$, $p < .0001$). As predicted, a lower proportion of moral traits were categorized as descriptive of Jenna in the high- (vs. low-) effort condition (High effort = 0.82, Low effort = 0.91; $Z = -3.18$, $p < .01$). However, there was no difference in the proportion of positive filler traits categorized as representative of Jenna across effort conditions (High effort = .89, Low effort = .86; $Z = 1.49$, $p = .14$).

Timing. The reaction time data were positively skewed, so the latencies of all eight traits were log-transformed (Smith and Lerner 1986). The implicit association of Jenna with each trait was operationalized as the reaction time for categorizing each trait. We predicted that in the high-

(vs. low-) effort conditions, participants would take longer to sort moral but not filler traits. We conducted a 2 (effort: low, high; between) \times 2 (traits: moral, filler; within) mixed-model ANOVA on reaction times. There was a main effect of effort ($F(1, 398) = 4.81$, $p = .03$), which was qualified by a significant effort \times trait interaction ($F(1, 398) = 15.89$, $p < .0001$). Participants took longer to sort moral traits in the high- (vs. low-) effort condition ($M_{\text{High}} = 0.51$, $M_{\text{Low}} = 0.43$; $t(1, 398) = 3.42$, $p < .001$). Analysis of the filler traits showed no difference between effort conditions ($M_{\text{High}} = 0.47$, $M_{\text{Low}} = 0.45$; $t(1, 398) = .70$, $p = .48$).³

Discussion. Study 1B provides evidence consistent with our theorizing that extensive beauty work is spontaneously judged as indicative of poorer moral character. Using an implicit measure, we demonstrate that participants took longer to categorize a woman on moral traits when they read that she engaged in high- (vs. low-) effort beauty work, indicating a weaker association between women who engage in effortful beauty work and morality. This weaker association is also reflected in participants being less likely to immediately categorize moral traits as descriptive of a woman who engaged in higher-effort beauty work. Importantly, these effects do not hold for positive traits less related to morality. Having established that perceptions of effortful beauty work lead to spontaneous judgments of women’s moral character, our remaining studies examine the underlying process and boundary conditions of this effect.

STUDY 2

In study 2, we examine the effect of effort on perceived moral character for three types of beauty work (cosmetics, tanning, and skincare) pretested as leading to different levels of transformativeness but similar levels of transience. We expect that engaging in high- (vs. low-) effort beauty work will lead to more negative inferences of moral character, but only when this work results in transformative, immediate changes (i.e., cosmetics and tanning, but not skincare), because these changes are seen as misrepresentative of the true self. Since men and women differ in familiarity with and perceptions of what entails effortful beauty work within these three domains (O’Riordan et al. 2006), we recruit only female participants for this study. Also, we now ask participants to make judgments of morality based on the description of a single instance of a woman’s beauty work rather than a daily routine (study 1A, study 1B) to show that singular (and not just habitual) beauty work is still seen as diagnostic of moral character. This

3 To facilitate interpretation, the non-transformed means are as follows: Moral traits: $M_{\text{Low}} = 633$ milliseconds, $M_{\text{High}} = 844$ milliseconds; filler traits: $M_{\text{Low}} = 621$ milliseconds, $M_{\text{High}} = 617$ milliseconds.

single-instance presentation also allows us to focus on perceptions of the direct transformation resulting from effortful beauty work (i.e., the immediate effects of cosmetics, tanning, and skincare). Further, rather than providing an explicit time duration of beauty work as a proxy for effort, we describe effortful beauty work as requiring more care and steps. Finally, we measure perceived effort excessiveness to rule out the possibility that people view effortful beauty work negatively not due to perceived misrepresentation, but because it deviates from normative expectations.

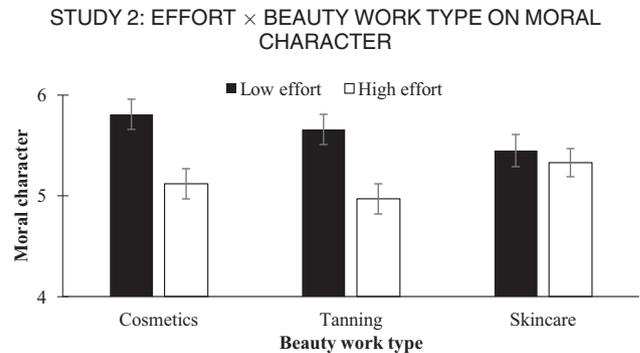
Method

Three hundred female AMT participants ($M_{Age} = 41.0$) completed this study and were randomly assigned to a 2 (effort: high, low) \times 3 (beauty work type: cosmetics, tanning, skincare) between-subjects experiment. We used a similar passage paradigm as in study 1B, but this time, Jenna was going to a barbecue and planned to spend either a lot or very little effort on cosmetics, tanning, or skincare (see appendix C). Pretests indicated that relative to skincare, cosmetics and tanning were viewed as higher on transformativeness but not transience,⁴ and also supported the effectiveness of our effort manipulation.⁵ After reading the passage, participants rated to what extent they believed Jenna was genuine, ethical, moral, and sincere (1 = Not at all, 7 = Very much; $\alpha = .94$). Next, to measure our predicted mediator, perceived misrepresentation, participants indicated their agreement with four statements: 1) Jenna is trying to put forth an image of someone she is not, 2) Jenna is misrepresenting herself to others, 3) Jenna is trying to present herself as something that she is not, and 4) Jenna is misrepresenting her innate self (1 = Completely disagree, 7 = Completely agree; $\alpha = .97$). Lastly, to test whether our results might be driven by excessive (vs. extensive) effort, participants rated the amount of effort Jenna spent getting ready for the barbecue (1 = Far too little, 4 = Appropriate, 7 = Excessive).

4 Participants ($N = 155$) read one of the three vignettes from study 2 with the effort manipulation removed and completed measures of the perceived transience and transformativeness of the beauty work behavior. A one-way ANOVA (cosmetics vs. tanning vs. skincare) on these measures revealed no effect of beauty work type on transience ($F < 1$) but a main effect on transformativeness ($F(2, 152) = 25.15$; $p < .0001$). Skincare was rated as less transformative relative to cosmetics ($M_{Skincare} = 3.11$, $M_{Cosmetics} = 4.78$; $F(1, 152) = 42.43$, $p < .0001$) and tanning ($M_{Tanning} = 4.58$; $F(1, 152) = 32.62$, $p < .0001$). See procedural details, results, and measures in web appendix B1.

5 This pretest ($N = 187$) utilized the same design and vignettes as study 2. A 2 (effort) \times 3 (beauty work type) ANOVA revealed that the high- (vs. low-) effort conditions were viewed as more effortful in the cosmetics ($M_{High} = 5.45$, $M_{Low} = 3.22$; $F(1, 181) = 63.50$, $p < .0001$), tanning ($M_{High} = 5.73$, $M_{Low} = 3.82$; $F(1, 181) = 49.24$, $p < .0001$), and skincare ($M_{High} = 5.48$, $M_{Low} = 3.36$; $F(1, 181) = 39.63$, $p < .0001$) conditions. The effort \times type interaction was not significant ($F < 1$). See full details in web appendix B2.

FIGURE 2



Results and Discussion

We conducted a 2 (effort: high, low) \times 3 (beauty work type: cosmetics, tanning, skincare) between-subjects ANOVA on all dependent variables, followed by serial mediation analyses of our key variables.

Moral Character. We found a main effect of effort ($F(1, 294) = 16.69$, $p < .0001$) and a marginal effort \times beauty work type interaction ($F(2, 294) = 2.38$, $p = .09$; see figure 2). As predicted, Jenna was rated as less moral when she engaged in high- (vs. low-) effort on cosmetics ($M_{High} = 5.12$, $M_{Low} = 5.81$; $F(1, 294) = 10.52$, $p = .001$) and tanning ($M_{High} = 4.97$, $M_{Low} = 5.66$; $F(1, 294) = 10.79$, $p = .001$), but not skincare ($M_{High} = 5.33$, $M_{Low} = 5.45$; $F(1, 294) < 1$, NS).

