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Physical Attractiveness, Race, and Somatic Prejudice in Bahia, Brazil

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INTRODUCTION: SOMATIC PREJUDICE

"Somatic prejudice" may be defined as a form of prejudice in which members of one racial or ethnic group are evaluated more or less favorably than members of another on the basis of their physical appearance. The study of somatic prejudice lies at the intersection of two normally separate areas of inquiry: the psychology of physical attractiveness and the sociology and history of racial and ethnic relations.

There are at least two reasons why somatic prejudice is theoretically important. First, the study of physical attractiveness has lately developed as one of the most active areas of inquiry in the new discipline of "evolutionary psychology." Evolutionary psychology is based on two propositions. (1) Human beings are biologically specialized for certain kinds of information processing, so that some learning tasks come much more easily and automatically than others. (2) The modern theory of evolution by natural selection may be particularly useful in figuring out what form such specialized "programmed learning" is likely to take. Because the theory of sexual selection is an especially successful area of modern evolutionary theory, many evolutionary psychologists have been interested in applying it to understanding standards of physical attractiveness among humans (reviewed in Jones 1996b). Much of the work of evolutionary psychologists regarding standards of attractiveness has ignored the larger social context—and especially the ethnic context—in which judgments of attractiveness operate. However, the study of the ethnic and racial dimension of attractiveness should ultimately allow a revision and expansion of our theories of the psychology of attractiveness.

There is a second reason why the study of somatic prejudice is important: it offers the chance to revise not only our understanding of attractiveness, but also our understanding of racial and ethnic prejudice. Studies of relations between groups frequently note positive or negative responses to the physical appearance of members of different groups (Hoetink 1967; Isaacs 1975:46–70). However, the

theories of human nature commonly employed by historians and social scientists make it difficult to get a handle on such somatic prejudice. On the one hand, utilitarian theories of human nature, in which individuals are chiefly concerned with their own material well-being and social position, make it difficult to understand why such importance seems to attach to details of physical appearance. On the other hand, cultural constructionist theories of human nature make it difficult to explain—or even recognize—cross-cultural commonalities in the psychology of attractiveness. The new picture of the psychology of attractiveness coming out of evolutionary psychology may thus make it easier for researchers in ethnic and race relations to give somatic prejudice the attention it deserves.

Finally, it is worth noting that apart from its intellectual interest, somatic prejudice has important practical consequences for the lives of individuals; members of groups subject to negative somatic prejudice are generally keenly aware of this prejudice and its social effects. Greater understanding of the roots of somatic prejudice may make it possible to combat such prejudice and to alleviate some of its consequences.

This paper is concerned with the phenomenon of somatic prejudice, and with the mutual relevance of evolutionary-psychology theories of attractiveness and studies of race and ethnic relations. In the next section I summarize some current theory and evidence regarding the evolutionary psychology of attractiveness, with special emphasis on principles of attractiveness likely to be most relevant to understanding somatic prejudice in modern multiracial societies. In the following section, I focus on the racially stratified society of Bahia, Brazil, summarizing some of the relevant social history, and presenting results of research I have conducted on racial classification, physical attractiveness, and somatic prejudice in Bahia. In the last section I discuss implications for evolutionary psychology and for studies of race and ethnic relations.

VARIANTS AND INVARIANTS IN PHYSICAL ATTRACTIVENESS

Richard Dawkins (1989) coined the phrase "the selfish gene" to distill modern evolutionary biology's view that adaptations are designed to propagate the genes that produce them. The survival and well-being of individuals is evolutionarily relevant only insofar as it has historically contributed to their reproduction, or to the reproduction of kin who share their genes. This gene-centered view of life has been particularly productive in the study of mate choice. The modern theory of mate choice begins with the proposition that because organisms' mate preferences are likely to have been shaped by natural selection, organisms are likely to have adaptations for assessing the "mate value" of potential mates. The mate value of animal A for animal B can be defined as the expected fitness that B would have

from mating with A, divided by B's expected fitness from mating at random or from mating with an individual of maximum mate value. (In fact, there might be several different mate values of A for B, depending for example on whether a long- or a short-term mating relationship is considered.) Mate preferences, in other words, can be regarded as the product of adaptations for reproduction (Andersson 1994; Jones 1996a).

A number of investigators have suggested that this approach might apply to humans as well as to other animals, and might apply especially to the phenomenon of physical attractiveness in our species. Social psychological research (Hatfield and Sprecher 1986) demonstrates that physical attractiveness is at least moderately important in social relationships, including dating and marriage, in the United States, while cross-cultural surveys (Buss 1989) and ethnographic and historical evidence (Ford and Beach 1951) show that concern for attractiveness is not limited to modern industrialized and media-saturated societies. From one point of view these findings are merely a confirmation of folk wisdom, but from another they are paradoxical, since it is difficult to see what advantage individuals gain from choosing an attractive sexual or social partner over an unattractive one, or why individuals should have the standards of attractiveness that they do. A "selfish gene" perspective may help to resolve this paradox: the advantage to choosing an attractive mate may be a reproductive advantage, and variations in physical attractiveness may track variations in mate value. More precisely, whether or not perceived attractiveness is correlated with mate value in modern—and evolutionarily "unnatural"—environments, the development of standards of attractiveness in our species is likely to be governed by adaptations which historically functioned to track variations in mate value.

