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A LIKELY basis for renewing sociocultural analysis is in terms of the dynamics of sociocultural networks. Recastings of current disciplinary boundaries and constructs can follow.

Sociocultural reality was constructed only when there was switching back and forth between at least two domains, everyday and ceremonial, with their continuing networks. Durkheim argued that the impacts of differentiation were as strong for subsequent societies as well, where they cumulated into further levels of sociocultural organization. Perceived times themselves are byproducts of switching processes, constructed as scaffolding for meanings. Languages can be accounted for as envelopes deposited from interpretive dynamics in networks.

Begin with some imagery. We humans live as if in a shambles of theaters, both proscenium and in-the-round, with innumerable spotlights darting now here, now there, illuminating situations. These shifting situations bring to focus first one, then another sort of theater context or domain. The spotlights are triggers for social action and, in turn, for various selves of each of us and for neighbors and for unacknowledged network-mates some number of ties distant in the network of that building domain.

Such a sprawl of theaters emerges historically, in the course of work and celebration. Like homes, these theaters are only brought to life by and with particular actual sociocultural relations of various sorts, in which our actions join with contingencies of biophysical ecology and bodily hormones to crew the many spotlights which together offer a stochastic flow of situations. Such "buildings" persist at least as well as wooden houses and are perhaps as resistant to easy, instant change. The flow of situations persists as well—and mingles and clashes with other flows from still other tribal congeries or occupational registers.

These "situations" are the primitive terms in which to derive an explicit model of human sociocultural doings. Although I do cite many publications that can contribute, in this paper I only sketch the outlines of results which I suppose can be obtained, illustrated by seven conjectures. I begin by arguing for talk as the chief medium and product of switchings in situation flows and then debunk "person" as an alternative primitive term, after which I elaborate on network ties and stories. Then we will turn to times, woven from interpretations in between switchings; and, subsequently, I introduce Bayesian inference as a guide to how stories can map with chaotic ongoing life. Publics of various sorts are argued to be crucial as the interstices of these processes of switching and interpretation.

SWITCHINGS

Linguistics continues to construe language as evolved independently of the form of social organization, which surely is implausible. The writings of Whorf(FN1) have hypnotized linguists and others with the possibility that language is shaped by and shapes mental habits carried by the individual. I argue that mental habits are less tangible and pressing than continuing switches in the ordinary situations of interactive sociocultural life in a species preoccupied with dominance as well as subsistence.

TALK FROM SWITCHINGS

Talk comes first. Talk comes much before persons. Talk comes with the emerging human-ness of groups of Homo sapiens. All vertebrates—wolves, chickens, and apes

most familiarly—come in packs (Wilson, 1980). Vertebrates are both recognizably individual and equipped with perceptual systems that pick up that individuality. So there is the conundrum of establishing comparability, a basis for intra-species relations not mired in costly delays and injuries from fights. The solution observed is transitive dominance (Chase, 1996). Each pack is characterized by a pecking order giving precedence as to every activity—sex, food, resting site, first to the alpha male, then.... No talk needed.

But much greater subsistence can be achieved with specialization, as the ants of Wilson (1970) have demonstrated for millions of years. Establishing boundaries, all sorts of boundaries, of task and caste and locale and breeding, was essential. Pheromone chemical signaling was the key mechanism in harnessing as well as building the boundaries of specialization. Different castes of ants carried out different tasks (with occasional re-settings of caste membership with season or ecology).

Over thousands of years, one vertebrate species (two, if you include Neanderthal) worked out specialization with talking, not pheromones. Like the ants, early human talkers may have switched only rarely, perhaps in earliest mass ceremonials. At some point came frequent switching, perhaps situated around sleep patterns, and no longer necessarily in lockstep.

Domains and networks are but abstractions, mutual analytic abstractions from the sociocultural goop of human life. Networks catch up especially the cross-sectional patterns of connection and resonance in interaction. Domains catch up especially the meanings and interpretations which are the phenomenology of process as talk. These two, networks and domains, come together for the type of tie and, as I hope to show, for construction of social meanings and times.

For any human setting, operational definitions of domain as of network depend on each other and, thus, also on the focus of research. Domain pulls more than a particular register of speech from culture, just as network is more than connectivity. A network-domain comes to characterize, in terms of shared stories, the diverse cultural terms of perceptions—the Whorfian “grammatical patterning” (Silverstein, 1979)—by various participants in particular given sites of social action.

Interactions switch from one evolved domain of aptness to another—contingently with ecological and/or sociocultural incidents in situations—and, thus, also from one set of ties, one evolved network, to another: call each such intertwined network-domain a netdom. Through and only through switchings among netdoms come into existence languages as envelopes from ways of talking, which are just ways of transacting that transfer, that are transposable, from one netdom to another.

