

CULTURE AND COGNITION

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ABSTRACT

Recent work in cognitive psychology and social cognition bears heavily on concerns of sociologists of culture. Cognitive research confirms views of culture as fragmented; clarifies the roles of institutions and agency; and illuminates supra-individual aspects of culture. Individuals experience culture as disparate bits of information and as schematic structures that organize that information. Culture carried by institutions, networks, and social movements diffuses, activates, and selects among available schemata. Implications for the study of identity, collective memory, social classification, and logics of action are developed.

INTRODUCTION

The study of culture in everyday life remains a virtuoso affair. Interpretive studies offer great insight but fail to build on one another. Cultural theory has become highly sophisticated but not fully operational. These riches ready the field for takeoff, like the study of social stratification in Sorokin's day (1957 [1927]). But before the study of lived culture can become a cumulative enterprise, scholars must clarify the cognitive presuppositions behind their theories of what culture does and what people do with it, and the fundamental concepts and units of analysis (Jepperson & Swidler 1994, Wuthnow 1987).

Recent work in cognitive psychology and social cognition provides resources for both tasks. After describing recent convergence between cultural sociology and psychology, this chapter considers lessons of recent work on cognition for presuppositions about the nature of culture; develops implications of these lessons for sociological work on identity, collective memory, social classification, logics of action, and framing; and points to key problems that remain unsolved.

Rather than offer an exhaustive review of cognitive sociology per se (see Zerubavel 1997) or work in psychology relevant to culture (see D'Andrade 1995), I emphasize tensions and affinities between recent cognitive research and work in the sociology of culture with the aim of bringing the former into the service of the latter. I focus on how people use culture, rather than the production of culture, ideology, or culture embedded in the physical environment. The point is not to psychologize the study of culture, but to lay a foundation for a view of culture as working through the interaction of shared cognitive structures and supra-individual cultural phenomena (material culture, media messages, or conversation, for example) that activate those structures to varying degrees.

SOCIOLOGY AND PSYCHOLOGY: POINTS OF CONVERGENCE

A handful of sociologists have appreciated the potential of cognitive science to inform sociological work on culture (Carley 1989, Cicourel 1973, Schwartz 1981, White 1992), and some social constructionists have anticipated important results of cognitive research (Berger & Luckman 1967, Garfinkel 1987 [1967], Zerubavel 1991). For the most part, however, sociologists of culture have ignored relevant work by cognitive psychologists, social psychologists, and public-opinion researchers. This omission reflects a mismatch between the modal intellectual styles of humanistic, interpretively oriented cultural sociologists and experimentally oriented positivistic psychologists, as well as the disappointing legacy of Parsons' efforts at disciplinary fusion, which psychologized culture, reducing it to shared values, norms, and attitudes.

Sociology: More Complex Views of Culture

In recent years, however, common ground between sociology of culture and psychology has grown. The major development within sociology has been a shift to a more complex understanding of culture. Thirty years ago, most sociologists viewed culture as a "seamless web" (Swidler 1997), unitary and internally coherent across groups and situations. In effect, culture was portrayed as a latent variable influencing in common such manifestations as media images, responses to attitude questionnaires, and the values embodied in everyday practices. Individuals were presumed to acquire culture in the course of socialization and, in the popular oversocialized view (Wrong 1961), to enact it unproblematically. It followed from this perspective that there was little reason to worry about constructs used to study culture, for any kind of "cultural stuff" could serve as an indicator of the underlying latent variable.

By contrast, recent work depicts culture as fragmented across groups and inconsistent across its manifestations (Martin 1992). The view of culture as

values that suffuse other aspects of belief, intention, and collective life has succumbed to one of culture as complex rule-like structures that constitute resources that can be put to strategic use (Bourdieu 1990, Sewell 1992, Swidler 1986).

This shift makes studying culture much more complicated. Once we acknowledge that culture is inconsistent—that people's norms may deviate from what the media represent as normal, or that our preconscious images and discursive accounts of a phenomenon may differ—it becomes crucial to identify units of cultural analysis and to focus attention upon the relations among them. In effect, our measures stop being indicators of a latent variable (culture), and their relationship to culture becomes analogous to that of education, income, and place of residence to social stratification: separate phenomena, analytically related to a common theoretical construct, the relations among them a matter for empirical investigation (D'Andrade 1995 notes similar trends in anthropology).

Similarly, once we acknowledge that people behave as if they use culture strategically, it follows that the cultures into which people are socialized leave much opportunity for choice and variation. Thus our attention turns to ways in which differing cultural frames or understandings may be situationally cued. Addressing such issues requires more elaborate and contestable psychological presuppositions than did the culture-as-latent-variable view.

Psychology: More Complex Views of Cognition

Such questions make it sensible for sociologists of culture to turn to psychology for insight into the mechanisms through which shared culture enters into cognition. Yet nothing guarantees that psychologists, who have their own research agendas, can help us. Thirty years ago, behaviorism made psychology essentially irrelevant to the study of culture. Twenty years ago, psychologists casting off the yoke of behaviorism focused primarily on the acquisition of skills and capacities of little interest to most sociologists of culture. Even a dozen years ago, the implications for cultural sociology of many of the ideas and research traditions that are most useful today were still unclear.