What people find physically attractive today may thus depend on what physical characteristics in the past predicted fecundity, health, ability and willingness to provision offspring, and other components of mate value. However, the past environments and selective pressures that shaped the psychology of mate choice cannot have been absolutely uniform, and evolutionary psychologists must explain how ancestral humans solved the problem of homing in on correlates of mate value across a range of environments. One approach to this problem is to look at physical cues like bilateral symmetry (Grammer and Thornhill 1994), facial neoteny (Jones 1995), and low waist-to-hip ratios (Singh 1993) that have probably been relatively invariant indicators of health, female fecundity, or other components of mate value, and might operate as relatively universal and "hard-wired" criteria of attractiveness. However, many physical characteristics are likely to have been positively correlated with mate value only in some environments, and uncorrelated or negatively correlated in others. Natural selection may favor individuals who can modify their emotional and aesthetic responses to such characteristics in response to environmental cues. The evidence suggests that there is significant variation across time and space in criteria of physical attractiveness in human societies. For example, Singh's (1993) research on the waist-to-hip ratio

(WHR) demonstrates that winners of the Miss America beauty pageant since the 1920s and *Playboy* centerfolds since the 1950s have had consistently low WHRs. But this same research shows that both sets of women have grown thinner over the course of time, both in absolute terms and relative to the average U.S. female. An evolutionary psychologist might expect variation in aesthetic responses to fatness versus leanness, because the selective benefits of having a fat or a lean mate are likely to have varied over the course of evolution with variation in workload and reliability of food supply. But such variation clearly raises a host of questions about how individuals use environmental cues in developing standards of attractiveness.

Biologists studying mate choice in nonhuman animals have devoted increasing attention to the influence of environmental and social cues. Some particularly interesting work integrating sexual selection and ecological variation comes from studies of guppies. Male guppies normally develop orange patches on their sides, and these patches seem to be a product of sexual selection; female guppies commonly prefer males with brighter patches. Why females show this preference is not certain; based on analogies with other species the patches may be honest advertisements of male nutritional status and resistance to infection (Endler and Lyles 1989). Although bright patches may benefit males in sexual competition, they also carry serious costs in some environments: experiments demonstrate that brighter males can suffer higher rates of predation, with the added risk varying enormously across habitats depending on which predator species are present in a given stream (Endler 1980). The result is that bright patches are far from an invariant marker of mate value across guppy populations, because when a female chooses a bright mate in a stream well-stocked with predators, the brightly colored sons that result are especially likely to be eaten before they reach adulthood. Females adapt to this situation in several ways. There are sometimes genetic differences between populations in the intensity of female preferences for bright males (Dugatkin and Godin 1995). However, females are also capable of modifying their preferences based on observations of other females. Dugatkin (1996) shows that a female who sees another female apparently choosing the duller of two males will shift her own preference away from bright males—but only if the differences in brightness are not too great.

The guppy case demonstrates that standards of attractiveness are likely to involve some relatively invariant, species-typical preferences, but those standards may also be adaptively modified to some degree by experience and imitation. A comparable mixture of the invariant and the environmentally contingent is likely to operate among humans. This paper will consider both invariant and variable criteria of physical attractiveness, concentrating especially on three—color, averageness, and status indicators—likely to contribute to somatic prejudice in modern multiracial societies. The remainder of this section will review cross-cultural evidence and theoretical arguments regarding these three, and the next section will consider their role in somatic prejudice in Bahia.

Color

A preference for lighter than average skin, at least among males evaluating females, is reported with very high frequency in the ethnographic literature (van den Berghe and Frost 1986). Investigators working in modern, racially stratified societies often assume that preferences for lighter skin result from the political and social dominance of light-skinned over dark-skinned peoples (Lancaster 1991). However, cross-cultural evidence makes it clear that racial hierarchies, while they may exaggerate skin color preferences, do not create them. Some of the evidence comes from historical records of societies in which darker-skinned people dominated lighter-skinned subjects. In both the ancient Roman and the Islamic worlds the presence of large numbers of light-skinned northern slaves went hand in hand with an idealization of whiteness or lightness as a criterion of female beauty. More evidence comes from relatively unstratified societies that show a consistent pattern of preference for lighter than average skin color in females. This preference occurs across populations with a wide range of skin colors, and it is found even in societies whose standards of attractiveness with regard to fatness and facial proportions are sharply at variance with contemporary Western standards. It is reported by male and female and Western and non-Western ethnographers, and it is manifest both in informants' statements and in cosmetic practices. Evidence regarding female preferences for male skin color is much more mixed.

Why should there be a widespread preference for lighter than average skin color, and why should this preference be more marked in males' evaluations of females than vice versa? Skin color, like the waist-to-hip ratio, seems to be a relatively invariant marker of female mate value. Estrogen production suppresses melanin production, so that females typically lighten with the onset of puberty, gradually darkening in step with declining ovarian function from young adulthood to old age. In light-haired populations hair color too may track changes in female fecundity. Thus an attraction to light-skinned mates may be a genetic adaptation in human males. This attraction, however, is also affected by experience and social cues. Men adapt their preferences to local conditions, so that while men in dark-skinned populations commonly report an attraction to lighter than average females, they also commonly report an aversion to Europeans whose skin color puts them far outside the local normal range of variation. And in some modern societies, social responses to sun-tanning may also modify skin color preferences.

Average Features

When researchers use computer graphic software to produce "composite" facial images by blending a number of individual facial photographs, the resulting composites are judged more attractive than most of the photographs going into them (Langlois and Roggman 1990). Attractiveness, in other words, is partly a matter of having features close to the average. This finding suggests that people mentally combine the faces they see around them to arrive at an image of the aver-

age face, and base their standards of attractiveness partly on this image (Symons 1979). Koeslag and Koeslag (1994) argue that "koinophilia"—a preference for modal or average features—is widespread among animals, and is adaptive because individuals distant from the local average often carry a higher genetic load or have suffered from stress during development. Koinophilia will sometimes be overridden by innate or acquired preferences for extreme values of particular traits, but the "default" preference in the absence of such influences seems to be for the average. To the extent that standards of attractiveness are koinophilic, culturally isolated populations are expected to have an ethnocentric standard of beauty, judging the attractiveness of outsiders by their "somatic distance" from the local norm.