For example, the faculty of a university department together build up some set of netdom stories in discussions over some months of a job search; so, too, a Polynesian fishing-boat crew concerning a season’s fishing in a given lagoon. In the faculty example, if accountings came to focus on a particular infamous session with a Dean, the story set and domain could enlarge along with the network activated, but perhaps with eclipse of most of the history and other candidates previously under active consideration. At a more local and trivial scope, my snort (but probably not a student’s) may effect a switch in a graduate seminar, with some students rousing and others fading in attention as a new topic appears with a switch in netdom. But in an investigation of balance between research and teaching within the ambiance of that university, such micro switches would not even be coded.

It is an empirical matter how many and which of the ties are activated before, during, and after a switch between network-domains. These activations depend on the scope of involvements among talkers and the interests among observers rather than on any pre-existing “boundaries” of such networks. Although any given event, or obser-

vation, may seize part of a network as being a separate distinct group, networks do not have boundaries.

Grunts and gestures suffice before specialization and accompanying switchings; so there was no call for talk. Thus,

Conjecture #1: Language originates in switching. A variety of traces are manifest in observed languages.

Conjecture #2: Language builds around relatively few words, which are polysemic. This follows from ubiquity of switching between netdoms, and it is also suggested by the brilliant analysis of mother-in-law language by Dixon (1970) for the Dyirbal aborigines of Australia. A word recognized in common is an achievement worth capitalizing, and distinct nuances of meaning follow from the distinct contexts of different netdoms, overlap which also helps maintain socially useful ambiguity of meanings, referential and interactional.

Grammar develops next, before subsequent elaboration of a full lexicon from a basic set of words. Dominance order transmutes by language into species of valuations orderings which constrain shapes of continuing networks of actors and the internal disciplines which hold together sub-selves as an identity, eventually perhaps as a person (White, 1992, Ch 2).

Conjecture #3: Language evolves in mutual accommodation with some form of dominance order. Much of grammar, whether in deixis, verb form, or other syntax, especially concerns switchings and, thus, oversees potential disruptions of dominance. More than in the lexicon, it is in conjunctions, pronouns, relativizers, and other grammatical gadgetry of a particular language that are to be found evidence of the basic mechanisms underlying sociocultural dominance. Real hegemony derived from local dominance patterns lies in such apparently universal, innocuous, "logical," and "coordinative" features as are lumped in "grammar." Similarly, more than accent, it is syntactical framings of verbal expression, including such other aspects of grammar as aspect, mood, and tense, that determine dominance through the veil of switchings. The problem is specifying and measuring.

The accepted wisdom in linguistics, published as grammaticalization theory (Bybee, Perkins, and Pagliuca, 1994; Hopper and Traugott, 1993) is that grammatical forms, such as suffixes and prefixes, evolve from wear and tear on longer expressions, much as pebbles do from rocks. Much of the evidence marshaled, however, speaks only to the existence of linear ordering, not to which end actually comes earlier, grammar or elaborated lexicon—on which, as is the case with talk, there is remarkably little direct evidence. Many further words are spun out in carrying through a specialization by switches between netdoms.

FROM PERSON BACK INTO BRAINS

Conventions implicit in talk and other discourse grievously mislead social scientist observers, as well as participants, about the current status and basis of identities and processes in everyday life. Let us start with the fact closest to you, namely you. The reason you do not remember your second birthday is that it preceded you. Today, you remain much as you came into being, the byproduct of, because physiologically you are able to perceive and store—and yourself to transmit—transactions with others which require and induce apt responses, some of them habituating as continuing ties in an ecology of switching among netdoms.

The era of the concept of person, a stupendous construction especially of the Western 1500s, is in process of supersession by the era of the concept of brain. Interacting ideas as context is being supplanted by social construction of reality in emergent spaces and times. This provides the great opportunity for sociology in general, and

social network analysis in particular, to move from carping on the sidelines at existing frameworks of computation, as in economic theory, to providing new algebras of social analysis. Social linguistics and netdom dynamics can be twin foundations from which to derive a pragmatic re-vision of the person. In so doing, one task will be to re-account on a new basis for the useful gist of existing social analyses.

The pecking order of the vertebrate band transmutes into syntactic and other patterning in discourse that evolves into full-fledged language of speech. Initially, whether we are thinking of today's children or yesteryear's hunter-gatherer tribe, these situations are largely ecological and biophysical. Within such flow can evolve specializations in companionship and of production, variously of babies, food, and protection. Repetition would then induce specialized ties and their domains that get marked in discourse.

Think of your brain as a portable engineering device which is hard-wired for a number of perceptual/locomotor interactions with its biophysical environment, especially vision, but which also has, unlike the frog's brain, a huge amount of spare switching capacity. Over aeons, switches among patterns of sociocultural interaction, networks in domains, encoded themselves into the spare capacity of the brain as a grammar for talk. Pecking order is transmuted into a joint social construction of a new sort of reality among you's and I's who presuppose agency of each other. Pecking order reemerged as grammar, controlling switches back and forth, invidious use of dialects, and so on.

