

**Clarence C. Gravlee**

Department of Anthropology  
University of Florida

**Elizabeth Sweet**

Department of Anthropology  
Northwestern University

## **Race, Ethnicity, and Racism in Medical Anthropology, 1977–2002**

---

*Researchers across the health sciences are engaged in a vigorous debate over the role that the concepts of “race” and “ethnicity” play in health research and clinical practice. Here we contribute to that debate by examining how the concepts of race, ethnicity, and racism are used in medical–anthropological research. We present a content analysis of Medical Anthropology and Medical Anthropology Quarterly, based on a systematic random sample of empirical research articles (n = 283) published in these journals from 1977 to 2002. We identify both differences and similarities in the use of race, ethnicity, and racism concepts in medical anthropology and neighboring disciplines, and we offer recommendations for ways that medical anthropologists can contribute to the broader debate over racial and ethnic inequalities in health.*

Keywords: [Race; ethnicity; racism; health disparities; systematic review]

---

Racial and ethnic inequalities in health have become a major focus of research across the social and biological sciences. This research is significant most of all because the stakes are so high. In Brazil, for example, infant mortality is almost 70 percent higher for Afro-Brazilians than it is for whites (Pan American Health Organization 2001). In Singapore, diabetes mellitus is twice as common among Indians as it is among Chinese (Cutter et al. 2001). In Canada, the overall death rate for indigenous peoples is more than 50 percent higher than in the nonindigenous population (Trovato 2001). And in the United States, each year more than 83,000 African Americans die who would not if death rates for black and white Americans were equal (Satcher et al. 2005).

Beyond the devastating scale of suffering, these inequalities are also significant because they are the center of contemporary scientific debate about the meaning of race. Historically, physicians and medical scientists have played a pivotal role in

---

*MEDICAL ANTHROPOLOGY QUARTERLY*, Vol. 22, Issue 1, pp. 27–51, ISSN 0745-5194, online ISSN 1548-1387. © 2008 by the American Anthropological Association. All rights reserved. DOI: 10.1111/j.1548-1387.2008.00002.x

---

representing race as a natural, biological concept (Krieger 1987). Some researchers still openly defend race as a legitimate framework for identifying genetic differences in the risk for disease (e.g., Risch et al. 2002; Tang et al. 2005). However, over the last 20 years, clinicians and health researchers have become increasingly critical of race as a biological construct (Cooper 1984), and the health effects of racism are now a major area of research (Dressler et al. 2005). This shift has led to vigorous debate over the meaning and measurement of race in biomedicine and public health (e.g., Bamshad 2005; Burchard et al. 2003; Cooper et al. 2003; Krieger 2005).

Meanwhile, a parallel debate is taking place in anthropology. In the nineteenth and early twentieth centuries, anthropologists were central in constructing race as a legitimate biological category. By the 1960s, most anthropologists rejected race as biology but largely fell silent about race and racism as sociocultural phenomena (Littlefield et al. 1982; Mukhopadhyay and Moses 1997; Shanklin 1998). In the last decade, however, anthropologists have begun to reclaim a voice in national discussions about race and racism. Recent examples include position statements on race by both the American Anthropological Association (1998) and the American Association of Physical Anthropologists (1996); the AAA's (1997) response to the U.S. federal government's revised standards for collecting data on race and ethnicity; and the AAA's multimillion-dollar RACE project to improve public understanding of race, racism, and human variation.<sup>1</sup>

To date, discussions about race in anthropology and in the health sciences have had relatively little to do with one another. Indeed, in comparison to other disciplines, anthropology remains marginal to the current debate over racial inequalities in health (Chapman and Berggren 2005). Yet medical anthropologists are well positioned to make anthropology matter again. One striking element of recent debates in medicine and public health is how often clinicians and health researchers appeal to anthropologists for guidance on the meaning of race, often citing the American Anthropological Association's recent position statement (e.g., Anderson et al. 2001; Braun 2006; Freeman 1998; Oppenheimer 2001). Such broad recognition of anthropologists' expertise is rare, a singular invitation to be relevant in solving a problem of theoretical and practical importance.

We aim to stimulate interest in this debate by examining how the concepts of "race," "ethnicity," and "racism" are used in medical-anthropological research. Following the example of similar studies in neighboring disciplines, we present a content analysis of two key journals, *Medical Anthropology* and *Medical Anthropology Quarterly*. In particular, we ask: (1) How often and in what context do medical anthropologists use the concepts of race or ethnicity?, (2) How, if at all, do they distinguish between these concepts?, and (3) How often do medical anthropologists explicitly identify racism and social inequality as causes of health disparities? By comparing our results to trends in medicine, nursing, and public health, we draw attention to areas in which debates across disciplines can inform one another.

## Background

The recent surge of interest in health disparities has prompted many researchers to reflect critically on the role of race and ethnicity in health-related disciplines. In

particular, researchers in nursing, public health, and medicine have systematically reviewed the use of race and ethnicity as variables in U.S.-based health research. Table 1 summarizes the key findings from six such reviews. In general, they show that:

- race and ethnicity are among the most commonly used variables in health research
- the use of these variables is on the rise
- the concepts of race and ethnicity are seldom defined or justified for inclusion as study variables.

Of the studies in Table 1, Jones and colleagues' (1991) review of the *American Journal of Epidemiology* covers the broadest time span. From 1921–1990, nearly two-thirds of the U.S.-based studies published in the *American Journal of Epidemiology* referred to race. The proportion declined from 1921–1965 but has risen again since 1975. By 1990, 79 percent of U.S.-based studies made mention of race. In a later study, Comstock et al. (2004) extended the analysis to 1996–99 and found that roughly 74 percent of articles published in the *American Journal of Epidemiology* used race or ethnicity as study variables.

Similar patterns are evident in other journals. Denise Drevdahl et al. (2001) reviewed almost 50 years of the journal *Nursing Research*. Overall, roughly half of the articles used race or ethnicity. However, the proportion of articles has increased over time, from less than 30 percent in 1975 to more than 81 percent in 2000. Likewise, in the *American Journal of Public Health*, half of the articles published during the 1980s used race, ethnicity, or “national origins” (Ahdieh and Hahn 1996), but, by the late 1990s, race and ethnicity appeared in 80 percent of articles (Comstock et al. 2004).

A common concern across the reviews is the conceptual and methodological ambiguity of race and ethnicity as generally used in health research. There are four related problems. First, race and ethnicity are generally ill defined—if they are defined at all (Table 1). For example, Matthew Anderson and Susan Moscou (1998) searched MEDLINE for all original reports on infant mortality from January 1995 to June 1996. Of the 43 articles that used race or ethnicity, one defined ethnicity, and none defined race. Similarly, David Williams (1994) identified 121 research articles that used race or ethnicity in *Health Services Research* from 1966 to 1990. None of these articles defined race. Racial and ethnic categories were defined in 8.4 percent of articles that used them in the *American Journal of Public Health* (1980–89) and in only 3.0 percent in *Nursing Research* (1952–2000).

Second, there is little agreement about the conceptual relation between race and ethnicity. In *Health Services Research*, for example, “the terms race and ethnicity were used interchangeably, and clear distinctions were not made among nationality, race, and ethnicity” (Williams 1994:266). In the *American Journal of Public Health*, “terminology for race, ethnicity, and national origins... was rarely based on a clear and explicit definition,” and “different terms were used interchangeably” (Ahdieh and Hahn 1996:98). In infant mortality research, 53 percent of the articles that used race or ethnicity “intermixed racial data with data on ethnic groups, nationalities, or geographic areas of origin” (Anderson and Moscou 1998:226). And during 1996–99, articles in the *American Journal of Epidemiology* and the

Table 1. Summary of content analyses of race and ethnicity in health-related journals, U.S.-based studies

Source	Scope of review	Period	Articles screened	Articles reviewed	# Use race or ethnicity	% Use race or ethnicity	% Defined or justified use of race or ethnicity	% Stated method for determining race or ethnicity
Anderson and Moscou (1998)	Infant mortality	1995-1996	44	44	35	79.5	2.9	0.0
Drevdahl et al. (2001)	<i>Nurs Res</i>	1952-2000	596	337	167	49.6	3.0	9.0
Jones et al. (1991)	<i>Am J Epidemiol</i>	1921-1990	1200	558	359	64.3	—	—
Comstock et al. (2004)	<i>Am J Epidemiol</i>	1996-1999	1016	570	420	73.7	—	24.8
Ahdieh and Hahn (1996)	<i>Am J Public Health</i>	1980-1989	1001	914	462	50.5	8.4	1.1
Comstock et al. (2004)	<i>Am J Public Health</i>	1996-1999	902	628	499	79.5	—	45.5
Williams (1994)	<i>Health Serv Res</i>	1966-1990	585	192	121	63.0	13.2	—
Total			5344	3243	2063	63.6	7.8	19.0

*American Journal of Public Health* used nine different variable names that combined race and ethnicity into a single variable (e.g., race–ethnicity) (Comstock et al. 2004: 613).