Status Markers

While people may come equipped with a relatively "hardwired" attraction to relatively invariant markers of high mate value in the opposite sex, standards of attractiveness also seem to be responsive to social cues. Some of the best evidence for this proposition comes from changes in standards of attractiveness in the wake of Western political, economic, and cultural expansion. A great deal of evidence shows that non-Europeans commonly found European physical features unattractive on first contact, as expected under the koinophilia hypothesis (reviewed in Jones 1996a:122–125). In much of the non-Western world, however, ethnocentric standards of attractiveness have partly given way to Eurocentric standards.

One of the best descriptions of this process comes from Wagatsuma's (1968) essay on standards of attractiveness in Japan. In 1860, just after Japan was opened to the outside world, a group of samurai visited Washington, D.C. Their reactions to American women, recorded in their diaries, reflect both an attraction to light skin and an ethnocentric response to facial proportions and hair color: "The women's skin was white, and they were charming in their gala dresses decorated with gold and silver but their hair was red and their eyes looked like dog eyes, which was quite disheartening," and "Occasionally I saw women with black hair and black eyes. They must have been of some Asian race. Naturally they looked more attractive and beautiful" (1968:136). By the early twentieth century, Japanese standards of attractiveness had begun to change. "The subtle, not fully conscious, trend toward an idealization of Western physical features by the Japanese apparently became of increasing importance by the twenties" (1968:139). The political climate of the 1930s and early 1940s discouraged open expression of such attitudes, but by 1954 the Westernization of standards of attractiveness had gone far enough for novelist Shusaku Endo to have a character observe

> I do not know why and how only the white people's skin became the standard of beauty. I do not know why and how the standard of beauty in sculpture and paintings all stemmed from the white body of the Greeks, and has been so maintained until today. But what I am sure of is that in regard to the body, those like myself and

> Negroes can never forget miserable inferiority feelings in front of people possessing white skin, however vexing it might be to admit it. [Cited in Wagatsuma 1968:140]

Wagatsuma notes that Westernization in Japanese standards of attractiveness is expressed today in artificial waving and curling of hair, hair lightening, the use of surgery to reduce epicanthic folds, and in an idealization of Western looks in popular media.

Further evidence for Westernization in standards of attractiveness around the world is summarized in Jones (1996a:130–132). For the United States, where nonwhites are not only commonly of lower social status but also numerically in the minority, white influence on nonwhite standards of attractiveness is especially evident. Russell et al. (1992) summarize a large body of historical and current evidence for somatic prejudice both against African Americans as a group and among African Americans of varying appearance in *The Color Complex: The Politics of Skin Color among African Americans.*

The widespread Westernization of standards of attractiveness, even in countries where Westerners are not present in large numbers, is evidence of the importance of social cues in formulating standards of attractiveness; more specifically, it is evidence that people may develop an attraction to physical features associated with high status. This phenomenon deserves some discussion from an evolutionary perspective. A number of authors have noted that high social status may be associated with high mate value, because over the course of human evolution high status individuals have probably commanded more of the resources needed to provision offspring. And cross-cultural evidence shows that social status is usually an important component of sexual attractiveness, especially in women's evaluations of men (Buss 1989; Ellis 1992). However it is less clear why physical traits associated with high status, as opposed to high status itself, should be attractive. One possibility is that status may be an indicator of the direction of selection. Suppose that directional selection on physical traits has commonly been at least moderately strong, but varying in direction. For example, suppose that food supplies have commonly varied enough that the optimal body size and level of fatness have differed from one population and time period to another. In this case correlations between social status and body size and fatness might provide evidence regarding the current direction of selection. Using high status individuals as models when choosing a mate may be a mechanism for adapting to local variations in selection pressures.

The evidence suggests that color, averageness, and status markers are all components of attractiveness, and there are plausible—albeit unproven—evolutionary arguments why each of these might have been an indicator of mate value in the evolutionary past. It is more doubtful that they are good indicators of mate value in modern multiracial societies, but emotional responses that were adaptive in the past may persist and produce somatic prejudice in the present.

RACIAL CLASSIFICATION AND SOMATIC PREJUDICE IN BAHIA

In this section I report results of research on race and standards of attractiveness in Bahia, Brazil. In 1989 I travelled to Salvador, the capitol of Bahia, for a pilot study of physical attractiveness. From 1990 to 1991, I conducted more fieldwork at the Federal University of Bahia in Salvador and in a lower-class community on the city's northern outskirts. Finally in 1992 I began a long-term study of criteria and consequences of physical attractiveness in the Bahian coastal village of Arembepe. This research is part of a larger, ongoing investigation of standards of attractiveness across cultures that has also involved work in the United States, Paraguay (among Ache Indians), and Russia. More details on research protocols and results can be found in Jones and Hill (1993) and Jones (1995, 1996a). Kottak (1992) provides both ethnographic and quantitative descriptions of Arembepe. Below I provide some background on race in Brazil and then present research results.

Race in Brazil

From the sixteenth to the nineteenth centuries, approximately four million Africans, more than one-third of the Atlantic slave trade, were transported to Brazil (Thomas 1997:804). The descendants of these slaves today make up the largest population of African descent in the New World. In the Brazilian Northeast people claiming some African descent are a majority of the population—80% in the state of Bahia (Scheper-Hughes 1992:544).

