

THE INFLUENCE OF INFANT FACIAL CUES ON ADOPTION PREFERENCES

Anthony Volk and Vernon L. Quinsey
Queen's University at Kingston, Ontario

Trivers's theory of parental investment suggests that adults should decide whether or not to invest in a given infant using a cost-benefit analysis. To make the best investment decision, adults should seek as much relevant information as possible. Infant facial cues may serve to provide information and evoke feelings of parental care in adults. Four specific infant facial cues were investigated: resemblance (as a proxy for kinship), health, happiness, and cuteness. It was predicted that these cues would influence feelings of parental care for both sexes, but that resemblance would be more important for men than women because of the importance of paternity uncertainty in the ancestral environment. Seventy-six men and 76 women participated in a hypothetical adoption task in which they made judgments of infant faces. Average zero-order, partial, and component score correlations all revealed that men placed primary emphasis on cues of resemblance, while women placed primary emphasis on cues of health and cuteness (cues of infant quality). The correlations also showed that men placed a significantly greater emphasis on cues of resemblance than did women.

KEY WORDS: Adoption preferences; Infant faces; Infant facial cues; Parental investment; Resemblance; Sex differences

INFANT FACIAL CUES

Human parents face a potentially substantial investment when they decide to raise a child. Current estimates in Canada suggest that it costs an

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Address all correspondence to Anthony Volk, Department of Psychology, Queen's University, Humphrey Hall, 62 Arch Street, Kingston, Ontario, Canada, K7L 3N6. Email: avolk@psyc.queensu.ca

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average of \$160,000 to raise a child to the age of 18 (Manitoba Department of Agriculture 1998). Cross-cultural studies have also shown that besides requiring material resources, raising a child requires a lot of time and energy (Eibl-Eibesfeldt 1989). The raising of the child may therefore represent a serious burden to the finite resources of a prospective parent.

In light of these significant costs, Trivers's (1972, 1974) parental investment theory suggests that parents should weigh the costs and benefits of investing resources in the current infant. The costs to the parent may include diverting resources from their own somatic growth and maintenance, not pursuing current and/or future mating opportunities, and investing less in current and/or future offspring. The primary biological benefit is raising an offspring to sexual maturity. Several studies suggest that adults are cognizant of this cost-benefit analysis and attempt to optimize their allocation of resources between parental care and other activities (Bereczkei 2001; Bereczkei et al. 2000; Marlowe 1999a, 1999b).

In order to make the best cost-benefit decision, parents should seek to gain as much relevant information as possible. Besides information relating to their own status (social, economic, etc.), information related to the offspring in question may be of primary importance. Because young infants provide little detailed information through speech or gesture, much of this information is likely to come from physical cues. Certainly, one of the more expressive and informative physical regions on the human body is the face (Landau 1989). It stands to reason that infant facial cues may provide adults with information relevant to their cost-benefit analysis.

Konrad Lorenz (1943) postulated that infant faces may be designed not simply to deliver information to adults, but to elicit feelings of parental care. Previous research has shown that infant faces elicit positive feelings from adults (Hildebrandt and Fitzgerald 1979; Sternglanz et al. 1975). Also, specific infant facial cues may relay different types of information to adults. Four such infant facial cues were thought to be of particular importance: resemblance, health, happiness, and cuteness.

Resemblance

Of the many signals an infant face may send, perhaps the most important concern kinship. Evolutionary theory states that adults should be primarily interested in investing in related infants, thereby passing on shared genes (Daly and Wilson 1999; Darwin 1872; Dawkins 1989; Westneat and Sherman 1993; Xia 1992). This theory is supported by evidence of decreased average investment in unrelated offspring, including stepchildren (Anderson et al. 1999a, 1999b; Case et al. 1999, 2000; Daly and Wilson 1988: 83–93; Zvoch 1999). Given their concern with investing in related offspring, adults may attempt to determine the degree to which they share

genes with a given child. Perhaps the simplest way of doing this (and certainly the method most available to our ancestors) is to look for shared physical traits (resemblance) that may indicate shared genotypes underlying the expression of the shared phenotypes. In the ancestral environment, knowledge of one's own appearance likely came from comments from other individuals regarding one's appearance, and from viewing common familial features and one's reflection in water (as described in many cultural myths and legends).