Third, even when researchers define race or ethnicity, they rarely provide information about how these variables are measured. Overall, fewer than one in five studies specified methods for determining participants' race or ethnicity (Table 1). The overall proportion is biased upward by the relatively high frequency of articles that specify methods in the *American Journal of Public Health* (45.5 percent) and the *American Journal of Epidemiology* (24.8 percent) during 1996–99. Yet even the high frequency in these journals is deceptive because the most commonly stated method for determining race or ethnicity was the use of preexisting records, such as birth certificates or medical records. These records, in turn, have well-known flaws regarding the validity and reliability of data on race and ethnicity (Hahn 1992, 1999b; Hahn et al. 2002).

Fourth, these patterns—few explicit definitions, conflation of race and ethnicity, and unspecified methods—reflect a more basic problem: the routine and uncritical use of race or ethnicity without an explicit rationale. As Jay Kaufman and Richard Cooper observe, “epidemiology journals are filled to overflowing with direct black–white comparisons” (1995:664), but the testable hypotheses underlying such comparisons are seldom stated. Instead, race and ethnicity are typically used as proxies for some unspecified combination of genetic, sociocultural, or behavioral influences on health. The result is an endless collection of descriptive differences that test neither genetic nor environmental mechanisms and serve mainly to reinforce racial thinking (Braun 2006; Dressler et al. 2005).

Anthropologists have much to contribute to improving the use of race and ethnicity in health research. Yet, to foster fruitful exchange across disciplines, we believe it is important first to turn a critical eye toward the literature in medical anthropology. Thus, here we describe patterns in the use of race, ethnicity, and racism concepts in medical anthropology, as others have done for neighboring disciplines.

## Methods

### *Sample*

We conducted a content analysis (Neuendorf 2002) of two key journals: *Medical Anthropology* (1977–2002) and *Medical Anthropology Quarterly* (1987–2002). We identified 843 articles published in these journals from their inception through 2002. We then drew a systematic random sample that included every other article published in both journals prior to 2003 ( $n = 422$ ). This sampling design enhances the representativeness of our sample because it ensures consistent coverage across all time periods. We distinguished among four types of articles: empirical research reports ( $n = 283$ ); review, method, or theory articles ( $n = 70$ ); commentaries ( $n = 57$ ); and editorial material ( $n = 12$ ). To facilitate comparison with systematic reviews in other disciplines (Table 1), we limit our analysis to the 283 empirical research articles.<sup>2</sup>

### Measurement

Our coding scheme assessed the concepts, categories, and context in which race and ethnicity were used in the entire text of each article. We recorded verbatim the general concepts (e.g., “race,” “ethnicity,” “racial-ethnic”) and the specific categories (e.g., “black,” “white”) used in each article. We also recorded whether concepts were justified or defined, and whether researchers specified how people were assigned to racial or ethnic categories. Last, we coded whether articles used race and ethnicity in the context of discussing health disparities, racism, or other forms of social inequality. All measures were coded as dichotomous (1 = present, 0 = absent).<sup>3</sup>

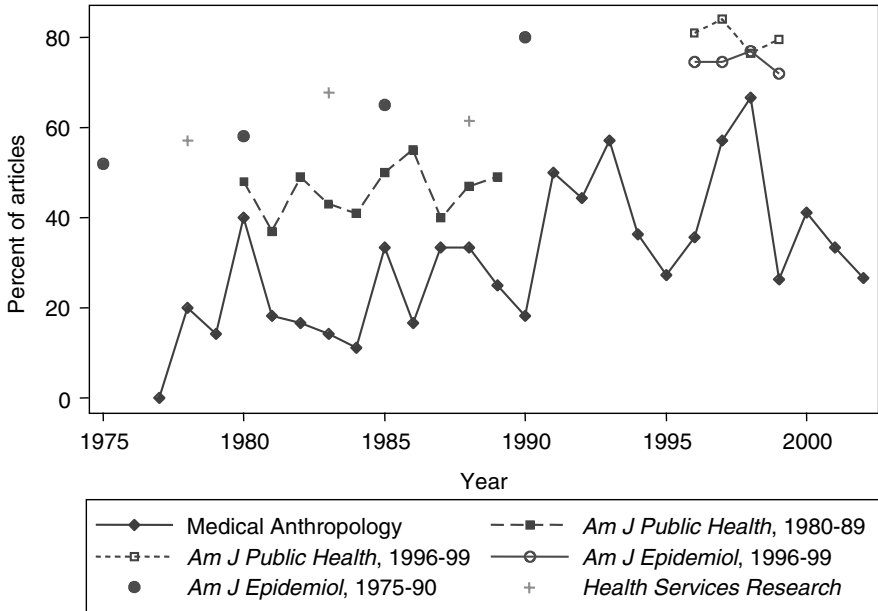
The original sample ( $n = 422$ ) was divided between two coders. We assessed intercoder reliability in a random subsample of 143 articles (33.9 percent) assigned to both coders. We use two estimates of intercoder reliability. Percent agreement is the proportion of times that coders applied the same value for a code. Cohen’s Kappa ( $\kappa$ ) measures the amount of agreement above what would be expected by chance (Cohen 1960).

Intercoder reliability for whether the 143 articles were “empirical research reports” was excellent ( $\kappa = .97$ ). For the remaining codes, estimates of reliability are based on the 67 articles in the reliability subsample coded as “empirical” by either coder. In general, reliability is acceptable. Coders agreed more than 90 percent of the time about all but two codes (see Appendix A). Kappa is generally higher for the presence of specific categories ( $.66 \leq \kappa \leq 1.00$ ) than it is for race ( $\kappa = .53$ ) or ethnicity ( $\kappa = .58$ ) as generic concepts. In part, this pattern reflects the low frequency of abstract concepts related to race or ethnicity in the reliability subsample, which makes estimates of Kappa unstable.

The coders faced several challenges. For example, coders reported difficulty in distinguishing between ethnic (as opposed to national or other social) identities in articles in which the concept of ethnicity was not explicitly used. We decided to record national identities as ethnic categories because the distinction between nationality and ethnicity is not always clear in the contexts in which anthropologists work; we generally excluded other social identities, such as religious affiliation. Coders also reported difficulty in coding subtle discussions of racial or ethnic inequality in articles that did not use direct terms such as racial inequality. Coders typically reviewed each article twice to ensure that they did not overlook any concepts or categories related to race or ethnicity.

### Results

We found little evidence that the frequency of racial or ethnic concepts differs between the two journals any more than would be expected by random sampling error (for race:  $\chi^2 = 2.14$ ,  $p = 0.14$ ; for ethnicity:  $\chi^2 = 2.96$ ,  $p = 0.09$ ). The only significant difference is in use of the category “African American,” which appeared in 19.4 percent of the articles in *Medical Anthropology Quarterly* but in only 7.1 percent of the articles in *Medical Anthropology* ( $\chi^2 = 9.47$ ,  $p = 0.002$ ). Otherwise, the differences between journals are not statistically significant. Thus, we combine results from the total sample in the rest of our analysis.



**Figure 1.** Time trends in frequency of race or ethnicity in medical anthropology and other disciplines. (See text for sources. Where necessary, percentages are estimates based on figures from original sources.)