Misrepresentation. We found significant main effects of effort ($F(1, 294) = 21.65$, $p < .0001$) and beauty work type ($F(2, 294) = 11.28$, $p < .0001$) as well as a two-way interaction ($F(2, 294) = 3.01$, $p = .05$). As predicted, Jenna was seen as misrepresenting herself more when she engaged in higher effort on cosmetics ($M_{High} = 2.33$, $M_{Low} = 1.43$; $F(1, 294) = 13.24$, $p < .001$) and tanning ($M_{High} = 3.03$, $M_{Low} = 2.10$; $F(1, 294) = 14.20$, $p < .001$), but not skincare ($M_{High} = 1.91$, $M_{Low} = 1.74$; $F(1, 294) = .45$, $p = .50$).

Moderated Mediation. According to our conceptualization, misrepresentation should mediate the effect of effort on moral character ratings only within cosmetics and tanning, where high effort leads to immediate, transformative changes to a woman's appearance. We first confirmed with a factor analysis that the morality and misrepresentation items loaded separately (all coefficients $> .76$; see web appendix G for full factor loadings across studies 2–6 showing that morality and misrepresentation consistently load separately). Next, because effort had the same effect in the cosmetics and tanning conditions and these were not theoretically distinct, we combined them and conducted a

moderated mediation analysis (model 8, Hayes 2013) using beauty work type (cosmetics/tanning vs. skincare) as the moderator and misrepresentation as the mediator. As predicted, misrepresentation mediated the relationship between effort and morality within cosmetics/tanning ($B = -.29$, $CI_{95\%} = -.50, -.16$) but not within skincare ($B = -.06$, $CI_{95\%} = -.23, .07$). Furthermore, our moderated mediation index was significant ($B = .24$, $CI_{95\%} = .06, .47$). Of note, this same pattern holds when cosmetics and tanning are analyzed separately.

Excessiveness. We found only a main effect of effort ($F(1, 294) = 59.17$, $p < .0001$). The effort \times beauty work type interaction was not significant ($p = .80$). Jenna's effort was seen as more excessive under high (vs. low) effort across all beauty work types (all contrasts $p < .0001$). In the high-effort conditions, perceived excessiveness did not differ between the three beauty work types ($M_{\text{Cosmetics}} = 5.02$, $M_{\text{Tanning}} = 5.04$, $M_{\text{Skincare}} = 4.91$; all contrasts $p > .48$), suggesting that it is not playing a role. Moreover, the mean of 5 in the high-effort conditions is closer to the "appropriate" midpoint (4) than to the "excessive" extreme (7).⁶

Discussion. The results of study 2 illustrate the role of transformativeness and perceived misrepresentation in the negative effect of effort on perceived moral character. Within cosmetics and tanning, where effort is seen as transformative and leading to immediately visible changes in appearance, high effort reduces perceived moral character, but not with skincare, where effort leads to less apparent changes in appearance. Moderated mediation analysis supported our prediction that perceived misrepresentation drove negative judgments of moral character. We also rule out the alternative that perceptions of excessive (rather than extensive) effort might be driving our effect. Next, we examine the effect of transformativeness within a single type of beauty work by testing whether attractiveness attenuates the negative effort-morality link.

STUDY 3

We have argued that negative judgments of moral character stem from the belief that effortful beauty work signals a willingness to present an enhanced appearance discrepant from one's true, natural appearance. This also implies that the negative effort-morality link should be attenuated for more attractive women because the enhanced appearance resulting from high-effort beauty work is seen as less discrepant from an attractive woman's true, original

appearance. We test this prediction in study 3 using two pictures of the same model, one where she appears very attractive, and another where she appears average in attractiveness (Dahl, Argo, and Morales 2012). We also include a "no information" condition where participants were not shown an image. This study ensures our effects hold when physical appearance is evident and provides more robust evidence of our effects in several other ways. First, to generalize beyond our four-item morality index, we add a nine-item trait measure drawn from Aquino and Reed's (2002) moral identity scale, which reflects a broader measure of traits seen as characteristic of a moral person. Second, we again examine the effect of effort on expectations of future immoral behaviors. Finally, we rule out vanity as an alternative explanation. Given that vanity reflects an "excessive concern" for one's physical appearance (Netemeyer, Burton, and Lichtenstein 1995, 612), extensive effort put toward enhancing physical attractiveness, regardless of baseline attractiveness, should reflect high levels of vanity. However, if attractiveness level (i.e., the perceived degree of discrepancy) and effort interact to affect perceived morality but not vanity, these constructs likely tap into different processes.

Method

Four hundred fifty-six AMT participants (49.6% female, $M_{\text{Age}} = 36.0$) were randomly assigned to a 2 (effort: high, low) \times 3 (attractiveness: attractive, average, no image) between-subjects design. Participants were asked to form an impression of a woman named "Karen" by reading a passage describing her morning routine. These passages were the same as the high- and low-effort cosmetic conditions of study 1A, except we reduced the time spent in the high-effort condition to an hour and a half (from an hour and 45 minutes). The low-effort condition remained at 10 minutes. In the average and attractive conditions, participants were also shown an image of Karen (appendix D).⁷ We counterbalanced the order of the passage and image; order did not interact to affect the dependent variables ($p > .75$ on morality, $p > .63$ on misrepresentation, and $p \geq .11$ on anticipated immoral behaviors), so we do not discuss it further.

After reading this passage, participants completed the same moral character ($\alpha = .91$) and misrepresentation ($\alpha = .97$) measures used in study 2. They also rated Karen's moral character using Aquino and Reed's (2002) nine-item moral trait measure (i.e., to what extent do you believe Karen is [caring, compassionate, fair, friendly, generous, hardworking, helpful, honest, kind]; Not at all = 1, Very much so = 7; $\alpha = .96$). We next asked participants to rate

6 Of note, we included this excessiveness question in studies 3–5 as well and did not obtain differences between beauty work types across the high-effort conditions, despite finding differences in perceived morality, so for brevity we do not discuss this additional measure in subsequent studies.

7 A pretest ($N = 100$) showed that the attractive image was rated higher on attractiveness (1 = Not at all attractive, 7 = Very attractive) than the average image ($M_{\text{High}} = 4.98$, $M_{\text{Average}} = 4.17$; $F(1, 98) = 9.35$; $p < .01$).

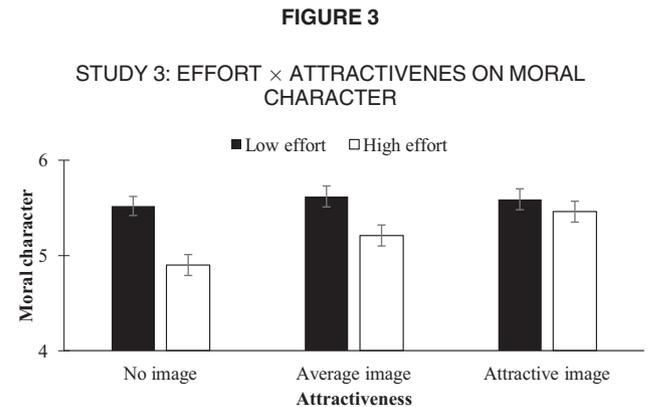
how likely they thought Karen would be to engage in four immoral behaviors similar to those of study 1A except that they were not exclusively work-related (i.e., inflate her business expense report, board a plane before her number was called, lie to an insurance company, lie to a supervisor about progress on a project; 1 = Not likely, 9 = Very likely; $\alpha = .90$; adapted from Gino et al. 2010). To examine vanity, we included the five items adapted from Netemeyer et al.'s (1995) physical vanity scale (e.g., Karen is very concerned about her appearance; $\alpha = .93$; see appendix E). Finally, as an effort manipulation check, participants rated how much effort they thought Karen put into getting ready in the morning (1 = Very little effort, 7 = Very high effort).

Results and Discussion

We predicted that Karen would be judged as less moral and more likely to engage in immoral behaviors when her beauty routine entailed high (vs. low) effort, but that this effect would be attenuated when Karen was attractive. Further, we expected that this shift based on effort would be mediated by perceived misrepresentation. We conducted a 2 (effort: low, high) \times 3 (attractiveness: attractive, average, no image information) between-subjects ANOVA on all dependent variables, followed by serial mediation analyses.

Effort Manipulation Check. We found a significant main effect of effort such that participants rated Karen as putting more effort into her morning routine in the high-compared to low-effort condition ($M_{\text{High}} = 6.35$, $M_{\text{Low}} = 3.55$; $F(1, 450) = 582.98$, $p < .0001$). We also found a significant main effect of attractiveness ($F(2, 450) = 5.15$, $p < .01$): participants felt Karen put less effort into her appearance in the average condition relative to the attractive ($M_{\text{Average}} = 4.70$ vs. $M_{\text{Attractive}} = 5.14$; $F(1, 450) = 9.64$, $p < .01$) and no image conditions ($M_{\text{No Image}} = 5.02$; $F(1, 450) = 5.09$; $p = .02$). The no image and attractive conditions did not differ from one another ($F < 1$). There was no effort \times attractiveness interaction ($F < 1$).