The whole evolution becomes booted up to further levels involving compounded actors and their relations within institutions. This evolution requires that the capacity which we call episodic memory is developed and reinforced. Initially this is in co-evolution with various genres of oral literature. Later, this is in co-evolution with the adaptation of accounting-notation into writing coded for the speech language. The ruminative self then emerges with its internal panoply of genres imaged from experience of discourse, oral and written and other.

A reality which is social thus can be seen as emerging through and in interaction across the whole. In intricacy, this reality goes beyond the social character of ant societies because of the availability of brain capacity for evolution in programming. In such evolution, beginning with the band of a vertebrate species, clearly the social psychology is being created from outside inward, from whole to part. The Meadian vision of self is a dyadic simplification, although it does argue also for a top-down elaboration into distinct sensibilities.

TYPES OF TIES AND STORIES

Ties of a type are both network and domain, both relation and talk. It is talk that switches, not tie—and certainly not persons, they being deposits and byproducts of the process. The substance of a type of tie lies in what reflexive accountings are accepted in that network-domain as warranties, and in what are the presuppositions and entailments. These can all together be approximated as a particular set of accepted stories. Thus, within a particular micro-historical setting, the tie is also a boundary, which comes as the envelope of a joint selection process across story set.

Only very early or very late in its career would some observable netdom be constituted in just a single tie, or in just ties relating to some one actor, but in principle one tie is enough. Subtleties of tie always concern the profound asymmetry between sending and receiving; that is, they are subtleties of the dyad (Carley and Krackhardt, 1996). For example, in some forms of deference, the nature of the tie may primarily concern the receiving end. But the type of tie goes beyond that; it is a triad construct. Type of tie designates not a dyadic relation, but rather a set of such relations.

Meanings are multiple because kept in play within each of the ties of a network-domain are a set of stories, a set of accountings. This was long ago argued by

Herbert Simon.(FN2) Many of the stories are kept in play until and as some exogenous contingency, such as unannounced arrival of the company auditors. The contingency is itself negotiated as event, which occasions selection via hindsight, and thus extrudes a particular sense of timing. Meanings are multiple on other grounds as well. Type of tie refers necessarily to contents of a network-domain so that each particular tie is referred to the observation by some relevant third party. In a novel, the polyphony from fusing “voices” of narrator and quoted speaker illustrates this kind of tie.

Consider a homely example. You, two spouses, are now discussing the evening at/after dinner with your children. The ties are of long standing, and (at least before age 13!) are preeminent over ties of your children with others, and indeed shape and constitute your children’s and, very likely, your own persona. Dish-washing, and homework stories—as well as bed-time stories—are chief, familiar instantiations of the ties of the type that define this post-prandial domain. Such domain would be quite transposable across some population of families. In another population, perhaps of born-again Christians or Mormons, prayers would be included in the story set, perhaps replacing what TV watching is to be allowed.

Choices of stories come in ripostes of reflexive accountings: this conjecture needs to be specified and elaborated through careful examination of tangible, yet circumscribed scenes in the manner which discourse analysts have pioneered. These scenes may be domestic, or from work and school, or from some tribal setting (Duranti, 1994). Coding rules are needed which go much beyond any grammar derived from written sentences. One can derive guidance from detailed field studies. As Shuman (1986) shows in a years-long participant-observation study, the interactive construction of time can proceed across distinct modes. In her case, it is the continuing interaction among her teen-age girl students between their individual diaries and their daily talk.

I see discourse as woven around stories, sets of which characterize a network-domain and its type of tie. In selection among stories, both warranting and entailment are accomplished. Warrants are those features perceived as prior justifications. And entailments also are moral invocations, of tradition or pattern of behavior.(FN3) Together they make up the reflexive accountings by which network-domains are given moral basis and reproduced. They stand somewhat apart both from conventional grammar and Grice’s “laws” of propriety for conversation in public.

Selection among stories will be fuzzy, since any human world is as fuzzy semantically as it is both phonologically and in its social stratification. Selections will bootstrap on prior states of assessments; these assessments thereupon evolve in terms of those selections across the network-domain. Both of these qualities, fuzzy and bootstrap, come together in the sense of time which is hegemonic among us: past/present/future. This is extruded as a sense of time which provides meaningfulness in patching together stories into what, in our public visions, we call rational and causal accounts, which are in their particularity also ex post accounts.

TIMES

A type of tie is a particular scaffolding for meanings. A time is negotiated as a process with this scaffolding of story sets in a netdom. Several meanings are kept in suspension during accountings in discourse, with selections being a process of negotiation over specific presuppositions and entailments and other interpretations available within that network-domain. These accountings provide content and substance which we also jointly experience as coordinations and severally experience as durations.