#### *Frequency and Use of Race and Ethnicity*

Figure 1 shows the proportion of articles over time that use any concept of race or ethnicity in our sample and in similar studies from neighboring disciplines. Two patterns are evident. First, despite large fluctuations from year to year, the role of race and ethnicity concepts in medical anthropology appears to have grown over time. A similar trend has occurred in other disciplines, although some of this trend may be an artifact of methodological differences between content analyses. Second, at all times, race and ethnicity appear to play a smaller role in medical anthropology than they do in allied disciplines. Overall, one third (32.9 percent) of the articles in our sample used the concepts of race or ethnicity, as compared to 50 to 80 percent in neighboring disciplines.

Table 2 lists selected terms and phrases that we interpreted as racial or ethnic concepts. Not surprisingly, there is no uniform terminology for discussing race and ethnicity in medical anthropology. Rather, medical anthropologists use a wide variety of terms to invoke different meanings. Some terms in Table 2 are used to delineate groups of people (e.g., “ethnic group,” “people of color,” “racial group”). Others refer to social identities (e.g., “ethnic identity,” “racial identity”) or to cultural and linguistic differences (e.g., “ethnic or cultural group,” “ethnolinguistic group”). Still others refer to *race* and *ethnicity* as an aspect of social organization (e.g., “ethnic and race relations,” “racial and ethnic stratification”).

Table 2. Selected terms and phrases used in reference to concepts of race or ethnicity

Cultural or ethnic background	Ethnic populations
Ethnicity	Ethnolinguistic groups
Ethnicities	Minority
Ethnic	Minority group
Ethnic and race relations	Minority populations
Ethnic background	Peoples of color
Ethnic or cultural group	Race
Ethnic group	Racial identity
Ethnic heritage	Racial group
Ethnic identity	Racial and ethnic minorities
Ethnic minorities	Race/ethnicity
Ethnic minority populations	Race/ethnic
Ethnic heritage	Racial/ethnic

These differences in meaning generally depend on context; explicit definitions of race or ethnicity are rare. Of the 93 articles in our sample that used race or ethnicity, only two defined or justified use of these terms. Both of these cases refer to the contested meaning of race and ethnicity in endnotes:

We use the term “social race” to underscore the socially and politically constructed nature of “race” as a category. Ongoing controversy about the meaning of the term and how best to address the politics and ideology of race in research have yet to produce a vocabulary that is widely accepted. In deference to this unfinished discussion, we use “race” in the remainder of the article. [Estroff et al. 1991:365]

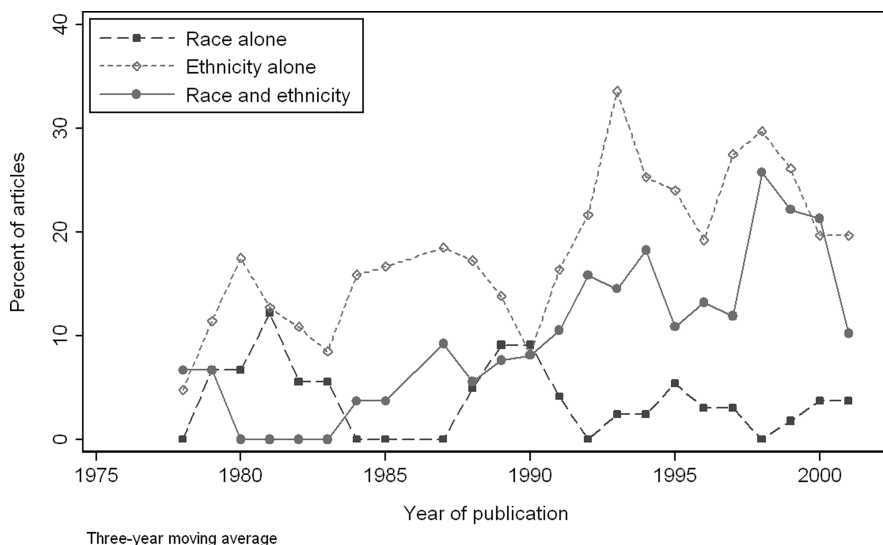
This is not the article to critique the categorical terms racial or ethnic. I find both terms, as well as the cultural–political process of lumping people of various backgrounds into a handful of superimposed identity categories that describe skin color (white, African American), language (Hispanic), or continent of origin (Asian), to be inadequate. Because it is culturally and thus academically the norm to separate people according to these classifications, I do the same. [Pliskin 1997:104]

The second passage is notable, among other reasons, because it refers to both racial and ethnic but does not distinguish between these concepts. Indeed, Table 2 includes several terms that combine race and ethnicity in a single phrase (e.g., “race–ethnicity,” “racial and ethnic minorities,” “racial and ethnic stratification”). These patterns raise questions about how medical anthropologists conceptualize the relation between race and ethnicity.

### *Race versus Ethnicity*

Figure 2 compares time trends in the percentage of articles that (1) use race alone, (2) use ethnicity alone, or (3) use race and ethnicity together. In general, the concept





**Figure 2.** Time trends in the frequency of race versus ethnicity in medical anthropology

of ethnicity is nearly four times more common than is the concept of race. About 19 percent of the articles in our sample use ethnicity alone, but less than five percent use race alone. The most significant change over time is the growing tendency to use both race and ethnicity together. From 1979–1984, no article in our sample used both race and ethnicity; from 1997–2002, on average, 18 percent did so each year (range = 8.3–41.7).

In part, the preference for ethnicity may reflect the demise of the race concept in anthropology (Harrison 1995). But it may also reflect the fact that many medical anthropologists work in cultural contexts where the emic concept of race is not locally meaningful. Thus, Table 3 summarizes our results for the total sample and separately for research based in the United States versus other regions.

Table 3a shows that articles based on research in the United States are substantially more likely to use the concepts of race or ethnicity (45.7 percent versus 25.3 percent), but the difference is most pronounced for the concept of race. More than one-quarter of U.S.-based articles used some racial concept, but only 6.7 percent of other articles did so. The concept of ethnicity was also more common in the U.S.-based articles, but here the regional difference is more modest (36.2 versus 22.5 percent).

Figure 3 further illustrates these differences. Just under 8 percent of U.S.-based articles use the concept of race alone (i.e., without also using ethnicity). This proportion is still not large, but it is nearly triple the proportion for articles based on research in other societies. More striking still is the fact that nearly five times as many articles about the United States use both race and ethnicity than is the case for research based in other parts of the world (19.1 versus 3.9 percent). There is no

Table 3. Frequency of racial and ethnic concepts and categories in medical anthropology, U.S. versus non-U.S. research, 1977–2002

	United States ( <i>n</i> = 105)		Other region ( <i>n</i> = 178)		Total ( <i>n</i> = 283)	
	Number	%	Number	%	Number	%
<i>a. Concepts</i>						
Any racial or ethnic concept*	48	45.7	45	25.3	93	32.9
Any race concept*	27	25.7	12	6.7	39	13.8
Any ethnicity concept*	38	36.2	40	22.5	78	27.6
Any combined racial/ethnic concept*	4	3.8	0	0.0	4	1.4
Concepts defined	2	1.9	0	0.0	2	0.7
<i>b. Categories</i>						
Any racial or ethnic category	91	86.7	163	91.6	254	89.8
Any OMB racial or ethnic category*	81	77.1	32	18.0	113	39.9
Any non-OMB racial or ethnic category*	70	66.7	163	91.6	233	82.3
Categories defined	6	5.7	7	3.9	13	4.6
<i>c. Context</i>						
Racism and racial or ethnic inequality *	25	23.8	12	6.7	37	13.1
Social inequality	29	27.6	46	25.8	75	26.5

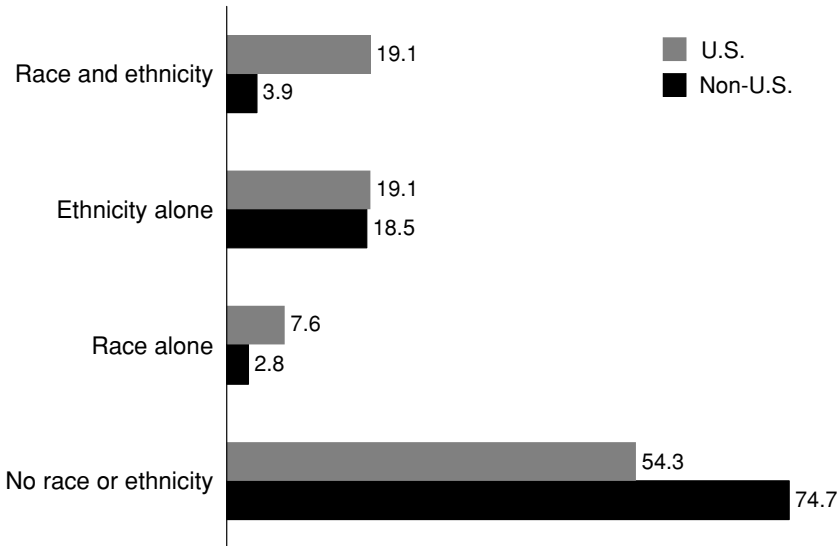
\*Statistically significant ( $\chi^2$ ) with Sidak correction for multiple comparisons ( $\alpha = .05$ ).