Moral Character. Analyses of our four-item morality scale and Aquino and Reed's nine-item scale yielded identical results. For brevity, we report only the Aquino and Reed measure in detail here and across all remaining studies; however, we include all results from our four-item scale in web appendix E. A 2 \times 3 ANOVA on perceived moral character revealed main effects of effort ($F(1, 450) = 19.52$; $p < .0001$) and attractiveness ($F(2, 450) = 4.40$; $p = .01$), which were qualified by a marginal two-way interaction ($F(2, 450) = 2.49$; $p = 0.08$; see figure 3). Karen's moral character was rated more negatively when she engaged in high-effort beauty work in the average ($M_{\text{High}} = 5.21$, $M_{\text{Low}} = 5.62$; $F(1, 450) = 7.38$, $p < .01$) and no image conditions ($M_{\text{High}} = 4.90$, $M_{\text{Low}} = 5.52$;



$F(1, 450) = 16.18$, $p < .0001$). However, effort had no effect on moral character in the attractive image condition ($M_{\text{High}} = 5.46$; $M_{\text{Low}} = 5.59$, $F(1, 450) = .81$; $p = .37$).

Misrepresentation. The same analysis revealed main effects of effort ($F(1, 450) = 90.66$; $p < .0001$) and image ($F(2, 450) = 3.05$; $p = .05$) on perceived misrepresentation, which were qualified by a two-way interaction ($F(2, 450) = 3.83$; $p = .02$). Karen was perceived as misrepresenting herself more when she put high effort into her appearance in both the average ($M_{\text{High}} = 3.03$, $M_{\text{Low}} = 1.75$; $F(1, 450) = 41.44$, $p < .0001$) and no image conditions ($M_{\text{High}} = 3.02$, $M_{\text{Low}} = 1.67$; $F(1, 450) = 45.94$, $p < .0001$). This was also the case for the attractive condition, but to a lesser extent ($M_{\text{High}} = 2.39$, $M_{\text{Low}} = 1.75$; $F(1, 450) = 10.65$, $p = .001$), reflecting the significant interaction. These results suggest that people may recognize that all women engage in some degree of misrepresentation through effortful beauty work, but if a woman is attractive, the degree of misrepresentation is more limited and less likely to affect moral character judgments. Consistent with this notion, when Karen engaged in high-effort beauty work, she was perceived as misrepresenting herself significantly less when she was attractive versus average in appearance ($F(1, 450) = 10.54$, $p < .01$) and when no image was presented ($F(1, 450) = 9.80$, $p < .01$). However, when Karen engaged in low-effort beauty work, attractiveness did not affect misrepresentation (all $p > .69$).

Immoral Behaviors. We found a main effect of effort ($F(1, 450) = 27.57$, $p < .0001$) and the predicted two-way interaction ($F(2, 450) = 4.25$, $p = 0.01$) on anticipated immoral behaviors. Karen was rated as more likely to engage in immoral behaviors under high (vs. low) effort in the average image ($M_{\text{High}} = 3.55$, $M_{\text{Low}} = 2.80$; $F(1, 450) = 9.02$, $p < .01$) and no image ($M_{\text{High}} = 3.88$, $M_{\text{Low}} = 2.60$; $F(1, 450) = 25.87$, $p < .0001$) conditions, but not in the attractive image condition ($M_{\text{High}} = 3.10$, $M_{\text{Low}} = 2.86$; $F(1, 450) = .97$, $p = .32$).

Moderated Serial Mediation. Based on our conceptualization, the effect of effortful beauty work on misrepresentation and judgments of moral character should be attenuated when Karen is highly attractive, and further, should have downstream consequences for future immoral behaviors. We conducted a moderated serial mediation analysis (Blanchard, Carlson, and Hyodo 2016) to test our focal pathway: high- (vs. low-) effort beauty work \rightarrow perceived misrepresentation \rightarrow perceived moral character \rightarrow expectations of immoral behaviors. Because the average attractiveness and no image conditions were not theoretically distinct, we collapsed across these conditions, though the same results hold if they are examined separately. We compared the serial mediation pathway of the combined average attractiveness/no image conditions to that of the high attractiveness condition in a moderated serial mediation analysis, with effort as the independent variable, attractiveness as the moderator, misrepresentation and moral character as serial mediators, and expectations of moral behaviors as the dependent variable.

We first examine the combined average attractiveness/no image condition. The serial mediation pathway, high- (vs. low-) effort beauty work \rightarrow perceived misrepresentation \rightarrow perceived moral character \rightarrow expectations of immoral behaviors, was significant ($B = .24$, CI_{95} : .15, .35). There was also a significant indirect effect solely through misrepresentation ($B = .74$, CI_{95} : .54, .99), but not solely through moral character ($B = .04$, CI_{95} : -.08, .16). In the high attractiveness condition, the same pattern of effects held, but was considerably attenuated, supporting the notion that attractiveness provides a buffer for the negative effort-morality link. Specifically, the serial mediation pathway coefficient was halved ($B = .12$, CI_{95} : .05, .22), as was the indirect effect solely through misrepresentation ($B = .36$, CI_{95} : .17, .59). As in the combined condition, there was no evidence of mediation solely through judgments of moral character ($B = -.04$, CI_{95} : -.20, .10). This suggests that effortful beauty work affects anticipated immoral behaviors only through changing perceptions of misrepresentation.

Vanity. Results revealed a main effect of effort on ratings of vanity whereby Karen was rated as more vain in the high- (vs. low-) effort condition ($M_{High} = 6.03$, $M_{Low} = 4.13$; $F(1, 450) = 344.02$, $p < .0001$). There was also a main effect of attractiveness ($F(2, 450) = 7.42$, $p < .001$) such that Karen was rated as less vain in the average (vs. attractive) condition ($M_{Avg.} = 4.80$, $M_{Attractive} = 5.25$; $F(1, 450) = 12.48$, $p < .001$) and versus the no image condition ($M_{No\ Image} = 5.19$; $F(1, 450) = 9.58$, $p < .01$). There was no difference in the attractive and no image conditions ($F < 1$). Critically, there was no two-way interaction ($F(2, 450) = .39$, NS).

Discussion. As expected, when Karen was average in attractiveness or no image of her was provided and her

cosmetics routine was described as high (vs. low) effort, participants rated her as more misrepresentative, less moral, and more likely to engage in immoral behaviors. However, when Karen was attractive, her perceived morality and likelihood of engaging in immoral behaviors were no longer affected. Our results suggest that the key difference between average and attractive evaluation targets is how much their effortful beauty work transforms their appearance and changes perceptions of misrepresentation. When women are average in attractiveness or no appearance information is given, engaging in an effortful cosmetics routine increases misrepresentation, leading to derogations of moral character. When women are attractive, engaging in such a routine affects misrepresentation, but not enough to change perceived moral character, suggesting people have a tolerance or expectation of some discrepancy between the unadulterated and made-up self. Study 3 also shows that perceived vanity is distinct from perceived morality; perceived morality was moderated by attractiveness (i.e., the magnitude of the discrepancy), yet there was no such interaction for vanity. Having established the moderating role of transience, we next examine the role of transience.

STUDY 4

In study 4, we build on our findings in two ways. First, we provide further support for our proposed process by manipulating the extent to which effortful beauty work leads to transient changes. As discussed in our theorizing, temporary increases in physical attractiveness are more likely to be construed as superficial and hence misrepresentative of one's true self. We compare the effect of effortful beauty work in cosmetics to that in exercise, where the results of extensive beauty work are more enduring. Importantly, in both conditions, we explicitly state that the woman in our scenario engages in the behavior to enhance appearance in order to minimize differences in perceived intrinsic goals for using make-up versus exercising, and thus make clear that exercise is being performed as a form of beauty work. We expect that high (vs. low) effort in cosmetics will increase perceived misrepresentation and subsequent negative judgments of morality because only with cosmetics is physical appearance temporarily changed and therefore misrepresentative of true appearance. With exercise, improvements to appearance are more enduring and not easily reversed at the end of the day, limiting the sense of misrepresentation. In fact, as alluded to earlier, effortful exercise may be seen as a sign of good moral character because of associations between wellness and morality (Whorton 1982) and exercise and high self-control, which is also associated with moral character (Baumeister and Exline 2000). Lastly, we again rule out vanity as an alternative explanation for our effects.