These cues of resemblance may be more important to men than to women. Mammalian physiology virtually guarantees maternity certainty, but no such guarantee exists for paternity certainty (Alcock 1989). Evidence for a modest level of false paternity in humans comes from comparative primate testicular physiology (Alcock 1989:529–531), behavioral information (Baker and Bellis 1995; Chagnon 1983:117; Eibl-Eibesfeldt 1989:98, 245–249; Hart and Pilling 1960:36–38), and genetic tests (Boster et al. 1999; Sasse et al. 1994). In humans, current evidence suggests that men may use cues of paternity to influence the likelihood of caring for, or abusing, or abandoning, infants and children (Burch and Gallup 2000; Daly and Wilson 1988:83–93; Marlowe 1999a; Zvoch 1999). Presumably, then, men should place a greater emphasis on cues of resemblance (kinship) than women. Indeed, studies have shown that the mother and the maternal family are eight times more likely to ascribe resemblance to the father, while the father and the paternal family show no bias in ascribing resemblance, suggesting an increased need for assuring the father of cues of resemblance, but not the mother (Daly and Wilson 1982; McLain, Setters et al. 2000).

Health

An unhealthy infant typically requires substantial resources and attention, and suffers an increased likelihood of mortality (Attard-Montalto and Saha 1999). Thus, a sick infant simultaneously increases the cost of parental investment and reduces the likelihood of the investment paying off. For example, in the United States the 7.6% of infants who have low birth weights account for 64% of infant mortalities (MacDorman and Atkinson 1998). Furthermore, a healthy infant may have a better chance of being a healthy adult via the development of a strong immune system and/or greater physical or mental development during infancy. For example, low birth weight is also associated with physical and behavioral problems during childhood and adolescence (Hille et al. 2001; Saigal et al. 2001). Cues of infant health (weight, skin tone, etc.) are thus quite likely to be of significance to parents.

While there are some contrary examples (e.g., Lee et al. 1991), many studies have shown the importance of infant health to parents. The primary

concern for a sample of expectant, first-time Mexican parents was the health of the infant (Niska et al. 1997). Mothers of unhealthy infants were more likely to suffer from postpartum depression, which reduces parental investment (Hagen 1999). Adults showed a preference for healthy infant faces versus those with symptoms of fetal alcohol syndrome (Waller, Volk, and Quinsey, submitted). Frodi and colleagues (1978) showed that infant cries paired with premature infant faces were more unpleasant to adults than cries paired with normal infant faces. Finally, and perhaps most dramatically, a significant percentage of women report that they would abort a medically handicapped fetus (Engelmann et al. 1996; Green et al. 1993).

Happiness

Hiat, Campos, and Emde (1979) found that adults are capable of reliably judging infant emotional states using facial cues. Happiness may indicate an infant's mental state (e.g., a lack of happiness may indicate autistic disorders; Davison and Neale 1994:476–482). Happiness may also be a proxy for an infant's physical health (a seriously ill infant is unlikely to be a happy infant). An infant's happiness can also directly influence the quality of the parent-infant bond, as adults significantly prefer to interact with happier infants (Frodi and Lamb 1980; van den Boom and Hoeksma 1994). Happy infants may therefore receive more attention and care than unhappy infants.

Cuteness

Cuteness presumably reflects infant attractiveness to parentally motivated adults. As with health, cuteness may have important short- and long-term consequences. In the short term, it has been shown that adults are more affectionate and playful with cute infants (Langlois et al. 1995) and rate them as being generally more competent (Ritter et al. 1991). In the long term, cuteness may be associated with good genes via high levels of symmetry (Scheib et al. 1999). Cuter infants may be more symmetrical than other infants, thus indicating a greater ability to resist environmental insults during development (Kowner 1996). Furthermore, cute infants may grow up to be attractive adults, who generally receive preferential treatment (Dion et al. 1972).

GOALS OF THE STUDY

To date, no one has studied whether or not infant facial cues directly influence feelings associated with parental care (let alone parental care itself). We hypothesized that adults possess cognitive mechanisms that

allow them to gain information from and respond to infant facial cues that are relevant to their cost-benefit parental investment analysis.

