The Construct Validity of Cultures: Cultural Diversity, Culture Theory, and a Method for Ethnography

ABSTRACT If we distinguish culture (embodied in individuals) from cultures (embodied in the superorganic properties of groups), we make it possible to accommodate the observation that individuals vary, make choices, and exert control over their lives with the observation that those same individuals find themselves constrained by recurrent patterns with properties of things. This shift in perspective makes the central problem for ethnography the identification and description of the evolving configurations of cognition, emotion, and behavior at the intersection of evolving, individually unique cultural sets. Principal components analysis of similarities among informants identifies and describes this intersection and its important variations precisely. Ordinary least squares and logistic multiple regressions test for plausible antecedents of intracultural and intercultural variation, respectively. I illustrate with data on cultural diversity in the relative importance of components that make up a partnership between parents and teachers in the United States and in how to organize these components effectively. I demonstrate the existence of a single model of the importance of these components, with intracultural variation. I demonstrate the existence of two cultural models of how to organize these components into effective parent-teacher partnerships (Separate but Equal and Mutual Decision Makers). Discordance between these cultures and the social identities of the cultural participants validates Keesing's claim that culture is not bounded in ways many people have long assumed. The shift in perspective that reconciles Sapir and Kroeber points past culture theory to a theory of culture. As we work out the details, it will also help us make ethnographic sense out of the contemporary world and give us a better grasp of the past one. [Key words: cultural diversity, culture theory, ethnographic methods, ethnology]
that neither intracultural nor intercultural variation corresponds with what commonly pass for "cultural groups."

I conclude by setting this solution and these findings in historical context and by advocating a specific direction for the construction of a theory of culture.

CULTURE AND CONTEMPORARY TRIBES: CLASS, GENDER, AND ETHNICITY

It has become commonplace to hear people ascribe differences in what people think and do (cultural differences) to labels for class, gender, and ethnicity, in much the same way that we once ascribed cultural differences to tribal identities. I have a very personal sense of comfort in and understanding of a West Indian culture that emerged among people of northwest European and West African origin brought together in a plantation economy. So I have no doubt that there exist distinctive cultures legitimately called African American, Puerto Rican, or broadly American. I feel equally sure that there exists a women's culture and a men's culture. But I feel like the boy who looked for the emperor's clothes when I look for evidence that validates their existence.

Historically, we used assumptions, not evidence, to equate cultures with social identities such as Nuer, Navajo, and African American; we also dismissed, overlooked, or downplayed both cultural variation among people who use the same social identity and cultural equivalence among people who use different social identities. Our historical data come to us in labeled bits we usually call societies or cultural groups. But, as Wolf (1982) reminds us, the constituency of such groups, their labels, and even their existence change by means of the interconnected historical processes through which people seek access to resources. On the Pepper Coast of West Africa, men who differentiated themselves as father and son became undifferentiated members of a regional dako that competed with its neighbors for control over land, rights over women and children, and trade; men of competing dako became undifferentiated "Kru" when they sought work on ships plying the commercial shipping lanes off the West African coast (McEvoy 1977). A few "Kru," along with "Yoruba" and despite marked differences in language, customs, and physical attributes, became undifferentiated "slaves" who worked plantations in the West Indies and the southern United States. Those who found a way to own their own plantations and slaves came to be called "Gens du Couleurs" in Haiti and equivalent names elsewhere, although their descendants as well as those of their slaves who now live in the United States became undifferentiated "African Americans."

I start from Wolf's central claim that "the world of humankind constitutes a manifold, a totality of interconnected processes, and inquiries that disassemble this totality into bits and then fail to reassemble it fail to reality" (1982:3) and his argument that "by turning names into things we create false models of reality. By endowing nations, societies, or cultures with the qualities of internally homogeneous and externally distinctive and bounded objects, we create a model of the world as a global pool in which the entities spin off each other like so many hard and round billiard balls" (1982:6). But I urge a step further. Cease perpetuating by assumption rather than evidence what constitutes the "bits" in which this totality of interconnected processes can best be understood. We cannot know precisely what cognitive, emotional, and behavioral configurations constitute cultures until we make the reality of social groups, the existence of cultures, and the location of cultural boundaries empirical issues that require explicit tests for construct validity.

Indeed, until we identify cultures by reference to specific configurations of cognition, emotion, and behavior, we shall forever find ethnographically incomprehensible a world in which a successful rap group comes out of Japan; one can watch the movie Out of Africa on a VCR run by a kerosene generator in an African bush village a three-hour walk off the road; and Russians play jazz, compose country music, and turn capitalist—or the ongoing dynamics of social interaction and cultural change in any contemporary community. Indeed, as I write this I listen to an NPR report about typecasting and stereotypes in the entertainment industry. A Japanese American explains how he walked out of a casting session for a Japanese mobster after having been told repeatedly that his accent was wrong for the part, until he selected one that represented a stereotypical Cantonese Chinese. A Latina scriptwriter explains her successful writing career by reference to her non-Hispanic professional name. An African American actor and director explains how bias enters into the choices made by most of the people who control the industry because they have little or no historical experience with real people who have brown skin tones and minority ethnic labels. The construct of "cultural group" fits these observations no better than equivalent observations made centuries earlier on the culturally diverse populations that came to be merged into British, German, Italian, French, or Russian identities (e.g., Wolf 1982:379). And to the extent that we perpetuate by assumption the construct of "cultural group" bequeathed to us by structural-functionalist ancestors, we beg what may constitute the most important questions ethnographers can address in the early 21st century: "What groups, by what criteria, where are their boundaries, and how can we know any of this?"

CULTURE, CULTURES, AND LIFE EXPERIENCES

Culture consists, most simply, of the knowledge people use to live their lives and the way in which they do so. This definition comes to us from Edward B. Tylor, who, in Primitive Society (1871), first identified culture as that complex whole that we acquire by virtue of living our lives with other people. Ever since, we have wrestled with issues implicit in that definition. In what sense is culture a
“whole,” and for whom—individuals, groups, or both? If groups, how can we know them, and what are their boundaries? How, exactly, do we “acquire” culture by virtue of living our lives with other people? Usually, we have translated acquire as “learned,” which raises the question of what, exactly, this means. Why do we learn the things we learn but not learn the things we could have but did not? Does culture come to us from other people, or do we create culture in response to what we experience by virtue of living with others? Because learning “just happens”—our consciousness of having learned comes after the fact—how and in what ways (if at all) does learning take place volitionally? How much of what we learn and what we do not is hardwired into us?

After more than 100 years, increased understanding of how the mind works provides at least tentative answers to some of these questions. These suggest that we reframe questions about culture and change how we go about studying it. Ethnography, as I use the word, consists of the processes and products of research that documents what people know, feel, and do in a way that situates those phenomena at specific times in the history of individual lives, including pertinent global events and processes. Historically, we distinguished ethnography from ethnology. The former referred to descriptive accounts of culture, and the latter, to comparative, explanatory analyses of culture. Rather than look at cultural variability between reified and essentialized social groups that exist only by assumption, we need to pay attention to cultural variability among and between individuals (see Barnett 1953; Boster 1987; Keeling 1994; Pelto and Pelto 1975; Wallace 1961). Explaining the intracultural and intercultural variation we find means extending ethnographic practice to correspond with a line of ethnological practice (Boas 1894; Driver 1970; Jorgensen 1980). If we pay attention to cultural variability among individuals, we make the reality of social groups, the existence of cultures, and the location of cultural boundaries empirical issues that require explicit tests for construct validity. We shall also see phenomena we did not previously recognize.