Method

Two hundred two AMT participants (38.8% female, $M_{\text{Age}} = 34.4$) completed this 2 (effort: high, low) \times 2 (beauty work type: cosmetics, exercise) between-subjects experiment. In the cosmetics condition, participants read the same morning routine passage as in study 3 except the woman's name was Jenna. In the exercise condition, participants read that Jenna spent either an hour and a half doing an intense workout (high effort) or 10 minutes doing low-impact exercises (low effort; see appendix F). In both conditions, participants read that Jenna engaged in the cosmetics/exercise routine because she "likes to make sure that she looks good and feels positive about the way she looks." A pretest confirmed that the cosmetics routine was rated as higher in transience than exercise but the same on transformativeness.⁸ Next, participants completed the same measures of morality (four-item: $\alpha = .92$, Aquino and Reed: $\alpha = .95$), misrepresentation ($\alpha = .96$), immoral behaviors ($\alpha = .86$), vanity ($\alpha = .92$), and effort used in study 3.

Results and Discussion

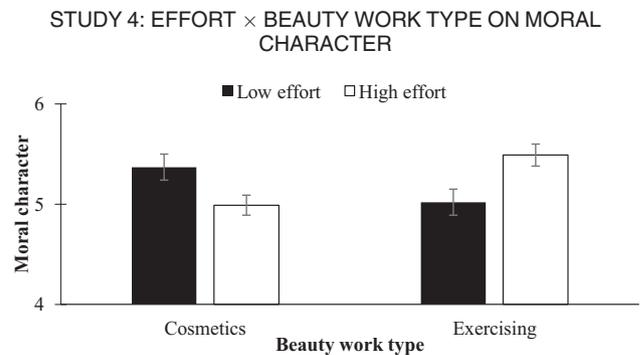
We predicted that our focal effects of effort would hold only for the cosmetics (and not the exercise) routine. To test our predictions, we analyzed each of our dependent variables with a 2 (effort: high, low) \times 2 (beauty work type: cosmetics, exercise) ANOVA.

Effort Manipulation Check. Analysis of the effort manipulation check yielded significant main effects of effort ($F(1, 197) = 170.31, p < .0001$) and beauty work type ($F(1, 197) = 38.82, p < .0001$), as well as a two-way interaction ($F(1, 197) = 28.86, p < .0001$).⁹ Confirming that our effort manipulation was successful, the high- versus low-effort daily routine was rated as more effortful in both the cosmetics ($M_{\text{High}} = 6.40, M_{\text{Low}} = 3.43; F(1, 197) = 167.22, p < .0001$) and exercise conditions ($M_{\text{High}} = 6.54, M_{\text{Low}} = 5.30; F(1, 197) = 29.92, p < .0001$). Consistent with the notion that exercise is generally perceived as effortful (Dishman 1991), the low-effort routine was rated as more effortful in the exercise (vs. cosmetics) condition ($F(1, 197) = 66.33, p < .0001$) while this was not the case with the high-effort routines ($F(1, 197) = .37, p = .54$). Importantly, because our focus is on the effect of effort within each domain, we do not expect this difference to compromise our results.

8 Participants ($N = 104$) were randomly assigned to read one of the vignettes from study 4 with the effort manipulation removed. A one-way ANOVA (cosmetics vs. exercise) revealed no difference in transformativeness between the two domains ($F(1, 102) = .02, p = .89$). However, exercise was rated as leading to more permanent (i.e., less transient) outcomes than cosmetics ($M_{\text{Cosmetics}} = 2.94, M_{\text{Exercise}} = 5.39; F(1, 102) = 127.09, p < .0001$). See web appendix C for procedural details, measures, and results.

9 One participant failed to answer the effort manipulation check.

FIGURE 4



Moral Character. Analysis of Aquino and Reed's (2002) scale revealed only a significant two-way interaction ($F(1, 198) = 10.50, p = 0.001$; see figure 4). Within cosmetics, participants rated Jenna as less moral when she engaged in high (vs. low) effort ($M_{\text{High}} = 4.99, M_{\text{Low}} = 5.37; F(1, 198) = 4.03, p = .05$). However, the pattern reversed within exercise, where she was rated as more moral in the high-effort condition ($M_{\text{High}} = 5.49, M_{\text{Low}} = 5.02; F(1, 198) = 6.67, p = 0.01$).

Misrepresentation. Results revealed only a two-way interaction ($F(1, 198) = 22.99, p < .0001$). While within cosmetics, participants rated Jenna higher on misrepresentativeness when her routine entailed higher effort ($M_{\text{High}} = 2.95, M_{\text{Low}} = 1.87; F(1, 198) = 17.24, p < .0001$), this effect reversed for exercise ($M_{\text{High}} = 2.01, M_{\text{Low}} = 2.68; F(1, 198) = 6.83, p < 0.01$).

Immoral Behaviors. Analysis revealed only a significant two-way interaction ($F(1, 198) = 6.23, p = 0.01$). Within cosmetics, participants rated Jenna as more likely to engage in immoral behaviors under higher effort ($M_{\text{High}} = 3.78, M_{\text{Low}} = 3.16; F(1, 198) = 3.93, p = .05$); there was no significant effect with exercise ($M_{\text{High}} = 3.33, M_{\text{Low}} = 3.80; F(1, 198) = 2.39, p = .12$).

Moderated Serial Mediation. As in study 3, we examine the serial mediation pathway: high- (vs. low-) effort beauty work \rightarrow higher perceived misrepresentation \rightarrow lower perceived moral character \rightarrow higher expectations of immoral behaviors. We expect this mediation pattern to hold for cosmetics, where effortful beauty work results in more transient change, but not for exercise, where high effort leads to more permanent changes.

Within cosmetics, we tested the conditional indirect effect of effort on behaviors through the serial mediation pathway described above and found it was significant ($B = .14, CI_{95}: .06, .29$), as was the indirect effect solely through misrepresentation ($B = .67, CI_{95}: .35, 1.09$). There was no

evidence that morality alone mediated this pathway ($B = .02$, $CI_{95}: -.14, .20$). The exercise condition revealed the reverse pattern: the serial mediation pathway on expectations of immoral behaviors was significant but negative ($B = -.09$, $CI_{95}: -.21, -.03$), as was the sign for the significant indirect effect of misrepresentation alone ($B = -.41$, $CI_{95}: -.76, -.12$). Notably, this reversal of valence reveals that while effort increased misrepresentation ratings within cosmetics, it actually decreased these ratings within exercise. Within exercise, there was also no evidence of mediation solely through moral character ($B = -.12$, $CI_{95}: -.33, .01$).

Vanity. Analysis revealed a main effect of effort ($F(1, 198) = 126.34$, $p < .0001$). As expected, higher effort led to higher vanity ratings within both cosmetics ($M_{High} = 6.03$, $M_{Low} = 3.73$; $F(1, 198) = 164.76$, $p < .0001$) and exercise ($M_{High} = 6.08$, $M_{Low} = 5.56$; $F(1, 198) = 8.78$, $p < .01$). A main effect of beauty work type also emerged where Jenna was rated lower on vanity in the cosmetics relative to the exercise domain ($F(1, 198) = 55.95$, $p < .0001$). Finally, there was also a significant two-way interaction ($F(1, 198) = 50.28$, $p < .0001$), which was driven by lower ratings of vanity in cosmetics in the low-effort conditions ($F(1, 198) = 105.12$, $p < .0001$) but not the high-effort conditions ($F(1, 198) = .08$, $p = .78$). Given the interaction, we also ran a moderated serial mediation with vanity replacing misrepresentation. The indirect effect was not significant for cosmetics ($B = -.16$, $CI_{95}: -.47, .10$) or exercise ($B = -.04$, $CI_{95}: -.14, .02$), nor was there a mediation effect solely through vanity for either cosmetics ($B = -.11$, $CI_{95}: -.63, .42$) or exercise ($B = -.02$, $CI_{95}: -.17, .09$).

