Public schooling provides an opportunity for children of various races to interact more closely. School experience can create a consistent level of cross-racial contact that may not be duplicated in other social settings. However, cross-racial contacts in schools are not always positive. Research suggests that children may differ in their racial understanding as a function of their experience with racial variability in their social environment or their racial identification. This study considers two research questions: (1) Given individual photos of people of various races, what are the decision rules children use to sort photos into family groups? and (2) How will decisions differ as a function of age, gender, and community type? African American, Latino, and European American students in the first and third grades (N=420) participated in the study. The results determined that children use skin color most often to make racial categorization decisions, although children's use of skin color for categorization declined with age. An attempt was made to describe differences in children's communities but a confounding of variables made interpretation of community effects speculative. (Contains 16 references.) (JDM)
Race and kinship: Children's categorization processes

Cynthia Hudley, David Wakefield, Whitney Scott
University of California, Santa Barbara,

Kerra Bui
University of California, Los Angeles

Marcela Cuellar
Stanford University

Paper to be presented at the American Educational Research Association annual meeting, April, 2000 in New Orleans, LA.
Race and Kinship: Children's categorization processes

The study of racial understanding has taken on increased prominence in developmental social psychology as communities around the world become increasingly diverse. The rise in racial diversity in communities and neighborhoods across the world has been accompanied by a concomitant increase in inter-racial contacts. Such increases in inter-racial contact, in turn, make more salient the divisions in human beings that are readily indexed by visible, physical characteristics (McGuire & Padawer-Singer, 1976). Such divisions are typically defined as racial variation, a definition that we adopt for this study. Although we concur with the perspective that race is a social rather than a biological entity, humans typically sort themselves and others into specific groups, in no small measure on the basis of outward characteristics. Thus the construct of race as indexed by physical characteristics continues to have considerable influence on human thinking and behavior (Hirschfeld, 1996).

Opportunities for Cross-Racial Contact and Children's Thinking About Race

When neighborhoods and communities become more racially and ethnically diverse, public schooling makes it necessary for children of varied races to interact more closely. Children's school experiences can afford a consistent level of cross-racial contact that may not be possible in any other social setting (Andereck, 1992; Holmes, 1995). However, such cross-racial contacts in diverse communities and schools are not always positive. Evidence abounds of children's negative or violent school relations that have been attributed to racial or ethnic tensions (e.g., Cordes, 1999; Sahagun, 1999). Thus, understanding children's thinking about race has become a major topic in the study of children's development (Aboud, 1988; Hirschfeld,
Racial Categorization

1996) as cross-race experiences, be they positive, negative, or neutral, become more and more prevalent in children's lives.

In this country, there is considerable variability in the degree of racial diversity in neighborhoods and communities, due in no small measure to persistent patterns of residential segregation (Clark, 1987). Thus, children's opportunities to directly experience a multiracial and multicultural environment in their schools also vary considerably. Although some children's cross-racial contacts may be constrained by their school and neighborhood composition, the nature of American society makes it highly likely that children will interact with people from racial groups other than their own. For adults, such experiences are a virtual certainty. Thus, one might also wonder how the nature of a child's community of residence might influence thinking about race.

As a starting point, a growing body of literature seeks to understand how children perceive differences among groups, and how these perceptions change over the course of development and across communities with different levels of cross-racial contact. However, these understandings have not been fully pursued across a range of individual difference variables that may strongly influence children's understandings. We have elected to investigate young children's understanding of kinship and race. We selected kinship as a context to investigate race because most children at very young ages can understand the concept of a family unit and the notion of kinship (Dunn, 1988). However, considerably disagreement continues over how clearly children understand the relationship between race and family background (Aboud, 1988; Hirschfeld, 1996). Our study examined the manner in which children relate racial features to family relationships.
The Development of Racial Thinking

Children's thinking about racial and ethnic differences involves both the cognitive processing that allows them to construct social categories and the specific conceptual content that is represented in those categories (Ramsey, 1987). Developmental models of children's ethnic awareness typically begin with obvious, physical characteristics (e.g., skin color) as cues that children use to sort individuals into racial/ethnic categories (Holmes, 1995; Vaughn, 1987) and move to more abstract principals or internal qualities (Phinney & Rotheram, 1987). Although the developmental timetable for ethnic awareness is not consistent among children of varying ethnicities (cf. Vaughn, 1987; Alejandro-Wright, 1985), the sequence of cue use from external to internal was presumed to be an invariant feature of cognitive development (Damon & Hart, 1988).