A hypothetical adoption scenario was used to elicit the hypothesized judgmental processes involved in the allocation of parental investment. Adoption practices can vary widely across cultures (Brady 1976; Pertman 2000) and appear to be motivated by such disparate concerns as substitution for genetic offspring (Pertman 2000) and resource distribution (Brady 1976). The hypothetical judgmental processes presumed to be measured/investigated in this study focused on those relating to "substitution adoption" and parental investment rather than on other forms of adoption. This kind of hypothetical paradigm has proven successful in studies of female sperm donor choice, used as a proxy for hypothesized female mate choice (Scheib 1994; Scheib et al. 1997), as well as a concurrent study of infant health and fetal alcohol syndrome (Waller, Volk, and Quinsey, submitted). Using the hypothetical adoption paradigm, two main predictions were tested. The first was that infant facial cues would influence adult feelings of parental care (as measured by adoption preference). The second was that infant-adult resemblance would be more important for men than for women.

METHOD

Participants

The minimum number of participants required was determined by an a priori power analysis (Gpower: Faul and Erfelder 1992). A total of 152 participants (all Caucasian) were included in the data analysis. The participants were equally divided between the sexes, as well as two groups. The first group consisted of first-year undergraduates at Queen's University. They had a mean age of 20.0 years ($SD = 0.6$), came from a high SES background (modal household income during previous five years $> \$80,000$ Canadian), and had no children. The second group consisted of adult members of the Kingston community. They had a mean age of 42.6 years ($SD = 13.5$), typically came from a low SES background (modal household income during previous five years of $\$10,000$ – $20,000$ Canadian), and had sons (mean = 1.0, $SD = 1.8$) and daughters (mean = 0.7, $SD = 1.0$). Thus the two groups are fairly diverse in terms of age, SES, and experience with parental investment.

Apparatus

A video tape of infants filmed in another study (Semcesen 1999) was used to capture the infant faces presented to the participants. Twenty-one images of infant faces were captured using a Matrox G300 video capture card. One

infant was discarded because of its strongly non-Caucasian features (as judged by five adults). Infants ranged in age from 4 to 6 months, with a mean age of 5 months (Semcesen 1999). Pictures of young infants were selected because parental investment decisions are likely influenced by the duration of the attachment period (Lewis et al. 1997; Storey et al. 2000). Seven boys and thirteen girls were represented. The photos were cropped to reveal only the infant face, and set to a standard size of 640×680 pixels using Corel Photo House v. 5. No further digital manipulations were performed on the faces, although two of the infants had a "whitewash" appearance owing to lighting effects during filming. Using Limestone Technologies software/hardware, the images were displayed on a 28" color TV located in a private room. Participants were seated in an easy chair located 6' in front of the TV, with two control buttons for advancing and rating the slides located on the arms of the chair.

Procedure

Participants were solicited via the Introductory Psychology research pool, a newspaper ad (both referring to a study of parent-infant interactions), or word of mouth. Participants were offered either a 0.5% bonus on their Introductory Psychology grade or \$10 for their participation. Upon arrival at the lab, participants were asked to read and sign a consent form and were then brought to the presentation area, where they were given two practice slides to become familiar with the apparatus. Participants were then presented with the series of 20 infant faces and asked to rate their desire to fictionally adopt each infant using a Likert-like scale of 1–10. Participants were then presented with the same slides and asked to rate their resemblance to each infant using the same scale of 1–10. Participants were told to rate the degree of resemblance to whichever age they determined appropriate (i.e., to themselves as adults or children). Participants were then presented with the same slides for the final time and asked to rate the health, happiness and cuteness of each infant on a Likert scale of 1–7. These rating categories were based on the everyday language people use to describe babies.

The order of infant faces in the slide show was kept constant within participants, but randomized between participants to minimize order effects. The order of the tasks was kept constant to ensure that the two ratings of primary interest (adoption preference and resemblance) would not be influenced by previous ratings of health, happiness, or cuteness. After viewing the slides, participants were asked to record demographic information (e.g., age, SES, number of children). Participants were then debriefed, given their chosen compensation, and thanked for their participation. Each session lasted approximately 45 minutes.