Everywhere in the Americas slavery entailed the establishment of racially stratified societies in which free as well as enslaved blacks experienced political exclusion, economic discrimination, and social stigma, and everywhere in the Americas blacks continue on average to occupy a lower economic and social position than whites. But within this common framework of slavery and racial hierarchy there were and are significant variations between countries, deriving in part from differences between their European founders. The differences in race relations between Anglo-America and Latin America, and more specifically between the United States and Brazil, have long been noted by both travellers and scholars (Degler 1971; Harris 1964). Degler (1971:224) argues that the crucial difference between the two countries lies not so much in the position of slaves and persons of African descent as in the position of persons of mixed race.

> The key that unlocks the puzzle of the differences in race relations in Brazil and the United States is the mulatto escape hatch. Complex and varied as the race relations in the two countries have been and are today, the presence of a separate position for the mulatto in Brazil and its absence in the United States nevertheless define remarkably well the heart of the difference.

The United States for most of its history has followed the "one drop rule" or something close to it in defining blacks: individuals with even very small proportions of known African ancestry were and are counted as black (Davis 1991). By contrast, Brazilians of mixed ancestry commonly are not regarded either by themselves or by other people as black, but rather as white or as racially intermediate. They may escape much of the stigma that attaches to blacks. While race—at least the black/white distinction—is treated as a categorical variable in the United States, it is treated as more of a continuous variable in Brazil. And while the U.S. American system of racial classification mostly emphasizes descent—the child of a black parent is black—the Brazilian system puts more emphasis on appearance—even children of the same parents may belong to different racial categories if their appearances differ sufficiently.

While lower class and minority political mobilization since the 1960s has brought great changes to both the United States and Brazil (Fontaine 1985), racial boundaries still operate differently in the two countries. Friendship, romance, and marriage across "racial" lines (at least as U.S. Americans define race) are more common in Brazil than in the United States. The fuzziness of Brazilian racial categories also affects political life. In the past it precluded solidarity among whites; now it blocks the consolidation of a U.S.-style black nationalist movement, black voting bloc, or affirmative action agenda. Some Brazilian political activists, inspired in part by the U.S. civil rights movement, have encouraged all Brazilians with African ancestry to think of themselves as blacks (*negros*), but most mixed-race Bahians I encountered in the course of my fieldwork put themselves in some intermediate racial category, or identified themselves white.

No very clear line divides whites from blacks in Brazil, but the country is quite racially stratified. Brazilians sometimes call their country Bel-India—half Belgium and half India. Southern Brazil is overwhelmingly white and relatively prosperous; nonwhites (excluding Asians) are concentrated in the poor Northeast. While 44% of the population identified themselves as *pardo* (black or mixed race) in the 1990 census, "[d]ark-skinned persons have rarely if ever reached the highest levels of industry, business, the professions, or the government. . . . Blacks have achieved success only in athletics and entertainment" (Levine 1997:16).

> [In 1990] of Brazilians earning more than five hundred dollars a month, fewer than 10 percent [were] nonwhites. . . . Black Brazilians account for two-thirds of families surviving on fifty dollars a month or less. Even in the capital city of Salvador, Bahia, where 80% of the two million residents are black, the city has never had a black mayor. . . . And Bahian "society" is still controlled by a tiny Euro-Brazilian white elite (Scheper-Hughes 1992:543–544).

Major cities like São Paulo, Rio de Janeiro, and Salvador are strongly segregated by race, with nonwhites being greatly over-represented in the favelas (slum and shanty neighborhoods) and whites over-represented in upper-class neighbor-

hoods. Studies that consider subdivisions among nonwhites generally find that mulattoes have a higher social status than blacks, but are closer to blacks than whites (Fontaine 1985).

Racial Classification

Because Brazilians use a large number of labels to classify racial types, my first step in investigating somatic prejudice in Bahia was a study of Brazilian racial classification. For this study I used a series of facial photographs of Salvadoran females collected in 1989. To collect photographs, I positioned myself in several public places and, at set time intervals, approached the nearest female who seemed to be in her late teens or early twenties and was not visibly working or in a hurry. I asked each woman if I could take her photograph; after taking photographs I asked each subject her age. Owing to variable lighting conditions and problems with developing film, 11 of the photographs were of too poor a quality to be used, leaving 30 for the present study. The women who declined to have their photographs taken may have been of lower than average attractiveness: several gave this as a reason for declining. Given the neighborhoods I worked in, there may have been some bias toward upper-and middle-class subjects, but it is probably fair to say that the photographs span the whole range of physical types common in Bahia.

During 1992 fieldwork in Arembepe, I asked 40 males and 40 females to identify the "race" *(qualidade)* of each of the 30 people in the photographs. Subjects gave a total of 50 racial categories, although just 11 of these accounted for 94% of all categorizations. The categories include labels like *loira* (blond) that are not based on membership in a descent group, which seems to confirm that Bahian racial categories overlap with, and are partly defined by, categories based on appearance. All 50 categories are tabulated in Jones 1996a:138–139.

I have used monotonic Kruskal Multi-Dimensional Scaling (MDS) to investigate how different categories are related to one another. MDS uses data about similarities and dissimilarities between items to construct a multidimensional space in which similar items are placed closer together. To illustrate with a simple example, if people are asked to classify pairs of colors as similar or dissimilar, they will classify red and orange as similar, red and green as dissimilar, and so on. Applying MDS to ratings of similarity between pairs of colors in the spectrum will yield a two-dimensional space in which points corresponding to different colors are arranged around a circle, with purple between red and blue, and so on. That the colors fall in a circle rather than, say, an arc or a few separate clumps tells us something about human color perception.