Discussion. These results further support the notion that misrepresentation underlies the effect of effort on judgments of moral character and extend our findings by showing that these effects hold only for beauty work that results in relatively transient changes to one's appearance. Within cosmetics, where beauty work leads to only temporary changes, high effort leads to higher perceived misrepresentation. In contrast, within exercise, where beauty work leads to more permanent changes, high effort leads to lower perceived misrepresentation. We believe that this occurs because the transformation resulting from exercise reflects a real and lasting change to appearance and is therefore more true to (and hence less misrepresentative of) the self. However, we acknowledge that a positive association between exercise and morality may also be playing a role in driving this reversal, which would be an interesting area for future research. Importantly, even though effort is interpreted differently within cosmetics and exercise, misrepresentation was negatively related to perceived moral character, within both domains, which shaped expectations of immoral behaviors. Lastly, because high effort led to uniformly higher ratings of vanity across domains and vanity did not mediate the effect of effort on

our focal measures, it is unlikely to play a role in the effect of effort on perceived moral character.

STUDY 5

In our final two studies, we examine our proposed boundary condition—the salience of situational norms that lead to more external attributions. According to our theory, a woman's moral character is judged more negatively following effortful beauty work because her actions are assumed to be driven by her internal willingness to misrepresent herself to others. However, we propose that introducing a situational rationale for why a woman engages in effortful beauty work can mitigate dispositional attributions of misrepresentation and poor moral character. We test our predictions with a new condition in which Jenna is getting ready for a barbecue where potential employers will be present and norms for making a professional first impression will be more salient. This should lead to more external attributions for Jenna's effort, attenuating the negative effect of effortful beauty work on judgments of moral character.

Method

Two hundred ninety-eight AMT participants (55.0% female, $M_{Age} = 34.6$) completed this study, which employed a 2 (effort: high, low) \times 2 (beauty work attribution: internal, external) between-subjects design. Participants read the same high- and low-effort cosmetics vignettes used in study 2. Participants in the internal attribution condition did not read any additional information. In the external attribution condition, to make professional norms salient, participants also read that Jenna was hoping to find a sales job and the host of the barbecue had invited several friends from a medical sales firm that was currently hiring (see appendix G). Furthermore, Jenna knew that energy and organizational skills were important for the position and wanted to highlight these traits in herself. We purposefully did not specify that Jenna was focused on her appearance in this condition, but rather on the broader notion of making a good impression. A pretest revealed this manipulation was successful.¹⁰ After reading the passage, participants completed the same morality (four-item: $\alpha = .93$; Aquino and Reed: $\alpha = .96$) and misrepresentation ($\alpha = .96$) measures used previously.

10 The pretest ($N = 159$) used the same design and vignettes as study 5. A 2 (effort: high vs. low) \times 2 (attribution: internal vs. external) ANOVA on our attributions manipulation check measures revealed only a main effect of attribution where participants were more likely to attribute Jenna's behavior to external reasons in the external (vs. internal) condition ($M_{External} = 3.58$, $M_{Internal} = 3.02$; $F(1,155) = 12.19$, $p < .01$). See web appendix D.

Results and Discussion

We predicted that engaging in high- (vs. low-) effort beauty work would lead to more negative judgments of moral character in the (baseline) internal attribution condition, but not in the external attribution condition (i.e., when the professional norm was salient). We analyzed all dependent variables using a 2 (effort: high, low) \times 2 (attribution: internal, external) ANOVA.

Moral Character. For the Aquino and Reed (2002) scale, a marginal interaction between effort and attribution emerged ($F(1, 294) = 3.69, p = .06$; see figure 5). In the internal attribution condition, Jenna was rated as less moral when she engaged in higher effort ($M_{\text{High}} = 5.16, M_{\text{Low}} = 5.52; F(1, 294) = 5.48, p = .02$). However, in the external attribution condition, there were no differences based on effort ($M_{\text{High}} = 5.51, M_{\text{Low}} = 5.45; F(1, 294) = .15, \text{NS}$).

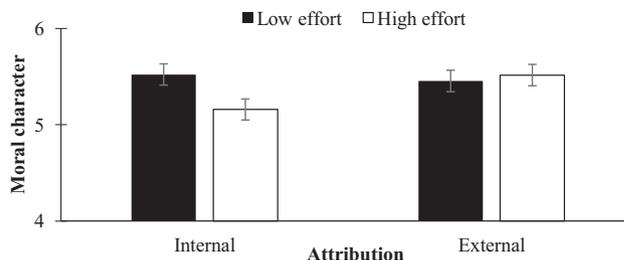
Misrepresentation. Results revealed only the predicted effort \times attribution interaction ($F(1, 294) = 5.85, p = .02$). In the internal attribution condition, participants rated Jenna as misrepresenting herself more in the high-effort condition ($M_{\text{High}} = 2.44, M_{\text{Low}} = 1.87; F(1, 294) = 8.33, p < .01$). There was no difference in the external attribution condition ($M_{\text{High}} = 2.04, M_{\text{Low}} = 2.15; F(1, 294) = .30, \text{NS}$).

Moderated Mediation. We predicted that misrepresentation would mediate the effect of effort on ratings of moral character, but only in the internal attribution condition. As predicted, a moderated mediation analysis (model 8, Hayes 2013) revealed that misrepresentation mediated the pathway between effort and moral character in the internal ($B = -.19, \text{CI}_{95\%} = -.37, -.05$), but not external ($B = .04, \text{CI}_{95\%} = -.08, .16$) condition. The moderated mediation index ($B = .22, \text{CI}_{95\%} = .05, .45$) also indicated that the indirect effect of effort was significantly different in the internal versus external attribution conditions.

Discussion. Study 5 provides further insight into how judgments of moral character are inferred from effortful beauty work by manipulating how effort is interpreted and whether the behavior can be attributed to an individual's internal disposition or to situational factors. In the absence of salient situational causes for behavior, and when internal attributions were more likely, we replicated our prior results where higher effort spent on cosmetics increased perceived misrepresentation, driving poorer ratings of moral character. However, when normative attributions of Jenna's effort were made salient, effort no longer influenced judgments of misrepresentation or moral character. In our last study, we continue to explore the notion that external attributions brought on by distinct norms surrounding effortful behavior can mitigate morality judgments, this time in a make-up advertising context.

FIGURE 5

STUDY 5: EFFORT \times ATTRIBUTION ON MORAL CHARACTER



STUDY 6

In our final study, we present participants with an ad for a real cosmetics brand, Colorescience. Rather than describe actual behavior as in prior studies, we manipulate perceived effort indirectly through the inferences people make based on the beauty products women use, such as higher-effort cosmetics. We thus examine whether negative perceptions of women who engage in high-effort beauty work extend to high-effort beauty products themselves. We expect the amount of effort required to use the cosmetic (as indicated in the ad) should shape inferences about the types of women who choose to use this product, knowing the amount of effort needed.

We examine only women who wear make-up and therefore have experience purchasing these products. We predict that when Colorescience products are described as requiring high (vs. low) effort, participants will judge women who use them as poorer in moral character because they are seen as trying to misrepresent themselves. In turn, these negative judgments will dampen interest in purchasing Colorescience products. As in study 5, we also test whether encouraging external attributions of beauty work serves as a boundary condition. To increase the salience of external causes for beauty work, we emphasize the importance of making a good first impression in the Colorescience ad. To maintain participants' internal attributions of beauty work, we emphasize the importance of being oneself, as prior work suggests that being oneself reflects a desire to convey one's internal, personal traits and is less externally focused (Schlegel et al. 2009). We expect lower purchase intent for higher-effort products when the ad emphasizes being oneself (internal attribution), but we expect the negative effect of effort to be mitigated when it stresses making a good first impression (external attribution). Because we use an ad, we also measure perceived product quality to ensure that effort does not impact perceived quality.

Method

One hundred fifty-nine female AMT participants ($M_{\text{Age}} = 34.4$) completed this study in exchange for payment. The study employed a 2 (effort: high, low) \times 2 (beauty work attribution: internal, external) between-subjects design. We created an ad promoting Colorescience that included a banner image, a slogan, and a description of the brand and its products. In the high-effort conditions, participants read (in addition to other filler information) that the products typically take several precise steps to use and that most take less than 10 minutes to apply. In the low-effort condition, participants read that the products typically take only a few simple steps to use and that most take less than 3 minutes to apply. Both conditions stated that the cosmetic provided flawless results. We manipulated whether participants would make internal versus external attributions for using Colorescience products with the ad's slogan. The internal attribution condition ad used the slogan "Being Yourself Matters," while the external attribution condition used the slogan "First Impressions Matter" (see appendix H).

