Face and Body:
(Somewhat) Independent Predictors of Women's Overall Attractiveness

Carolyn Kolb, University of Wisconsin-Eau Claire
Katey Quigley, Ball State University

Lyndsay A. Nelson, East Tennessee State University
Amy E. Steffes, California State University at Fullerton

Faculty Mentor: Dr. April Bleske-Rechek, University of Wisconsin-Eau Claire
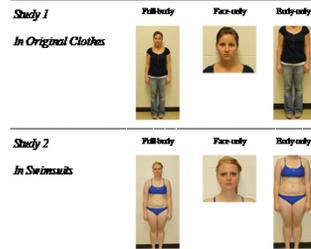
Introduction

Women's faces and bodies advertise socially-relevant information. Men glean information about a woman's age, health, fertility, and personality from cues carried in her face and body. Ratings of women's facial and body attractiveness are moderately correlated, indicating that while faces and bodies provide enough repetitious information to allow raters to make similar assessments of each, faces and bodies do not provide all of the same cues. Indeed, multiple lines of research have offered support for the proposition that women's faces and bodies both provide valuable, non-redundant pieces of information. For example, women's faces appear to provide more cues to women's health, age, sexual attitudes, femininity and kindness[1], whereas their bodies appear to provide more time-sensitive information about their current fertility and ability to support fetal development[2].

Although both face and body predict women's overall attractiveness, women's faces are a better predictor of overall attractiveness than their bodies are[3]. One potential explanation is that the face offers more information, or more important pieces of information, about a woman than does her body, perhaps because it is a primary vehicle for communication and social expression. Another non-mutually exclusive possibility, as noted by Peters et al. (2007), is that cues displayed in women's bodies may be masked, highlighted, or deemphasized by women's choice of clothing. In the current set of studies, we attempted to extend previous work by comparing the relative importance of face versus body for predicting overall attractiveness under conditions that differ in the degree to which bodies are masked.

Method

Women came into the lab in dyads as part of a broader study on women's friendships. When we recruited participants, we intentionally did not tell them that they would be measured and photographed because (1) we did not want women to select into the studies or select a friend into the studies based on their willingness to be measured and photographed, and (2) we did not want women to dress differently from usual or engage in extra self-preparation in anticipation of a photo shoot. Upon their arrival to the lab, we told women that we were interested in measuring their bodies and photographing them for research purposes only. Each woman was photographed from a set distance under constant lighting and was asked to retain a neutral expression. In Study 1, each woman was photographed in her original street clothes. In Study 2, each woman was photographed with her hair pulled back, wearing a two-piece, royal blue swimsuit that we supplied. Very few women wore makeup other than mascara and lip gloss. After the photographs, we took women's height and weight and measured their waist, hip, and chest circumference (at the point where breasts were fullest). Then, friends were led to rooms to complete a larger questionnaire that included demographic information, including their bra cup size.

Each woman's full-body photograph was cropped into face and body shots. For each study, researchers constructed three separate slideshows of all the women (full-body, face-only, and body-only). Women were placed into the slideshow in a random, unpaired order that was the same for each slideshow. Students at two other universities served as attractiveness judges. A different set of judges viewed each slideshow - that is, we gathered six independent sets of 26-41 raters. Raters did not know that some of the women they viewed were friends. Participants viewed each picture for three seconds and for each woman they responded to the question, "Compared to other women her age, how physically attractive is this woman (this woman's face, this woman's body)?" Students recorded their responses on paper sheets using a nine-point scale ranging from *Much Less Attractive* to *The Same* to *Much More Attractive*. Because the results were consistent by sex of judge across studies, we report the findings from male and female judges combined.

Study 1
In Original Clothes — Full-body, Face-only, Body-only

Study 2
In Swimsuits — Full-body, Face-only, Body-only

Finding 1:
Ratings of Face Attractiveness and Body Attractiveness are Correlated

As expected on the basis of previous research,[3d,4] ratings of women's face-only attractiveness and body-only attractiveness were positively correlated. In fact, the associations were larger in magnitude than those documented in previous studies (Study 1 $r = .62$, Study 2 $r = .45$); these associations are displayed below. Further, both face and body attractiveness independently predicted ratings of women's full-body attractiveness, all $ps < .001$.
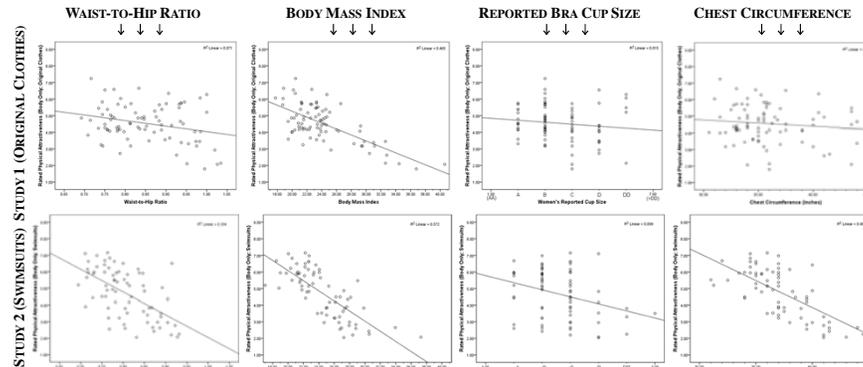