What has happened to make psychology useful to sociologists of culture? First, psychologists have rejected behaviorism, accepted and demonstrated the existence of mental structures used to perceive, process, and retrieve information, and found ways to make inferences about such structures. Second, just as sociological research has demonstrated culture's complexity and fragmentation, psychological research has demonstrated the complexity of memory and provided glimpses of the partitioning of mental structures by domain. Third, recent foci of psychological research (schemata, categories, mental models, and so on) are much richer in cultural content than the formal operations or intellectual capacities that once preoccupied cognitivists and developmentalists

(Rogoff & Chavajay 1995). Fourth, some psychologists have taken notice of such sociological topics as cross-cultural differences in cognition (Shweder & Bourne 1991, Markus & Kitayama 1991), elite/popular interaction in cultural change (Moscovici 1984), and “distributed cognition” (i.e. the social division of cognitive labor) (Resnick et al 1991, Salomon 1993).

In addition to expanding the grounds of shared interest between the two disciplines, such developments have also softened two important epistemological differences. Whereas most sociologists of culture have been steadfastly anti-reductionist, resisting efforts to portray culture as the aggregate of individual subjectivities, psychology has focused upon the individual. Increasingly, however, as I shall argue, psychological research bolsters and clarifies the view of culture as supra-individual, and even addresses supra-individual aspects of cognition directly [as in work on pluralistic ignorance (Miller & Prentice 1994)].

Second, some sociologists of culture rejected the subjectivist focus of psychological research, calling instead for research on external aspects of culture amenable to direct measurement (Wuthnow 1987). In recent years, cognitivists have developed ingenious empirical techniques (reviewed in D’Andrade 1995) that permit strong inferences about mental structures, going far toward closing the observability gap between external and subjective aspects of culture.

Of course, the fit between the disciplines must not be exaggerated. Most of what psychologists do is irrelevant to sociologists of culture, and much of the culture sociologists’ study is supra-individual. Common ground has increased but will remain limited by the different subject matters of the disciplines (Zerubavel 1997), which will remain complements rather than substitutes.

COGNITIVE PRESUPPOSITIONS OF CULTURAL SOCIOLOGY

Sociologists who write about the ways that culture enters into everyday life necessarily make assumptions about cognitive processes. If we assume that a shared symbol evokes a sense of common identity (Warner 1959), that a certain frame provokes people to think about a social issue in a new way (Gamson 1992), that lessons about the structure of space and time learned in school are generalized to the workplace (Willis 1977), or that surveys can measure class consciousness (see Fantasia’s critique 1995), we are then making powerful cognitive assumptions. Such assumptions, while metatheoretical to sociologists, are keenly empirical from the standpoint of cognitive psychology. It is crucial, then, to evaluate our assumptions (or adjudicate differences among them) by microtranslating presuppositions (Collins 1981) to the cognitive level and assessing their consistency with results of empirical research on cognition.

Coherence vs Fragmentation

Many sociologists have come to reject the latent-variable view of culture as coherent, integrated, and ambiguous in favor of representations of culture as a “toolkit” (Swidler 1986) or “repertoire” (Tilly 1992): a collection of stuff that is heterogeneous in content and function. Yet much empirical work on culture still presumes that culture is organized around national societies or cohesive subnational groupings, is highly thematized, and is manifested in similar ways across many domains (Hofstede 1980, Bourdieu 1984).

Is culture a latent variable—a tight network of a few abstract central themes and their more concrete entailments, all instantiated to various degrees in a range of symbols, rituals, and practices? If so, then we would expect to find that group members share a limited number of consistent elements—beliefs, attitudes, typifications, strategies—and that the inclusion of any one element in the collective culture implies the exclusion of inconsistent elements.

Or is culture a grab-bag of odds and ends: a pastiche of mediated representations, a repertoire of techniques, or a toolkit of strategies? If so, then we might expect less clustering of cultural elements within social groups, less strong linkages among the elements, and weaker pressures for the exclusion of inconsistent elements.

Research in cognitive psychology strongly supports the toolkit over the latent-variable view and suggests that the typical toolkit is very large indeed. Particularly relevant here is research (summarized by Gilbert 1991) on how people attribute accuracy or plausibility to statements of fact and opinion. Consistent with Swidler’s (1986) contention that “all people know more culture than they use,” Gilbert reports that “The acceptance of an idea is a part of the automatic comprehension of that idea, and the rejection of the idea occurs subsequent to and more effortfully than its acceptance.” In other words, our heads are full of images, opinions, and information, untagged as to truth value, to which we are inclined to attribute accuracy and plausibility.

Research on memory tells a similar story, revealing that information (including false information) passes into memory without being “tagged” as to source or credibility, and that active inference is required to identify the source of the information when it is recalled. Such inferences may be incorrect, yielding misattributions of source and credibility (Johnson et al 1991).

This work has several important implications for students of culture. First, it refutes the notion that people acquire a culture by imbibing it (and no other) through socialization. Instead, it directs the search for sources of stability and consistency in our beliefs and representations, first, to schematic organization, which makes some ideas or images more accessible than others; and, second, to cues embedded in the physical and social environment.

Second, learning that people retain (and store with a default value of “correct”) almost every image or idea with which they have come into contact, renders intelligible otherwise anomalous research findings about inconsistency in expressions of attitudes across time, cultural volatility in periods of rapid change (e.g. the fall of the Soviet system), and the susceptibility of attitudes to framing effects (Sniderman & Piazza 1993).