**Cultures as Superorganic Environments**

Two sets of observations warrant this shift. First, reification and its corollaries—treating culture as if it were a thing that could be owned and could act—pose significant theoretical problems that too easily lead to real world damage. For example, in the recent Exxon Valdez oil spill case in Alaska, the assumption that the world consists of “a sum of self-contained societies and cultures” rather than “people of diverse origins and social makeup who take part in the construction of a common world” (Wolf 1982:385) warranted reifications on the part of both defendants and plaintiffs. Defendants alleged that native culture had been “smashed” centuries before the oil spill. Plaintiffs alleged that native culture was “damaged” by the spill. As Joseph Jorgensen (1995) points out, both constitute irresponsible and indefensible claims that obfuscate the issues and lead to court decisions grounded on fantasy. The oil spill did not “damage” native culture—it could not because cultures are not things—but it significantly damaged natives, who experienced real losses of wild resources, real damage to the areas in which they gained their livelihoods, real alterations to the manner in which they made a living, and real threats to the future generations of animals on which they based their subsistence. Similarly, native culture had not been “smashed” centuries earlier—it could not because cultures are not things—and native and nonnative inhabitants of the oil spill region responded to the spill in culturally characteristic ways that reflected the processes of social interaction that maintained cultural differences (boundaries) among people in the spill area (Jørgensen 1995:89).

The existence of patterned cultural differences like these points to a sense in which we might accurately characterize cultures as superorganic wholes nonetheless. Cultures still do not constitute things. But our minds turn them into phenomena that exhibit some of the properties of things. Recurrent behavioral patterns constitute a major part of the environment within which people live their lives and, thus, constitute a major source of the important sensory input we process. Random variation in behavior may remain outside our consciousness and, even if not, usually may be profitably ignored. Recurrent behavioral patterns, by contrast, exert effects because they establish parameters that cannot be ignored profitably, to which one must respond. Nonrandom changes in recurrent patterns also call for responses. In doing so, they form our minds—or, at least, the materials our minds use to respond to the world of experience.

As D'Andrade (1999) points out, demonstration that a culture exerts effects warrants reification and essentialization. One must explicitly identify and measure the culture before one can demonstrate its effects, however. The method I propose explicitly identifies and measures cultures and thus makes it possible to demonstrate their effects. Some effects may originate most immediately in the patterned responses of those around us to what we say and do, and in how we make sense of and respond to those words and acts in either patterned or individually unique ways. Dressler and Bindon (2000) and I (Handwerker 1999b) demonstrate effects that originate most immediately in deprivation relative to specific cultural models and the behavioral patterns they rationalize. Some studies (e.g., Handwerker 1993, 1999a) suggest that specific recurrent behavioral patterns experienced in childhood produce specific, potentially lifelong alterations of how our minds work.

Some such cultures will correspond to conventionally identified ethnic groups. I suspect that the vast majority will show only random correspondence to conventionally identified ethnic groups. Some cultures may exhibit specific forms of historical and regional variation (e.g., Dressler and Bindon 2000; Dressler et al. 1991). A broader
view may reveal clinal variation over space (e.g., Boas 1894; Caulkins 2001; Driver 1970; Jorgensen 1980), rather than sharp boundaries. Other cultures may constitute human universals (e.g., Handwerker 1999b). However broadly shared, all cultures, I suspect, will turn out to consist of recurrent patterns of behavior rationalized by what we otherwise call domain-specific theories, models, or, most generically, schemas (D’Andrade 1995; Kellogg 1995).

**Culture as the Superorganic Product of Individual Minds**

Second, only individuals learn, and individuals embody and constitute the only source of cultural data. To make the world we live in sensible, all of us assemble out of our individual sensory experiences ways of thinking about what we have experienced. We still understand only vaguely how we accomplish this, despite the construction of an increasingly specific characterization of how our minds work by neuroscientists and cognitive psychologists. One basic point of reference is that the human central nervous system functions constantly (Barnett 1953; for another application of this observation, see Garro 2000). Another is that we construct our understanding of the world without being conscious that we are doing so (Bargh and Chartrand 1999; Barnett 1953; Gazzaniga 1998). The construction process invariably infuses ostensibly intellectual products with often intense and complex emotional associations. Our minds use this information to respond to the world of experience in patterned ways. They also rationalize this information as the conscious understandings of the world of experience that we call theories, models, or schemas. For a specific person, culture, because it is constructed in that individual’s mind out of the unique set and sequence of experiences that mark the trajectory of the person’s life, embodies who that person is as an individual, what he or she knows and does, at specific points along that trajectory. As such, the individually unique system of mental constructions that allows each of us to understand and respond to the world of experience exhibits properties of superorganic wholes, too—a body of knowledge that, at least metaphorically, we use to live our lives.

For data collection purposes, these mental constructions consist of three phenomena:

- **labels**, names that identify the existence of distinct configurations of phenomenal experience;
- **definitions**, which, however ambiguous in specific cases, differentiate one thing from another; and
- **intellectual and emotional associations**, which give mental constructions distinctive meaning.

In the field, data collection reveals culture as potentially ephemeral beliefs, feelings, and behavior unique in their details to each individual. No two people can live precisely identical life histories. No one person can experience all things. The unceasing mental processes by which individuals perceive, store, and manipulate information, and, so, create culture, make it physically impossible for any two people to hold identical cultural configurations. These processes make it physically impossible for any one person to hold identical cultural configurations at two points in time. Effective and efficient ethnographic research thus hinges on a clear understanding of the implications of two observations:

- Cultural differences reflect variation in personal experiences.
- Culture evolves, and, because it does, so do cultures.

**Our Central Nervous Systems Construct Culture with Sensory Input**

The set of cognitions, emotions, and behavior that uniquely identifies each of us as individuals reflects where we live and the web of social relations through which we have lived our lives. This means

- where we were born and raised;
  - when we were born; and
  - with whom we have interacted, in what ways, and what we experienced at specific places and times over the course of our lives.

All clinicians share a common set of understandings that come from their training in biomedicine, for example, but physicians work with a body of knowledge that distinguishes them from, say, nurse practitioners. Similarly, family practice physicians work with a body of knowledge distinct from that used by surgeons. Variation in life experiences leads people to see the world differently and to work with distinctive bodies of knowledge. Older people—whether physicians, plumbers, or anthropologists—share a distinctive vantage point owing only to age, and older anthropologists typically share a body of knowledge that distinguishes them from junior faculty or graduate students, just as older plumbers typically share a body of knowledge that distinguishes them from apprentices. The knowledge of men and women the same age—sociologists, developmental psychologists, or airline pilots—may differ solely because of gendered experiences. Men and women the same age may work with a common body of knowledge merely because they grew up in poverty or experienced the privileges bestowed by wealthy parents. Because they share an ethnic heritage, Puerto Ricans, irrespective of age, gender, and class, may use a common body of knowledge, which may differ significantly from a body of knowledge shared by Mexicans. Fathers—whether Puerto Rican or Mexican, Eskimo or Navaho, whether physicians or nurse practitioners, whether old or young, rich or poor—may share a body of knowledge simply because they share the experience of being fathers. Academics, whether they live in China, Russia, Nigeria, Mexico, or the United States, share a distinctive culture irrespective of other differences.
In short, except for the set of understandings and behavioral patterns that make each of us unique, no one possesses or participates in a single culture. As Sapir (1932) pointed out, everyone participates in many cultures. By virtue of its mode of construction, the cultural configuration of cognition, emotion, and behavior unique to individuals necessarily contains elements shared variously with others. When you first meet someone, you cannot tell very well by that person's age, gender, dress, or skin color which cultures you share and which you do not. Knowledge about the visual signals of cultural differences comes only from listening for the right cues—speech or other behavioral patterns that make no sense or do not form part of one's personal cultural repertoire. Variation in historical and regional context provides one set of choices to some people and a different set of choices to others, and it produces different historically and regionally specific cultures. Both Connecticut Yankees and Puerto Rican migrants to Connecticut, for example, bring to parenthood assumptions constructed from their experiences with family members, teachers, friends, and other socially significant people, which may vary by birth cohort, gender, and specific social origins. But we cannot know how or even if these assumptions exhibit patterned variation without careful examination. And we cannot tell from shared historical and regional origins alone whether Connecticut Yankee natives and Puerto Rican migrants employ distinctive cultural models of what constitutes and how to organize a working relationship with their child's teacher.