However, recent theories and research in developmental social cognition have begun to question this invariant sequence. Hirschfeld (1996) has argued that young children have an essentialist understanding of race, making it a characteristic that is assigned based on inner, distinguishing essences rather than visibly accessible categories. Children are presumed to possess a cognitive predisposition to categorize humans according to dimensions that the culture in which they are raised deems highly salient (e.g., skin color, nose shape). These categories are not drawn from superficial visual similarities but from attributed "essential" differences. If that were the case, conceptual beliefs about internal characteristics may create a heightened perceptual awareness of superficial, physical markers of race, a direct reversal of the invariant sequence postulated by general cognitive theory. For example, his studies have shown that children as young as three years of age match photos of supposed parents and
Racial Categorization

...children based on skin color, even though other, equally conspicuous visual cues were present (Hirschfeld, 1996). Thus, how and why children use superficial cues when making decisions about racial categorizations is a discussion that is ongoing; children's use of such characteristics to denote race has been clearly established.

Individual Differences in Racial Thinking

If all children possess essentialized notions of race, then all children from a given culture should categorize human groups in similar ways. But, prior research suggests that children might differ in their racial understanding as a function of their experience with racial variability in their social environment or perhaps their own racial identification. For example, young children of color are likely to misidentify themselves, or others, by racial categories (Cross, 1985). Children from racially diverse communities have been found to differ from children from majority White communities in their judgments about biracial children (Hirschfeld, 1995). Further for some children, the salient characteristics used for sorting are often not skin color, facial features, or other physical cues. Rather, affective responses (e.g., she seems nice), affiliative concerns (e.g., she looks like my friend), or other social concepts may underlie judgments about an individual's social identity.

To further illuminate individual differences in children's thinking about the physical characteristics that index race, we specifically tested two research questions. Given individual photographs of people of various races, each of which contains range of visual information (e.g., facial expression, hair, physical features), what are the decision rules that children will use to sort photos into "family groups"? Based on prior research, we expected children to use skin color most frequently. Further, how will the decisions differ as a function of age, gender, and
community type? We anticipated that the use of skin color would increase with age, as children become more accurate in their labeling and that responses would differ as a function of community type, consistent with prior research.

Method

Two groups of participants (N = 215) were recruited from two settings in southern California. We recruited a sample of African-Americans and Latinos (n=107) from a multiethnic urban metropolis and a sample of European-Americans (n=108) from a monoethnic coastal community. The sample was split across two grade levels (first-graders, M age = 6.61, n=107; and third-graders, M age = 9.01, n=108) with equal numbers of males (n=107) and females (n=108).

Participants completed two sorting tasks, one with three male photographs and the other with three female photographs, using photographs of unfamiliar youth. These stimulus materials were computer-enhanced to maintain consistency across visible features such as facial expression, eyebrows, ears, hair color and type, clothing, and photo background. In each set, one photo was of a child with race consistent African-American skin color and facial features (nose and lip shape), another photo was of a child with European-American race consistent skin color and facial features, and a third was of a child with light-colored skin and African-American facial features. One possible match would use skin color, and another possible match would use facial features.

The sorting tasks were presented to each child individually, and the order in which the sets of pictures (male set, female set) were presented to each student was counterbalanced. Participants were told "Two of these pictures belong together because the two children are
brothers (sisters). That is, they have the same mom and dad and are part of the same family.

Which are the two pictures that belong together? Participants were asked to explain why they grouped the photographs in that particular manner, and the experimenter noted the participant's pairings and all of the reasons provided.

Results

These categorical data were analyzed using chi-square and logit log-linear statistics, using sorting characteristics (skin color vs. facial features) as the dependent variable and age, region, and sex as independent variables. The data for boys' and girls' triads were analyzed separately. Preliminary chi-square analyses indicated significant (all p's <.01) effects of age for photos of both boys and girls, as well as significant effects of region for photos of girls only. Subsequent log-linear analyses tested all 3 independent variables to find the best model for the data.

Consistent with the preliminary analyses, the best fitting model for the boys' triad included only sorting characteristics and age, $\hat{L}^2 (6) = 8.22$, $p=.23$. Parameter estimates revealed that younger subjects were five times more likely to sort using use skin color than older subjects (log odds = 1.65, odds = 5.15) (See Figure 1). For the female triad, the best fitting model contained sorting characteristics as well as the three way interaction including both age and region, $\hat{L}^2 (4) = 3.02$, $p=.55$. Parameter estimated indicated that older students in the European-American community were four times less likely to use skin color as the sorting principle than were other subjects (log odds = -1.46, odds = -4.31) (See Figure 2).
Discussion

Consistent with our first hypothesis, children indeed used skin color most often to make racial categorization decisions. However, children's use of skin color declined with age, contrary to our expectations. As expected, findings were moderated by community of residence but only for the female stimulus materials. As children get older, their working memory and cognitive skills increase. As a result, perhaps older children are able to attend to and use characteristics less obvious than skin color in their categorization or sorting processes.