RESULTS

Within-Stimulus Correlations

The data were first analysed using zero-order, within-stimulus correlations. Each individual infant face (stimulus) was treated in much the same way as a separate trial in a repeated-measures design. The data were split between the male and female samples. For example, the correlation between adoption preference and infant-adult resemblance for the first infant face/stimulus/trial was composed of 76 participants \times 2 variables for each sex. This was then repeated for each of the 20 infant stimuli, yielding 20 correlations (for each sex). These correlations were tested for homogeneity (Strube 1988) and transformed into z' scores using Fisher's z' transformation (Silver and Dunlap 1987). The z' scores were then averaged to yield the average, within-stimulus correlations between two variables (Dunlap et al. 1983; Hays 1962). Using Howell's recommendation for treating z' transformed correlations as data (1992), independent-measures t -tests ($df = 38$, equal variances) and within-sample t -tests ($df = 19$) were performed. Post-hoc power analysis showed that, assuming each average correlation included 3,040 data points, a single-sample t -test with an effect size of $r = .05$ yielded $1 - \beta = 0.86$ (Gpower: Faul and Erfelder 1992).

The results of the t -tests are presented in Table 1. In each cell, the male sample correlations are listed on the top and the female sample correlations are listed below, in italics. Numbers in bold indicate a significant difference between the sexes ($p < .05$). The average correlations are displayed in the top right of the matrix diagonal, and their corresponding standard

Table 1. Average Within-Stimulus Zero-Order Correlations (and Standard Errors) for Male and Female Samples

	<i>Adoption Preference</i>	<i>Resemblance</i>	<i>Health</i>	<i>Happiness</i>	<i>Cuteness</i>
Adoption Preference	—	.333**	.131**	.089**	.265**
Resemblance	$\pm .026$	—	.325**	.208**	.433**
Health	$\pm .021$.083**	.140**	.267**
Happiness	$\pm .031$	$\pm .026$	—	.428**	.449**
Cuteness	$\pm .025$	$\pm .026$.529**	.484**
	$\pm .027$	$\pm .026$	$\pm .026$	—	.473**
	$\pm .019$	$\pm .020$	$\pm .028$.523**
	$\pm .032$	$\pm .025$	$\pm .022$	$\pm .034$	—
	$\pm .025$	$\pm .027$	$\pm .033$	$\pm .025$	

* $p < .05$; ** $p < .01$; ♀ values italicized; sex differences ($p < .05$) bolded

errors in the bottom left of the matrix diagonal. In accordance with the hypotheses, the infant cues were significantly correlated with adoption preference, and men had a significantly greater correlation between adoption preference and resemblance. Women had significantly higher correlations than men between the remaining three predictor variables and adoption preference. For men, only the resemblance-adoption correlation was associated with a medium effect size (Cohen 1977), although the cuteness-adoption correlation was close. For women, both the health-adoption and cuteness-adoption correlations had medium effect sizes. In both sexes, resemblance was only modestly correlated with the other independent variables, while the remaining three variables all had large, positive, and significant correlations with each other. Other than the health-happiness correlation, there were no significant sex differences among the independent variable correlations.

Average within-participant partial correlations were then generated to determine the relationship of each independent variable with adoption-preference while holding constant the influence of the other independent variables. The averaging and transforming of the variables was performed in the same manner as for the zero-order correlations. Once again, independent-samples *t*-tests (*df* = 38, equal variances) and within-sample *t*-tests (*df* = 19) were performed. The average partial correlations are plotted in Figure 1. The error bars represent the standard error associated with the average partial correlations.

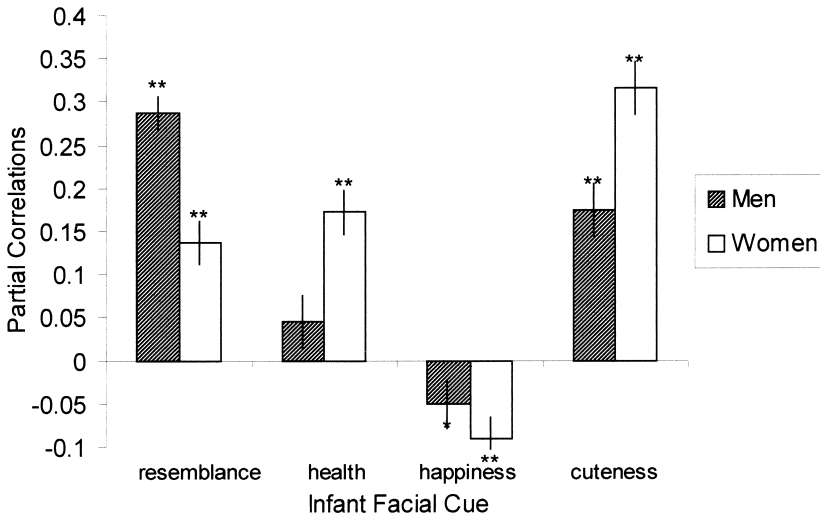


Figure 1. Average partial correlations between the independent variables and adoption preference in male and female samples. (* *p* < .05; ** *p* < .01)