Culture Evolves, Which Means That Cultures Evolve

Over the course of our lives and through various means—listening to news reports, reading, traveling, talking with friends or family members, taking courses or attending workshops, or explicit and rigorous research—we come to think differently about the components of our world. We think of new ways to organize activities and new ways to think about domains of understanding. We tend to incorporate into our lives the new ways of thinking about the world that we infer yield better results. By interacting with other people—acting and responding to what we experience of other people's words and acts—we actively participate in an unceasing process that leads to the evolution of what we know and how we act and produces the shared understandings and patterns of behavior visible in temporal and spatial autocorrelation (e.g., Handwerker and Wozniak 1997). Because culture evolves, it makes a moving target. Ethnographers who have many years of experience working with a specific population may miss cues that signal important new cultural differences if they do not keep up with the cultural evolution that goes on around them all the time.

And because the culture of individuals evolves, so do the cultures to which each of us contribute. The culture that Puerto Rican migrants bring with them to the mainland evolves because new cultural environments provide new forms of experience for their minds to process. Simultaneously, the way in which migrants make sense of and respond to specific experiences in a new cultural environment itself constitutes a new cultural environment, a non-random change in recurrent behavioral patterns, for the minds of host country natives to process. Migrants thus contribute to ongoing cultural evolution in their host regions. The specific contribution may vary with age, gender, education, travel patterns, and the patterns, networks, and character of social networks, including experience with people from different ethnic and social class backgrounds, experience with health and education professionals, household composition and caregiving responsibilities, or other contingencies. Certain forms of cultural evolution in individuals, which we have yet to specify very precisely, produce changes in the recurrent patterned behavior that constitutes the superorganic environments of cultures. One such form, however, may consist of changes that shift the balance of power in social relationships (e.g., Handwerker 2001a; Wolf 1982).

Naive reification and essentialization of the kind Jorgensen (1995) describes appreciate the superorganic properties of cultures but fail to grasp that, although cultures may exert effects, they do so by virtue of eliciting our response to important forms of sensory information that come from recurrent behavioral patterns. Cultures thus exhibit some of the properties of things. But they cannot be smashed or damaged. They just evolve.

In short, Tylor's definition of "culture" contains two largely overlooked and undervalued implications: (1) the culture that specific people use to live their lives constitutes an evolving configuration of cognition, emotion, and behavior unique to themselves; and (2) cultures consist of an evolving configuration of cognition, emotion, and behavior at the intersection of evolving, individually unique cultural sets. The central problem for ethnography thus consists of identifying and describing that intersection and its significant variations. Ethnography becomes ethnology when we try to explain by reference to pertinent life history variables the evolution of specific cultures or the culture of specific people.

Toward the end of the 20th century, global movement and communication placed individuals who embodied different recurrent patterns of thought and behavior (cultures) face to face. The challenges of understanding and working with cultural diversity in the 21st century may come principally, however, from standing face to face with people whom we might think embody different cultures but who do not. To make sense of the changed circumstances of our lives, we must pay specific attention to the domains of cognition, emotion, and behavior pertinent to individual lives and explicitly establish which aspects of these domains one person shares with which specific others. This creates questions bearing on the details of the social distribution of cognition, emotion, and behavior and about the patterns, networks, and character of
social interaction through which culture evolves, locally, regionally, and globally. This requires attention to the design of ethnographic research and specific appreciation of the unique point of view ethnography offers—its focus on similarities and differences among informants rather than among variables.

Standard approaches to numerical analysis do not lend themselves to ethnography because they focus on variables, not informants. Consensus analysis procedures (e.g., Romney et al. 1986), by contrast, address the analytical issues raised by the question of who agrees with and acts like whom about what and to what degree. However, consensus analysis was designed for analysis of a single culture. The software implementation of consensus analysis can be employed in ways I illustrate later—but not easily. More important, cultural consensus theory comes out of a specific branch of learning theory and contains highly restrictive assumptions. One central assumption, not often met in field research, is that there exists a specific body of knowledge bearing on a specific cultural domain for which there exist cultural experts who know a lot and others who know less (see Garro’s [2000] excellent review). Where this cultural pool model of the distribution of culture exhibits empirical content (e.g., Weller and Mann 1997), consensus analysis answers the analytical question directly.

Under ordinary field conditions and for nearly all ethnographic goals, however, everyone constitutes a cultural expert in what she or he knows, feels, and does—like women who report on the meaning of stress and social support or parents and teachers who report on what goes into an effective working relationship between parents and teachers. Moreover, the culture that rationalizes our individual worlds of experience appears to be organized hierarchically (Garro 2000; see Handwerker 1989). These starting points make the question of who agrees with whom about what and to what degree bear directly on the empirical problem of identifying many possible cultures and the boundaries between one culture and another. It also makes the answer the simple outcome of standard construct validation procedures, akin to the procedures Boas (1894) used more than a century ago to evaluate the distribution of cultural phenomena across space and (implicitly) time.

**ESTABLISHING THE CONSTRUCT VALIDITY OF CULTURES**

Construct validity refers to the observed match between a set of observations and the theoretical construct it purports to measure (Campbell 1970). Our individual culture provides the material by which our minds rationalize (interpret) sensory input from the world of experience, and a variety of mental processes alter both culture and behavior in ways that reflect variation in sensory input. One outcome consists of the assumptions from which we construct our understandings of the world. Because our theories thus constitute cultural constructions, they necessarily contain biases that mirror everything we have experienced and everything we have not experienced over the course of our lives. This makes for a fundamental uncertainty concerning the empirical content of mental constructions and makes it essential to distinguish what is there from what we may put there. Validity consists of a relationship between the definitions of specific mental constructions and specific observations. One cannot evaluate the validity of one’s data or findings without information about whether or not, or the degree to which, specific mental constructions correspond with specific observations and discriminate those observations from others.