Applying MDS requires first constructing a similarity matrix in which element $\{i, j\}$ is some measure of the similarity between item i and item j. For the present analysis, the "items" are the different racial categories, and the measure of similarity between racial categories i and j is the Spearman correlation coefficient over all photographs of the number of times the photograph was assigned to category i

and the number it was assigned to j. For example, *branca* (white) and *clara* (light) were strongly positively correlated ($r = .91$), because the same photographs most often labeled *branca* were also most often labeled *clara. Branca* and *escura* (dark), on the other hand, were strongly negatively correlated ($r = .74$).

Figure 7.1 presents the results of MDS applied to the similarity matrix of racial categories described above, with each circle corresponding to one category. The most commonly used categories are labeled. Dimension 1 (horizontal) is largely a color axis: terms at the left end of the scale (*negra, escura, morena*) label people as dark or black, while terms at the right (*branca, clara*) label people as light or white. Dimension 2 (vertical) is an axis of African versus non-African features, independent of color: *morena,* at the low end of dimension 2, implies dark color but not necessarily African features, while *sararáí,* at the high end, refers specifically to African physiognomy and hair form combined with light skin and hair. Thus the initial results of MDS suggest that Bahian racial classification, beneath a

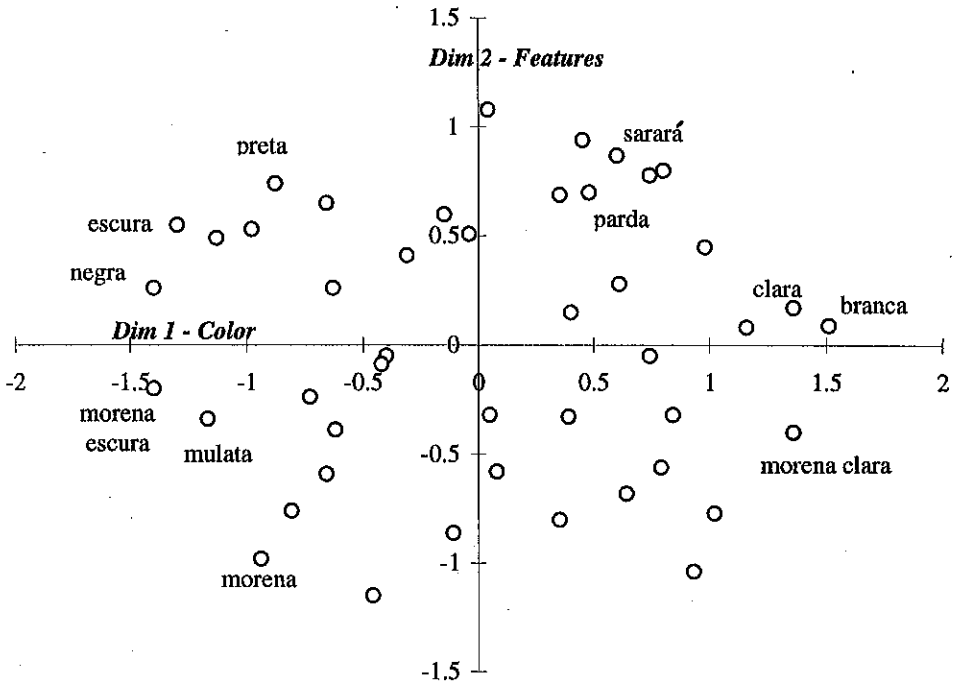

Figure 7.1. Brazilian racial categories and Multi-Dimensional Scaling. Each circle represents one category. The closer points are to one another, the more often the corresponding categories were applied to the same photographs. From left to right, categories refer to dark or light color. From bottom to top, categories refer to non-African or African features. The most frequently used categories are labelled.

bewildering profusion of labels, is largely concerned with labeling individuals first by color and then by African versus non-African features independent of color.

In principle, Brazilian racial terminology could be used to specify objectively and fairly exactly both color and other racial features of individuals. In practice, however, Brazilians' use of this terminology is affected by local ideology and etiquette. This can be demonstrated with another set of results. Each of 30 females in the photographic sample can be assigned a position on dimensions 1 and 2 by averaging her scores on each dimension over all 80 categorizations given her. Figure 7.2 shows the results, with each female represented by a circle.

Several things stand out in this figure. First, all but three of the points in Figure 7.2 fall on the lower half of the scale. While Brazilian racial terminology contains many terms with high positive scores on dimension 2 (referring to African features, independent of color), and while many photographic subjects did have pronounced African features, raters tended to stay away from labels clearly indicating these features (including *negra* = Negro/black, 2% of classifications; *preta* = black, 2%; and *sarará*, 2%). Instead, the most commonly used terms were *morena* (brown, 39%) and variants thereof (*morena clara* = light brown, 11%, and *morena escura* = dark brown, 4%), while various terms designating white or light color (*branca* = white, 21%, and *clara* = light, 6%) were also common. *Morena* is a very general word which can be applied to dark-skinned whites, and it seems to operate as à euphemism in a context where African features are not highly esteemed.

