

pursue the subject. Dawson mentions, too, that a person cannot use an undecorated club to kill an enemy, but does not explain why. Similarly, we learn, again in passing, that white, black, brown, red, or orange colors are used in painted designs, and color plates show combinations of red, blue, white, and yellow on headdress feathers. It is also mentioned that designs used by a given individual must be chosen according to moiety and generation status.

Although comments such as these cry out for further elaboration, virtually none is provided. Yet the anthropological literature on tropical America contains much relevant information on such topics as color symbolism, the association between decorative arts and socio-ideological concepts and identities, and the use of design styles and color to identify the cultural realm and the world of nature; and the symbolic significance accorded to various animals and birds whose pelts or feathers are used in decorative arts and the symbolic significance associated with evidencing skill and control in creating such designs. Even if Kensinger's notes do not contain specifics on such matters as they relate to Cashinahua culture, more analysis could have been done by Dawson, Tanner, and Ferguson utilizing cross-cultural comparisons.

The paper by Phyllis Rabineau provides the major exception to this complaint. In fact, Rabineau's contributions to the volume are by far the most intellectually exciting and satisfying precisely because Rabineau links material objects with social processes and provides considerable symbolic and cultural contexts for the material she examines. In her paper, "Artists and Leaders," Rabineau draws on cross-cultural materials and her own appreciation of cultural dynamics to deftly examine the relationships between the aesthetics and technology of headdress styles and manufacture and the social and ideological roles of shaman and village headman. We learn, for example, that among the Cashinahua the wearing of ornaments represents true humanness; that feathers are symbolic of authority; that successful leaders who are skilled in the arts of compromise and ostensibly put community concern above self-interest also use a praiseworthy (in Cashinahua eyes) restraint in headdress decoration, while men who have been unsuccessful in establishing leadership positions tend to create extravagant headdresses, which are also regarded as failures in terms of Cashinahua ideas regarding proper use of feathers and color; that headmen whose power derives mainly from acceptance by human society create more orderly headdresses, while shamans, who are in contact with the vicissitudes of the spirit world, produce more individualistic and diversified feather-pieces.

In the final third of the volume, the Catalog of the Cashinahua Collection, Rabineau again relates material culture to the dynamics of social and ceremonial life with descriptive and analytical commentary. In sum, while the volume is uneven in quality, the emphasis accorded to ethnographic background and the recognition of the interplay between social process and material culture, particularly the decorative arts, is highly commendable. It is to be hoped that these directions will be pursued in later volumes of the series, which, all things considered, is off to a good start.

**Mary Ritchie Key, ed.** *The Relationship of Verbal and Nonverbal Communication*, The Hague: Mouton., 1980.

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I laid down Mary Ritchie Key's recently edited volume and found myself feeling strangely uncomfortable and unsatisfied. Although the papers are of uniformly high quality, they differ significantly in the manner and degree to which they address the book's ostensible theme: verbal and nonverbal behavioral relationships. A second disappointment is that the three papers which comprise what might have been the most important section, "Theoretical Approaches to Human Interaction," were not written by scholars principally concerned with or trained in face-to-face interaction, do not make mention of unresolved theoretical issues broached by the other authors, and do not integrate their remarks into the larger interactional literature. This is not to suggest that the book is without its merits, which I am happy to describe below, but the fact that the whole is simply not up to the sum of its parts I found somewhat disappointing.

The book is divided into five sections. Key's contribution to the book comprises the first section, "Language and Nonverbal Behavior as Organizers of Social Systems." In addition to this and the final one on theoretical approaches, there are sections on "The Suprasegmentals of Interaction," "Organization of Language and Nonverbal Behavior," and "Acquisition of Communicative Behavior." Key's section sets the tone by summarizing and commenting on the remaining contributions, and by relating these to previous and ongoing research. The article demonstrates Key's already well-established command of a diverse bibliography and is a good introduction to some of the debates surrounding interaction studies: the universality of gestures, language and meaning, intentionality and awareness, and so on. Perhaps Key's most significant



substantive contribution is to suggest that communication is a process of organization, or social regulation, and is not limited to the transmission of "meanings" between persons. Her remarks on this issue are unfortunately brief, and the overall exposition of the theory might have benefited from a more detailed historical consideration of scholars who have held this view of communicative activity, for example, Birdwhistell, Goffman, Lasswell, Malinowski, and Schefflen.