Third, the research explains the capacity of individuals to participate in multiple cultural traditions, even when those traditions contain inconsistent elements. Fourth, it establishes the capacity of people to maintain distinctive and inconsistent action frames, which can be invoked in response to particular contextual cues. Fifth, this work raises the possibility that socialization may be less experientially based, and more dependent upon media images and hearsay, than many of our theories (for example, Bourdieu’s habitus [1990] construct) imply.

Such inferences as these go beyond the scope of cognitive studies, to be sure, and much rides on the precise ways in which schematic organization imposes order upon stored knowledge and memory. Nonetheless, recent cognitive research strongly reinforces the “toolkit” as opposed to the “latent-variable” view of culture and, at the very least, places the burden of proof on those who depict culture as strongly constraining behavior or who would argue that people experience culture as highly integrated, that cultural meanings are strongly thematized, that culture is binding, and that cultural information acquired through experience is more powerful than that acquired through other means.

Institution and Agency

Cognitive research can also enhance our appreciation of the view that culture both constrains and enables (Sewell 1992). Although this position has become virtually catechismic among sociologists of culture, we know little about the conditions under which one or the other is the case. Many sociologists believe, following Gramsci (1990), that culture, embedded in language and everyday practices, constrains people’s capacity to imagine alternatives to existing arrangements. At the same time, we know that people act as if they use cultural elements strategically to pursue valued ends (Bourdieu 1990). Cognitive research cannot answer the essentially sociological question of when culture does each, but it can provide direction to the search.

The finding that culture is stored in memory as an indiscriminately assembled and relatively unorganized collection of odds and ends imposes a far stronger organizing burden on actors than did the earlier oversocialized view. The question, then, is how the actor organizes the information that she or he possesses. Psychological research points to two quite different mechanisms or modes of cognition.

AUTOMATIC COGNITION The first, and most important, which I refer to as automatic cognition is “implicit, un verbalized, rapid, and automatic” (D’Andrade 1995). This routine, everyday cognition relies heavily and uncritically upon culturally available schemata—knowledge structures that represent objects or events and provide default assumptions about their characteristics, relationships, and entailments under conditions of incomplete information.

Psychological research on schemata is central to the interests of sociologists both methodologically (due to advances in techniques that reveal taken-for-granted assumptions to which subjects may not have easy verbal access) and substantively, for what it tells us about how culture works. Indeed, for some purposes, it may be useful to treat the schema as a basic unit of analysis for the study of culture, and to focus on social patterns of schema acquisition, diffusion, and modification (Carley 1991 makes a related argument).

Schemata are both representations of knowledge and information-processing mechanisms. As representations, they entail images of objects and the relations among them. Psychologists use the term broadly [some would suggest too broadly (Fiske & Linville 1980)]. It can refer to simple, highly abstract concepts [for example, container (D’Andrade 1995)]; to concrete activities (buying chewing gum), or to complex social phenomena (group stereotypes or social roles). Event schemata or scripts (Abelson 1981, Garfinkel 1987) constitute an important class of schemata. Special attention has also been given to self schemata (Milburn 1987, Markus & Kitayama 1994, Markus et al 1997), culturally variable representations of the self that provide stability both to individual behavior across time and to social interactions within the group.

Schemata are also mechanisms that simplify cognition. Highly schematic cognition is the realm of institutionalized culture, of typification, of the habitus, of the cognitive shortcuts that promote efficiency at the expense of synoptic accuracy (Berger & Luckman 1967, Bourdieu 1990, Kahneman et al 1982). Much cognitive research demonstrates that “schematic material dominates other material in accurate recall, in intruded recall, in recognition confidence, in recall clustering and in resistance to disconfirmation. . . . Schemata also facilitate inaccurate recall when the information is schema consistent” (Fiske & Linville 1980: 545). In schematic cognition we find the mechanisms by which culture shapes and biases thought.

People are more likely to perceive information that is germane to existing schemata Von Hippel et al (1993) report that experimental subjects are more likely to perceive correctly terms that are schematically relevant than those that are not. Information embedded in existing schemata and information that is schema-dissonant are both more likely to be noticed than information orthogonal to existing structures (Schneider 1991). Such laboratory findings resonate

with results in historical sociology and cultural studies: for example, the gradual and halting acceptance of information about the New World by early modern mapmakers (Zerubavel 1992); the ways in which archaic physical models constrained medical scientists' interpretation of new evidence about syphilis (Fleck 1979); and the penchant of male biologists for seeing dominance hierarchies when they watch apes and elephant seals (Haraway 1991).

People recall schematically embedded information more quickly Most psychological evidence is based on laboratory experiments, which reveal that subjects remember longer lists of words, or interpret ambiguous stimuli more accurately, and retrieve information about a story they have heard more effectively if it is relevant to preexisting mental structures that render the information interpretable (Sedikides & Skowronski 1991). But again, there are intriguing sociological parallels in studies that report cross-cultural differences in descriptions of the content of the same novel (Griswold 1987), television program (Liebes & Katz 1990), or movie (Shively 1992) that reflect collective preoccupations ("chronically activated mental structures" in psychological parlance).

People recall schematically embedded information more accurately When Freeman et al (1987) asked members of a faculty workshop to list the people who had attended the previous meeting, they found that long-term attenders correctly recalled participants who regularly attended, but forgot the infrequent attenders. Using a very different method (analysis of Watergate transcripts), Neisser (1981) reported that Nixon aide John Dean remembered schema-consistent events more accurately than events that were schema-inconsistent.