In men, resemblance had the largest partial correlation with adoption preference ($pr = .287$, $SE = .020$). Adoption preference was more modestly partially correlated with cuteness ($pr = .174$, $SE = .031$) and happiness ($pr = -.051$, $SE = .028$) but did not have a significant partial correlation with health ($pr = .045$, $SE = .032$). Women's adoption scores had significant partial correlations with all of the predictors (resemblance $pr = .137$, $SE = .025$; health $pr = .172$, $SE = .026$; happiness $pr = -.090$, $SE = .024$), with cuteness exhibiting the largest ($pr = .316$, $SE = .031$). The partial correlations for resemblance, health, and cuteness were significantly ($p < .01$) different between the sexes. Interestingly, unlike the zero-order correlations, the partial correlations for happiness were negatively correlated with adoption preference in both sexes.

Principal Components Analysis

Given the similarity of the correlations between the variables for both sexes, as well as the large, significant correlations between health, happiness, and cuteness, a more parsimonious representation of the independent variables was sought. Principal component analysis was chosen to reduce the variables from each sex to components and generate component scores to be used in correlational analyses. A rotated solution was sought using varimax rotation. A principal component analysis was run for each stimulus/trial, and the resulting 20 loadings were then averaged to yield the averaged component loadings for each sex. Supplementary analyses using direct oblimin and/or EFA were performed to confirm that the assumption of orthogonality was not violated. Two factors were obtained for both sexes, accounting for an average of 80% of the variance among the two factors.

The averaged component loadings for the male sample are illustrated in Figure 2 (error bars represent standard error of the mean). As can be seen, the first component, which we labeled Infant Quality, had a low loading on resemblance and high loadings on health, happiness, and cuteness. The second component, which we labeled Resemblance, had a very high loading on resemblance and low loadings on health and happiness. Cuteness had a modest average loading of 0.26, which was lower than the typical limit for component inclusion (Tabachnick and Fidell 1996). The averaged component loadings for the female sample are illustrated in Figure 3 (error bars again representing standard errors) and show virtually the exact pattern as the male sample.

Using the two-factor solution, component scores were generated for each stimulus/trial using the regression method (SPSS v.10). These component scores were correlated with adoption preference, once again yielding 20 correlations per sex. As in the previous analyses, the correlations were tested for homogeneity and transformed using Fisher's z' .

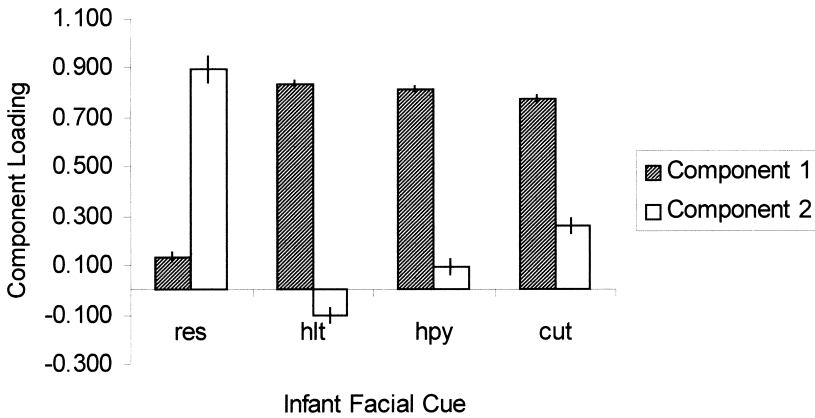


Figure 2. Averaged male component loadings.