STUDY 1 (ORIGINAL CLOTHES) | STUDY 2 (SWIMSUITS)
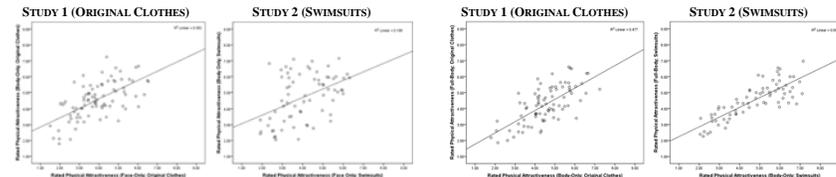
Finding 2:
Ratings of Body Attractiveness Predict Ratings of Full-Body Attractiveness, Especially when Women's Bodies are Visible

In Study 1, when women wore street clothes, ratings of women's bodies predicted ratings of their overall attractiveness ($r(84) = .69$, $p < .001$), but that association was reduced when we controlled for ratings of their facial attractiveness (partial $r(81) = .39$, $p < .001$). In Study 2, when the women wore swimsuits, women's body ratings were highly predictive of their overall attractiveness ratings ($r(72) = .82$, $p < .001$), even after controlling for ratings of their facial attractiveness (partial $r(68) = .81$, $p < .001$).

STUDY 1 (ORIGINAL CLOTHES) | STUDY 2 (SWIMSUITS)

Finding 3: Women's Body Shape, Body Mass, and Breast Size Predict Ratings of Their Body Attractiveness

WAIST-TO-HIP RATIO | BODY MASS INDEX | REPORTED BRA CUP SIZE | CHEST CIRCUMFERENCE

STUDY 1 (ORIGINAL CLOTHES) / STUDY 2 (SWIMSUITS)

As expected, women's WHR and BMI were positively correlated with each other in both studies (Study 1 $r = .44$; Study 2 $r = .48$). Furthermore, WHR and BMI were both negatively correlated with ratings of women's body-only attractiveness as well as with ratings of women's face-only attractiveness and overall attractiveness (Study 1 $rs = -.27$ to $-.68$, Study 2 $rs = -.27$ to $-.76$; all associations statistically significant). That is, women with larger WHRs and larger body mass were rated as less attractive. Note that the correlation between WHR and body-only attractiveness was stronger among women in swimsuits ($r = -.58$) than among women in their original clothes ($r = -.27$). Similarly, the correlation for BMI and body-only attractiveness was stronger among women in swimsuits ($r = -.76$) than among women dressed in their original clothes ($r = -.68$).

Women with larger breasts tended to have larger WHRs and BMI (all $ps < .05$). In Study 1, when women were measured and photographed in their street clothes, women's chest circumference was not associated with judgments of their attractiveness ($rs = -.03$ to $-.11$, all $ps > .30$). Similarly, cup size in Study 1 was not associated with ratings of either body-only ($r = -.12$, $p = .268$) or face-only attractiveness ($r = -.17$, $p = .132$), although women who reported a larger bra cup size received lower ratings of full-body attractiveness ($r = -.24$, $p = .030$). In Study 2, when women were photographed in the revealing condition of a swimsuit, chest circumference was strongly negatively associated with ratings of women's body, face, and overall attractiveness ($rs = -.51$ to $-.70$, all $ps < .001$); and women with larger cup sizes received lower ratings of face-only, body-only, and full-body attractiveness ($rs = -.28$ to $-.38$, all $ps < .020$). In summary then, when women were in swimsuits, those with larger breasts were rated as less attractive.

Finding 4: However, There's More to Body Attractiveness than Body Shape, Body Mass, and Breast Size

We wanted to determine if ratings of body attractiveness would still predict full-body attractiveness once we controlled for women's body shape (WHR), body mass (BMI), and breast size. If they did not, women's body attributes would be responsible for the link between body attractiveness and overall attractiveness. However, as shown at right, ratings of body attractiveness continued to predict overall attractiveness after we held body attributes constant, suggesting that there is much more to body attractiveness than the measurements we obtained (see Discussion).

	Partial r between body and full-body attractiveness	
	Controlling Only for Face Attractiveness	Controlling for Face, WHR, BMI, and Breast Size
Study 1	.39 ($p < .001$)	.34 ($p = .003$)
Study 2	.81 ($p < .001$)	.71 ($p < .001$)

Discussion

The primary objective of this study was to investigate face and body as predictors of overall attractiveness, focusing on the ways a masked or unmasked body predict full-body attractiveness. Previous studies suggest that body influences judgments of women's overall attractiveness[3b,3d]. We replicated that finding: In two independent samples, ratings of women's body attractiveness independently predicted ratings of their full-body attractiveness. In swimsuits, which were high-cut bikinis that did not have bra cup pad or under-wires for lift, women's torso, waist-to-hip ratio, actual breast size, and breast firmness were more conspicuous than under the typically clothed conditions of Study 1. Therefore, in Study 2, women's body ratings were highly correlated with ratings of full-body attractiveness, even after controlling for ratings of women's facial attractiveness.

As others have suggested, attributes of the face and body may share some underlying factor of genetic quality that is perceived as attractive[4]. Moreover, the various body attributes we measured were correlated with each other as well as with ratings of women's body attractiveness. Although women's body attributes correlated with ratings of women's body attractiveness, controlling for those measurements did not reduce the magnitude of the link between body attractiveness and full-body attractiveness. For example, when women's bodies were conspicuous (Study 2), the association between body attractiveness ratings and full-body attractiveness ratings was .71, even after controlling for body attributes and face-only ratings of attractiveness. Thus, ratings of women's attractiveness seem to be influenced by much more than what we were able to measure in the current studies, such as breast shape (e.g., round and firm versus saggy[5]), body posture, skin tone[6], symmetry[7], and averageness[8]. We speculate that these cues operate in combination as signals of women's reproductive value and health. In particular, future researchers could investigate how breast size and breast shape interact, in natural populations, to predict ratings of attractiveness.

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