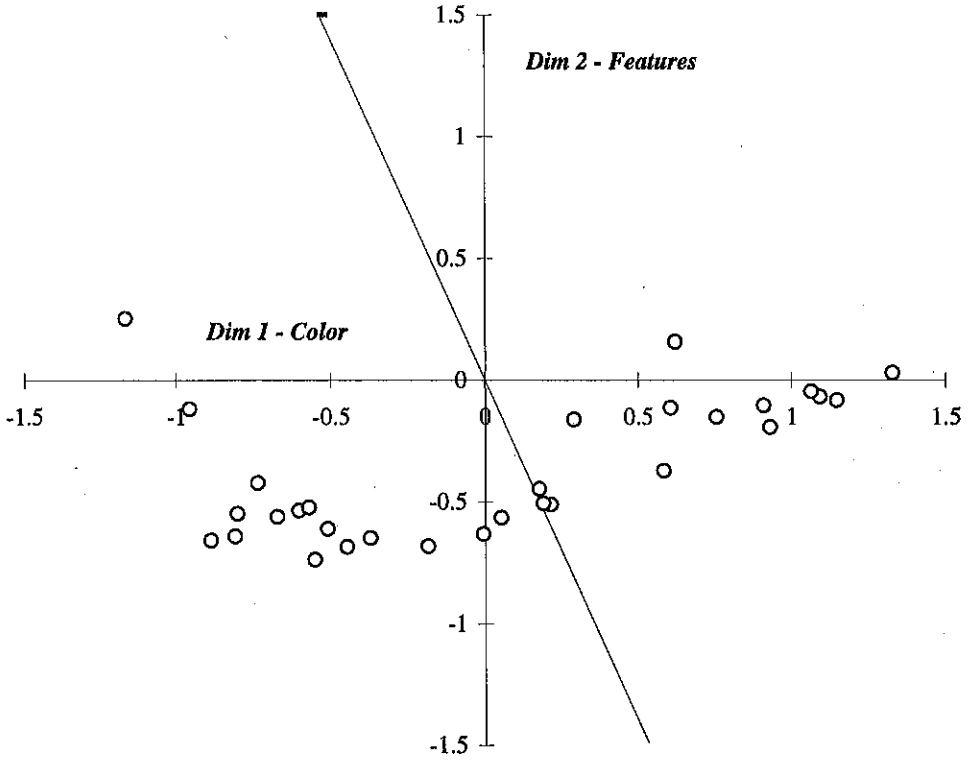

Figure 7.2. Racial classification of photographs of Brazilians. Each circle represents one photograph. Each photograph was assigned a position on Dimensions 1 and 2 by averaging over racial categories given to it. The diagonal line shows the Combined Index given by Equation 1; scores on this index are correlated with ratings of attractiveness.

Second, and quite oddly, scores on dimension 1 are strongly and significantly correlated with scores on dimension 2 ($r = .57$, $p < .01$). Taken at face value, the direction of the correlation would imply that light-skinned people are more likely than dark-skinned people to have an African physiognomy and hair form. Obviously this is not really the case in Bahia, nor does it seem to be the case among the women in the photographic sample. Rather, raters seem to be employing terminology in such a way as to downplay racial distinctions. Two women in the sample presented such a strong combination of dark skin and African features that they were often labeled *preta* or *negra* (the two points above and just below the *x*-axis on the left of Figure 7.2). But for the most part classification was dominated by two trends: *branca* and *clara* were often applied not just to whites but to light-skinned blacks, and whites were likely to be labeled *morena.* (Every female in the sample, including several with no discernable African ancestry and not especially dark skin, was classified as some kind of *morena* by more than 10% of raters.) Instead of emphasizing the distinctions between black people and white people, this use of terminology emphasizes the different ways people combine black and white characteristics.

The low average scores on dimension 2 and the positive correlation between scores on dimensions 1 and 2 reflect two frequently noted aspects of Brazilian—and especially Bahian—race relations. Negative stereotypes and social prejudice against blacks are widespread, and there is a corresponding resistance to labeling oneself or others as simply "black" (*preta, negra,* etc.). But there is a tolerant or even somewhat positive attitude to miscegenation, an attitude reflected, for example, in the ideology of *mestiçagem* (racial mixture), which encourages Brazilians to think more about their common identity as *mestiços* than their separate identities as blacks, whites, Indians, or Asians.

Race and Attractiveness

To extend this investigation from racial classification to somatic prejudice, I collected ratings of the attractiveness of the 30 photographs from 25 male and female subjects in Arembepe. Ages of subjects ranged from 19 to 35. When asked about their racial identity, four-fifths chose labels implying dark color or mixed

ancestry (*moreno, pardo,* etc), one-fifth called themselves white (*branco*), and none called themselves black (*negro, preto*). Subjects were mostly working class; all described themselves as literate. Pictures were laid out in three-by-three blocks and rated on a scale of one to nine according to a procedure described in Jones (1996a); each rater rated 27 randomly selected pictures. Attractiveness ratings were generated for each photograph by averaging across raters.

Scores on dimensions 1 and 2 are each moderately correlated with ratings of attractiveness (dimension 1: $r = .29$, n.s.; dimension 2: $r = .36, p < .05$). The directions of the correlations suggest somatic prejudice against dark color and African features, but given the correlation between dimension 1 and dimension 2, it is worth considering the two dimensions together. The best predictor of attractiveness in this sample is a combined index given by:

$$\text{Combined Index} = \text{dimension 1} - 2.8 \times \text{dimension 2} \quad (1)$$

This index, which is highest for individuals combining light color and non-African features, is strongly and significantly correlated with ratings of physical attractiveness ($r = .68$, $p < .01$). According to equation 1, color (dimension 1) is only 1/2.8 times as important as other racial features (dimension 2). But since standard deviations of scores on dimension 1 are 2.6 times greater than those for dimension 2, the two dimensions are actually about equally important.