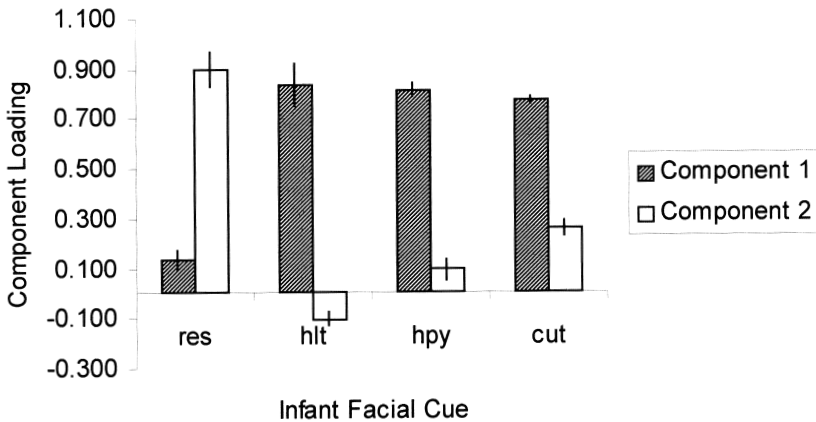


Figure 3. Averaged female component loadings.

Independent-samples *t*-tests ($df = 38$, equal variances) and within-sample *t*-tests ($df = 19$) were performed. The average correlations and their standard errors are presented in Table 2. Both component correlations were significantly different between the sexes.

DISCUSSION

The present study sought to determine whether infant facial cues significantly influenced feelings of parental care in adults by using a hypotheti-

Table 2. Average Correlations between Male and Female Component Scores and Adoption Preference

	COMPONENT 1 <i>Infant Quality</i>		COMPONENT 2 <i>Resemblance</i>	
	♂	♀	♂	♀
Adoption Preference	.185**	.406**	.330**	.185**
	±.031	±.026	±.021	±.022

** $p < .01$

cal adoption paradigm. It was predicted that infant facial cues would significantly influence feelings of parental care in adults. It was also predicted that resemblance would serve as a more important cue for men than for women. Both of these predictions were strongly supported by the data.

Within-Stimulus Average Correlations

To begin with, all of the zero-order average correlations were significantly different from zero. Owing to the high statistical power, caution is recommended before placing too great a significance on the results without also considering effect sizes. With that in mind, resemblance was the most important infant facial cue for men, and although the difference was small, it was significantly more important for men than for women. It should also be noted that for both sexes, the correlations between resemblance and the other cues, while significant, were also relatively modest. This suggests that resemblance was a relatively "honest" measure of the adult-infant resemblance (as opposed to adults simply asserting that the healthiest, happiest, and cutest infants most resembled them).

It is interesting that women still showed a significant correlation between resemblance and adoption preference, as maternity certainty presumably reduces the importance of cues of resemblance for women. It may be that the semantic meaning of "adoption" evokes not only feelings associated with parental care, but feelings associated with "dutiful" care. "Dutiful" care refers to an adult caring for an offspring because of some social obligation (e.g., deceased sister's offspring, unrelated godparent). In this situation, all else being equal, women should be concerned with kinship (i.e., it is better to care for a sister's child than a second-cousin's child). Also, perhaps women (and men) have a generalized preference to look for resemblance that is independent of maternity/paternity concerns. Social factors may influence parents' desire for infant-adult resemblance in order to help the infant "fit in" with the adoptive family (Wegar 1997).

A possible concern relevant to all of the cues, and to resemblance in particular, is whether or not the cues perceived by the adults were externally,

objectively valid. Several studies have focused on the ability of individuals to judge resemblance between other individuals (Christenfeld and Hill 1995; McLain et al. 2000). However, we believe that our approach has two significant advantages to those other studies. First, since humans are presumed to have lived in small bands for most of their evolutionary history (Fagan 1989), ascriptions of resemblance would rarely involve strangers. This is in strong contrast to the relative anonymity of western culture, from which our test samples are drawn. Individuals have far more exposure to their own features, as well as features of kin (including features that the individual may not have). Strangers must rely on relatively brief exposures to features, and they have no exposure to familial features. Second, and perhaps more important, the primary factor in determining the impact of resemblance on an individual's decision to invest may be that individual's perception of resemblance. As such, any inadequacy of the kin-recognition system in dealing with unfamiliar infants is independent of the consequences of a perceived resemblance. Thus, even if a parent's perception of resemblance (and thus kinship) is incorrect, feelings of parental care should still be evoked by the false perception.