People may falsely recall schematically embedded events that did not occur Freeman et al's (1987) informants remembered regular attenders as present at the meeting in question even when they hadn't been there. When subjects are told to code small-group interactions and then given questionnaires about characteristics of group members shortly thereafter, the post-hoc evaluations yield much higher correlations of schematically related behaviors (e.g. criticizing or expressing hostility) than do the real-time codings (Shweder 1982). Similar confusion of schematic representations for real events may be observed in at least some reports of satanic child abuse (Hacking 1995) and in some of former President Reagan's speeches.

The parallel with sociological accounts of institutions is striking. Typifications (mental structures) influence perception, interpretation, planning, and action (Berger & Luckman 1967, DiMaggio & Powell 1991). Institutionalized structures and behaviors (i.e. those that are both highly schematic and widely shared) are taken for granted, reproduced in everyday action [Giddens' "structuration" (1984)] and treated as legitimate (Meyer & Rowan 1977). Indeed, an

eminent psychologist (Bruner 1990:58) has written explicitly of the “schematizing power of institutions.” Thus the psychology of mental structures provides a microfoundation to the sociology of institutions.

Research on social cognition enhances our understanding of how culture constrains but does not support theories that depict culture as overwhelmingly constraining. Instead, consistent with contemporary sociological theorizing, work in psychology provides microfoundational evidence for the efficacy of agency.

DELIBERATIVE COGNITION In contrast to automatic thought, psychologists note a quite different form of cognition, which is “explicit, verbalized, slow, and deliberate” (D’Andrade 1995). When sufficiently motivated, people can override programmed modes of thought to think critically and reflexively.

Such overrides are necessarily rare because deliberation is so inefficient in its rejection of the shortcuts that automatic cognition offers. Consequently, the key question is why people are ever deliberative. Psychologists have identified three facilitating conditions in studies that intriguingly parallel work in the sociology of culture.

Attention Psychological research suggests that people shift into deliberative modes of thought relatively easily when their attention is attracted to a problem. For example, experimenters can create false recollections of a videotape or story among laboratory “witnesses” by presenting inaccurate information or asking leading questions (Loftus et al 1989). But when the task is changed to ask subjects to think carefully about the source of particular bits of information, the experimental effect is diminished or eliminated (Johnson et al 1993). In experimental studies of attitude-behavior consistency, merely increasing self-awareness by placing a mirror in the face of the subject as he or she completes an attitude questionnaire significantly increases the attitude-behavior correlation (Abelson 1981:722). Such results parallel the insights of students of social movements, who have studied agenda-building and who have also noted the effectiveness as an organizing device of reframing issues in ways that call attention to problems salient to movement participants (Snow & Benford 1992).

Motivation People may also shift from automatic to deliberative cognition when they are strongly motivated to do so by dissatisfaction with the status quo or by the moral salience of a particular issue. For example, although racist schemata are accessible to most white Americans, whites can override such schemata to some extent through awareness and reflexivity (Devine 1989). Marx’s theory of class consciousness—which contends that physically proximate workers facing immiseration will overcome false beliefs through interaction and reflection—is a classic sociological counterpart (and see Bourdieu 1974).

Schema failure Finally, people shift to more deliberative modes of processing when existing schemata fail to account adequately for new stimuli. Research on the psychology of intergroup relations suggests that people in task groups initially code others on the basis of stereotypes but shift to more deliberate evaluations when faced with very strong inconsistent evidence (Schneider 1991:536, Berger et al 1980). Moscovici, whose Durkheimian social psychology differs in many respects from other psychological accounts of mental structures (Farr & Moscovici 1984, Augoustinos & Innes 1990), argues that collectivities confronted with disjunctive social change construct new social representations (often anchored in analogies to pre-existing schemata, and often constructed deliberately by experts in the social sciences and mass media) in order to interpret new stimuli. Such arguments are paralleled in Garfinkel's (1967) breaching experiments, which forcibly and painfully overrode automatic processing, and in Swidler's contention that ideologies and other consistent cultural forms are more influential during unsettled times (1986, Jepperson & Swidler 1994 on constitutive vs. strategic culture).

Psychologists may note that I have paid scant attention to active debates about the nature of mental structures and have drawn too sharp a contrast between automatic and deliberative processing. Research on culture, however, can already benefit from what research on cognition has resolved. The notion of schema is a fair approximation of phenomena identifiable in fuzzy outline, if not sharp relief, by experimental methods; research on schemata advances sociological understandings of culture, especially institutions; and research on automatic vs deliberative processing may help sociologists determine what to do with the widely believed but theoretically inert notion that both institution and agency are central to social life.

Culture as Supra-Individual

It is no news to sociologists that culture exists, *sui generis*, at the collective level. (The position taken here—that culture is also manifest in people's heads—is probably more controversial.) Nonetheless, psychological research can help us appreciate several aspects of culture's supra-individual character that sociologists of culture sometimes neglect.

PLURALISTIC IGNORANCE A lively branch of social-psychological research derives from Robert K. Merton's notion of "pluralistic ignorance" (1957): the idea that people act with reference to shared representations of collective opinion that are empirically inaccurate. Such research directs us to distinguish between two senses in which culture is supra-individual: as an aggregate of individuals' beliefs or representations, or as shared representations of individuals' beliefs. Substantial evidence indicates that the latter deviates substantially

from the former with significant behavioral consequences and that this process represents a basis for the relative autonomy of social norms (Miller & Prentice 1996, Noelle-Neumann 1993).