Key also provides a subtle and well-reasoned reminder to interaction scholars that their appropriate research province must be limited to perceptible and hence (potentially) socially meaningful behavior. She does this through the often neglected structural linguistic notion of *etics/emics*:

Film and spectrograms furnish enormous amounts of information; the fine detail provides more than is desired or needed. By applying emic analysis fine differences can be filtered out and the investigator is left with manageable units. [p. 19]

Since there are twenty additional articles, I will summarize and discuss here only those that raised for me specific points critical to interaction study. I found most of the other papers well written and interesting but, in a few cases, saw no real linkage with a concern for verbal/nonverbal studies. I do not mean to suggest by this criticism that a study which focuses on only one communication channel should have been excluded from the volume. At the same time, several authors do explicitly argue for and demonstrate multichannel interaction investigations, and the volume taken as a whole would have better served had all the authors more systematically dealt with cross-modality relationships.

Martirena's article, "Interruptions of Continuity and Other Features Characteristic of Spontaneous Talk," for example, provides a cogent illustration of verbal disfluencies in naturalistically recorded speech. However, neither data nor hypotheses concerned with, for instance, patterns of co-occurring eye gaze mutuality/avoidance, or patterns of gestural substitutes, are advanced. The paper is limited to a taxonomy of conversational (verbal) discontinuities. One of the problems here is that Key herself never actually states what she means by "verbal and nonverbal relationships" and never states the criteria for inclusion of papers.

Individual authors handle the problem of multichannel research and verbal/nonverbal relationships in a number of interesting yet diverse ways. Condon's article, "The Relation of Interactional Synchrony to Cognitive and Emotional Processes," provides a summary and theoretical exposition of his 15-year career in microanalysis, specifically his work on synchrony. Moreover, the paper advances a much-needed technical vocabulary for describing and analyzing face-to-face interaction in

general. One interesting point that Condon raises is that the concept "organization" must be seen as existing in the *relationships* of behaviors, and not as a function of "individual body parts as discrete or isolated entities" (p. 51). In this regard, Condon's work is a continuing warning to those who seek to explore interaction structure through monochannel research and who expect to build structure additively. Condon writes that heuristically separated behavior units (and body parts) are, in fact, more complexly integrated; they are pieces of larger systems of behavioral regulation:

The order did not reside in an individual body part by itself but in the relationship of the changes of the body parts in relation to each other. A relationship is sustained or maintained between the body parts for a brief duration, usually lasting two or three frames at 24 frames per second (f.p.s.). [ibid.]

The organizing or integrating of these synchronous change patterns was not (and could not have been) a function of the individual body parts as discrete or isolated entities. In other words, these ordered patterns of change were the expression of the wholistic behavioral unity of the organism. [ibid.]

Some of Condon's arguments are quite technical and one in particular would have been better served (and made more of a contribution) had it been expanded. Condon observes that the unitization of behavior *at certain levels* is derived not from the identificatory or contrast properties of the behaviors themselves, but from the differing relationships they sustain with other behaviors. This makes an implicit challenge to Birdwhistell's earlier structural linguistic/kinesic research:

That which makes the three minimal units to be such is their contrast as relational sustainings at that level. In this sense they constitute the level. That which makes the body motion across /kkkiiipp/ to be a unit is its contrast with forms at its level. It is a different form of order and arrived at differently, but it is integrated with the more minimal forms. *The concept that minimal forms of behavior are combined to form wider forms is therefore not logically correct.* [p. 54; italics added]

Condon is developing systems for describing both the serial and hierarchical continuities of behavior; the theoretical contrast with previous "structuralist" work is well worth more attention in the literature.