Many critically important variables, such as stress, affection, and problem drinking, cannot be measured directly. Indeed, we must posit their existence because we cannot see them. Measurement of multidimensional constructs like these requires specific observations of a set of items, each of which constitutes an independent and imperfect measure of the otherwise unseen, underlying variable. The following questions, for example, elicit measurements of different dimensions of problem drinking (Mayfield et al. 1974): How often have you tried to cut down your drinking? gotten annoyed with people who complain about your drinking? felt guilty about your drinking? or had a drink when you first get up to feel better? As Campbell and Fiske (1959; see Campbell 1970) point out, items that measure the same theoretical construct should correlate highly. Items that measure a second construct should not correlate as highly with the items that measure the first. If there exists such a variable as problem drinking, and if these items measure that variable, we will see it as a large intersection shared by the four items, any one of which measures problem drinking imperfectly. A large shared variance among these items means that people who report often trying to cut down their drinking also tend to report that they often get annoyed, feel guilty, or have a drink when they first get up; people who report that they never or rarely try to cut down their drinking also tend to report that they never or rarely get annoyed, feel guilty, or have a drink when they first get up.

**Use Factor Analysis to Identify the Intersection among Sets of Variables**

Cluster analysis, multidimensional scaling, correspondence analysis, and other numerical reasoning tools answer questions about patterned relationships among many variables. However, only factor or principal components analysis (e.g., Rummel 1970) directly tests the hypothesis that a specific set of scale items constitutes an independent set of imperfect measurements of one and only one otherwise unseen, underlying variable. Principal components analysis constructs a small set of variables (factors or principal components) from additive combinations of existing similarities among variables. Each factor thus identifies the existence of otherwise unseen variables that
lie at the intersection of observed similarities among the variables measured. The size of the intersection tells us the importance of the factor. Factor loadings (Pearson's coefficients) measure the size of the intersection. The square of a loading \((r^2)\) tells us how much variance a specific item shares with the unseen variable identified by each factor. Important measures of this unseen variable show loadings at or above 0.500 (25 percent shared variance). The sum of squared loadings for a factor (its eigenvalue) tells us how much variation all our cases or variables share with a factor. A factor's eigenvalue divided by the sum of eigenvalues for all factors tells us the overall size of the shared intersection identified by the factor.

The first factor or principal component identifies the largest shared intersection among a set of variables. The second factor accounts for the largest shared intersection that remains. Subsequent factors account for the largest shared intersections among the variance unaccounted for by previously extracted factors.

Principal components analysis yields one factor for every variable. Four items will form a 4*4 similarity matrix and will yield four factors, for example. Evidence of a single valid factor consists of the following:

1. A first factor with an intersection that accounts for 50 percent of the variance in the matrix (or more).
2. A sharp scree fall between the eigenvalues for the first and second factors. Scree refers to the jumble of rocks and soil that accumulates at the bottom of cliffs. A scree plot shows the size of the eigenvalues for all factors beginning with factor 1. Just by chance, sample items may show great similarity. Factor analysis of matrices filled with random data will find some eigenvalues over 1.0 and some high loadings just by chance. But matrices that contain no real factors will generate random distributions of eigenvalues and loadings. One-half of the eigenvalues will be over 1.00, one-half will be under 1.00, and we will see no perceptible scree. Matrices that contain one real factor will exhibit a dramatic scree fall between the first and second eigenvalues; the first eigenvalue will be approximately three or more times larger than the second.
3. The eigenvalue of the second factor lies at the top of the scree.
4. There exist no (or inconsequentially small) negative loadings on factor 1.
5. There exist no (or inconsequentially small numbers of) high (+/- .50) loadings on factor 2. This last condition gives important diagnostic information. As Rummel (1970:373) notes, because the procedure fits the first factor to the data to account for the maximum variance, when there exist two independent clusters of interrelated variables, factor 1 may be located between them. All variables may load highly on factor 1. But the variables will also load highly on factor 2, and the variables that constitute each independent cluster will exhibit different signs on factor 2.

Evidence of these five conditions shows that people who live dramatically different lives—the descendants of former plantation slaves who make a living in tourist economies in the West Indies and people who continue to hunt, gather, and herd in the Alaskan and Siberian Arctic—agree about experiences that make up unitary phenomena, otherwise unseen, legitimately called violence and affection (Handwerker 1997). Similar evidence shows that, irrespective of ethnic identity (European American, Latino American, African American, and Native American), working women agree about experiences that make up unitary phenomena, otherwise unseen, legitimately called stress and social support coming from daily social interaction, and depression (Handwerker 1999b).

**For Ethnography, Use Factor Analysis to Identify the Intersection among Sets of Informants**

One can easily answer questions like, "Do Inupiat Eskimos give answers or act in ways that differ from West Indians?" Simply divide the replies by identity, count the responses for each, and compare the results. As Keessing (1994) points out, however, this procedure yields answers that beg the question of the location of cultural boundaries. Questions like these impose cultural differences by assumption rather than evidence. To avoid this error and to pinpoint cultural boundaries, if they exist, use principal components to establish the construct validity of the culture or cultures in the data. Findings from such an analysis will tell us whether or not or the extent to which cultural boundaries correspond with social labels like Nuer or Navajo, men or women, or old or young.

One cannot see cultures, however. To see them, one has to identify what people share, the configuration of cognition, emotion, and behavior that constitutes the intersection of configurations unique in their details to individuals. Cultures thus constitute multidimensional variables, just like variables such as stress, affection, and problem drinking. To validate this construct, one must demonstrate that a specific set of people shares a specific configuration of cognition, emotion, or behavior (see, e.g., Handwerker 2001a, 2001b). As Campbell and Fiske (1959; see Campbell 1970) imply, informants who think or act alike provide information that measures the same theoretical construct (culture). Informants who think or act in other ways provide information that measures a second construct (another culture). The ideas and behavior of the first set of informants should correlate highly; the ideas and behavior of the second set of informants should not correlate highly with the ideas and behavior of the first set. If there exists a culture of parent-teacher working relationships, and one has correctly identified its components, a principal components analysis of the similarities in the information provided by informants will reveal a large intersection shared by those informants, any one of
whom provides only imperfect information about the culture. A large shared variance among informants thus tells us that a culture exists—a shared cognitive model of the responsibilities and activities that form important components of parent-teacher relationships, a shared cognitive model of how to organize those components effectively, shared recurrent patterns of behavior between parents and teachers, or both one or more cognitive models and one or more recurrent behavioral patterns.

Establishing the construct validity of a culture thus requires that we demonstrate that what some informants tell us or do correlates highly with what other informants tell us or do. Informants who have constructed and participate in a different culture will say things and act in ways that correlate highly among themselves, but what they say or do will not correlate as highly with another set of informants. To evaluate the construct validity of cultures, carry out a standard construct validity analysis but transpose the matrix to focus the analysis on similarities and differences among informants rather than among variables (for practical details, see Handwerker 2001b).

CULTURAL DIVERSITY IN PARENT-TEACHER WORKING RELATIONSHIPS

Over the last 30 years, U.S. educators and parents have forged a consensus that effective education requires an effective parent-teacher partnership (Cutler 2000). Although there exist many models of how best to implement that relationship (e.g., Comer et al. 1999; Cutler 2000; Epstein 1995; Henry 1996), there exists growing recognition that cultural differences bear importantly on effective parent-teacher involvement (e.g., Hidalgo et al. 1995; Lareau and Horvat 1999). Forming effective relationships between the teachers and parents of Latino students, an increasing proportion of whom speak Spanish as their first language, constitutes a particularly pressing issue. Not only do Latino students make up the largest minority group in U.S. public schools, they also exhibit both poor test scores and frighteningly high dropout rates, the highest in the nation.