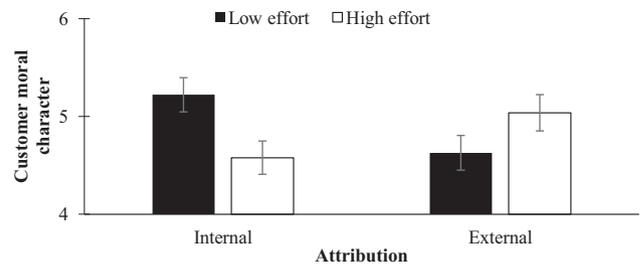
After reviewing the ad, participants were asked to rate people who used Colorescience on the same morality (four-item, $\alpha = .93$; Aquino and Reed, $\alpha = .95$) and misrepresentation ($\alpha = .97$) indices used in our prior studies. Additionally, participants completed three items capturing purchase intent: 1) How interested would you be in learning more about Colorescience products? 2) How interested would you be in purchasing Colorescience products? 3) How much would you want to purchase Colorescience products? (1 = Not at all, 7 = Very much; $\alpha = .95$). Participants then completed an effort manipulation check asking how much effort was required to use Colorescience products (1 = Very little, 7 = Very much). Finally, participants rated whether they thought Colorescience products were of high quality (1 = Not at all, 7 = Very much) to rule out the possibility that our effects are due to people believing that products requiring higher effort were of lower quality. Lastly, to ensure that our participants were representative of potential buyers, we asked participants if they wore make-up (Yes, No).

Results and Discussion

Eighteen participants indicated that they did not wear make-up and were removed from our analyses, leaving 141 female participants. We predicted that high- relative to low-effort products would lead participants to judge Colorescience customers as less moral and more misrepresentative in the internal attribution condition, but these effects would be mitigated in the external attribution condition. In turn, we expected these perceptions of misrepresentation and moral character to drive participants' own interest in purchasing Colorescience products.

FIGURE 6

STUDY 6: EFFORT \times ATTRIBUTION ON MORAL CHARACTER



We analyzed all dependent variables using a 2 (effort: high, low) \times 2 (attribution: internal, external) ANOVA, followed by serial mediation analyses.

Manipulation Check. Confirming that our effort manipulation was successful, participants believed Colorescience required more effort to use in the high- relative to low-effort conditions ($M_{\text{High}} = 4.18$, $M_{\text{Low}} = 2.49$; $F(1, 137) = 47.80$, $p < .0001$). There was no main effect of attribution ($p = .36$) nor was there a significant effort \times attribution interaction ($p = .33$).

Colorescience Customer Moral Character. Results for the Aquino and Reed (2002) measure showed only an effort \times attribution interaction ($F(1, 137) = 8.82$, $p < .01$; see figure 6). Planned contrasts revealed that participants in the internal attribution condition viewed Colorescience customers as less moral in the high-effort condition ($M_{\text{High}} = 4.58$, $M_{\text{Low}} = 5.22$; $F(1, 137) = 6.94$, $p < .01$). However, participants in the external attributions condition showed no such difference ($M_{\text{High}} = 5.04$, $M_{\text{Low}} = 4.63$; $F(1, 137) = 2.54$, $p = .11$).

Colorescience Customer Misrepresentation. Results revealed only a main effect of effort ($F(1, 137) = 5.82$, $p = .02$). Although the interaction was not significant ($F(1, 137) = .73$, $p = .39$), analysis of planned contrasts revealed that, consistent with our theorizing, in the internal attributions condition, Colorescience customers were seen as misrepresenting themselves to a greater degree in the high- (vs. low-) effort conditions ($M_{\text{High}} = 2.95$, $M_{\text{Low}} = 2.12$; $F(1, 137) = 5.62$, $p = .02$), while in the external attribution condition, there was no such difference ($M_{\text{High}} = 2.95$, $M_{\text{Low}} = 2.55$; $F(1, 137) = 1.16$, $p = .28$).

Purchase Intent. Results revealed only the predicted two-way interaction ($F(1, 137) = 7.36$, $p < .01$). In the internal attribution condition, the high-effort ad garnered lower purchase intentions ($M_{\text{High}} = 4.31$, $M_{\text{Low}} = 5.43$; $F(1, 137) = 9.37$, $p < .01$) while in the external attribution condition, there was no effect of effort ($M_{\text{High}} = 5.06$, $M_{\text{Low}} = 4.74$; $F(1, 137) = .69$, NS).

Serial Moderated Mediation. We predicted that in the internal attribution condition, the effect of effort on purchase intentions would be mediated by perceived misrepresentation and moral character, yet this pathway would not be significant in the external attribution condition. A moderated serial mediation analysis (Blanchard et al. 2016) revealed that in the internal attribution condition, the high (vs. low) effort \rightarrow perceived misrepresentation \rightarrow perceived moral character \rightarrow purchase intent pathway was significant ($B = -.10$, $CI_{95}: -.30, -.01$). There was also evidence of mediation through only misrepresentation ($B = -.22$, $CI_{95}: -.51, -.05$) and morality ($B = -.41$, $CI_{95}: -.85, -.02$) individually. In the external attribution condition, the serial pathway was not significant ($B = -.05$, $CI_{95}: -.20, .02$).

Quality. There were no significant effects of attribution, effort, or their interaction (all $p > .14$) on quality ratings. Furthermore, there were no significant differences between the high- versus low-effort cosmetics in the internal attribution conditions ($p = .26$) or external attribution conditions ($p = .34$), ruling out the possibility that different perceptions of quality related to products that require high versus low effort contributed to our effects. Additionally, all prior results (including serial mediation) held when we controlled for perceived quality.

Discussion. The results of study 6 conceptually replicate study 5 and extend the generalizability of our effects to an advertising context. When Colorescience products were positioned as helping customers “be themselves,” thereby encouraging internal attributions, we replicated our prior studies where customers of effortful beauty products were rated as engaging in greater misrepresentation and possessing poorer moral character. In turn, misrepresentation and moral character ratings led to reduced purchase intentions for Colorescience when it required high versus low effort. However, when these products were positioned as helping customers make a good first impression and thus encouraging external attributions, effort did not significantly affect any of these variables. These findings show that beauty work effort can be indirectly implied through the use of high- versus low-effort beauty products and shape subsequent judgments of moral character. Therefore, while effortful beauty work may not always be observed, it can be inferred through the products a woman uses, complementing prior work suggesting that similar inferences may be made from a woman’s physical appearance (e.g., light vs. heavy make-up; Etcoff et al. 2011).

Together with study 5, study 6 also provides insight into why consumers might engage in more effortful beauty work and choose more effortful cosmetic products despite negative moral associations. Because people have additional access to their own internal thoughts relative to observers (Jones and Nisbett 1972; Pronin 2009), it is likely that

external or norm-driven causes are more salient in consumers’ own decisions to engage in beauty work, thereby mitigating the effect effortful beauty work has on their own feelings of misrepresentation and moral character.

GENERAL DISCUSSION

We present a framework that delineates when and why effortful beauty work leads to more negative judgments of moral character. Across seven studies, we show that effortful beauty work that leads to transformative and transient change can negatively impact judgments of moral character and expectations of future morally-relevant behaviors. This negative effect holds only for moral character judgments, and does not reflect a generalized sense of disapproval (study 1A, study 1B). Furthermore, judgments of moral character are driven by perceptions of misrepresentation and can have downstream consequences for expectations of future immoral behaviors. Supporting the role of transformativeness (study 2), we find that exerting high versus low effort in cosmetics and tanning leads to negative judgments of moral character. However, this is not the case with skincare, where effort results in less transformative (but equally transient) changes in physical appearance. Bolstering the role of transformativeness (study 3), these effects are mitigated for an attractive woman for whom effortful beauty work results in less obvious changes to physical appearance. Focusing on transience (study 4), when the effort put toward improving one’s appearance is seen as resulting in more enduring (i.e., less transient) changes, such as with exercise (vs. cosmetics), the previous effects of effortful beauty work reverse. We also identify an important boundary condition, showing that negative judgments of moral character are mitigated if effortful beauty work is attributed to normative or situational constraints (in this case, the need to make a good first impression; study 5). Furthermore, we show that the negative effort-morality link generalizes to effortful beauty products, and that the moral judgments of those who use effortful beauty products influence consumers’ own purchase intent (study 6).