TIMES AND DISCOURSE

Ethnographic studies suggest that accounts in terms of switches between netdoms sidestep the experiencing of durations. Times are scaffolding thrown up by relationships

in constructing meanings at disjunctions, so that a time is experienced through and at the ongoing making of choices among a set of stories for ties of a type. Switching is cross-sectional. It especially concerns and negotiates coordinations, rather than durations. It is a challenge to see how times cast up from tie-events interdigitate, or not, across switches between network-domains, as well as across ties of a network. Results become embedded in narrative reaching across switchings.(FN4) But the texture of time is experienced within the network domain.

Experience of time builds as the envelope of reflexive interactions which reproduce continuing relations, ties. Each current event will account and was accounting for and warranting itself, both *ex post* and *ex ante*. This accounting is through selection from among a set of stories continually being laid down in that type of tie. In the limiting case of a Goffman public, some crowd of pedestrians, the choice might be just from "Oh, excuse me" and "Watch yourself." In other network-domains, a diverse set of stories goes with a historically specified network of ties and yields a distinct sense of time. Without explicit awareness on the part of speakers, the social sense of time switches from one network-domain to another.

There is no razor-edge present. Instead, there is a moving-target fuzz of co-existent familiar stories which resolve now in this and now in that incident, agreed *ex post*. And so on again in the next, or perhaps instead the order of time is rearranged as the stories are recalibrated, without our necessarily being aware. This can go on within brief speech which we think of as a sentence. But it also goes on in text that actors construct together, including narrative histories as strands in careers defining persons. A sense of time, such as future/present/past, is thereby constructed socially as byproduct and shaper of constructing interpretations.

Since the coarsest level of meaning is triggered by the switch from one network-domain to another, the sheer count of switchings provides the coarsest sense of sociocultural time. Biophysical time, such as accounted in our common public culture, is typically cited and applied just at switchings, as by the factory shift whistle or time-clock of yore (Biernacki, 1995). More refined textures of times and meaning build in the process within the network-domain, however.

Psychologist James J. Gibson provided the necessary infrastructure with his ecological theory of perception for the perspective I argue: social networks and their ties with multiple stories construct themselves amidst a stochastic flow of situations. The essential claim made by Gibson is that we did and still do come to perceive as movers who keep moving, eyes and body, continuously in an ecology so as to probe changing arrays of "stimuli," which in fact are our changing constructions as much as they are external givens, with us creating as much as receiving. He had earlier taken as his central term the affordance, which a long-time colleague specifies thus: "Unlike the related 'cognitive maps' and 'plans' which appear in other attempts to describe informed purposive behavior, these affordances are not mental structures. They are information about the environment, like sit-on-ability, that must be defined in terms of the needs and potential behavior of the individual animal but that exist regardless of observers" (Hochberg, 1990, p 750). Now transpose these Gibsonian views, which require a fuzzy present, to the durations built into sociocultural action.

John Shotter, a student of language who was directly influenced by Gibson, calls for an approach which appears consistent with my approach through story sets across multiple networks:

One's 'person-world' dimension of interaction or being exists within a whole melee of self-other relationships or dimensions of interaction—where joint action gives rise to a space that seems both to contain something and to be related to something other than or beyond itself, such that its inhabitants find themselves in a given situation, but

one that has a horizon and is open to their action ... those within them feel a need to be socially accountable.... Thus the 'afford' (to use the Gibsonian term) can be further specified in different ways within different discourses ... ways in which we must talk in the sense that if we can't account for things in an acceptable manner, we shall be treated as in some way socially incompetent ... within a changing sea of privileges and obligations, of entitlements and sanctions (Shotter, 1993, p 161).

But although Shotter offers a brilliant summary of an emerging orientation in socio-linguistics, he does not suggest any coding rules or the like for an empirical investigator.

BAYESIAN FORKS AT SWITCHINGS

The experiences that we adumbrate as "time" come out of the virtual co-existence of, and ex post selection among, the several stories of an accustomed story-set for that type-of-tie of that network-domain. These accountings from among the set of stories for that type of tie weave into times and choices in processes analogous to Bayesian analyses in science.

Social action is interaction that induces continuing relations through being reflexive. Thus, the reflexivity of discourse is key to netdoms and their stories. Reflexive interactions in our talk presuppose continuing relations marked by a particular type of tie and associated set of stories expressed in the speech register which has evolved, as, for example, in the business talk among a continuing network of colleagues across one or more organizations. But essential to reflexivity is ambiguity. This is the background to the accountings of interactive relations which constitute most of our talk.