What makes an effective parent-teacher working relationship, and why some parents were not involved in their children’s education, thus formed a natural study topic in a graduate seminar on ethnographic methods I taught in 1996 for teachers working toward graduate degrees in bilingual education, all of whom worked with Puerto Rican students and many of whom came from the Puerto Rican community. We wanted to find out

- the items or components people thought of as making up an effective parent-teacher working relationship,
  - the weighting people assigned different components, and
  - how they organized these elements to construct an effective parent-teacher working relationship.

In short, we aimed, as Hidalgo et al. urge, to look at “how much is similar and how much is different between and among families of different cultural groups” (1995:515).

We did not, however, define cultural groups by reference to ethnicity. We defined a cultural group as a group of people who share a common way of thinking about or enacting parent-teacher working relationships, and we designed our data collection and analysis in ways that allowed us to both explicitly identify the cultural group(s) in our data and explicitly assess what may have shaped it (them).

Informants and Data Collection

We anticipated that ethnicity might contribute to a shared culture bearing on parent-teacher working relationships—that Puerto Ricans might share a distinctive way of thinking about or enacting parent-teacher relationships, which might exhibit systematic, even qualitative, differences from the way, for example, Connecticut Yankee parents thought about or enacted the same issues. We also anticipated that teachers might share a distinctive way of thinking about or enacting parent-teacher relationships, which might exhibit systematic, even qualitative, differences from the way parents thought about or enacted the same issues. We allowed for the possibility that either intercultural or intracultural variation might reflect other sets of life experiences, like those shaped by gender, age, number of children in a family, whether or not an informant worked, and whether or not a partner helped. Finally, we wondered if the point of view of parents whom teachers evaluated as actively engaged in an effective parent-teacher working relationship differed from the point of view of parents whom teachers evaluated as not so engaged.

We collected data in two stages. In the first, we conducted informal interviews with teachers, students, and parents whom teachers evaluated as being actively engaged in effective parent-teacher working relationships and two different forms of structured interviews with teachers and actively engaged parents (n = 49). To answer the first question, we asked teachers, students, and parents to tell us what they thought was part of an effective parent-teacher working relationship and why it was important. To answer the second question, we asked teachers and actively involved parents to rate (from “not at all important” to “very important”) each of the components identified in the informal interviews. To answer the third question, we asked the same parents and teachers to evaluate the relative similarity of these components. We elicited these judgments with triads tests using a Lambda-2 design (see Burton and Nerlove 1976). We carried out interviews in English or Spanish, as appropriate. In the process, we collected data on life experience variables to test for their effects on intracultural or intercultural variation. Teachers constituted only 15 percent of the base sample of 49 informants. Most informants (56 percent)
identified themselves as Puerto Ricans, and 37 percent looked at themselves as one or another version of Connecticut Yankee; the residual consisted of two West Indians, one African American, and one South Asian. Nearly 70 percent were women, 76 percent were currently married, and 84 percent currently worked. Informants ranged in age from 21 to 47 (mean = 35.8 years, s.d. = 6.6). Two informants had no children, but one had five (mean = 2.0 children, s.d. = 1.2). Two informants had stopped school after the primary grades, but a couple were doctoral students (mean = 15.5 years of education, s.d. = 3.1).

In the second stage, we conducted triads tests with ten parents whom teachers evaluated as not actively engaged in an effective parent–teacher working relationship. This made n = 59 for analysis of the triads tests.

**Findings for Question #1: What Items Go into Making an Effective Parent–Teacher Working Relationship?**

Answers to the first question came from the informal ethnographic interviews. Nearly 30 teachers, parents, and children, who spoke from their experience in primary, middle, or high school, identified ten items as potential components of an effective parent–teacher working relationship:

1. parents who read with their children (READ)
2. parents who help their children with homework (HELP)
3. parents who participate actively in school activities (ACTIVE_SCHL)
4. parents who provide the space and materials necessary for their children to carry out homework assignments (SPACE_MAT)
5. parents who require their children to complete homework assignments (REQ_HMWRK)
6. parents who provide rewards for good grades and consequences for bad ones (R_C_grades)
7. school policies and programs that reach out to parents (SCHL_REACH)
8. active teacher–parent communication (TPCOM)
9. parents who listen to their children to hear their needs (LISTEN)
10. parents who respond to their children’s needs (RESPOND)

**Findings for Question #2: What Is the Relative Importance of These Items?**

Answers to the second question come from analysis of a 49*49 matrix that expresses the degree to which our informants rated (from "not at all important" to "very important") the relative importance of these ten items identically. Although we collected ratings data with a five-point scale (0-4), many informants rated all items as "very important," which left no variance for the calculation of correlation coefficients. I created binary variables coded "1" for ratings of "important" or "very important" and "0" otherwise and measured similarities among informants with a simple matching coefficient. Figure 1 shows the scree plot from a principal components analysis of the resulting 49*49 informant matrix and illustrates evidence for the construct validity of a single cultural group. The first factor’s eigenvalue (43.324) was 23 times larger than the second factor’s eigenvalue, and the latter lies on the top of the scree. The first factor accounted for 88.4 percent of the matrix variance; informant loadings averaged .935 (s.d. = .101).

Figure 2 shows two scatterplots of informant loadings on factor 1 by informant loadings on factor 2. The clustering of informants is so tight, I added slight amounts of random variation to each informant so that we can see their location. Both scatterplots reveal that nearly all cases form a tight cluster centered around a 1.00 loading on factor 1 and a 0.00 loading on factor 2. Figure 2 reveals no evidence of two or more cultures because no informant exhibited a high loading (+/- .50) on factor 2 coupled with a low loading on factor 1. On the contrary, this analysis explicitly confirms what a visual examination of the ratings data suggests—that nearly every informant rated nearly every item as an important or very important component of an effective parent–teacher working relationship.

Figure 2 reveals intracultural variation, however. A small number of informants exhibited a negative loading on factor 2. An informal (visual) or formal (ordinary least squares [OLS] regression) examination of the relationship between informant ratings of different items and the factor loadings (which identify the shared intersection among these informants) reveals that this intracultural variation reflects variation in judgments about the importance of a
single item—the importance that informants ascribed to providing rewards for good grades and consequences for bad ones. The scatterplot on the left of Figure 2 plots informants with circles of uniform size. The scatterplot on the right identifies teachers with a T and parents by ethnicity (P = Puerto Rican, Y = Connecticut Yankee, and O = other ethnicity). This scatterplot also weights symbol size by the importance the informant ascribed to providing rewards for good grades and consequences for bad ones. The only demonstrably nonrandom intracultural variation (r = 8.322, p < .001) comes from a small number of parents and one teacher who rated the importance of providing rewards for good grades and consequences for bad grades lower than most parents.

**Findings for Question #3: How Do People Organize These Items?**

Answers to the third question come from analysis of a stacked set of 59 matrices. Each matrix contains coefficients that measure a specific informant's judgment about the similarity among the items that go into an effective working relationship between parents and teachers based on the Lambda-2 triads design. The question answered by the factor analysis is the extent to which all 59 informants evaluated the similarity among these ten items identically. Without a close reading, factor analysis output alone may suggest a single culture: factor 1 accounts for 74.58 percent of matrix variance, and its eigenvalue is 5.3 times larger than that of the second. However, a large number of low loadings on factor 1 and several very high loadings on factor 2 exist, and factor 2 accounts for another 15 percent of matrix variance. A scree plot would show that the eigenvalue of the second factor lies above the scree. Graphical analysis thus forms an essential diagnostic tool.