Note: Percentages of “any race concept” and “any ethnicity concept” do not total to “any racial or ethnic concept” because they are not mutually exclusive (i.e., some articles used both race and ethnicity concepts). “Any combined racial/ethnic concept” refers only to articles that combined race and ethnicity into a single term (e.g., race/ethnicity). OMB categories refer to Office of Management and Budget. 1997. Standards for maintaining, collecting, and presenting federal data on race and ethnicity. *Federal Register* 62:58781–58790.

significant regional difference in the proportion of articles that use the concept of ethnicity alone (i.e., without also using race).

#### *Frequency and Use of Racial and Ethnic Categories*

Table 3b summarizes the frequency of specific racial or ethnic categories (e.g., “white,” “Indian”) by region and for the total sample. Overall, specific racial or ethnic labels are much more common than are abstract racial or ethnic concepts. Nearly 90 percent of the articles use some racial or ethnic category; the modest difference between research in the United States and in other regions is not statistically significant. However, as we would expect, there is a substantial difference in which specific categories are used in different regions. Research based in the United States is dominated by the racial and ethnic categories defined by the federal Office of



**Figure 3.** Percent of articles that use concepts of race or ethnicity in research based in United States versus other regions

Management and Budget (OMB 1997), whereas these categories are not relevant in other societies.

Table 4 shows the most frequently used categories in our sample. The list is dominated by categories related to OMB guidelines, even though U.S.-based research accounts for less than 40 percent of the sample. By far the most common category is “white,” which occurred in more than 21 percent of the articles. Five of the top seven terms correspond to OMB categories (e.g., “Hispanic,” “black,” “African American,” “Native American”), and even many of the less frequently used terms are closely related to these categories (e.g., “American Indian,” “Caucasian,” “Euro-American,” “Latino”). At the same time, none of these categories is widely used. With the exception of “white,” no term is used in 15 percent of the articles or more. This pattern likely reflects the fact that medical anthropologists work all over the world, and many of the racial or ethnic labels they use are bound to particular contexts.

A relatively small fraction of articles (4.6 percent) define or justify the use of racial or ethnic categories (Table 3b). However, these cases—particularly those based in the United States—highlight two important themes. First, several researchers are critical of OMB categories, citing the importance of local context and diversity within conventional racial and ethnic categories. For example, Rayna Rapp (1988:147) notes that “‘Hispanic’ glosses a range of Spanish-speaking cultures, especially at the present time in New York City.” Similarly, Maria Luis Urdaneta and Rodney Krehbiel (1989) examine cultural diversity among “at least four distinct populations which are collectively referred to as Mexican-Americans in the United States.” Leo Chavez and colleagues likewise explain, “A note on terminology is in order”:

Table 4. Most frequently used racial or ethnic categories ( $n = 233$ )

Item	Number of articles	Percent
1 White	61	21.6
2 Indian	41	14.5
3 European	38	13.4
4 Black	37	13.1
5 Hispanic	37	13.1
6 African American	36	12.7
7 Native American	22	7.8
8 American	22	7.8
9 Puerto Rican	21	7.4
10 Mexican	19	6.7
11 African	19	6.7
12 Chinese	18	6.4
13 Mexican American	17	6.0
14 Latino	16	5.7
15 Latin American	14	4.9
16 Caucasian	13	4.6
17 Navajo	12	4.2
18 North American	12	4.2
19 Anglo	12	4.2
20 Japanese	11	3.9
21 Cuban	11	3.9
22 Mestizo	11	3.9
23 Haitian	10	3.5
24 French	10	3.5
25 Asian	9	3.2
26 American Indian	9	3.2
27 Filipino	9	3.2
28 Euro-American	9	3.2

“Latinas,” like “Hispanics,” is a general term that refers to women of Latin American descent and includes Mexican and Salvadoran immigrants and U.S.-born Chicanas. Our use of “Chicanas,” “Mexican immigrants,” and “Salvadoran immigrants” is intentional and is meant not only to highlight the diversity among Latinas but to allow us to examine for differences among these groups. “Latina immigrants” includes Mexican and Salvadoran immigrants only. [Chavez et al. 1995:46]

Second, a few authors explain that racial and ethnic categories are important because of the way people are labeled in society. For example, writing about South Africa, Rachel Jewkes and Katharine Wood note that “the term ‘coloured’ is used to refer to people who would have been classified as such by the apartheid population classification system” (1999:184). Eugenia Kaw describes the participants in her study as “Asian American” for a similar reason: “Although I realize their ethnic diversity, people of Asian ancestry in the United States share similar experiences in that they are subject to many of the same racial stereotypes” (Kaw 1993:87).

These examples suggest that, despite their limitations, racial or ethnic categories may be important to the extent that they reflect processes of racialization that are a meaningful part of people's experience.

Because these examples focus on how people are labeled by others, they raise questions about the relative value of self-identification versus categorization by others. However, in our sample, there is otherwise little discussion of self-identification versus observer categorization. Very few (5.1 percent) of the articles that use racial or ethnic categories describe how people were assigned to these categories. These articles either rely on self-identification (2.4 percent) or use data from the census, historical sources, or other literature (2.7 percent). The remaining 94.9 percent of the articles omit discussion of how racial or ethnic labels were applied.

### *Context of Racism and Social Inequality*

Table 3c summarizes the proportion of articles that explicitly mention racism or other forms of social inequality. Here we distinguish between (1) racism and racial or ethnic inequalities and (2) other forms of social inequality (e.g., poverty, sexism). Social inequalities (other than racism) are a substantial focus of research in medical anthropology regardless of region; more than 26 percent of articles refer to social inequalities as a determinant of health status or access to health care. Racism and racial or ethnic inequalities are nearly as salient for articles about the United States; nearly one in four (23.8 percent) U.S.-based articles mentions racism or racial and ethnic inequality. By contrast, less than seven percent of articles about other regions discuss racism or racial and ethnic inequality.

We also find that, when medical anthropologists use the concepts of race or ethnicity, they are likely also to discuss racism or other social inequalities. Most articles that discuss social inequalities do so without using the concepts of race (76.7 percent) or ethnicity (56.3 percent). But among articles that do use race or ethnicity, most do so in the context of discussing racism or other social inequalities (61.5 percent for race; 57.7 percent for ethnicity).

### Discussion

The links between race, medicine, and health have always been contentious, but probably never more so than now. Racial inequalities in health have become a central focus of debate not only in academic circles but also in the public sphere (e.g., Bakalar 2007; Brink 2002; Drexler 2007; Wade 2002). The unprecedented level of interest in health disparities provides a unique opportunity for medical anthropologists to participate in a public discussion with broad theoretical and practical implications.

The content analysis we present here permits direct comparisons between the role that the concepts of race, ethnicity, and racism play in medical anthropology and in other health-related disciplines. The results point to both differences and similarities. In some cases, the differences highlight unique strengths of medical anthropology that could inform the broader effort to explain and eliminate racial and ethnic inequalities in health. Yet our findings also call attention to potential pitfalls that could hinder medical anthropologists' contribution to this effort.