Conjecture #4: Switching creates problems of managing ambiguity and thus also opens up possibilities in managing ambiguity. The argument has been vague thus far. It exploits metaphor and obscures itself in complex sentence structures and chainings of paragraphs in the English language. The next task is to create parameters for the argument. But the parameters must not remove the ambiguity. The argument attributes this fuzziness not to measurement error but to the substance of social relations as an ongoing process of constructing while living one's own realities in continuing reflexive interactions. This leads me to argue that the Bayesian theory of statistical inference can provide a model for discourse as interactive selection.(FN5)

Procedures of Bayesian inference initially developed within statistical theory can yield the required parameters. Two classes of parameters are suggested by the argument thus far: one class is to deal with the density and profile of incidence of contingencies perceived locally as sufficient to occasion switching. The other class is to describe the number of, and the profile of use among, a set of stories for each network-domain being considered. A traffic cop pulling you over for speeding is a prototype for such an occasion. The discourse around his giving you a citation likely has but two stories carried in its set, the set for that network-domain, here one of the special versions which below I will call publics, presumably a Goffman public among unacquainted strangers. There might also be very few alternative stories carried along during a parent's disciplining of a child within a familial netdom.

In ordinary, everyday social relations, I argue, multiple alternative accounts are being carried along until temporary resolutions at disjunctions which I call switches. At a switching, the continuing juggling among a set of stories is resolved into the account from which the next phase of reality constructing takes off, among relations cohering through that there and then. It is such a resolution which I call a Bayesian fork. Getting up from the family dinner occasions a Bayesian fork: wrangling may continue over a family arrangement, or you may all head for the O.J. Trial excerpts, or some or all may peel off and transpose to quite other network-domains. More generally, one can desig-

nate by letters the stories in the story set of one network-domain as say $[x, y, z, k..]$ and the story set of the subsequent network-domain as being perhaps $[r, z, k, m..]$.

To proceed further, I will steal Bayesian theory from its usual applications in statistical science, wherein the outside observer allows explicitly for his own uncertainty about which theoretical framing is appropriate for given measurements. I claim that uncertainty translates into the question, "What's going on here?" Ethnomethodology and similar phenomenological approaches have made this famous as the question of ordinary discourse. My point is that one ordinarily carries along and juggles a set of distinct answers, corresponding to say the $[x, y, z, k..]$ designation.

One issue is how to recognize in discourse behavior weightings which correspond to a priori probabilities in Bayesian inference. Say the most likely story in the first set, its mode, is x : that of the subsequent set might be m , or it might be k , which is a less likely alternative in the prior set. It seems to me unlikely that the same story, such as k , would be the mode in the story sets of two network-domains which are around enough to be observed.

I will have to appeal to the powers of selective evolution over enormous numbers of switches as supplying to everyday discourse the equivalent of the rather arduous computations needed to revise and thus update Bayesian probability assessments. But I can mimic this result by transposing probability theorists' computations. The paper by Western (1993) provides excellent overall guidance and further technical references, as well as clarifies ambiguities in use of Bayesian procedures.

There can be a confusion over the term "parameter," which is conventionally used for the measurement of a quantity, such as, say, social prestige or age or fraction employed. Most Bayesian applications you will see in the literature are about estimating such parameters from given measurements by weighted combination of the estimation formulas from the several theoretical models which are thought feasible. These weightings bootstrap from prior weightings partly on the basis of the revised estimate of the particular quantities subjected to measurement. Indeed, Bayesian approaches could be relabeled bootstrap.

But there are two different levels of bootstrapping going on, and that is why there can be confusion about the term parameter. To me, the set of stories being carried along in discourse in some network-domain are equivalent to the set of theories being carried along in Bayesian inference by a statistical scientist. Of course, an important interest in the discourse, mirrored in some or all of the stories, is some quantity such as earlier illustrated by age and status and fraction. And, further, the value assigned can affect and be affected by the weight assigned to the story within the set of stories. But it is the stories, analogous to the scientist's theories or models, which are central here, and their likelihoods are the parameters of interest.

Still other estimates will be of interest to an observer, such as the frequency of recurrence of a given network-domain. This may be affected by how its story set relates to others, and especially to the more standardized and smaller sets one will find in publics. One approach could be to meld a Markov chain formulation with the Bayesian approach. These other estimates need not figure in the Bayesian forks themselves and, therefore, are a side issue here.

Thus, language necessarily breeds meta-language. One invokes an historical present, one maneuvers among pronouns to calibrate an epistemic frame. "Here-this-now-I" becomes denotationally absorptive, with no threshold imposed. Entextualization implies strategy; interpretation implies consequentiality. One inserts quotations into one's own discourse with such metapragmatic outcomes as consequence. There is consistency with Bayesian forks but now as enlarged to the scope of switches among network-domains. It is possible that recent developments in game theory (Fudenberg and Tirole, 1991) can suggest measurement approaches here.

PERIODIZATION

Each local sense of time comes wrapped around particular meanings as negotiated among a set of stories along ties of one type. Around us today, domains and thereby types of tie, network-domains, differ widely in degree of insulation from one another. Also, actors within a domain differ widely in their degree of encapsulation there and thus exclusion from other domains. The familiar distinction between networks of strong and weak ties correlates to this difference. Newly mobilized domains can be especially insulated.