For members of the dominant American culture (European-Americans), skin color may further lose salience as a cue because race may have a minimal impact on their lives in a manner that is not true for children of color. As a result, our European-American sample in a monoethnic environment may have preferred surface cues other than skin color (i.e., facial features) for their categorization process. In contrast, our ethnic minority students in a multiethnic environment may be more aware of the impact of race in their lives as a result of racial discrimination and racial injustice. Therefore, ethnic minority students may be more sensitive to variations in skin color because that characteristic is highly salient in multiethnic communities.

A highly speculative explanation for the differences in responses between the male and female photos may be a function of physical attractiveness. The attractiveness literature consistently suggests that physical attractiveness is more salient for females than males. Therefore one might hypothesize that participants attended to more facial details when viewing the female set of photographs.
Finally, a severe limitation of this study is that community and race of participants were completely confounded. Studies of racial understanding typically compare participants using race as a grouping variable, while characteristics of the community of residence are not considered. In this study we have attempted to describe the differences in children's communities; however, the confounding of variables makes interpretation of community effects speculative at best. Future research must control for these variables separately. These data are valuable only a starting point for a question that is relatively neglected in the literature.
References


I. DOCUMENT IDENTIFICATION:

Title: "Face and Kinship: "Child" News Categorization Processes"

II. REPRODUCTION RELEASE:

In order to disseminate as widely as possible timely and significant materials of interest to the educational community, documents announced in the monthly abstract journal of the ERIC system, Resources in Education (RIE), are usually made available to users in microfiche, reproduced paper copy, and electronic media, and sold through the ERIC Document Reproduction Service (EDRS). Credit is given to the source of each document, and, if reproduction release is granted, one of the following notices is affixed to the document.

If permission is granted to reproduce and disseminate the identified document, please CHECK ONE of the following three options and sign at the bottom of the page.

The sample sticker shown below will be affixed to all Level 1 documents.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

Level 1

Check here for Level 1 release, permitting reproduction and dissemination in microfiche or other ERIC archival media (e.g., electronic) and paper copy.

The sample sticker shown below will be affixed to all Level 2A documents.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE, AND IN ELECTRONIC MEDIA FOR ERIC COLLECTION SUBSCRIBERS ONLY, HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

Level 2A

Check here for Level 2A release, permitting reproduction and dissemination in microfiche and in electronic media for ERIC archival collection subscribers only.

The sample sticker shown below will be affixed to all Level 2B documents.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

Level 2B

Check here for Level 2B release, permitting reproduction and dissemination in microfiche only.

Documents will be processed as indicated provided reproduction quality permits. If permission to reproduce is granted, but no box is checked, documents will be processed at Level 1.

I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce and disseminate this document as indicated above. Reproduction from the ERIC microfiche or electronic media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries.

Signature: Cynthia Hudson

Printed Name/Position/Title: Cynthia Hudson - Assistant Professor

Organization/Address: Univ. of Calif. - Santa Barbara

Telephone: 805-893-9324

E-Mail Address: hudleys@edu

Date: 8/15/00

Note: The form is on the reverse side of the first page.
III. DOCUMENT AVAILABILITY INFORMATION (FROM NON-ERIC SOURCE):

If permission to reproduce is not granted to ERIC, or, if you wish ERIC to cite the availability of the document from another source, please provide the following information regarding the availability of the document. (ERIC will not announce a document unless it is publicly available, and a dependable source can be specified. Contributors should also be aware that ERIC selection criteria are significantly more stringent for documents that cannot be made available through EDRS.)

<table>
<thead>
<tr>
<th>Publisher/Distributor:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Address:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Price:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

IV. REFERRAL OF ERIC TO COPYRIGHT/REPRODUCTION RIGHTS HOLDER:

If the right to grant this reproduction release is held by someone other than the addressee, please provide the appropriate name and address:

<table>
<thead>
<tr>
<th>Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Address:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

V. WHERE TO SEND THIS FORM:

Send this form to the following ERIC Clearinghouse:

University of North Carolina at Greensboro
ERIC/CASS
201 Ferguson Building
PO Box 26171
Greensboro, NC 27402-6171

However, if solicited by the ERIC Facility, or if making an unsolicited contribution to ERIC, return this form (and the document being contributed) to:

ERIC Processing and Reference Facility
1100 West Street, 2nd Floor
Laurel, Maryland 20707-3598

Telephone: 301-497-4080
Toll Free: 800-799-3742
FAX: 301-953-0263
e-mail: ericfac@inet.ed.gov
WWW: http://ericfac.piccard.csc.com

EFF-088 (Rev. 9/97)