INTERGROUP CONTRAST AND POLARIZATION The existence of group-level cultures (shared understanding partly independent of individual beliefs) is also suggested by the tendency of groups to adopt public positions more extreme than the preferences of their members, especially when acting with reference to a contrasting group. What is striking is not polarization *per se*, but the cultural availability of polarized stances (representations of collective opinion) on which members of each group can converge (Tajfel 1981).

SCHEMATA AS CULTURE Not all schemata are cultural to the same degree. Some schemata reflect universal cognitive processes (for example, basic object categorization), whereas others may be quite idiosyncratic. Many schemata, however, and the schemata of greatest interest to sociologists of culture, enact widely held scripts that appear independent of individual experience. For example, the research, cited above, that found coherence in ratings of small group behavior emerging only after the fact, led the author (Shweder 1982) to speculate that much of what passes as clinical research on personality is really about cultural constructions of personhood (and see Meyer 1986).

COHERENT CULTURES AS EXTERNAL TO PERSONS Despite this chapter's focus on subjective representations of culture, we must not forget that relatively coherent cultural forms exist independently of persons in the broader environment. Indeed, one of the more notable characteristics of modern societies is the existence of a cultural division of labor in which intellectual producers intentionally create and diffuse myths, images, and idea systems (Douglas 1986, Farr & Moscovici 1984, Swidler 1997). Other relatively coherent representations exist less formally as narratives or stories repeatedly invoked in public discourse (Dobbin 1994, White 1992).

AN INITIAL SYNTHESIS Some would argue that whatever coherence exists flows from such externally available sources, *i.e.* that cultural coherence is entirely external to the person. As we have seen, however, such a position pushes the healthy shift from the latent-variable to the toolkit one step too far. Instead, the research reviewed here suggests that culture works through the interaction of three forms. First, we have information, distributed across persons (Carley 1991). Such distribution is patterned, but not highly differentiating, due to the indiscriminant manner in which bits of culture are accumulated and stored in memory (Gilbert 1991). Second, we have mental structures, especially schematic representations of complex social phenomena, which shape

the way we attend to, interpret, remember, and respond emotionally to the information we encounter and possess. Such schemata are more clearly socially patterned than are memory traces. Finally, we have culture as symbol systems external to the person, including the content of talk, elements of the constructed environment, media messages, and meanings embedded in observable activity patterns.

Culture inheres not in the information, nor in the schemata, nor in the symbolic universe, but in the interactions among them. As we have seen, schemata structure our use of information. But people acquire many schemata throughout their lives, and some of these are inconsistent both in content and in implications for behavior. How is it that people invoke one among the many schemata available to them in a given situation?

To simplify greatly in order to focus upon the aspect of the process most relevant to the sociology of culture, selection is guided by cultural cues available in the environment. Although a few schemata may be chronically available, more often they are primed or activated by an external stimulus or frame (Sedikides & Skowronski 1991, Barsalou 1992, Gamson 1992:6–8, Schudson 1989). Framing effects in social surveys—e.g. the finding that whites are more likely to accept negative stereotypes of African-Americans if the question is preceded by a neutral reference to affirmative action (Sniderman & Piazza 1993:102–104)—are familiar examples. But schemata can also be activated through conversation, media use, or observation of the physical environment. Understanding the interaction between two distributions—of the schemata that constitute people’s cultural toolkits, and of external cultural primers that act as frames to evoke (and, in evoking, exerting selection pressures upon) these schemata—is a central challenge for sociologists of culture.

APPLICATIONS

This section reviews work on cognitive aspects of the sociology of culture in light of the perspective developed here. The topics are identity, collective memory, social classification, logics of action, and framing.

Identity

Identity has become one of the most active research fields in the sociology of culture. It is useful to distinguish between two quite different kinds of collective identity: the identities of collectives, on the one hand, and collective aspects of the identities of individuals on the other.

IDENTITIES OF COLLECTIVES At the supra-individual level, collective identity is a shared representation of a collectivity. Research at this level portrays collective identities as highly constructed (Anderson 1983), through explicit

messages and more subtle elements such as anthems and flags (Cerulo 1994). Collective identities are chronically contested, as groups vie to produce social representations capable of evoking schemata favorable to their ideal or material interests (Moscovici 1984, Zerubavel 1994, Friedland & Hecht 1996).

Another line of research, active in both psychology and sociology, views identities and selves as collective representations that vary cross-culturally and historically. Markus et al (1996) review research on differences in the cultural construction of identity in East Asian and Western societies. Meyer & Jepperson (1996) contend that the modern self (and its variations in different polities) is a constructed identity endowed with agency in relation to the collectivity.

COLLECTIVE ELEMENTS IN INDIVIDUAL IDENTITIES Much research on collective identity is actually about the more complex issue of the ways in which social identities enter into the constitution of individual selves. Social identity theory views individual identities as comprising prioritized identity-sets based on particularistic and role-based group affiliations (Stryker 1986). Self-categorization theories also portray collective identities as invoked by conditions that make particular identities especially salient (Tajfel & Turner 1986). In this view, individual identities reflect elaborated group-identity schemata in proportion to strength and recency of activation. Viewing identities as context-dependent in this way is consistent with observations of the volatility with which identities may gain and lose salience during periods of intergroup conflict.

Collective Memory

Collective memory is the outcome of processes affecting, respectively, the information to which individuals have access, the schemata by which people understand the past, and the external symbols or messages that prime these schemata. Like collective identities, research on collective memory portrays the phenomenon in both supra-individual and individual terms.