Kendon also extends current thinking on the segmentation of interaction into viable units. He develops the idea that nonlexical segmentation is not simply redundant with and an embellishment of lexical phrase structuring. Rather, he argues, it is a production of *idea units* having as their surface manifestations both lexical and nonlexical behavior.



S says that the patient moves very rapidly from one area to another, taking two Tone Units to express this, but there is only one G-Phrase (Gesticular Phrase), G-3. This is a complex phrase in which the hand is moved back and forth quickly from one place to another. A rapid back and forth movement of the hand, thus, embodies in one unit of movement the idea that is also expressed in two units of speech. [p. 217]

Osgood's paper seems to argue along complementary lines by suggesting that "this 'deep'/cognitive system is shared by both nonlinguistic (perceptual) and linguistic information-processing channels" (p. 230). I think Kendon's next step is to make operational the analysis of idea units (I was not at all sure how idea units are derived and segmented), perhaps finding some inspiration in current research on topic negotiation and given-new information. Despite this, Kendon's approach to multichannel interdependencies is novel and carefully detailed.

Duncan also argues for a multichannel perspective, critiquing the often limited view held by some non-verbal specialists, sociolinguists, and so on. This paper, "Some Notes on Analyzing Data on Face-to-Face Interaction," is in essence a summary of the methodological concerns in doing "strategy" research. Given lingering suggestions in the communications literature that rules statements must be phrased as obligatory—i.e., unless the performance of a behavior is obligatory it does not warrant being discussed as a rule—Duncan's treatment of optional rules and strategy is timely and correctly reasoned. Duncan suggests that the term "organization" be reserved as a synonym for "grammar" or "structure," and that "strategy" be limited to the legitimate (as well as nonpermissible) choices that exist as a result of specific organization. Duncan admits that organization and strategy are related but insists that they are conceptually and methodologically distinct. He then discusses several statistical tests for evaluating hypotheses regarding the optional/obligatory nature of interaction sequences. I agree with the more general proposition that descriptive studies need statistical testing for evaluating the commonality and limits of findings:

It seems reasonable to expect in a social science of face-to-face interaction that investigators present evidence in support of their hypotheses. Examples, even when taken from the recorded data (as opposed to constructed examples), are excellent communication devices, but they are entirely inadequate for evaluating the effectiveness of a proposed hypothesis for a given set of observations. [p. 138]

At the same time, I am not as confident as Duncan that statistical tests can be solely relied upon for analyzing organization and strategy. The suggestion that certain interaction sequences are required while others are optional implies for a number of scholars recourse to actors' perceptions, value structures, and nonverbal reactions. That is, several social psychologists and communication scholars (e.g., Harré and Secord, Cushman and Pearce) assume that such data are needed for separating permissible from nonpermissible selections. Duncan dismisses this rather important issue in the following way:

It seems useful to draw a clear distinction between the description of an interaction strategy (describable as patterns of option choice), and interpretations of the goals, motives, interactions and the like underlying that strategy. Describing a strategy is an empirical process, framed in terms of the organization of rules, etc., within which the strategy operates. [p. 130]

I would have liked to see more discussion of this much-debated issue throughout the book.

While some of the essays are primarily definitional and empirical, as in the above cases, Key has rightly allowed her authors to go beyond the behavioral data and provide interesting speculative essays. As one example, Fónagy contributes a Freudian-influenced analysis of sound change and attempts to account for the systematic distortions of linguistic competence by performance in introducing the notion of "double coding" of language:

It was suggested that sentences created by the grammar in every case pass through a "distorter" which contains as many levels as the grammar (phonetic, lexical, syntactical, and paraphrastic) but which operates according to fundamentally different rules. As opposed to arbitrary rules of grammar, the rules of the distorter are not arbitrary, they are motivated (symptomatic or symbolic), and may be assumed to be universal. [p. 168]