How larger stretches of time are constructed thus might seem a hopelessly messy topic. Focus on just one aspect, periodization. The hope is that the micro approaches above carry over in a self-similar fashion.

Periodization is the agreed demarcation of phases of development. Micro-level perceptions and constructions in and as events require periodization, and indeed the Bayesian forks are themselves periodizers. But macro-periodization troubles the social sciences more than micro-periodization. I am arguing that the two can both be specified with analogous constructs, namely, Bayesian forks and network-domain switches. Reflexivity is a reality at many scopes and levels other than individual relations. In particular, reflexivity enters into how events are construed to cluster.

Turn to the largest, the historical scale of periodizations. What historical periodizations make most sense of the data, data construed in narrative forms? Clemens (1995) emphasizes discontinuities lining up across domains to define period boundaries. This is in contrast to traditional historians who accept domain-specific histories, for example,

[Many historians] split the past into a series of tunnels, each continuous from the remote past to the present, but practically self-contained at every point.... At their entrances these tunnels bore signs saying diplomatic history, political history, institutional history, ecclesiastical history, intellectual history, military history, economic history, legal history, administrative history, art history, colonial history, social history, agricultural history, and so on, and so on.... What mainly determined the way historians split up history during the past century was a ridiculously adventitious set of circumstances: the way in which public authorities and private persons tended to order the documents which suited their purposes to preserve (Elton, 1961, pp. 194-95).

I cite three examples in social history, in which each has been worked out especially systematically, and connect them to the previous discussion. All three are concerned with the development of new forms for politics. In one, Charles Tilly (1995) provides quantitative accounts of sequences of events which document changing forms of display, that cumulate into a new social space—the public—which is defined by new equations of metaphor and meaning among display terms, and which is coordinate with a new social time—the future. In the second, Theda Skocpol (1992) traces the emergence over many decades in this country of joint action by women sufficient to change laws and organizations concerned with the protection and identity of women—again helping to set a new Progressive time.

On the much larger scale of Africa, over the past several centuries, Ekeh has evolved (1975, 1990, 1995) an incisive account of the framing, deframing, and reframing of “state” and “kinship” vis à vis “tribalism” in successive periods, in accordance with imperatives of colonialism and slavery. Colonialism ushered in yet a new periodization, which, however, merely heightened the political salience of kinship both in the newly colonized “states” and for protection of persons. Then, in the mid-twentieth century, yet another periodization became established, post-Colonialism, with much the same effects. One can see Bayesian forks and network-domain switches throughout these intertwining interpretations and actions, on a vast scale, which resolve

in a macro-time constituted in terms of competing eras. The outcomes are no more chaotic and turbulent than on smaller scales.

PUBLICS

It is switchings which induce identities and thus construct actors and thence enable recognition of ties among them (White, 1992). I will now argue that distinct types of ties came into existence in any great number only along with publics which eased switchings among network-domains. Thinking about Erving Goffman's work was a help, although it required seeing Goffman's analysis as much more restricted in sociocultural and historical context than he had implied.(FN6) It also required realizing the great variety of scopes which can be assumed by publics across periods and interpretive and social spaces.

Define a public as a linguistically constructed interactional space which is an approximation to a non-subjective, maximally decontextual, interactional setting exhibiting fully connected actors, whether considered equivalent or arrayed in transitive pecking order (Orr, 1995). For example, a court of law when in session attempts to be a public. A less extreme form is the coffee break, which can quickly yield a whole new staging of sociocultural action, perhaps with juice drinkers to one side and smokers shunted away to talk on a topic of their own.

One focus of this paper has been that meanings along with their framings in times get settled at switchings, but whence, in origin or in destination netdom? The tribal ceremonies through which early switches were made can be seen as a sort of public. A public is itself a very special case of network-domain, in the sense that zero is a very special number.

The social network of the public is perceived as fully connected, because other network-domains and their particular histories are suppressed. Essential to its mechanism is a decoupling of times, whereby time in public is always a continuing present time, an historic present (Zerubavel, 1979). A public may last only for the moment of routine salutations at a gathering, or it may last for hours of joint immersion before a communal TV. Scope of participation in terms of external networks is just as variable.

Conjecture #5: Publics decouple network-domains from each other and thus enable slippage in social times. Take the dyad as a limiting case of network-domain. Leifer (1991, 1995) argues that a pair of actors may obscure cues in their talk and other signals to obfuscate what domain, and, hence, what status relation, is to obtain as the current state being constructed or reproduced in a dyad; so we could think of Leifer's dyad as a special case of public. Leifer shows that both actors involved must exhibit skill to keep up this state, which seems one-sided and manipulative, perhaps being only a semi-public.(FN7) He is addressing especially those institutions, such as sports or games, that go beyond publics in being nearly sealed off from the context of larger social organization. So we can now see Leifer as sketching a temporary bubble resembling the publics which Goffman describes, rather than a network-domain. The experience of time will be decoupled from all other sense of time; indeed, the perceptions tend to be sheer suspension of "the" time. But that is a special case. Times develop along with meanings mostly within network-domains proper.