Several scholars have studied institutional processes that maintain or suppress information as part of public culture, such as factors determining the reputation and popularity of particular persons or art works (Fine 1996, Griswold 1986, Lang & Lang 1988). Much research, however, focuses upon the schematic level, studying struggles to define the ways in which members of a society interpret widely shared information about their past, either tracking change in the ways in which a person or public figure is understood over time (Schudson 1992, Schwartz 1991) or analyzing conflict over alternative visions of a collective past (Maier 1988, Zerubavel 1994).

Little research has focused on the interaction between individual and collective memories. An exception is the work of Schuman & Scott (1989), who use survey methods to explore the possibility that the historical events that

men and women of different generations remember most vividly structure their understanding of contemporary social issues.

Social Classification

The study of social classification—the social construction and use of category schemes—has burgeoned in the last decade. Some work has analyzed processes of classification in historical time, describing the emergence of a strongly classified artistic high culture (DiMaggio 1982), or the use of social categorization in the formation and implementation of social policies (Starr 1992). Of particular interest is Mohr's (1994) analysis of "discourse roles," which uses structural equivalence analysis to identify the implicit classification of social problems and client groups embedded in self-descriptions of social-service and poverty-relief organizations in early twentieth-century New York City.

Other research has focused upon social differentiation in shorter time spans. Zelizer (1989) describes the process by which women find ways to differentiate even money, the universal medium of exchange, in order to imbue it with social meaning. Lamont (1992) analyzes the bases upon which men of different regional and national origins make social distinctions that reinforce their sense of social honor. Gieryn (1997) describes boundary work within scientific communities, examining how scientists respond when the strong classification science/nonscience is threatened.

Zerubavel, one of few sociologists to study classification from a cognitive perspective, points out that the drive to partition a continuous world appears to be a human universal, though the nature of the categories constructed may vary significantly among groups (Zerubavel 1991, 1997, Douglas 1966). Rosch (1978), whose work has dominated psychological thinking on the topic, proposes (with much experimental support) that cognition is most efficient when we chunk many separate features (bits of information) together by thinking with a prototype (complete mental image) of an object. Prototypical constructs emerge at the most efficient level of abstraction: i.e. where an increase in specificity provides the greatest marginal increase in information. Thus we have prototypes for "chair" but not "furniture" or "divan," and for "bird" but not for "animal" or "sparrow." Although the level at which object prototypes form appears to be relatively universal, the specific content of a prototype reflects a mix of typicality and availability in a given location (D'Andrade 1995).

Rosch applied her model of prototypes to relatively simple concepts. Self-categorization theory draws on the prototype model (Hogg & McGarty 1990), but it remains to be seen if complex social constructs are represented in such unambiguous terms. If so, application to role analysis may be useful, in light of an intriguing parallel between Rosch's characterization of a prototype as a

core of essential features and Nadel's (1957) classic definition of social role as consisting of a core of entailments and a penumbra of optional features.

Logics of Action

Many authors have used the expression "logics of action" to refer to an interdependent set of representations or constraints that influence action in a given domain. Sometimes, of course, the term is used as a synonym for "ideal type" (Oru 1991) or, in rational-actor approaches, to refer to situational constraints that induce parallel behaviors among players with similar resources given particular rules of the game (Block 1990, Offe 1985).

A richer, more cultural, sense of logics has emerged in recent work in political economy, a view that embeds them in the interaction between mental structures instantiated in practical reason (Bourdieu 1990), on the one hand, and institutional requirements on the other. Friedland & Alford (1991:248–49) provide the most thorough exposition and definition, describing "institutional logics" as sets "of material practices and symbolic constructions" that constitute an institutional order's "organizing principles" and are "available to organizations and individuals to elaborate." According to Friedland & Alford, these logics are "symbolically grounded, organizationally structured, politically defined and technically and materially constrained."

Similar imagery is apparent in Boltanski & Thévenot's notion of modes of justification (1991), institutionally linked discourses embodying specific orientations toward action and evaluation. Empirical development of similar ideas can be found in Fligstein's (1990) work on "conceptions of control" in corporate governance, and in Stark's (1990) analysis of shop floor politics in a Hungarian socialist factory.

Such work requires a taxonomy of institutions, each of which entails a distinctive logic. (For Friedland & Alford, the institutions are capitalism, the state, democracy, family, religion, and science, each of which has its own axial principle and linked routines and rituals.) Conflict erupts from the clash of institutional logics, as when a wife views her household labor through a marketplace logic of explicit exchange, whereas her husband imposes a family logic of selfless service upon the situation.

The notion of logics is immensely appealing. First, it proposes that external rituals and stimuli interact with internal mental structures to generate routine behavior. Second, it is consistent with the view that culture is fragmented among potentially inconsistent elements, without surrendering the notion of limited coherence, which thematization of clusters of rituals and schemata around institutions provides. Third, it provides a vocabulary for discussing cultural conflict as confrontation between inconsistent logics of action.

At the same time, the work remains frankly exploratory and calls attention to gaps in our current understanding of culture and cognition, which neither psychology nor sociology can address. These are the topics of the next section.

KEY PROBLEMS IN THE STUDY OF CULTURE AND COGNITION

The notion of institutional logics can be reinterpreted as an effort to thematize schemata and link them to social structure. In order to exploit the insights this perspective offers, students of culture need three things that we now lack: an understanding of how schemata aggregate to more complex cultural structures, or “logics”; an understanding of cultural change, which, in turn, requires a clear understanding of the way in which actors switch among institutional logics; and a theory of analogy, which is necessary if we are to understand processes of schematic generalization that thematization and switching both require.