Figure 3 shows the answer produced by the factor analysis in two scatterplots of informant loadings on factor 1 by informant loadings on factor 2. Where Figure 2 illustrated a scatterplot that exhibits evidence of a single culture, Figure 3 illustrates a scatterplot that exhibits evidence of two cultures plus individually unique cultural configurations (random data). Informant labels of 1, 2, and 3 identify the two cultures (1, 2) and random data (3) in the scatterplot on the left. One culture (1; Separate but Equal—I describe the culture shortly) consists of 38 informants who exhibited high loadings on factor 1 and low loadings on factor 2. The other culture (2; Mutual Decision Makers—I describe the culture shortly) consists of seven informants who exhibited low loadings on factor 1 and high loadings on factor 2. The residual (3) of 14 informants exhibited low loadings on both factor 1 and factor 2.

These findings tell us that 38 informants generally agreed that the ten items that make up an effective parent-teacher working relationship should be organized in one way, that seven informants agreed that these items should be organized in a qualitatively different manner, and that 14 informants exhibited no agreement at all. The scatterplot on the right identifies teachers with a T, a parent who was not actively involved in an effective parent-teach working relationship with an n, and a parent actively involved in an effective parent-teacher relationship by ethnicity. Puerto Ricans (P), Connecticut Yankees (Y), and others (O—West Indian, African American, and South Asian) show up in both cultures. One teacher, two Puerto Ricans, and two Yankees show up in the set of random data (no cultural patterning), but nine of the 14 informants who exhibited no shared agreement were parents not actively involved in an effective parent-teacher working relationship.
relationship. Only one noninvolved parent shows up in one of the cultures.

Once we disaggregate the original matrix into three distinct sets, we find evidence of the kind illustrated earlier for the existence of a single culture. Factor analysis of a stacked set of 38 matrices that contain similarity judgments about the items that go into an effective working relationship between parents and teachers for each of 38 informants yields a first factor that accounts for 82 percent of matrix variance, the first eigenvalue of which is 8.5 times larger than that of the second, and loadings that average .679 (s.d. = .178). Analysis of a stacked set of seven matrices that contain similarity judgments about the items that go into an effective working relationship between parents and teachers for each of seven informants yields a first factor that accounts for 62.8 percent of matrix variance, the first eigenvalue of which is three times larger than that of the second, and loadings that average .564 (s.d. = .122).

The third set of informants who exhibit only random similarities and differences, most of whom teachers evaluated as not engaged in effective parent-teacher relationships, suggests the existence of a subpopulation that simply may not know how to effectively organize the elements of parental involvement, even if they show familiarity with some or all of its elements. Effective behavior presupposes planning, organization, and coordination of clearly identified activities. But not everyone has put the same effort into thinking about these issues, and not everyone has the same degree of experience carrying out these activities. Moreover, variation in life experiences mean that people see the world differently. They may see different things. Or they may not see what other people do. The core issue for parents who remain uninvolved in their children's education may be simply that they do not know how to go about it. They work with no organized map of the things that go into the construction of an effective working relationship between parents and teachers, such as those shown in Figure 4. Some informants who belong to this group may have worked out an individually unique way to organize a parent-teacher relationship. However, the absence of a shared model of parent-teacher relationships probably makes putting together an effective one difficult to achieve.

Figure 4 shows the differences between the two cultures as multidimensional scaling maps of the aggregate similarities among the ten items. Multidimensional scaling (MDS) transforms a matrix of similarities or differences into a map (e.g., Kruskal and Wish 1978). MDS transforms a matrix of distances among cities in the United States (city block dissimilarities) into map coordinates of the United States, for example. MDS coordinates thus express strong similarities (small dissimilarities) as spatial closeness and weak similarities (great dissimilarities) as spatial distance. Like the Cartesian coordinates that mapmakers use, the axes of an MDS picture are arbitrary and uninterpretable. The only thing that matters is the relative placement of cases or variables on the MDS map. A value called stress measures the extent to which mapping distorts the distance between the mapped items. Stress varies between 0 and 1. A stress value of 0.0 means that no distortion took place. Stress values of .083 and .082 for the map on the left and the map on the right, respectively, constitute evidence of an excellent fit between the original matrix of similarities and the mapped coordinates (see Sturrock and Rocha 2000).

The Separate but Equal culture organizes an effective working relationship between parents and teachers into

![Figure 3](image-url)
one set of activities focused on the school (school policies and programs that reach out to parents, being active in the school, and parent–teacher communication) and a distinct set of home activities arranged along a continuum from impersonal activities (providing space and materials so children can complete homework assignments) to highly personal activities (listening for and responding to children’s needs). In this culture, rewarding good grades and providing consequences for bad ones constitute a school activity carried out by parents. Listening for and responding to children’s needs constitute activities on the periphery of an effective working relationship between parents and teachers, ones that may but because a child’s needs go far beyond school performance, do not necessarily contribute to the parent–teacher relationship.

The Mutual Decision Makers culture organizes an effective working relationship between parents and teachers qualitatively differently. In this culture, one set of activities focuses on active engagement in a child’s education (responding to their needs, requiring the completion of homework, and rewarding good grades and providing consequences for bad ones). The other set integrates the material infrastructure for a child’s education (on one end, parental provision of space and materials and, on the other, school provision of policies and programs that reach out to parents) with parental activities that entail listening for children’s needs, reading with them, helping with homework, and discussing home and school issues with a child’s teacher.

The MDS maps thus identify cultural differences whose effects may include conflict, disappointment, and frustration—or a comfortable working relationship between a teacher and a parent. For example, the first cultural model of parent–teacher relationships identifies a clear separation of school and home activities. Parents have one set of responsibilities and activities to perform. Teachers have another. Parents and teachers complement each other, but their domains of responsibilities and activities remain separate. By contrast, the second cultural model of parent–teacher relationships implies mutual and overlapping domains of responsibilities and activities. Requiring that a child complete homework assignments and providing rewards for good grades and consequences for bad ones remain solely a parental responsibility. But the continuum this culture employs to organize the other components of a parent–teacher relationship draws no boundary between home and school. One mother explained: “You want to create a support system for your child that extends from home to school and back again.” A parent who employs this model may expect suggestions and direction from the child’s teacher for activities like reading to children and helping with homework. The same parent may expect to provide an active voice in classroom and school activities. As one such parent commented, “I know what’s best for my child!” A teacher who employs this model may give suggestions and direction for home activities and expect parents to provide an active voice in classroom and school activities. Parents (teachers) who try to create effective working relationships based on the Separate but Equal model with teachers (parents) who employ the Mutual Decision Makers model set themselves up for the classic symptoms of clashing cultures—misunderstandings, disappointments,
frustration—and ineffective if not hostile parent-teacher relationships. A mother who employed the Mutual Decision Makers model but continually ran into teachers who employed the Separate but Equal model explained: "I feel strongly about this. I've given talks about it [to parent-teacher groups]! I really hated the ones [teachers] when you went in to talk about your child and all they talked about was what they were doing in the classroom! I hated them to the degree that they eventually hated me. I just wouldn't give up."