The diagonal line in Figure 7.2 represents the Combined Index calculated using equation 1. The scores of each photograph on this index are given by the positions of their projections on this line. Note that the major axis of the cloud of points—running somewhat upward from left to right—is almost at right angles to the line of the Combined Index—running sharply downward from left to right. This means that even though subjects assigning racial labels tended to de-emphasize the black/white distinction (dark skin and African features on the upper left vs. light skin and non-African features on the lower right), the distinction showed up clearly when subjects made judgments of attractiveness. Figure 7.3 shows physical attractiveness ratings as a function of Combined Index scores. Although the two females with negative index scores are outliers, the correlations are virtually the same when recomputed using rank orders ($r = .72, p < .01$) or with the outliers omitted ($r = .69, p < .01$).

The strong correlation between race and attractiveness in this sample seems to reflect a prejudice against pronounced black appearance more than it reflects a prejudice in favor of pronounced white appearance. Suppose we compare attractiveness ratings for three groups: the 10 women with the lowest scores on the Combined Index (group I, average attractiveness rating = 3.5), the 10 women with intermediate scores (group II, average = 5.3), and the 10 women with the highest scores (group III, average = 6.3). Women in the first group, with the strongest combination of African features and dark skin, have significantly lower attractiveness ratings than women in the other two groups (I vs. II, $p = .004$; I vs. III, $p = .0005$, two-tailed unpaired t-tests). But women in the intermediate second group

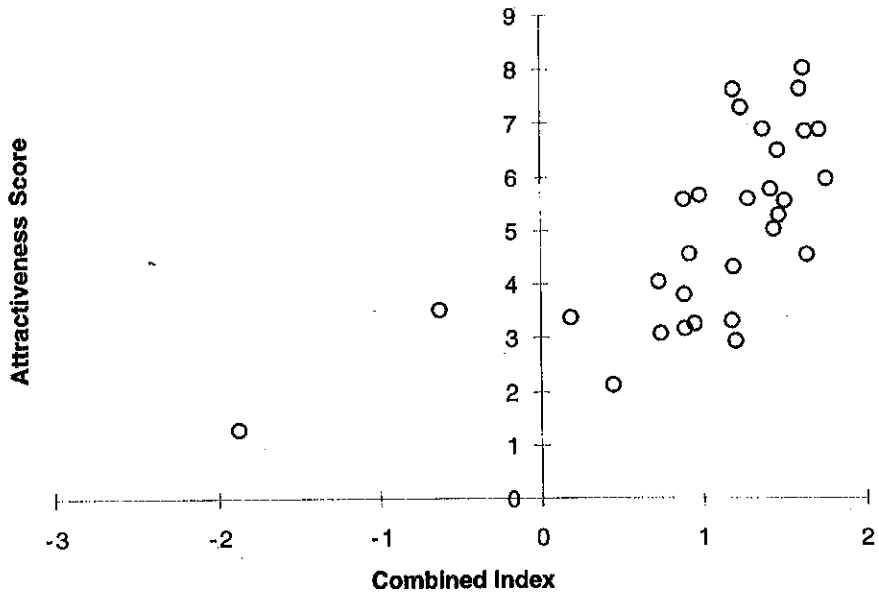

Figure 7.3. Racial classification and ratings of attractiveness. Individuals with high scores on the Combined Index—combining light color and non-African features—generally receive higher attractiveness ratings.

are not rated significantly less attractive than women in the third group, the one with the strongest combination of non-African features and light skin (II vs. III, $p = .16$). There is other evidence suggesting that Bahians do not have a particularly strong attraction to whites relative to people of mixed race. In another study involving photographs of Bahian university students who were mostly whites and light-skinned blacks, U.S. American raters gave higher attractiveness ratings to students with Caucasian physical features like thin lips and narrow noses, but Bahian raters did not (Jones 1996a:142). And in rating photographs of U.S. university students, U.S. but not Bahian raters gave significantly higher ratings to blond women (both groups gave significantly lower ratings to blond men; Jones 1996a:98). While Bahians in this study show strong somatic prejudice against blacks, they are far from perceiving whites as supernormally attractive.

DISCUSSION

The data presented above demonstrate significant somatic prejudice against women with dark color and African features. The effect is a strong one: the difference in average attractiveness ratings between women in the "blackest" tercile

and other women is 1.7 standard deviations. Below I consider the relevance of these findings both for evolutionary theories of attractiveness and for studies of racial and ethnic relations. I conclude by considering the prospects for change in Brazil and elsewhere.

Evolutionary Psychology and Somatic Prejudice

At least three general principles of human physical attractiveness—attraction to markers of social status, to "average" features, and to fair color (in females)—may contribute to the somatic prejudice documented in this paper.

Social cues, specifically those afforded by correlations between physical appearance and social status, are probably the most important source of somatic prejudice in the study population. Innate preferences may account to some extent for the attraction to light color, but it is less plausible that they account for negative responses to African facial morphology and hair form. Some evidence suggests that men have an innate attraction to adult females with "neotenous" facial proportions—large eyes in relation to the vertical dimensions of the face, gracile jaws, small noses, and full lips (Jones 1995). But Africans are not systematically more craniofacially neotenous than Europeans (Lahr 1996:248–263); they are more neotenous on some facial characters (nasal projection, lip width), less on others (nose width, lower facial prognathism), and simply different on others (face width, hair form). And while Bahian women, like other women, do not evidence much attraction to neotenous male faces, they do show somatic prejudice against blacks in research involving photographs of a racially mixed sample of U.S. Americans (Jones 1996a:123–125). All this, together with cross-cultural evidence for changing standards of attractiveness in response to Western influence, makes it likely that Bahian somatic prejudice results to a very large degree from an awareness of the low economic and social position of blacks both locally and in the world system. This is an important finding for evolutionary psychology: while the adaptive basis, if any, of status effects on standards of attractiveness is not well-understood, these effects can be powerful, and they need to be taken into account by any theory of attractiveness.

