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Judging female figures: A new methodological approach to male attractiveness judgments of female waist-to-hip ratio

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Abstract

The procedure in previous research on attractiveness judgments of female waist-to-hip ratio (WHR) presumably supported an elaborate, effortful and deliberate decision process. In contrast, motivated by evolutionary psychological considerations about the psychological mechanism underlying attractiveness judgments of female WHR, the present study differed from previous research inasmuch as: (a) the participants were uninformed in advance about the various female figures; (b) the exposure time of the female figures was very brief; (c) trials were presented in rapid succession; (d) the participants were instructed to judge spontaneously; (e) forced-choice preference judgments and their underlying judgment times were registered. The results confirmed previous research that men prefer a normal weight figure with a .7 WHR. Additionally, judgments in favor of this figure were made most rapidly. Finally, attractiveness judgments and judgment times were found to be more closely related to those for health than for fecundity or pregnancy judgments.

Keywords: Waist-to-hip ratio; Attractiveness judgments; Evolutionary psychology; Evolved psychological mechanism

Male judgments of female physical attractiveness are influenced by a variety of morphological traits such as face (e.g., Buss, 2004; Hassebrauck, 1998), body weight (e.g., Singh, 1994a; Singh and Young, 1995), height (e.g., Pawlowski and Koziel, 2002), body mass index (e.g., Tovée and Cornelissen, 2001a,b), breasts (Singh, 1995) and waist-to-hip ratio (WHR).

The critical role of WHR for judgments of female attractiveness has been proposed by Singh (1993a). This proposal has inspired a considerable body of research (e.g., Furnham et al., 1997; Henss, 1995, 2000; Marlowe and Wetsman, 2001; Singh, 1993a,b, 1994a,b,c,d, 1995; Singh and Luis, 1995; Singh and Young, 1995; Streeter and McBurney, 2003; Tassinary and Hansen, 1998; Rozmus-Wrzesinska and Pawlowski, 2005; Wetsman and Marlowe, 1999). In these studies, a WHR near .7 was frequently found to be the most attractive in Western societies. This preference for a .7 WHR almost exclusively derives from a single experimental methodology: Participants were presented line drawings or photos of female figures varying in WHR and weight which had to be rank ordered or rated for attractiveness. Additionally, the participants typically could take their time to inspect and compare all stimuli simultaneously in making their judgments. Thus, the participants knew the entire set of stimuli and were aware of the differences between the female figures when making their judgments. Additionally, the exposure time of the stimuli was unrestricted and—as a consequence—presumably varied considerably between participants. Moreover, these studies counted on subjective evaluations (rank orders or ratings) as the sole dependent variable.

As a consequence of the reliance on a single methodology, the obtained empirical findings might be restricted to this methodology and might not emerge when alternative presentation modes and response formats are used. This possible limitation takes on even greater weight when one considers the possibility that this methodology might induce elaborate, effortful and deliberate decision strategies. However, in everyday life, attractiveness judgments are presumably—at least in the typical case—made rather rapidly and automatically. That is, the usual attractiveness

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judgments most likely rely on decision strategies that are quite dissimilar to the ones examined in the previous WHR studies.

These considerations about the nature of the processes involved in typical attractiveness judgments of female WHR derive from the assumption that the underlying psychological mechanism evolved in our ancestral past because it importantly contributed to successful mate selection. Considered an evolved psychological mechanism (e.g., Buss, 1995, 2004; McDougall, 1960; Cosmides and Tooby, 1994), it is assumed to be a domain-specific and content-dependent information-processing device that reliably detects and preferentially as well as rapidly processes relevant input. As a consequence, the evolved attractiveness judgment mechanism should be able to make reliable and rapid judgments even when the stimuli are presented only briefly and in the absence of prior information as to their range (for applications of this assumption on research on the jealousy mechanism, see Schützwohl, 2004, 2005; Schützwohl and Koch, 2004).

The present study links these assumptions to Singh's (1993a) original study and its successors. To achieve this linkage, the line drawing figures introduced by Singh (1993a) were also presented in the present study, thus making it directly comparable to the original study and a number of other studies using the same stimulus set. However, the presentation mode of the line drawing figures differed from its predecessors in several important aspects. These modifications were all motivated by an attempt to encourage the use of those decision strategies that were presumably used in the typical attractiveness judgments. First, the participants were not pre-informed about the various female figures whose attractiveness they had to judge. Second, the exposure time of the female figures was restricted to very short and was constant for all participants throughout the entire experiment. Third, trials were presented in rapid succession to prevent participants' reflecting on the differences between the figures. Fourth, in order to prevent the use of elaborate, effortful and deliberate decision strategies in the production of preference judgments, the participants were instructed to make their judgments spontaneously, that is, without extensive rumination. Finally, two instead of one dependent variables were obtained, namely a preference judgment and—unknown to the participants and thus outside their voluntary control—the time needed for this judgment which helped to serve in establishing the validity of the subjective preference judgment.

In sum, the first aim of the present study was to examine whether the preference for a .7 WHR can be confirmed with a new procedure that encourages decision processes which more closely resemble those processes presumably underlying typical attractiveness judgments of female WHR than those invoked by the original procedure. More specifically, two predictions which can be derived from the assumption that an evolved psychological mechanism underlies attractiveness judgments of female WHR were tested: first, men also prefer a female WHR of .7 as most attractive when the presentation mode of the female figure encourages rapid and automatic rather than elaborate and effortful decision strategies. Second, attractiveness judgments in favor of a female WHR of .7 are made most rapidly.

The second aim was to compare these attractiveness judgments, which by themselves are biologically irrelevant, with more biologically relevant judgments associated with WHR. WHR has been found to be associated with a variety of biologically relevant attributes (e.g., Singh, 1993a; Streeter and McBurney, 2003). For example, the WHR has been proposed as a reliable indicator of a woman's health, her fecundity and the likelihood of her being pregnant. The assumption is that a WHR of .7 signals good health, high fecundity and the absence of pregnancy. A comparison of the preference judgments for health status, fecundity and the likelihood of pregnancy and the pertinent judgment times with those for attractiveness might provide some immediate (i.e., without reference to some external criteria) insight whether attractiveness judgments assess one or more of these biologically relevant attributes.

1. Method

1.1. Participants

The participants were 105 male students of various disciplines at the Universities of Bielefeld and Osnabrück, Germany. Three participants were excluded from the data analyses because they failed to respond in a considerable number of trials. A fourth participant was excluded because he reported having problems in judging female attractiveness as a consequence of his homosexuality. Thus, the analyses of the results are based on 101 men. Their mean age was 24.9 years (S.D. = 6.6). The participants were informed that after the completion of the study, six of them would win € 25 each (about US$ 30) drawn by lot.

1.2. Apparatus

Stimuli were presented on a 19 in. monitor (Samsung Sync Master 959NF) connected to an IBM compatible Pentium computer. All stimuli presentation and data collection was controlled by Experimental Run Time System (ERTS; BeriSoft Corporation) software.

1.3. Stimuli

The stimuli were based on line drawings of female figures used by Singh (1993a). There were three levels of WHR (.5, .7 and .9) and three levels of body weight (underweight [90 lb], normal [129 lb] and overweight [150 lb]). The complete combination of the three levels of WHR and body weight resulted in nine pictures. The figures with a WHR of