Models of Schematic Aggregation

Perhaps the highest priority for students of culture and cognition is to develop models of thematization, by which I mean the ways in which diverse schemata aggregate to more general and sociologically interesting constructs like thought styles, stories, logics, paradigms, and ideologies. There are several candidates for such models.

ATOMISTIC DECOUPLING The null hypothesis is that everyday thought is populated by randomly invoked, loosely coupled schemata with little or no higher-level architecture. If so, thematization is simply imposed post hoc by cultural specialists or embedded in the environment and in everyday routines. Although this view is inconsistent with most work in the sociology of culture, and would seem ill-equipped to explain either experimental research on schemata or macro-cultural change, it cannot now be disconfirmed absolutely.

NESTED HIERARCHY At the opposite extreme is the view of cross-cultural psychologists that culture comprises a hierarchy of nested schemata, arrayed from abstract to concrete, with the latter entailed by the former. For example, Markus & Kitayama (1994) view a wide range of cognitive differences between Japanese and Americans as flowing from fundamental differences in self-schemata. Although they provide compelling evidence of significant intergroup differences, one need not assume as much coherence as they do.

DOMAIN-SPECIFICITY There is considerable evidence that information and schemata pertaining to different life domains is stored in distinct areas of memory, with schematic integration occurring within specific domains (Hirschfeld

& Gelman 1994). In this view, clusters of schemata are coherent only within limited boundaries; taken together, the domains are “more like the collected denizens of a tide pool than a single octopus” (D’Andrade 1995:249).

This view has considerable experimental support, though there is little consensus as to the size or character of the domains. It is tempting to equate “domain” with the institutional realms identified by Friedland & Alford (1991) or Boltanski & Thévenot (1990), and to posit that culturally specific “logics of action” are thus embedded in schematic organization, but there is at present little if any empirical warrant for doing so.

IDENTITY CENTRALITY Some evidence suggests that affectively hot schemata are more salient and have more extensive entailments than do emotionally neutral structures. Work on identity (Wiley & Alexander 1987, Hogg & McGarty 1990) suggests the possibility that “the self” may be an emotionally supersaturated cluster of schemata tending toward consistency and stability over time. Schemata that are embedded in the self-schemata, then, are more closely articulated with other schemata than those that are not incorporated into the self.

ROLE CENTRALITY By analogy, one can view roles as situationally evoked, emotionally activated, partial identities that provide integrated chunks of schematic organization and permit compartmentalization of different cultural contents. This perspective is appealing because it identifies a mechanism (i.e. role activation) connecting schematic triggering to contextual variation, and because it is consistent with evidence for domain-specificity of schematic organization. Moreover, because roles are embedded in distinctive role relations, this view points toward an integration of cultural and network analysis within a single framework (McCall 1987).

Which of these models of schematic thematization best describes the processes by which people integrate schemata is at present anybody’s guess. Significant matters—the extent to which ideology enters into conscious experience, the patterning of cultural styles or orientations, and the stability of cognition across context—ride on its resolution.

Cultural Change

A second priority for sociologists of culture is to create theories of cultural change that integrate ideas from research on culture and cognition with macro-sociological perspectives. At least four different change processes are crucial to understand.

THEORY OF ENVIRONMENTAL TRIGGERING I have argued that culture enters into everyday life through the interaction of environmental cues and mental structures. I have further suggested, by combining logic-of-action theories in

sociology and domain-specificity theories in psychology, that cultural understandings may be fragmented by domain, so that when persons or groups switch from one domain to another, their perspectives, attitudes, preferences, and dispositions may change radically. It follows that large-scale cultural changes may be caused by large-scale, more-or-less simultaneous frame switches by many interdependent actors.

At the micro level, we need a better understanding of how and why people switch among frames, logics, or domains (White 1995; from a rational choice perspective, Lindenberg & Frey 1993). The paradigmatic work on this comes from language, where research on code-switching has documented the circumstances (ordinarily changes in context, conversation partner, or topic) that trigger change in language or dialect (Gumperz 1982). At the macro level, the challenge is to create models that link environmental change to patterns of switching (White 1995).

THEORY OF SCHEMA ACQUISITION, DIFFUSION, AND EXTINCTION Psychologists have cast substantial light on the acquisition of schemata by individuals during development (Nelson & Gruendel 1981, Hirschfeld 1994). Sociologists of culture should turn their attention to factors leading to change in the distribution and level of activation of cultural representations or schemata in the population. Such change may occur if different cohorts acquire particular schemata at varying rates; or if changes in the distribution of environmental cues lead to enhanced activation or deactivation of particular schemata that have already been acquired.

Diffusion models of the sort that have been used to study the effects of media exposure on the adoption of new technologies or beliefs may be useful. Diffusion should be most effective where resonance exists between the new cultural element and existing schematic organization (Sperber 1985).

Work in the historical sociology of culture provides some guidance. Wuthnow's (1989) macro-theory of ideological change, which points to the importance of ecological effects on the life chances of new beliefs, may be usefully transposed to more micro levels. Tilly (1992) has developed and implemented a valuable approach to studying change over time in contentious movement repertoires. Buchmann & Eisner (1996) present evidence of accelerating change in the public presentation of selves during the second half of the twentieth century.