Theoretical Contributions

We believe our work makes several important contributions. Prior work has largely focused on the “beauty premium,” or the benefits that beauty garners, such as more positive trait inferences (Dion et al. 1972; Langlois et al. 2000) or higher wages (Hamermesh and Biddle 1994; Landy and Sigall 1974). However, this past research has assumed a more static notion of beauty. Given the incentives that physical attractiveness provides, it is natural that women invest significant effort to enhance their appearance. Indeed, recent research suggests that grooming plays a larger role in the beauty premium than previously anticipated (Wong and Penner 2016). While prior research has

focused on identifying various forms of beauty work (Kwan and Trautner 2009) and how women can use beauty work to achieve status and other social and professional rewards (Segal-Caspi et al. 2012; Wong and Penner 2016), our research focuses on perceptions of beauty work itself. To our knowledge, we are the first to show that the amount of effort exerted on certain types of beauty work is seen as diagnostic of a woman's moral character. Further, in demonstrating that the nature of the change resulting from beauty work determines the inferences people make about a woman's morality, we identify specific beauty work types for which the negative effort-morality link is more (cosmetics, tanning) or less likely to occur (skincare, exercise). Furthermore, we show that shifting attributions of effortful beauty work from dispositional to situational (norm-driven) causes mitigates the negative effort-morality link. Our findings contribute to a more nuanced understanding of how, when, and why women's efforts to enhance their appearance are rewarded (as delineated by prior research) versus frowned upon (as identified by the present work).

Additional contributions of our research are our classification of beauty work as a specific type of effort that consumers engage in and our examination of the inferences people make surrounding this effort. Although beauty work has not been previously conceptualized as effortful behavior, it can require significant time and physical or mental exertion. Our findings that certain types of effortful beauty work are viewed negatively contrast with prior work that largely reveals consumers' appreciation of the effort that others put into specific products or displays (Kruger et al. 2004; Morales 2005). Recent work on nondurable goods (e.g., cupcakes, napkins) has even shown that people value beautiful products precisely because of the effort that went into creating them (Wu et al. 2017). Interestingly, people have the opposite intuitions when considering the effort exerted to achieve an attractive physical appearance because such effort is seen as dishonest. Thus, while people value the effort put into making a product beautiful, they frown upon certain types of effort that go into making a person beautiful.

In demonstrating that beauty work can shape judgments of moral character, we also add to a growing body of work showing that relatively mundane consumer behaviors can elicit moral inferences (Olson et al. 2016). In this manner, we integrate literature on personality trait inferences based on physical appearance (Dion et al. 1972; Langlois et al. 2000) with research on moral trait inferences based on specific behaviors (Reeder and Brewer 1979; Skowronski and Carlston 1979) to understand how physical appearance and behaviors can shape perceptions of morality.

Practical Implications

In addition to our various contributions to theory, our work has a number of practical implications. Our studies

suggest that to increase the desirability of appearance-enhancing products, marketers should consider making lower-effort perceptions even more salient. Further, while our findings imply that cosmetics requiring higher effort may present a challenge to marketers, our work also suggests routes through which effortful beauty work and products may be made more desirable. Marketers can encourage consumers to view effortful beauty products as leading to more subtle and natural-looking enhancements to one's physical appearance, which may diminish the perceived transformativeness of high-effort beauty work. This notion also suggests that products viewed as significantly transforming should be framed as requiring lower effort to be more successful, or alternatively, as stemming from an external or normative motivation rather than an internal one.

Future Work

We believe that our research can also be extended in various ways. First, although we examine beauty work that involves behaviors that people can reasonably perform on themselves to alter their appearance (i.e., applying cosmetics, using self-tanner), we believe our effects would hold even if these activities were performed by others, such as salon hairstyling or make-up, insofar as the nature of the transformation is the same. Notably, the broader definition of beauty work (Kwan and Trautner 2009) encompasses behaviors that alter and improve an individual's physical appearance in ways requiring professional intervention, such as receiving Botox injections, obtaining breast implants, or undergoing other forms of plastic surgery. We expect that in these cases, women would be seen as transforming their unadulterated, or true, self in significant and seemingly artificial or synthetic ways, so they would be perceived as misrepresenting themselves even more and thus as having poorer moral character. However, we recognize that our "transience" criterion is not fulfilled in that professional interventions make these changes permanent as opposed to fleeting. Thus, we expect that external intervention might be a boundary condition regarding the role of transience in our focal effect.

Relatedly, future research could also examine when behaviors such as shopping, dressing up, or accessorizing elicit moral inferences. Spending a great deal of money on cosmetics might signal a willingness to misrepresent the self, and nuances in clothing and dress may also elicit moral judgments. "Shapewear," or constricting undergarments worn to create a more attractive silhouette, may be seen as more misrepresentative than a flattering dress or earrings, thereby eliciting lower perceptions of morality. Also, while we focus on how low- versus high-effort cosmetic appeals affect purchase intent, outcomes such as concealment of beauty work effort would be interesting to

explore. Indeed, a pretest indicated that women who imagined taking 90 (vs. 30) minutes on their beauty routine were more reluctant to reveal the amount of time they spent to others ($M_{\text{High}} = 4.18$ vs. $M_{\text{Low}} = 2.80$; $F(1, 141) = 14.16, p = .0002$).

In sum, we integrate research on physical attractiveness, person perception, beauty work, and moral inferences to document the negative consequences that many women may face while trying to conform to society's expectations of attractiveness and femininity. At its broadest level, our work highlights another way in which women face inherent contradictions in how they must look and behave already evident within various contexts (e.g., workplace, romantic relationships; Bernard 2016). We shed new light on the notion that women should appear feminine and attractive (and indeed, have many incentives to do so), yet should not give the impression that they expend extensive effort in this endeavor. These issues are important to consumers and marketers, as the message that appearance enhancement is misrepresentative if it requires high effort is integral to marketing communications and continues to shape women's consumption intentions and the subsequent manners in which they are judged.

DATA COLLECTION INFORMATION

All studies were designed and reviewed by all three authors. Research assistants at the W. P. Carey Marketing Behavioral Lab at Arizona State University collected the data for study 1A under the supervision of the first and third authors in fall 2016. The data for study 1B was collected on Amazon Mechanical Turk in fall 2017. The first and third authors jointly analyzed studies 1A and 1B. Studies 2, 3, 4, and 5 were all collected on Amazon Mechanical Turk during summer 2016. These studies were analyzed by the third author under the guidance of the other authors. Study 6 was collected on Amazon Mechanical Turk and analyzed by the first author in fall 2016. The pretests of transformativeness and transience for studies 2 (web appendix B.1) and 4 (web appendix C) were collected on Amazon Mechanical Turk and analyzed by the third author under the guidance of the other authors in spring 2017. The effort pretest for study 2 (web appendix B.2) and the attributions pretest for study 5 (web appendix D) were collected on Amazon Mechanical Turk and analyzed by the second author in fall 2016. Lastly, the supplementary trait inferences study (reported in web appendix A) was collected on Amazon Mechanical Turk and analyzed by the third author under the guidance of the other authors in fall 2016.

APPENDIX A: STUDY 1A STIMULI

Participants in all conditions read the following information:

Jenna is a 24-year-old woman living in a small city. She has a good job and an active social life. On the weekends, she likes to meet up with friends for dinner or drinks, catch

up on her Netflix shows, and occasionally go shopping or hiking, depending on her mood.

During the week, Jenna gets up most mornings at 6:30 a.m. She showers and then listens to the radio as she gets ready for the day.

Low-Effort Condition

She does not put a great deal of effort into her grooming routine. However, she likes to make sure that she looks good and feels positive about the way she looks, so she typically spends about 10 minutes doing her make-up and styling her hair.

High-Effort Condition

She puts a lot of effort into her grooming routine—she typically spends about an hour and 45 minutes doing her make-up and styling her hair. She likes to make sure that she looks good and feels positive about the way she looks.

Control Condition

She likes to make sure that she looks good and feels positive about the way she looks.

Participants in all conditions read the following information:

After this, she picks out an outfit and grabs the papers and materials she needs for work. She pours herself a cup of coffee in a to-go mug and heads to the office.

APPENDIX B: STUDY 1B STIMULI

Study 1B was identical to 1A, except for slight changes in wording to make the passage more parallel, and concluded after participants viewed the manipulation. Thus, only the manipulations are included below.