Publics can also figure in what we think of as privacy. Erving Goffman emphasizes the unending re-negotiations of rules:

It is known, although perhaps not sufficiently appreciated, that the individual spends a considerable amount of time bathing his wounds in fantasy.... He also rehearses what he will say when the time comes and privately formulates what he should have said after it has come and gone.... When the individual is not engaged in private fantasy but engaged in routine talk throughout the day.... it turns out to be just as

much removed from actual worlds as is the stage ... much inclined to use the opportunity to tell little anecdotes.... A social function of this infrastructure [that is, publics to network-domains] is to provide each of us with sympathizers who will stand by while we recycle remains of our old experience (Goffman, 1974, pp. 551-552).

These support sessions are reached via switchings, and so too are other institutings of “the” interpretation and “the” time which accompanies a coagulation from Bayesian fork out of juggling stories. Publics are socially protected settings which may be common sites.

I designate the floating bubbles around ego which Goffman investigated in his works as Goffman publics. Consider six other varieties of public:

subway: this is the public of minimal presence, minimal interchange, and maximal decoupling from “co-text” and network—the street public;

assembly: formal discussion of whole community;

rally: activist version of assembly, wherein existing networks and co-texts are being re-spliced in strategic efforts by actors who thereby continue or emerge with recognition as leaders;

salon: a sophisticated mode/setting of discourse not tied to ongoing pragmatic concerns or identities; a Parisian (re-)invention during the Enlightenment;

ceremonial: wherein fixed cultural formulae are issued upon designation before a prescribed audience;

Mardi Gras: an inverse ceremonial, a public exhibiting extreme distortion of normal transactions, marked by carnival culturally and reversal of status socially.

All these publics, small or large, are sorts of social-space-in-common. Except for the ceremonial, they can be seen as exhibiting fully-connected networks, even where, as for the subway example, the ties are mostly general and of minimal intensity. And we all do take it for granted that the ceremonial makes communication seem clear, despite substitution for a fully-connected network of its opposite, a fully specified sacred role order.

Conjecture #6: Entries and exits through publics ease switches between network-domains which encourages further differentiation of types of network ties. Any network-domain is only concerned in the switch to or from public, rather than in the negotiation of switching to and from any of a whole set of other particular network-domains. The greater the number of distinct network-domains, the greater is the easing by publics of switches. In the mathematical idiom, the argument is that it is easier to evolve a mere $2n$ ways to enter and exit a common public state from n distinctive network-domains than it is to evolve the much larger (n times $n-1$) number of ways to switch from one to another of the network-domains.

In continuing reflexive processes of mutual perception, the switchings to publics being negotiated may not appear abrupt or even be marked, either by those relations that go along in that switch or by those that do not. At least at a micro scale of dyad, there can be many realizations of publics that are strategic. But publics may sustain censoring among fellow temporary inhabitants, censoring which accords with some culture-wide code of politeness rather than the concerns of specific network-domains.

Conjecture #7: Pronouns evolve particularly for and from use in publics. Spatio-temporal deictics (for example, “here,” “now”) may mark possible transitions between types of tie from within a given public. By contrast, anaphoric indexing, perhaps by articles along with pronouns, from inside a public to other utterances may serve to prioritize or frame distinct types of tie. Deixis thus may correspond to process across publics, with anaphora and other syntax corresponding to framing from within a public.

DISCUSSION

Existing conventions in social science present reality in terms of homunculuses—hypostasized, pre-existing “persons,” together with languages—which linguistics treats like homunculuses as pre-existing. Either variety is allowed as evolving under external influences, but only as ruled by an inner essence. Reconstructions of person-ness and language-ness are proceeding independently in a score of social science and humanities disciplines. My proposal is to fold them all together in the framework of co-evolving networks of specialization, with speech induced in coping with the endless switchings back and forth among networks. The Western tradition (Taylor, 1989) insists that the person be seen as roughly coherent over time and across domains, and this, along with context, shapes what accounts are warranted and warrantable in discourse. But research(FN8) is leading social science toward a social interactive view of personality that is more similar to that held in earlier civilizations. And similarly for language.

Today, we confuse our brains with our selves. No doubt other tribes earlier have confused their hearts or perhaps their livers with their self-doms. Even today board-certified renal specialists, at least, will declaim that we would still be fish in the sea except for the amazing tubule apparatus we have come to carry around with us to provide sea-substitute, permitting us to strut upright on land. And each approach is indeed believable as characterizing an utterly essential tool in, or matrix for, selves coming to be in the form which those parties take for granted.