A combination of the "averageness" effect and status effects may account for the apparent nonlinearity in the relationship between race and ratings of attractiveness. If ratings of attractiveness depended only on "averageness," one might expect that individuals at either extreme of the Bahian racial continuum would be rated as less attractive than those in the middle. If ratings of attractiveness depended only on correlates of status, one might expect that attractiveness would vary linearly with race. Instead, both effects seem to be at work, reinforcing one another at the black end of the scale but partly canceling each other out at the white end so that whites are not rated significantly more attractive than those in the middle. However, more research is needed to determine whether a similar nonlinear effect operates in societies without Brazil's "mulatto escape hatch."

Finally, regarding color, two factors—local correlations between color and status, and a near-universal (and perhaps innate) male attraction to women of lighter-than-average color—may each account for some of the negative response to dark color observed in the present study. However, it will take more research to disentangle the relative contributions of these factors. Specifically, if future fieldwork in Bahia shows that color, relative to other features, is less important for male attractiveness than for female attractiveness, this will support the argument that responses to skin color involve more than just its correlation with social status.

Standards of Beauty, Racial Prejudice, and the Prospects for Change

A considerable literature in social psychology now demonstrates the importance of physical appearance and attractiveness in social and especially sexual relationships. This literature, in conjunction with evidence suggesting the importance of somatic prejudice, raises the possibility that prejudice and discrimination based on race may overlap with prejudice and discrimination based on attractiveness. The social consequences of somatic prejudice is a large topic; here I will mention just one direction that research might take.

One of the characteristic institutions of the African diaspora in the New World is the matrifocal family. In Latin America, the Caribbean, and the United States, family life among blacks, more than among whites, involves female-headed households and unstable relationships between men and women. Some scholars (Herskovits and Herskovits 1947) emphasize the African roots of New World matrifocality, arguing that the matrifocal family has arisen because West African traditions of female economic and social independence have survived among New World blacks, while West Africa's unilineal descent groups mostly have not. Others emphasize the legacy of slavery and the attendant disruption of long-term monogamous relations between blacks (Frazier 1939). For the West Indies, Smith argues that the racial hierarchy associated with slavery resulted in the establishment of a "dual marriage system." "Whereas white women did not (with few exceptions) enter non-legal unions, colored women were reputed to prefer concubinage with a white man over marriage with a colored man" (1996:75). Some features of this dual marriage system have persisted to the present (see also Martinez-Alier 1974). More immediate causes of matrifocality may include economic circumstances making it difficult for poor men to support a family (Wilson 1996), and low sex ratios facilitating male mate switching (Guttentag and Secord 1983). While no single factor is likely to account for the matrifocal family, I suggest that somatic prejudice may be part of the story. When ethnic groups differ in physical appearance, standards of attractiveness may affect ethnic relations, and individuals' and groups' social position, including their bargaining power in the mating and marriage market, may depend not just on their economic and political resources but on how closely they attain to the local somatic ideal (Hoetink 1967).

The sexual and reproductive options for women at the bottom of a society's aesthetic hierarchy may not include much possibility of a stable relationship with an acceptable man. This is a topic I plan to investigate in future research; I have begun collecting photographs and life history data for sibling pairs, aiming in part at investigating the social and life history consequences of being the more or less attractive of a set of siblings.

Somatic prejudice, involving as it does a very personal and visceral dimension of a major public problem, is obviously a disturbing topic, but not one that should be approached in a spirit of fatalism. A number of political and cultural groups in Bahia are actively involved in trying to cultivate a more Afrocentric standard of beauty among Bahians as part of a larger program of black consciousness raising (*conscientização*). Such efforts had had little impact on the groups I studied at the time of my fieldwork, but nothing in the results or theory presented in this paper rules out the possibility that they might have more influence in the future. Doing the evolutionary psychology of attractiveness is not only a matter of discovering an invariant, species-typical hierarchy of aesthetic values. It may also involve understanding standards of attractiveness in any given culture as the joint and mutable product of human nature and history.

SUMMARY

1. The evolutionary psychology of physical attractiveness may contribute to understanding "somatic prejudice," in which members of one racial or ethnic group are evaluated more or less favorably than members of another on the basis of their physical appearance. Three well-documented and universal or near-universal components of attractiveness–color, "averageness," and status markers–are likely to be especially relevant to understanding somatic prejudice.

2. Brazil is a racially stratified country in which whites have considerably higher status than blacks, but Brazilians generally treat race as a continuous rather than a categorical variable. An investigation of the complex racial terminology in the state of Bahia in northeastern Brazil shows that (a) Bahian racial classification is largely concerned with labeling individuals first by color, and then by African versus non-African features independently of color, and (b) in accordance with the ideology of *mestiçagem* (mixture), individuals labeling photographs tend to avoid labels clearly indicating African features, and to emphasize the way different individuals combine white and black features, rather than differences between blacks and whites.

3. Although Bahians downplay black/white differences in labeling photographs, these differences play a major role in assessments of attractiveness: photographic subjects with pronounced African color and features are rated substantially less attractive than others (1.7 standard deviations), while subjects with intermediate features are not rated significantly less attractive than those with pronounced European features. These findings demonstrate that evolutionary psychology must consider the role of social cues in the development of standards of attractiveness.

NOTE

1. Terms referring to Indian or mixed Indian ancestry (*indio, caboclo*) fell at the low end of dimension 2. These terms were used only infrequently, but if my sample had included significant numbers of individuals with marked Indian appearance, they might have added a third dimension to the MDS results.

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