One of the striking contrasts between our results and similar studies in neighboring disciplines is the relatively low frequency of race and ethnicity concepts in medical anthropology. Reviews in nursing (Drevdahl et al. 2001), in biomedicine (Anderson and Moscou 1998), and in public health and epidemiology (Comstock et al. 2004) show that roughly 80 percent of recent articles in those fields include race or ethnicity as study variables. By contrast, we find that the concepts of race and ethnicity appear in less than one-third of all articles in *Medical Anthropology* and *Medical Anthropology Quarterly* from 1977 to 2002; in no year did race or ethnicity appear in more than two-thirds of our sample. The contrast with other disciplines is even more striking if we focus only on race. The race concept occurs in just 13.8 percent of the articles in our sample, and most of these articles also reference ethnicity. Race appears by itself in less than 5 percent of the articles.

This pattern is a double-edged sword. On the one hand, the habitual use of race and ethnicity in biomedicine—with no apparent rationale, no testable hypothesis, and little consideration of what these concepts mean or how they should be measured—is a well-recognized problem (Kaplan and Bennett 2003; Kaufman and Cooper 1995). It obscures the causes of health disparities and reinforces the insidious assumption that racial inequalities stem from innate, immutable differences between racially defined groups. In general, medical anthropology avoids this trap.

On the other hand, medical anthropology risks being irrelevant to the broader debate about racial and ethnic inequalities in health, given the relatively small role that race currently seems to play in the discipline. This possibility mirrors the fate of anthropology in general. In the nineteenth and early twentieth centuries, anthropologists played a key role in constructing race as a legitimate biological construct (Baker 1998; Brace 2005). By the mid-20th century, the discipline reversed course, and most anthropologists adopted the view that there are no biological races of humankind. However, in dismissing race as biology, most anthropologists neglected the causes and consequences of persistent racial inequality, and the discipline lost its voice in public discussions of race and racism (Harrison 1995). Thus, as Eugenia Shanklin observes, the critique of race “helped to ensure that American anthropology won the battle and lost the war” (1998: 670).

Some researchers in public health and biomedicine are aware of this legacy and want to avoid repeating it. For example, Gerald Oppenheimer notices anthropology’s blind spot and wonders whether public health could develop one, too: “Would the excision of race as a category of analysis tend to blind researchers . . . to the existence and consequences of racism, including its impact on health?” (2001:1053). In particular, Oppenheimer worries that supplanting race with ethnicity—a trend we detect in our content analysis—would put health researchers out of touch with the reality of people’s lives:

Should we dump “race” when most people—White, Black, Asian, etc.—tend to use the concept both in describing themselves and in perceiving and responding to others? . . . Race, if not a biological fact, is a social fact. . . . In substituting “ethnic group” for “race,” to what extent will research fall short of the subjective and objective experiences of the groups we are studying? [Oppenheimer 2001:1053]

This sentiment resonates with clinicians and health researchers alike. For example, Anderson et al. note the family physician's dilemma: "If clinicians omit race because it is not a biological variable, do they risk ignoring or, worse, concealing important social data about their patients?" (2001:430). Likewise, Glenn Flores and colleagues write in the *Archives of Pediatrics and Adolescent Medicine* that they "are deeply distressed . . . by the journal policy of restricting the use of ethnicity and race in future research, a position that could set back pediatric research by decades." "Now, more than ever," they suggest, "ethnicity and race should be an essential part of all child health research" (2001:1178). Their chief rationale is that ethnicity and race, as sociocultural phenomena, are linked to a wide range of sociocultural factors that influence health and well-being.

These arguments imply that we must better understand how the sociocultural reality of race and racism affects individual experience, behavior, and biology. Yet current practices in the health sciences often undermine this objective. In particular, as other content analyses have shown, most health researchers (1) fail to define race and ethnicity, (2) conflate the two concepts, (3) neglect to identify how people were assigned to racial or ethnic categories, and (4) omit the reason for including race and ethnicity in the study. These limitations make it practically impossible to know just what race and ethnicity measure, leading researchers to speculate about the influence of unmeasured genetic, behavioral, or sociocultural factors on racial and ethnic inequalities in health.

Our results indicate that some of these patterns are evident in medical anthropology, too, but important differences also point the way to a more productive line of research. First, like their colleagues in allied disciplines, medical anthropologists seldom define race or ethnicity, and they often conflate the two. This finding should not be a surprise; concepts of race and ethnicity are no less contested in anthropology than in any other field. Indeed, Carol Mukhopadhyay and Yolanda Moses suggest that the first step in resuscitating an anthropological voice in discussions of race and racism is to resolve the "terminological chaos" (1997:521) that plagues the field. The debate over racial and ethnic inequalities in health is an important forum for this work.

Second, we find that, when medical anthropologists use specific racial or ethnic categories, they rarely identify the methods they used to assign people to these categories. This finding may not have the same meaning in our study as it does in other disciplines, given that anthropologists in general are less likely to be explicit about methods than are epidemiologists or biomedical researchers (Greenfield 2000). However, our sample does include several articles that discuss the rationale for and limitations of using conventional racial and ethnic categories (e.g., Chavez et al. 1995; Kaw 1993; Rapp 1988; Urdaneta and Krehbiel 1989). These articles draw attention to the importance of understanding the meaning of the racial or ethnic categories that are relevant for people in a given context. This point has important implications for discussions about the measurement of race and ethnicity as variables in health research.

Last, we note a stark distinction between medical anthropology and other disciplines regarding the context in which race and ethnicity are discussed. The tendency in most health-related disciplines is to treat race and ethnicity—operationally and conceptually—as (often immutable) characteristics of individuals (Kaplan and

Bennett 2003). By contrast, our results suggest that race and ethnicity often enter medical anthropology as an aspect of sociocultural context. Thus, we find that many of the racial and ethnic concepts medical anthropologists use refer to cultural background, social relations, or power and social stratification (Table 2). More important, we find that more than 60 percent of the articles that use the concepts of race or ethnicity also explicitly discuss racism or other social inequalities. This finding differs sharply from studies in other disciplines. Indeed, the mention of racism warranted inclusion in only one of the content analyses in Table 1. That study found that just a single article in the sample (1.3 percent) identified racism as a potential factor in infant mortality.

We acknowledge three important limitations of our study. First, we can generalize only to research reports in *Medical Anthropology* and *Medical Anthropology Quarterly*. In keeping with similar studies in other fields, we have excluded review articles, commentaries, and theoretical pieces that do not present new findings. This approach is sensible, given our goal of comparing research trends across disciplines. But it means that some relevant commentaries are omitted from our sample (e.g., Porter 1994). Moreover, the identification of empirical research articles is not as straightforward in medical anthropology as it is in neighboring disciplines. The format of journal articles is less standardized, and the conceptualization of research design is more diverse. Indeed, one of the biggest hurdles in developing a reliable coding scheme was in operationalizing the definition of empirical research articles. However, our attention to this issue during training and codebook development resulted in excellent interrater reliability on the identification of empirical research articles.

Second, although the journals we selected are important, they do not represent the full reach of medical anthropology. Indeed, it may be that medical anthropologists who study racial inequalities in health place their work deliberately in interdisciplinary journals that reach a broader audience, precisely to participate in the wider debate over racial inequalities in health. It is also possible that some of the authors in our sample are not anthropologists. Nevertheless, we would argue that *Medical Anthropology* and *Medical Anthropology Quarterly* best represent the main currents of the subdiscipline.

Third, to make our study comparable to content analyses in neighboring disciplines, we opted for an approach that describes broad patterns but cannot capture the richness of individual articles. Thus, we can generalize about how often anthropologists use concepts of race, ethnicity, and racism, but we cannot convey the full nuance in such usage. Given our aims, this trade-off was unavoidable, but we recognize the potential value of a more selective review of exemplary articles. The results we present here provide a baseline for such a review.

Despite its limitations, our study provides an important comparison between medical anthropology and other health-related disciplines regarding the use of race, ethnicity, and racism. It also points to several ways that medical anthropologists could contribute to interdisciplinary research on racial and ethnic inequalities in health. We conclude with seven recommendations to stimulate such research. These recommendations complement existing guidelines for the use of race and ethnicity



in health research (e.g., Kaplan and Bennett 2003) but focus on the unique strengths of medical anthropology.