But “brains” are what today confound us. There is boasting about beginning to understand “cognition” because we can point to physical indicators of differential locations of activity in the brain correlated with activities outside the brain; and there has been some research progress on phenomena that we point to as “memory.” So we now use “brains” to justify our continuing everyday perception of “minds” inside our heads, little homunculuses.

While these inconclusive cognitive searches stumble along, does it not make sense to derive our selves only from, which is to say in terms of, the tangible, external activities observable now, as at all prior times? Grant the brain as the chief computer storage and processing facility that *Homo sapiens* uses, which gets drawn into interaction chains. Any “minds” inside these “computers” got triggered and are programmed from, and only from, unending social interactions whose historical accumulation we have come to know as culture. It was not “thinking” that drove the evolution, it was interaction, with thinking beyond perception being a late branch, an opportunistic usage of the enormous capacities which supported human vision for dry land motion and action.

In my view, discourse is the central mechanism for both person and language, but also the chief obscurer. Its richness gulls us into resting our explanations on reflexive interaction, which indeed offers amazing depths(FN9) and/or on Bakhtinian narrative dialogue (Ong, 1982; Volosnikov, 1976) of surpassing subtlety between supposed reader and author about characters. However, we in fact do not live in such intimate soirees, or even in the tiny groups studied by discourse analysts.(FN10)

CONCLUSION

Network imagery has spread into lay thinking at least as much as into social sciences. But, although technical achievements in social network measurement and modeling have been impressive, network constructs have had little impact so far on the main lines of sociocultural theorizing and of historical understanding—and conversely. In order to bridge this gap, social network analyses have to be extended to include interpretive facets of action and, thus, social constructions of times alongside network spaces.

All our disciplinary boundaries of today presuppose person as homunculus, and this includes the variations in such boundaries from one language-culture to another. Language is similarly hypostasized. Even the major fault lines demarcating “natural” from “social” sciences and each from “humanities” also make these presuppositions. But a scandal is breaking forth: the one discipline explicitly charged with the person—psychology—is taking it less and less seriously as a construct for research. And, at the same time, linguistics has disappeared as a core discipline, leaving behind, on the one hand, some esoteric cults with associated Prophets and Heresies and, on the other hand, a growing and bewildering, though exciting, set of enterprises. These latter are known variously as discourse analysis; metalinguistics—reflexivity, metapragmatics, and metasemantics; anthropological linguistics—diglossia and ethnography; cognitive sociology—ethnomethodology, conversation analysis; historicist—pidgin and Creole studies, language death; narratology—genre, dialogics ... so far as I can see all centered around context and reflexivity in discourse as master constructs.

Discourse analysis insists on taking the perspective of a floating origin, the perspective from the person as ego. In their work, context becomes a subjective construct, one in sharp contrast with network-domain. Only a perspective which unifies domain with network can properly deal with sociocultural ambiguity, since both sociocultural structure and strategy are involved.

One might seek to reconstruct boundaries. Perhaps disciplines should be repartitioned in terms of the constructs described above: for example, the set could be identities (whether social psychological or state or production market or dialect), publics (whether exchange market or liturgical or parliamentary or Goffman bubble), netdoms (whether among Tiwi or French or athletes). Or perhaps the set should instead be processual: Bayesian forks, reflexive loops, switches, ratchets. The analysis itself, however, suggests that any such change is utopian.

It is more important to defuse present boundary constructs, beginning with culture and society. Processes are local, stochastic, and historical, within heterogeneous “spaces” in which social networks are inextricably involved in situations with strands of interpretation to form netdoms. Persons are late byproducts of histories in which agency is found in interactions among netdoms. For the sociocultural, envelope and level and duality and mappings stand in for boundaries, which obtain only vis á vis the ecological and perceptual contexts. Switchings build from the ecological to include the sociocultural, and the discourse so generated influences subsequent development as it itself is shaped, as in its deixis and polysemy, to Bayesian forks and switching. Transposability of talk through switches shapes language as much as repetition and as the reflexivity in discourse which breeds forks.

Added material

FOOTNOTES

1 Cf. Lucy, 1994.

2 Cf. White, 1992.

3 Cf. Shotter, 1993; Orr, 1994.

4 See White, 1992, Ch. 3, 5.

5 A talk at Columbia by Bruce Western (1995) suggested the constructive use of Bayesian inference for building interpretive theory, to which I turn below. For an earlier application to fieldwork data, see Berk, Klapp, Campbell, and Western, 1993.

6 Cf. Burns, 1992.

7 Padgett and Ansell (1993) have developed an extensive application to Cosimo de Medici, whose influence was so pervasive as to suggest a more extensive version, public-as-style, a semi-public of “robust action.”

8 Cf. Bales, 1970; Shoda, Mischel, and Wright, 1993.

9 Cf. Silverstein, 1976; Wiley, 1988.

10 Cf. Brown and Yule, 1982; Tannen, 1994.

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