Thus, there exist one cultural model of the components that go into the construction of an effective parent-teacher working relationship, with some minor intracultural variation, and two cultures about how to organize that relationship. The pertinent "cultural group" consists of the parents and teachers who share the Separate but Equal or the Mutual Decision Makers cultural model. OLS regression provides a tool to test for the effect of one or another life experience on intracultural variation, including measuring the extent to which that variation corresponds to the difference between parent and teacher or to the differences between Puerto Rican and Connecticut Yankee. As a matter of course, one would carry out an OLS regression analysis of the intracultural variation identified by variance in the loadings on both factors. Here I report only the analysis of factor 2 loadings, which, as Figure 2 shows, exhibited the only important form of intracultural variation. Logistic regression provides an equivalent tool to test for the effect of plausible antecedents of different cultures.

The top part of Table 1 shows OLS regression findings produced by SYSTAT software which reveal that Connecticut teachers and parents in their twenties, thirties, and forties, whether men or women, married or not, or currently employed or not, and irrespective of educational attainment and social identity (Puerto Rican or Connecticut Yankee), assessed the importance of the components of a working relationship between parents and teachers in ways that differ only by chance. The maximum condition index of 26.669 confirms the absence of multicollinearity disturbances. As Figure 2 reveals, some parents and teachers downplayed the relative importance of assigning rewards for good grades and consequences for bad ones. But the variables we thought might contribute to cultural diversity clearly do not account for what we found, and the analysis leaves open the question of the sources of this intracultural variation.

The bottom part of Table 1 shows logistic regression findings produced by LogXact software which reveal that Connecticut teachers and parents in their twenties, thirties, and forties, whether men or women, married or not, or currently employed or not, and irrespective of educational attainment and social identity (Puerto Rican or Connecticut Yankee), exhibited odds to employ the Separate but Equal or Mutual Decision Makers model of how to organize a parent-teacher relationship that differ only by chance. The variables we thought might contribute to cultural diversity clearly do not account for what we found, and this analysis, too, leaves open the question of the sources of intracultural variation.

Discordance between these cultures and the social identities of the cultural participants validates Keesing's (1994) claim that culture is not bounded in ways many people have long assumed. This highlights the conceptual error implicit in Hidalgo et al.,'s otherwise laudable admonition to look at "how much is similar and how much is different between and among families of different cultural groups" (1995:515). The pertinent "cultural groups" are not Puerto Ricans and Connecticut Yankees. They are the people who constructed the Separate but Equal and Mutual Decision Makers cultural models. This also highlights the methods error implicit in designing research to look at differences between Connecticut Yankees, Puerto Ricans, Chinese Americans, or African Americans. If we divide the replies by identity (class, gender, ethnicity, age, ad nauseam), count the responses for each, and compare the results, we impose cultural differences by assumption, not evidence. To avoid this error, ask who shares what with whom; look for similarities and differences among your informants.

PAST AND FUTURE

Ethnography is partially about learning from teachers rather than studying subjects. It is also about determining the similarities and differences among our teachers. In the late 1800s, Tylor and Boas made the point that similarities and differences among people exhibit recurrent patterns of thought and behavior over space and time. During the first half of the 20th century, Kroeber (e.g., 1948) and White (e.g., 1949) explored the notion that these recurrent patterns constitute superorganic wholes, sui generis phenomena, while Sapir (e.g., 1949) has pointed out that the foundations for these patterns reside in the minds of specific people and find expression in specific social interactions. During the second half of the 20th century, we wrestled with the problem of how (or if) what our individual brains store and process can find expression in recurrent patterns with the properties of superorganic wholes, how we might accommodate the observation that individuals vary, make choices, and exert control over their lives with the observation that those same individuals find themselves constrained by recurrent patterns with the properties of superorganic wholes. Toward the end of the 20th century, global movement and communication trashed the notion that region and history constrain these recurrent patterns by placing individuals who embodied different recurrent patterns of thought and behavior face to face. We are still trying to make sense of the observation that we find standing face-to-face with us people whom we might think embody different recurrent patterns of thought and behavior but who do not.

This article takes as its central problem this last observation. My way to make sense of it rests on a solution for
the more fundamental question of how we might accommodate the observation that individuals vary, make choices, and exert control over their lives with the observation that those same individuals find themselves constrained by recurrent patterns with the properties of superorganic wholes. Stated concisely:

- The ways in which our brains store and process sensory input mean that individually unique life trajectories yield individually unique people whose choices exert control over their lives.
- Critically important sensory input comes to us in the form of other people’s behavior.
- Our cognitive, emotional, and behavioral response to that input reflects our prior life history and the personal configuration of culture (cognition, emotion, and behavior) that our brains have constructed from that history of experience.
- Our behavioral responses elicit equivalent cognitive, emotional, and behavioral responses from others. We summarize these conditional responses to responses as social interaction.
- Other people influence us, and so constrain what we think and do, by means of their behavior—by what they do or do not do, by the circumstances of their lives, and by their immediate responses to our responses; we influence others likewise. By virtue of the sensory input they generate, social interaction and living our lives in the presence of others thus produce the evolution of the personal cultures we use to live our lives. We cannot now characterize how that takes place with any specificity. Evolution in the recurrent, patterned behavior that exhibits properties of superorganic wholes, however, may come from the evolution of a personal or shared culture that entails a shift in the balance of power in social relations.
- Recurrent, patterned behavior exhibits the properties of a thing because recurrent behavior constitutes an environment in which we carry out daily activities, which elicits cognitive, emotional, and behavioral responses. In eliciting these responses, recurrent, patterned behavior thus elicits evolution in the personal configuration of culture (cognition, emotion, and behavior) our minds use to produce personal cognitive, emotional, and behavioral responses to future sensory input. Certain forms of recurrent, patterned behavior may induce specific lifelong changes in how our minds work and in the behavioral trajectories of our lives.
- Patterned choices come from the application of specific criteria to the choice alternatives provided by sensory input.
- Our minds rationalize recurrent, patterned responses in the form of domain-specific theories, models, or schemas, which consist of assumptions about the nature, components, and organization of the world of sensory experience.

A theory of culture as cognitive elements and structure now dominates ethnographic research (D’Andrade 1999; Dressler and Bindon 2000). But definitions of culture

### TABLE 1. Tests for sources of intracultural and intercultural variation.

<table>
<thead>
<tr>
<th>Ordinary Least Squares Regression Test for Intracultural Variation—Loadings on Factor 2 ($R^2 = .069$, maximum condition index = 26.669)</th>
<th>Beta</th>
<th>t</th>
<th>P (2-tail)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnicity—Yankee compared with other</td>
<td>.040</td>
<td>0.393</td>
<td>0.697</td>
</tr>
<tr>
<td>Ethnicity—Puerto Rican compared with other</td>
<td>-.042</td>
<td>-0.458</td>
<td>0.649</td>
</tr>
<tr>
<td>Teacher compared with parent</td>
<td>.009</td>
<td>0.113</td>
<td>0.991</td>
</tr>
<tr>
<td>Men compared with women</td>
<td>-.122</td>
<td>-1.865</td>
<td>0.070</td>
</tr>
<tr>
<td>Education</td>
<td>.005</td>
<td>0.358</td>
<td>0.722</td>
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<tr>
<td>Informants with partners compared with those without</td>
<td>.002</td>
<td>0.017</td>
<td>0.986</td>
</tr>
<tr>
<td>Employed informant compared with those unemployed</td>
<td>-.057</td>
<td>-1.293</td>
<td>0.204</td>
</tr>
<tr>
<td>Number of children</td>
<td>.019</td>
<td>0.615</td>
<td>0.542</td>
</tr>
<tr>
<td>Age</td>
<td>.007</td>
<td>1.199</td>
<td>0.238</td>
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</table>