1. **Advance the critique of racial-genetic determinism.** Given the common assumption that racial health inequalities are largely genetic in origin, it remains necessary for anthropologists to clarify why race fails to describe human biological variation and genetic susceptibility to disease. Anthropologists have long advanced this critique. However, with a few notable exceptions (e.g., Goodman 2000; Kittles and Weiss 2003; Sankar et al. 2004), the critique is not usually addressed to biomedical audiences. The recent, widely publicized supplement to *Nature Genetics* on race and the human genome (Patrinos 2004), which featured the work of several biological anthropologists, demonstrates the relevance of anthropology to the debate in biomedicine. It also suggests that the extent to which anthropologists participate in this debate is a measure of our relevance to public discussions about race, racism, and human variation.

2. **Examine the cultural construction of race in biomedicine.** Medical anthropologists could contribute to criticism of the routine and uncritical use of race and ethnicity in biomedicine by examining the cultural construction of race in health research and clinical practice. There is already important work in this area (Linder 2004; Page and Thomas 1994; Rouse 2004; Santiago-Irizarry 2001), but there is room for more. In particular, it would be invaluable to have more ethnographic research on the hidden assumptions about race that shape the questions researchers ask and the ways they interpret their data. In addition, more ethnography of race and racism in clinical settings would be timely and relevant across disciplinary boundaries, given the overwhelming evidence for systemic racism in the provision of health care in the United States and elsewhere (Bhopal 2007; Braveman and Tarimo 2002; Smedley et al. 2002).

3. **Clarify the relation between race and ethnicity.** Our results reveal a growing tendency among medical anthropologists to combine the concepts of race and ethnicity. Content analyses in other disciplines have also documented this trend, and we echo others' recommendation that researchers clarify the conceptual relation between race and ethnicity (Office of Behavioral and Social Sciences Research [OBSSR] 2001).

The unique cross-cultural perspective of anthropology may prove particularly valuable here. Elsewhere we have suggested that race be understood as a culture-bound, emic construct that warrants ethnographic inquiry alongside other ways of constructing human difference in other societies (Dressler et al. 2005; Gravlee 2005). If the North American emic construct of *race* is used as a framework for understanding other societies, it may lead to profound misunderstanding (Bourdieu and Wacquant 1999; Hoetink 1967:34, 51–52; Seda Bonilla 1972). By contrast, because the concept of ethnicity presupposes fewer meanings, it may be more useful as an analytic framework for making valid comparisons between the emic construct of race in the United States and related constructs in other societies. In this sense, we suggest that ethnicity belongs on the same level of abstraction as constructs like kinship, religion, or the economy. That is, it delineates a field of study, not a variable that can be measured directly. Within this field, race demands attention as a sociocultural phenomenon bound to particular times and places.

Our content analysis suggests that medical anthropologists have implicitly adopted this strategy. The concept of race is nearly four times more common in articles based on research in the United States than it is in articles about other regions. By contrast, there is no significant regional difference in the use of ethnicity. This finding reinforces the view of race as a culture-bound construct and suggests that ethnicity may be more useful as an abstract theoretical construct for making comparisons across time and space. Others may argue with this conceptualization, but it is beyond question that clarifying the conceptual relation between race and ethnicity is a priority for future research.

**4. Link ethnography and measurement in health research.** One implication of our conceptualization of ethnicity is the need for systematic ethnographic research on the cultural construction of ethnic difference across time and space—including the construction of race in the United States. Ethnographic understanding of the salient concepts and categories in local models of ethnic classification can help to inform more meaningful measurement strategies in health-related research (OBSSR 2001:8–10).

A few articles in our sample touched on this point. In particular, Kaw (1993) and Jewkes and Wood (1999) justify the use of specific racial categories in the United States and South Africa, respectively, on grounds that they are meaningful to people in these contexts. Elsewhere Gravlee et al. (2005) take this approach a step further by incorporating systematic ethnographic data explicitly into the measurement of color in Puerto Rico. As they argue, establishing an empirical link between survey measurement and the meaning of local ethnic categories facilitates the interpretation of associations with health outcomes (Dressler et al. 2005).

**5. Identify sociocultural processes that generate inequalities in health.** Rachel Chapman and Jean Berggren (2005) make a compelling case that anthropologists can contribute to our understanding of racial and ethnic inequalities in health through the “radical contextualization” of health disparities. Ethnography is essential for understanding how global forces and power inequalities shape the local context of people’s lives and become embodied in individual sickness and suffering (Farmer 2004; Nguyen and Peschard 2003; OBSSR 2001:10–14). Ethnography also challenges assumptions that researchers otherwise take for granted, and it helps to generate hypotheses about specific sociocultural processes that link structural inequalities to health. These strengths represent an important and long-standing contribution of anthropology to epidemiology and other health sciences (Trostle 2005).

**6. Advance biocultural approaches to health and development.** There are growing calls for research that integrates the social and biological sciences across multiple levels of analysis (Glass and McAtee 2006; Institute of Medicine 2001; National Research Council 2001; OBSSR 2001). Anthropologists should be at the forefront of this development, but we are in danger of sitting on the sidelines as others reinvent the discipline. There are many different ways to envision the integration of cultural and biological anthropology (e.g., Briggs and Martini-Briggs 2004; Dressler 2005; Farmer 2003; Goodman and Leatherman 1998; Schell 1997; Worthman and Kuzara 2005), but all are relevant to an anthropology of racial and ethnic inequalities in health.

7. **Foster community-based participatory research.** Last, there is growing interest in community-based participatory research (CBPR) as a means for understanding and eliminating racial health disparities (Baker et al. 2001; Israel et al. 1998). This framework fosters institutional support and legitimacy for a style of research that many medical anthropologists take for granted (see, e.g., NIH Program Announcement PAR-07-283). Given the common ground between CBPR and the guiding principles of anthropological research (Hahn 1999a; Hyland 2005), medical anthropologists should be poised to make significant contributions to action-oriented research designed to eliminate racial inequalities in health.

## Notes

*Acknowledgments.* We thank Elena Park for assistance in coding and Bill Dressler for helpful comments on a previous version of this article.

1. For further information, see <http://www.understandingrace.org>.

2. Our codebook defined empirical research articles this way: “Article focused on reporting new research findings. The data may be qualitative or quantitative, and it may be the authors’ own data or that collected by other researchers or institutions. Analysis of primary historical or archival materials should also be coded as empirical research. Do not code a literature review or synthesis of ideas as empirical research.”

3. The codebook and coding forms are available on request. Coding materials are available by e-mail ([cgravlee@ufl.edu](mailto:cgravlee@ufl.edu)) or from Gravlee’s website (see <http://www.gravlee.org/>).

## References Cited

- Ahdieh, L., and Robert A. Hahn  
1996 Use of the Terms “Race,” “Ethnicity,” and “National Origins”: A Review of Articles in the American Journal of Public Health, 1980–1989. *Ethnicity and Health* 1(1):95–98.
- American Anthropological Association  
1997 American Anthropological Association Response to OMB Directive 15: Race and Ethnic Standards for Federal Statistics and Administrative Reporting, 2002.  
1998 AAA Statement on Race. *American Anthropologist* 100(3):712–713.
- American Association of Physical Anthropologists  
1996 AAPA Statement on Biological Aspects of Race. *American Journal of Physical Anthropology* 101:569–570.
- Anderson, Matthew R., and Susan Moscou  
1998 Race and Ethnicity in Research on Infant Mortality. *Family Medicine* 30(3):224–227.
- Anderson, Matthew R., Susan Moscou, Celestine Fulchon, and Daniel R. Neuspiel  
2001 The Role of Race in the Clinical Presentation. *Family Medicine* 33(6):430–434.
- Bakalar, Nicholas  
2007 Study Points to Genetics in Disparities in Preterm Birth. *New York Times*, February 27: F5.
- Baker, Edward L., LuAnn E. White, and Maureen Y. Lichtveld  
2001 Reducing Health Disparities through Community-Based Research. *Public Health Reports* 116(6):517–519.