Low-Effort Condition

She does not put a great deal of effort into her grooming routine. However, she likes to make sure that she looks good and feels positive about the way she looks, so she typically spends about 10 minutes doing her make-up and styling her hair.

High-Effort Condition

She puts a great deal of effort into her grooming routine. She likes to make sure that she looks good and feels positive about the way she looks, so she typically spends about an hour and 45 minutes doing her make-up and styling her hair.

APPENDIX C: STUDY 2 STIMULI

All participants read the following information:

Jenna is a 24-year-old woman living in a small city. She has a good job and an active social life. Jenna is attending

a barbecue this afternoon. She needs to do a number of things before she goes out. First, she plans to spend the morning cleaning her apartment. During the early afternoon, she will likely go grocery shopping for the coming week and then catch up on email and news in front of her computer. Around 2 p.m., she'll eat a snack and straighten up the kitchen. Finally, around 4 p.m., Jenna plans to start getting ready to go to the barbecue. She plans to wear a casual top and skirt.

Cosmetics/Low Effort

Though she feels a bit casual, she does not put too much effort into her hair or make-up. Before she heads out, she quickly brushes and styles her hair and applies her make-up. Then, she grabs a jacket and heads out the door.

Cosmetics/High Effort

She feels a bit casual, so she puts a great deal of effort into her hair and make-up. Before she heads out, she takes a fair amount of time to carefully brush and then style her hair and then conscientiously applies her make-up. She finalizes her outfit, grabs a jacket, and then heads out the door.

Tanning/Low Effort

Though she feels a bit pale, she does not put too much effort into trying to look more bronzed all over. Before she heads out, she quickly applies some spray-on bronzer to her legs and lets it set briefly. She finalizes her outfit, grabs a jacket, and then heads out the door.

Tanning/High Effort

She feels a bit pale, so she puts a great deal of effort into trying to look more bronzed all over. Before she heads out, she takes a fair amount of time to carefully apply spray-on bronzer all over her legs and arms and then waits while it sets. She finalizes her outfit, grabs a jacket, and then heads out the door.

Skincare/Low Effort

Though she feels her skin is a bit dry, she does not put too much effort into a full skincare routine. Before she heads out, she quickly applies a skin cleanser and moisturizer to her face. She finalizes her outfit, grabs a jacket, and then heads out the door.

Skincare/High Effort

She feels her skin is a bit dry, so she puts a great deal of effort into a full skincare routine. Before she heads out, she takes a fair amount of time to carefully perform a full multistep cleansing and moisturizing skin routine. She finalizes her outfit, grabs a jacket, and then heads out the door.

APPENDIX D: STUDY 3 IMAGE STIMULI

High-attractiveness condition

Average-attractiveness condition



APPENDIX E: PHYSICAL VANITY SCALE (NETEMEYER ET AL. 1995)

Participants were asked to rate their agreement with the following items (1 = Completely disagree, 7 = Completely agree):

1. The way Karen looks is very important to her.
2. Karen is very concerned about her appearance.
3. Karen would feel embarrassed if she was around people and did not look her best.
4. Looking her best is worth the effort Karen puts in.
5. It is important to Karen that she always looks good.

APPENDIX F: STUDY 4 STIMULI

Participants in the high- and low-effort *cosmetics* conditions read the passages from study 1A. Participants in the high- and low-effort *exercise* conditions read the information below instead of the cosmetics information.

Exercise/Low Effort

She does not put a lot of effort into her workout. However, she likes to make sure that she looks good and feels positive about the way she looks, so she typically spends about 10 minutes doing some light stretching and sit-ups before she gets ready for work.

Exercise/High Effort

She puts a lot of effort into her workout—she typically spends about an hour and a half doing intense cardiovascular exercise before she gets ready for work. She likes to make sure that she looks good and feels positive about the way she looks.

APPENDIX G: STUDY 5 STIMULI

All participants read the following information:

Jenna is a 24-year-old woman living in a small city. She has a good job and an active social life. Jenna is attending a barbecue this afternoon. She needs to do a number of

things before she goes out. First, she plans to spend the morning cleaning her apartment. During the early afternoon, she will likely go grocery shopping for the coming week and then catch up on email and news in front of her computer. Around 2 p.m., she'll eat a snack and straighten up the kitchen. Finally, around 4 p.m., Jenna plans to start getting ready to go to the barbecue. She plans to wear a casual top and skirt.

Cosmetics/Low Effort

Though she feels a bit casual, she does not put too much effort into her hair or make-up. Before she heads out, she quickly brushes and styles her hair and applies her make-up. Then, she grabs a jacket and heads out the door.

Cosmetics/High Effort

She feels a bit casual, so she puts a great deal of effort into her hair and make-up. Before she heads out, she takes a fair amount of time to carefully brush and then style her hair and then conscientiously applies her make-up. She finalizes her outfit, grabs a jacket, and then heads out the door.

In the external attribution conditions, participants read the additional paragraph, which appeared immediately before the effort manipulation paragraph.

Jenna is interested in obtaining a medical sales representative position. She knows that energy and organizational skills are very important for these types of positions. The host mentioned that some friends who currently work in medical sales at a large local firm are planning to attend. She's also heard that the company is currently hiring, so she's excited to meet these people. She really wants to present herself in a way that highlights her energy and organizational skills.

APPENDIX H: STUDY 6 STIMULI

Internal Attribution/Low Effort



Colorescience is a line of cosmetics focused on helping consumers express their true selves, define their personality and shine among a crowd. The brand has a unique lineup of items that dazzle and delight, allowing you to customize your look. **Because being yourself matters.**

If your complexion is less-than-radiant, you don't need to overhaul your skin care routine to find that natural brightness. Instead, simply invest in one of Colorescience's products that can perfect your complexion. **Our products typically take only a few simple steps to use. Most take less than 3 minutes to apply and provide flawless results.**

Find the right Colorescience products for your needs, and enjoy experimenting with new looks. With a few easy techniques, you'll see incredible results in a few simple steps. Effortlessly apply our foundation, adding extra over problem areas. You'll be ready to go in 3 minutes or less. To refresh your look, you can apply powder throughout the day.

Colorescience: Effortless application, impeccable results.

Internal Attribution/High Effort



Colorescience is a line of cosmetics focused on helping consumers express their true selves, define their personality and shine among a crowd. The brand has a unique lineup of items that dazzle and delight, allowing you to customize your look. **Because being yourself matters.**

If your complexion is less-than-radiant, you don't need to overhaul your skin care routine to find that natural brightness. Instead, simply invest in one of Colorescience's products that can perfect your complexion. **Our products typically take several precise steps to use. Most take less than 10 minutes to apply and provide flawless results.**

Find the right Colorescience products for your needs, and enjoy experimenting with new looks. With several precise techniques, you'll see incredible results in a few specific steps. Carefully apply our foundation and gradually add extra over problem areas. You'll be ready to go in 10 minutes. To refresh your look, always apply powder throughout the day.

Colorescience: Conscientious application, impeccable results.

External Attribution/Low Effort



Colorescience is a line of cosmetics focused on helping consumers express their true selves, define their personality and shine among a crowd. The brand has a unique lineup of items that dazzle and delight, allowing you to customize your look. **Because first impressions matter.**

If your complexion is less-than-radiant, you don't need to overhaul your skin care routine to find that natural brightness. Instead, simply invest in one of Colorescience's products that can perfect your complexion. **Our products typically take only a few simple steps to use. Most take less than 3 minutes to apply and provide flawless results.**

Find the right Colorescience products for your needs, and enjoy experimenting with new looks. With a few easy techniques, you'll see incredible results in a few simple steps. Effortlessly apply our foundation, adding extra over problem areas. You'll be ready to go in 3 minutes or less. To refresh your look, you can apply powder throughout the day.

Colorescience: Effortless application, impeccable results.

External Attribution/High Effort



Colorescience is a line of cosmetics focused on helping consumers express their true selves, define their personality and shine among a crowd. The brand has a unique lineup of items that dazzle and delight, allowing you to customize your look. **Because first impressions matter.**

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Find the right Colorescience products for your needs, and enjoy experimenting with new looks. With several precise techniques, you'll see incredible results in a few specific steps. Carefully apply our foundation and gradually add extra over problem areas. You'll be ready to go in 10 minutes. To refresh your look, always apply powder throughout the day.

Colorescience: Conscientious application, impeccable results.

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