A particular challenge is to understand cognitive aspects of major collective events in which large numbers of persons rapidly adopt orientations that might have appeared culturally alien to the majority of them a short time before. Some religious revivals, the emergence of capitalism after the fall of the Soviet Union, and some spirals of ethnic antagonism are demanding cases of this kind.

THEORY OF DELIBERATIVE OVERRIDING It is important to understand not only how culture constrains, but how persons and groups can transcend the biasing effects of culture on thought. Work on this problem by psychologists (noted earlier) must be supplemented by research on the types of social interaction that lead large numbers of people to question and, ultimately, to revise their schematic representations of social phenomena.

Analogy and Generalization

Related to the study of change, but so important that it warrants a section of its own, is the problem of analogy and generalization. Sociological theories that portray persons as actively incorporating culture into cognitive organization invariably rely on some notion like the habitus, which Bourdieu (1990) refers to as a “system of durable transposable dispositions.” The key question for all of these theories is: Under what conditions are dispositions or schemata abstracted and transposed from one domain to another?

Almost all cultural change entails the transfer of some body of ideas or images from one content area to another on the basis of similarity judgments. Indeed, any attempt to characterize the culture of a group or a people in abstract terms—i.e., any analytic effort at thematization—takes for granted that actors have the capacity to draw analogies between classes of objects, actors, events, or actions, and thereby to understand them in similar ways.

Think of culture as a network of interrelated schemata, with analogies as the “ties” that create paths along which generalization and innovation occur. How are new “ties” created? The literature provides at least three alternatives.

FEATURE CORRESPONDENCE In the most straightforward models, two schemata or related structures lend themselves to analogy (and thus to generalization across domains) insofar as they share particular features (Lakoff & Johnson 1980) that create a correspondence between them. Thus Swinburne’s line, “when the hounds of spring are on winter’s traces,” is meaningful because of the correspondence between temporal and spatial pursuit and between the destructive effects of hounds on hares and of spring on winter. Two problems with this view are that the correspondence itself is constructed rather than innate; and that analogical power would not seem to vary with the extent of overlap between tenor and vehicle.

STRUCTURE-MAPPING This view takes as its starting point the existence of some form of content-related domain-specificity. Analogies connect not simply schemata but whole domains (Tourganeau & Sternberg 1982), deriving their power from the network of entailed comparisons they trigger. The most powerful analogies connect domains that are structurally homologous. Put another way, generalizability across domains is a function not of the extent to which

they share particular features in common, but of the extent to which relations among features are structurally similar (Gentner 1983).

EMOTIONAL RESONANCE Some research suggests that affectively hot schemata are more likely to be generalized across domains than affectively neutral schemata. For example, analogies are likely to be drawn between situations that elicit strong emotional reactions of a similar kind (Abelson 1981:725).

POLYSEMY AND SEMANTIC CONTAGION A final possibility is that polysemous expressions—those with distinct meanings that resonate with multiple schemata or domains—facilitate analogical transfer. Bakhtin's work (1986) on textual multivocality is suggestive in this regard, as is White's (1992) work on stories and rhetorics. Ross (1992) portrays meaning as emerging from the relations of words to one another in speech and to activities in real time. Because these constantly change, meanings are rarely fixed, but instead adapt, diverge, and spread across domains through semantic contagion. This perspective is particularly attractive because it acknowledges endemic change in language and other symbol systems and because it embeds generalization in social interaction.

SYMBOLS, NETWORKS, AND COGNITION

Cognitive aspects of culture are only one—and not necessarily the largest—part of the sociology of culture's domain. But it is a part that we cannot avoid if we are interested in how culture enters into people's lives, for any explanation of culture's impact on practice rests on assumptions about the role of culture in cognition. I have argued that we are better off if we make such models explicit than if we smuggle them in through the back door and that work in cognitive psychology and social cognition, although animated by different questions, offers tools that we sociologists can use to pursue our own agendas.

Ultimately, the challenge is to integrate the micro perspectives on culture described here with analyses of cultural change in larger collectivities over longer stretches of time. I have argued for a perspective that privileges schemata and related constructs as units of analysis, and attends to mechanisms by which physical, social, and cultural environments differentially activate these schemata.

This argument has begged the question of which aspects of the environment are most worthy of study. Without denying the unquestionable importance of research on how media and activity structures interact with subjective cultural representations, I shall conclude by calling brief attention to new research on the relationship of cognitive and symbolic phenomena to social structures portrayed as social networks.

Some researchers have focused on cognitive representations of social structure. [Fiske & Linville (1980) claim that schema theory is especially relevant

to the representation of social phenomena; and see Howard (1994).] The idea that social structures exist simultaneously through mental representations and in concrete social relations was central to Nadel's (1957) role theory. Both theorists (Emirbayer & Goodwin 1994, Orr 1995, White 1992) and researchers (Krackhardt 1987) are exploring the implications of this view.

Networks are crucial environments for the activation of schemata, logics, and frames. In a study of the Paris Commune, Gould (1995) argues that political protest networks did not create new collective identities, but rather activated identities that communards already possessed. Bernstein (1975) demonstrates the impact of network structures on individuals' tendency to employ cognitive abstraction. Erickson (1996), studying security guards, finds a correlation between the complexity of social networks and the diversity of conversational interests. Vaughan (1986) describes how people questioning marriage alter customary patterns of social relations in order to create new, independent identities as prologue to separation. Such studies point to a new, more complex understanding of the relationship between culture and social structure built upon careful integration of micro and macro, and of cognitive and material, perspectives.

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