- Baker, Lee D.  
1998 *From Savage to Negro: Anthropology and the Construction of Race, 1896–1954*. Berkeley: University of California Press.
- Bamshad, Mike  
2005 Genetic Influences on Health: Does Race Matter? *Journal of the American Medical Association* 294(8):937–946.
- Bhopal, Raj S.  
2007 Racism in Health and Health Care in Europe: Reality or Mirage? *European Journal of Public Health* 17(3):238–241.
- Bourdieu, Pierre, and Loïc Wacquant  
1999 On the Cunning of Imperialist Reason. *Theory, Culture and Society* 16(1):41–58.
- Brace, C. Loring  
2005 “Race” Is a Four-Letter Word: The Genesis of the Concept. New York: Oxford University Press.
- Braun, Lundy  
2006 Reifying Human Difference: The Debate on Genetics, Race, and Health. *International Journal of Health Services* 36(3):557–573.
- Braveman, Paula, and Eleuther Tarimo  
2002 Social Inequalities in Health within Countries: Not Only an Issue for Affluent Nations. *Social Science and Medicine* 54(11):1621–1635.
- Briggs, Charles, and Clara Martini-Briggs  
2004 *Stories in the Time of Cholera: Racial Profiling during a Medical Nightmare*. Berkeley: University of California Press.
- Brink, Susan  
2002 Race and Gender: An Unhealthy Combo. *U.S. News and World Report* 132(7):70.
- Burchard, Esteban Gonzalez, Elad Ziv, Natasha Coyle, Scarlett Lin Gomez, Hua Tang, Andrew J. Karter, Joanna L. Mountain, Eliseo J. Perez-Stable, Dean Sheppard, and Neil Risch  
2003 The Importance of Race and Ethnic Background in Biomedical Research and Clinical Practice. *New England Journal of Medicine* 348(12):1170–1175.
- Chapman, Rachel R., and Jean R. Berggren  
2005 Radical Contextualization: Contributions to an Anthropology of Racial/Ethnic Health Disparities. *Health* 9(2):145–167.
- Chavez, Leo R., F. Allan Hubbell, Juliet M. McMullin, Rebecca G. Martinez, and Shiraz I. Mishra  
1995 Structure and Meaning in Models of Breast and Cervical Cancer Risk Factors: A Comparison of Perceptions among Latinas, Anglo Women, and Physicians. *Medical Anthropology Quarterly* 9(1):40–47.
- Cohen, Jacob  
1960 A Coefficient of Agreement for Nominal Scales. *Educational and Psychological Measurement* 20:37–46.
- Comstock, R. Dawn, Edward M. Castillo, and Suzanne P. Lindsay  
2004 Four-year Review of the Use of Race and Ethnicity in Epidemiologic and Public Health Research. *American Journal of Epidemiology* 159(6):611–619.
- Cooper, Richard S.  
1984 A Note on the Biologic Concept of Race and Its Application in Epidemiologic Research. *American Heart Journal* 108(3, part 2):715–723.
- Cooper, Richard S., Jay S. Kaufman, and Ryk Ward  
2003 Race and Genomics. *New England Journal of Medicine* 348(12):1166–1170.

- Cutter, J., B. Y. Tan, and S. K. Chew  
2001 Levels of Cardiovascular Disease Risk Factors in Singapore following a National Intervention Programme. *Bulletin of the World Health Organization* 79(10):908–915.
- Dressler, William W.  
2005 What's *Cultural* about *Biocultural* Research? *Ethos* 33(1):20–45.
- Dressler, William W., Kathryn S. Oths, and Clarence C. Gravlee  
2005 Race and Ethnicity in Public Health Research: Models to Explain Health Disparities. *Annual Review of Anthropology* 34(1):231–252.
- Drevdahl, Denise, Janette Y. Taylor, and Debby A. Phillips  
2001 Race and Ethnicity as Variables in Nursing Research, 1952–2000. *Nursing Research* 50(5):305–313.
- Drexler, Madeline  
2007 How Racism Hurts—Literally. *Boston Globe*, July 15: E1.
- Estroff, Sue E., William S. Lachicotte, Linda C. Illingworth, and Anna Johnston  
1991 Everybody's Got a Little Mental Illness: Accounts of Illness and Self among People with Severe, Persistent Mental Illnesses. *Medical Anthropology Quarterly* 5(4):331–369.
- Farmer, Paul  
2003 *Pathologies of Power: Health, Human Rights, and the New War on the Poor*. Berkeley: University of California Press.  
2004 *An Anthropology of Structural Violence*. *Current Anthropology* 45(3):305–317.
- Flores, Glenn, Elena Fuentes-Afflick, Olivia Carter-Pokras, Luz Claudio, Gontran Lamberty, Marielena Lara, Lee Pachter, Francisco Ramos Gomez, Fernando Mendoza, R. Burciaga Valdez, Ruth E. Zambrana, Robert Greenberg, and Michael Weitzman  
2001 Why Ethnicity and Race Are so Important in Child Health Services Research Today. *Archives of Pediatrics and Adolescent Medicine* 155(10):1178–1179.
- Freeman, H. P.  
1998 The Meaning of Race in Science—Considerations for Cancer Research: Concerns of Special Populations in the National Cancer Program. *Cancer* 82(1):219–225.
- Glass, Thomas A., and Matthew J. McAtee  
2006 Behavioral Science at the Crossroads in Public Health: Extending Horizons, Envisioning the Future. *Social Science and Medicine* 62(7):1650–1671.
- Goodman, Alan H.  
2000 Why Genes Don't Count (for Racial Differences in Health). *American Journal of Public Health* 90(11):1699–1702.
- Goodman, Alan H., and Thomas L. Leatherman  
1998 *Building a New Biocultural Synthesis: Political-Economic Perspectives on Human Biology*. Ann Arbor: University of Michigan Press.
- Gravlee, Clarence C.  
2005 Ethnic Classification in Southeastern Puerto Rico: The Cultural Model of "Color." *Social Forces* 83(3):949–970.
- Gravlee, Clarence C., William W. Dressler, and H. Russell Bernard  
2005 Skin Color, Social Classification, and Blood Pressure in Southeastern Puerto Rico. *American Journal of Public Health* 95(12):2191–2197.
- Greenfield, Patricia M.  
2000 What Psychology Can Do for Anthropology, or Why Anthropology Took Post-modernism on the Chin. *American Anthropologist* 102(3):564–576.

- Hahn, Robert A.  
 1992 The State of Federal Health Statistics on Racial and Ethnic groups. *JAMA* 267(2):268–271.  
 1999a *Anthropology in Public Health: Bridging Differences in Culture and Society*. New York: Oxford University Press.  
 1999b Why Race Is Differentially Classified on U.S. Birth and Infant Death Certificates: An Examination of Two Hypotheses. *Epidemiology* 10(2):108–111.
- Hahn, Robert A., Scott F. Wetterhall, George A. Gay, Dorothy S. Harshbarger, Carol A. Burnett, Roy Gibson Parrish, and Richard J. Orend  
 2002 The Recording of Demographic Information on Death Certificates: A National Survey of Funeral Directors. *Public Health Reports* 117(1):37–43.
- Harrison, Faye V.  
 1995 The Persistent Power of “Race” in the Cultural and Political Economy of Racism. *Annual Review of Anthropology* 24:47–74.
- Hoetink, H.  
 1967 *Caribbean Race Relations: A Study of Two Variants*. New York: Oxford University Press.
- Hyland, Stanley E., ed.  
 2005 *Community Building in the Twenty-First Century*. Santa Fe, NM: SAR Press.
- Institute of Medicine  
 2001 *Health and Behavior: The Interplay of Biological, Behavioral, and Societal Influences*. Washington, DC: National Academy Press.
- Israel, Barbara A., Amy J. Schulz, Edith A. Parker, and Adam B. Becker  
 1998 Review of Community-based Research: Assessing Partnership Approaches to Improve Public Health. *Annual Review of Public Health* 19:173–202.
- Jewkes, Rachel K., and Katharine Wood  
 1999 Problematizing Pollution: Dirty Wombs, Ritual Pollution, and Pathological Processes. *Medical Anthropology* 18(2):163–186.
- Jones, Camara Phyllis, Thomas A. LaVeist, and Marsha Lillie-Blanton  
 1991 “Race” in the Epidemiologic Literature: An Examination of the American Journal of Epidemiology, 1921–1990. *American Journal of Epidemiology* 134:1079–1084.
- Kaplan, Judith B., and Trude Bennett  
 2003 Use of Race and Ethnicity in Biomedical Publication. *Journal of the American Medical Association* 289(20):2709–2716.
- Kaufman, Jay S., and Richard S. Cooper  
 1995 In Search of the Hypothesis. *Public Health Reports* 110:662–666.
- Kaw, Eugenia  
 1993 Medicalization of Racial Features: Asian American Women and Cosmetic Surgery. *Medical Anthropological Quarterly* 7(1):74–89.
- Kittles, Rick A., and Kenneth M. Weiss  
 2003 Race, Ancestry, and Genes: Implications for Defining Disease Risk. *Annual Review of Genomics and Human Genetics* 4(1):33–67.
- Krieger, Nancy  
 1987 Shades of Difference: Theoretical Underpinnings of the Medical Controversy on Black/White Differences in the United States, 1830–1870. *International Journal of Health Services* 17(2):259–278.  
 2005 Stormy Weather: Race, Gene Expression, and the Science of Health Disparities. *American Journal of Public Health* 95(12):2155–2160.
- Linder, F.  
 2004 Slave Ethics and Imagining Critically Applied Anthropology in Public Health Research. *Medical Anthropology* 23(4):329–358.