<table>
<thead>
<tr>
<th>Logistic Regression Test for Intercultural Variation—Separate but Equal Culture (1) and Mutual Decision Makers Culture (0)</th>
<th>Odds Ratio</th>
<th>P (2-tail)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnicity—Yankee compared with other</td>
<td>2.726</td>
<td>0.610</td>
</tr>
<tr>
<td>Ethnicity—Puerto Rican compared with other</td>
<td>5.774</td>
<td>0.536</td>
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<tr>
<td>Teacher compared with parent</td>
<td>0.054</td>
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<tr>
<td>Men compared with women</td>
<td>0.108</td>
<td>0.170</td>
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<tr>
<td>Education</td>
<td>0.948</td>
<td>0.902</td>
</tr>
<tr>
<td>Informants with partners compared with those without</td>
<td>9.665</td>
<td>0.226</td>
</tr>
<tr>
<td>Employed informant compared with those unemployed</td>
<td>1.159</td>
<td>0.953</td>
</tr>
<tr>
<td>Number of children</td>
<td>1.845</td>
<td>0.609</td>
</tr>
<tr>
<td>Age</td>
<td>1.127</td>
<td>0.055</td>
</tr>
</tbody>
</table>
may focus on mental phenomena merely because mental models provide our only means to make behavior sensible. Despite the difference between cognition and behavior, especially the troublesome and ambiguous relationship between the two, there exist demonstrable patterns of behavior that correspond with specific cognitive models. More importantly, perhaps, what counts in the real world is what people do. Cognition and emotion respond to sensory input, and critically important sensory input comes to us in the form of what other people do. Who cares how parents and teachers think about organizing a parent–teacher working relationship? What counts is whether or not it works. It does not work unless people do something about it.

In the process of making it work, the culture of specific parents and teachers will evolve. As the culture of specific parents and teachers evolves, they will bring to their interaction with others new forms of sensory information that the minds of the people with whom they interact will turn into additional cultural evolution. Cultural evolution in individuals that shifts the balance of power in social relationships, and other forms we have yet to specify very precisely, produce changes in the recurrent, patterned behavior that constitutes the superorganic environments of cultures (e.g., Handwerker 2001a; Wolf 1982). We will not make sense of what people think, feel, and do, I suspect, without conceptualizing the interdependencies of all three components. A more sensible definition of culture thus might focus on the relationship between ideas and behavior, not on a single component. From this point of view, cultures consist of recurrent, patterned behavior rationalized by domain-specific theories, models, or schemas.

The problematical relationship between ideas and behavior calls for much rethinking. Until the 1950s, generally we maintained the definition of culture as encompassing both ideas and behavior. D'Andrade (1999) points out that the shift in our thinking took place in an attempt to explain what people do by reference to their ideas. This did not work. For one, it produced tautologies. Once we explain a particular pattern of behavior by reference to a particular configuration of ideas, we rule out the possibility that that pattern of behavior comes out of another configuration of ideas—if people really used that other configuration of ideas, they would have to produce a different pattern of behavior. For another, the assumption that particular configurations of ideas produce specific patterns of behavior could not account for the observation that individuals vary, make choices, and exert control over their lives.

The response that sought to resolve this dilemma with more nuanced interpretations of cultural variation retained the notion that ideas explain behavior. This failed to recognize that all mental model explanations of behavior suffer fatal flaws. Human minds rationalize what we do by reference to reasons, Intentions, and dispositions. But we can never rule out the possibility that, in accounting for behavior, we or our informants have not forgotten something, misjudged the relative importance of something, ignored one or more multiple mental states that might go into the production of behavior, lied (to ourselves or others), or merely produced an ad hoc or post hoc fantasy. Most importantly, explanations of behavior by reference to mental states garnered from our informants fail to comprehend unconscious mental processes and the observation that consciousness of having done something or having thought something occurs after the deed is done.

We face important ambiguities in the relationship between behavior and ideas. When we rely on our personal or informant reports, we can find that people can do the same thing for different reasons, can do different things for the same reasons, and can claim to think one way and act in other, contradictory ways. Most telling, perhaps, changes in behavior can yield subsequent changes in ideas.

The reasoning summarized above suggests that by focusing solely on products of the mind—ideas and behavior—we created this dilemma ourselves. Certainly, there exists an underlying logic that makes culture more than a statistical artifact, but it does not consist of ideas that produce behavior. Perhaps, in reifying the ideas of individuals as the knowledge they use to produce behavior, our minds tricked us into attributing causal properties to a phenomenon that does not exhibit them? If so, the resolution to the ambiguous and problematical relationship between ideas and behavior may come from asking what produces both.

Ideas and behavior reflect or constitute choices, so a solution to this dilemma-of-our-own-making may come from a theory of choice alternatives. Currently, economists and behavioral ecologists work with a theory of choices, but the research agenda of neither concerns itself with the full range of pertinent questions. Core research questions stem from the observation that our central nervous systems construct both the mental and the behavioral components of culture. If recurrent, patterned behavior exerts effects because it requires our response, something about the specific properties of those recurrent patterns evokes our attention. What are these properties? Why do they evoke our attention? How and why do we see alternatives or understand that alternatives even exist? By what criteria do we differentiate alternatives? Why do we employ those criteria? What are the properties of the mental mechanism or mechanisms that produce these effects? How and why did they become part of our central nervous systems? Answers to these questions will yield a comprehensive theory of choice alternatives. Such a theory will take us beyond culture theory because it will imply a theory of culture. It will also help us make ethnographic sense out of the contemporary world and give us a better grasp of the past one.
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NOTES

REFERENCES CITED


cite{Barth, John A., and Tanya L. Chartrand

Barrett, H. G.

Boas, Franz

Boster, James S.

Burton, Michael L., and Sarah Beth Nerlove

Campbell, D. T.

Campbell, D. T., and D. W. Fiske

Caulkins, Douglas

Comer, James P., Michael Ben-Avie, Norris M. Haynes, and Edward T. Joyner, eds.

Cutler, William W., III

D'Andrade, Roy


Dressler, William W., and James R. Bindon

Dressler, William W., F. E. Viteri, A. Chavez, G. A. C. Grell, and J. E. Dolan

Driver, Harold E.

Epstein, Joyce L.

Garro, Linda C.

Gazzaniga, Michael S.

Gazzaniga, Michael S.


Handwerker, W. Penn


2001b Quick Ethnography. Walnut Creek, CA: AltaMira Press.

Handwerker, W. Penn, and Danielle F. Wozniak

Henry, Mary E.

Hidalgo, Nitza M., Sau-Fong Siu, Josephine A. Bright, Susan M. Swap, and Joyce L. Epstein

Jorgensen, Joseph G.


Keesing, Roger

Kellogg, Ronald T.

Kroeber, A. L.


Pelto, P., and G. Pelto

Romney, A. Kimball, Susan C. Wellor, and William H. Batchelder

Rummel, R. J.

Sapir, Edward


McEvoy, F.

Pelto, P.

Romney, A. Kimball, Susan C. Weller, and William H. Batchelder

Rummel, R. J.

Sapir, Edward

Sturrock, Kenneth, and Jorge Rocha

Tylor, Edward B.

Wallace, A. F. C.

Weller, Susan C., and N. C. Mann

White, Leslie A.

Wolf, Eric R.