Cues of cuteness and health both had medium-size correlations with adoption preference in the female sample. Both of these correlations were significantly different than the male sample's correlations, with modest to medium effect sizes for the respective differences. Both the importance of these cues to women and the sex differences are not surprising given that women are the primary caregivers in virtually all societies (Eibl-Eibesfeldt 1989). Further support for a sex difference comes from the low correlations for health–adoption preference and happiness–adoption preference in the male sample. Men seemed to place a low emphasis on health and happiness as cues for adoption preference. Happiness was the least important cue for both sexes. This may be due in part to the fact that only stimuli with neutral expressions (not smiling or crying) were chosen so as to minimize any unwanted biases.

The partial correlations revealed much the same pattern as the zero-order correlations and also supported the two initial hypotheses. For the male sample, resemblance remained the most important predictor of adoption preference, while the remaining variables showed even lower relative importance than in the zero-order correlations. This strongly suggests that the primary cue that influences male feelings of parental care is resemblance. For women, cuteness remained the primary cue, with modest input from both health and resemblance. These results reinforce both the primary caregiver hypothesis as well as the idea that women do place some value on determining kinship in the current paradigm, regardless of presumed maternity certainty. The sex differences were still present for resemblance, health, and cuteness, but there was no sex difference between the partial correlations for happiness.

Interestingly, the partial correlations for happiness were negative. The change in sign and magnitude from the zero-order correlations is reminiscent of the effects of a suppressor variable in a regression (Cohen and Cohen 1983). It may be that happiness acts to suppress the variance associated with the other predictors and adoption preference—especially with health and cuteness, given its large correlations with those variables.

Principal Components Analysis

The results of the principal components analysis indicated that men and women viewed the relationships between the independent variables in much the same way. Two clear components emerged from the initial four variables. The first component was related to the infant's quality, and the second component was related to the infant-adult resemblance. The sexes' component loadings were strikingly similar. In conjunction with the data from the zero-order correlations, we therefore concluded that men and women understood the relationships between the predictor variables in much the same way. Where they differed was in the emphasis that they placed on the relationship of these variables with adoption preference.

This sex difference became apparent when the component scores for the sexes were correlated with adoption preference. Men placed greatest emphasis on the resemblance component, whereas women placed greatest emphasis on the infant quality component. However, both still placed modest emphasis on the relationship between the other component and adoption preference. For men, it seems sensible that cues of infant quality should be of importance, especially after kinship has been assessed. For women, it also seems reasonable to postulate that they have a generalized preference for investing in kin, and this translates into some concern for cues of kinship.

A final caution is appropriate in the discussion of the principal component results. It is possible that method variance may account for the high correlations between health, happiness, and cuteness. However, the solution obtained does seem to make intuitive sense, and it agrees well with theoretical predictions.

CONCLUSION

To demonstrate that infant cues are important for influencing feelings of parental care in adults, several issues need to be addressed. First, an objective measure of parental care, or better yet, parental investment, needs to be obtained. Although the proxy, adoption preference, seemed to work reasonably well, it may contain some semantic "impurities." Second, cross-cultural studies are needed to test the hypothesis that infant cues are used by adults in cultures outside of the one observed. The samples used

in this study do cover both sexes, and a wide range of parenting experience, education, and SES, but they still do not rule out the possibility of cultural influence. Third, a multivariate approach may be of some assistance in completely revealing the relationships between the variables. A repeated-measures regression approach was considered (Lorch and Myers 1990), but its use with these data was not practical owing to violations of multivariate normality and sphericity. Finally, it may be of interest to determine how accurate adults are in their perceptions of infant cues. That is, how well do individual parents' ratings of resemblance, health, happiness, and cuteness agree with the actual, objective measures of resemblance, health, happiness, and cuteness? We have started to answer some of these questions (Waller, Volk, and Quinsey, submitted), but more details (especially with regard to resemblance) are required.

Despite these concerns, the present study did address two main hypotheses. The first was that infant facial cues may provide important information for adults to use in a cost-benefit analysis of parental investment. The second was that cues of infant-adult resemblance would be more important for men than for women. Both of these hypotheses were supported by average zero-order correlations, average partial correlations, and average component score correlations. In all of the analyses, it seemed that men are primarily interested in cues of resemblance, with cues of infant quality (health, happiness, and cuteness) being of secondary importance. For women, the reverse was true, with cues of infant quality given priority over cues of resemblance in all of the analyses.

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Anthony Volk is a Ph.D. candidate at Queen's University, studying parental investment.

Vernon L. Quinsey is a professor of psychology and psychiatry at Queen's University. His research focuses on forensic and evolutionary psychology.

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