- Littlefield, Alice, Leonard Lieberman, and Larry T. Reynolds  
1982 Redefining Race: The Potential Demise of a Concept in Physical Anthropology. *Current Anthropology* 23(6):641–647.
- Mukhopadhyay, Carol C., and Yolanda T. Moses  
1997 Reestablishing “Race” in Anthropological Discourse. *American Anthropologist* 99(3):517–533.
- National Research Council  
2001 *New Horizons in Health: An Integrative Approach*. Washington, DC: National Academy Press.
- Neuendorf, Kimberly A.  
2002 *The Content Analysis Guidebook*. Thousand Oaks, CA: Sage Publications.
- Nguyen, Vinh-Kim, and Karine Peschard  
2003 Anthropology, Inequality, and Disease: A Review. *Annual Review of Anthropology* 32(1):447–474.
- Office of Behavioral and Social Sciences Research (OBSSR)  
2001 *Toward Higher Levels of Analysis: Progress and Promise in Research on Social and Cultural Dimensions of Health*. NIH Publication No. 01-5020. Bethesda, MD: National Institutes of Health.
- Office of Management and Budget  
1997 *Standards for Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity*. Federal Register 62:58781–58790.
- Oppenheimer, Gerald M.  
2001 Paradigm Lost: Race, Ethnicity, and the Search for a New Population Taxonomy. *American Journal of Public Health* 91(7):1049–1055.
- Page, Helan, and R. Brooke Thomas  
1994 White Public Space and the Construction of White Privilege in U.S. Health Care: Fresh Concepts and a New Model of Analysis. *Medical Anthropology Quarterly* 8(1):109–116.
- Pan American Health Organization  
2001 *Equity in Health: From an Ethnic Perspective*. Washington, DC: Pan American Health Organization.
- Patrinis, Ari  
2004 “Race” and the Human Genome. *Nature Genetics* 36(11s):S1–S2.
- Pliskin, Karen L.  
1997 Verbal Intercourse and Sexual Communication: Impediments to STD Prevention. *Medical Anthropology Quarterly* 11(1):89–109.
- Porter, Cornelia P.  
1994 Stirring the Pot of Differences: Racism and Health. *Medical Anthropology Quarterly* 8(1):102–106.
- Rapp, Rayna  
1988 Chromosomes and Communication: The Discourse of Genetic Counseling. *Medical Anthropology Quarterly* 2(2):143–157.
- Risch, Neil, Esteban Burchard, Elad Ziv, and Hua Tang  
2002 Categorization of Humans in Biomedical Research: Genes, Race and Disease. *Genome Biology* 3(7):comment 2007.1–2007.12.
- Rouse, Carolyn Moxley  
2004 Paradigms and Politics: Shaping Health Care Access for Sickle Cell Patients through the Discursive Regimes of Biomedicine. *Culture, Medicine and Psychiatry* 28(3):369–399.
- Sankar, Pamela, Mildred K. Cho, Celeste M. Condit, Linda M. Hunt, Barbara Koenig, Patricia Marshall, Sandra S. Lee, and Paul Spicer

- 2004 Genetic Research and Health Disparities. *JAMA* 291(24):2985–2989.
- Santiago-Irizarry, Vilma  
2001 Medicalizing Ethnicity: The Construction of Latino Identity in a Psychiatric Setting. Ithaca, NY: Cornell University Press.
- Satcher, David, George E. Fryer Jr., Jessica McCann, Adewale Troutman, Steven H. Woolf, and George Rust  
2005 What If We Were Equal? A Comparison of the Black–White Mortality Gap in 1960 and 2000. *Health Affairs* 24(2):459–464.
- Schell, Lawrence M.  
1997 Culture as a Stressor: A Revised Model of Biocultural Interaction. *American Journal of Physical Anthropology* 102:67–77.
- Seda Bonilla, Eduardo  
1972 Requiem para una cultura: ensayos sobre la socialización del puertorriqueño en su cultura y en el ámbito del poder neocolonial. Rio Piedras: Ediciones Bayoan.
- Shanklin, Eugenia  
1998 The Profession of the Color Blind: Sociocultural Anthropology and Racism in the 21st Century. *American Anthropologist* 100(3):669–679.
- Smedley, Brian D., Adrienne Y. Stith, and Alan R. Nelson, eds.  
2002 *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*. Washington, DC: National Academy Press.
- Tang, Hua, Tom Quertermous, Beatriz Rodriguez, Sharon L. Kardia, Xiaofeng Zhu, Andrew Brown, James S. Pankow, Michael A. Province, Steven C. Hunt, Eric Boerwinkle, Nicholas J. Schork, and Neil J. Risch  
2005 Genetic Structure, Self-identified Race/Ethnicity, and Confounding in Case-control Association Studies. *American Journal of Human Genetics* 76(2):268–275.
- Trostle, James A.  
2005 *Epidemiology and Culture*. New York: Cambridge University Press.
- Trovato, Frank  
2001 Aboriginal Mortality in Canada, the United States and New Zealand. *Journal of Biosocial Science* 33(1):67–86.
- Urdaneta, Maria Luisa, and Rodney Krehbiel  
1989 Cultural Heterogeneity of Mexican–Americans and Its Implications for the Treatment of Diabetes Mellitus Type II. *Medical Anthropology* 11(3):269–282.
- Wade, Nicholas  
2002 Race Is Seen as Real Guide to Track Roots of Disease. *New York Times*, July 30: F1.
- Williams, David R.  
1994 The Concept of Race in Health Services Research: 1966 to 1990. *Health Services Research* 29(3):261–274.
- Worthman, Carol M., and Jennifer Kuzara  
2005 Life History and the Early Origins of Health Differentials. *American Journal of Human Biology* 17(1):95–112.



Appendix A. Summary of reliability analysis for random subsample ( $n = 143$ )

Variable	Frequency of code		Intercoder reliability	
	Coder 1	Coder 2	Percent agreement	Kappa (SE)
Empirical article	62	64	98.6	0.97 (.08)
<i>Concepts</i>				
Race <sup>a</sup>	9	5	91.0	0.53 (.12)
Ethnicity <sup>b</sup>	20	10	85.1	0.58 (.11)
<i>Categories</i>				
Any category	24	20	91.0	0.80 (.12)
Black	10	6	94.0	0.72 (.12)
African American	8	7	98.5	0.93 (.12)
White	14	12	94.0	0.81 (.12)
Hispanic	8	10	94.0	0.74 (.12)
Latino	4	4	100.0	1.00 (.12)
Asian American	1	2	98.5	0.66 (.11)
Native American	6	5	98.5	0.90 (.12)
American Indian	3	2	98.5	0.79 (.12)
Other category	56	52	91.0	0.72 (.12)
<i>Context</i>				
Racism	5	4	95.1	0.64 (.13)
Social inequality	9	10	85.3	0.44 (.13)

<sup>a</sup>Includes any concept related to race (e.g., “racial group,” “racial identity”).

<sup>b</sup>Includes any concept related to ethnicity (e.g., “ethnic group,” “ethnic identity”).