Articulatory distortions may then give rise to linguistic changes:

The unconscious phallic cathexis of the rolled apical /r/ might have contributed to its development in a number of European languages, at first in the 16th-century court circles. The non-rolled, non-erect version of the /r/ was considered as a more "delicate" and more "refined" variant, thus the uvular /R/ gradually replaced the rolled /r/. [p. 173]

Similar processes are said to be at work in syntactic and semantic alterations. The paper, which is entitled "Pre-verbal Communication and Linguistic Evolution," is intellectually stimulating and deserves several careful readings; again, however, its connection with the remaining papers and the book's general theme is a bit unclear.



One of the best papers, "Requesting, Giving, and Taking: The Relationship Between Verbal and Nonverbal Behavior in the Speech Community of the Eipo, Irian Jaya (West New Guinea)" is provided by Heeschen, Schiefenhövel, and Eibl-Eibesfeldt. It provides considerable multilevel data to extend the Basso/Hymes' claims that speech is not everywhere valued equally and that silence in appropriate contexts has real (although culturally contrasting) communicative significance. The problem addressed by the paper is the behavioral regularities surrounding requesting, giving, and taking:

The basis for this "silence behavior," as we may call it, is the very mechanism just mentioned: to openly comment on something precious must be avoided. Otherwise it would induce the possessor to give of his wealth. [p. 145]

Within this framework of a taboo against explicit requests for another's goods, the authors analyze the nonverbal mediators of "indirect" requests, including postural shifts, paralinguistic, and visual contact. For example:

A slow proxemic shift towards the giver may indicate the intention. The preferred strategy of most of the children and some youths, among them Bingde and Melase, was to sit down at the side of the potential giver with close skin contact and a glance of about two seconds up to the person. [p. 156]

This study is further distinguished by the fact that it combines a number of research approaches: micro-analysis of interaction sequences, ethnography of communication (emphasis on speech event rules), and ethological and ethnological perspectives. It considers, for example, the interaction strategies related to direct and indirect requests as well as the sociobiological function of bonding provided by these behaviors and interaction sequences.

Key's rationale for publishing the three papers included in the theory section is expressed in the introduction:

In the past, researchers have used one science to explain another. The two-time Nobel Prize winner, Linus Pauling, used physics to understand chemistry. [p. 28]

Could it be that a theory of human behavior will come from the hard sciences—not from the disciplines that study human beings? [ibid.]

While cross-disciplinary influences in building theory certainly cannot be overlooked, neither should the issues raised by the other authors and *specifically related to human interaction* be left unconsidered. What the last section of the book cries out for is an integrative essay (albeit tentative) to delineate, ponder, and critique the current status of verbal/nonverbal studies, especially as exemplified by the rest of the volume.

This is not to say that the final pieces are not interesting and stimulating. Szent-Györgyi's brief remarks on Dionysian and Apollonian research strategies (previously published in a 1972 issue of *Science*) make a useful argument in favor of more flexible institutional procedures for doing research and allocating resources:

Applying for a grant begins with writing a project. The Apollonian clearly sees the future lines of his research and has no difficulty writing a clear project. Not so the Dionysian, who knows only the direction in which he wants to go out into the unknown; he has no idea what he is going to find there and how he is going to find it. [p. 317]

Szent-Györgyi is a biochemist and Nobel laureate. Thus a number of questions are raised. Which of the various interaction schools and individual scholars are characterized by Apollonian research strategies, and which by Dionysian? What are the different consequences of these two investigatory approaches for the kind of work currently being done under the rubrics of nonverbal communication, sociolinguistics, social interaction, ethogeny, and rules research? What are the consequences in terms of specific research projects getting funded, institutionally legitimated, and published?

Similar questions are raised in relating the remaining two papers to specific human interaction concerns. Zwicky, a linguist, offers some interesting observations on the emergent character of linguistic and chemical structures:

Also, in both linguistics and chemistry, there are molecular properties which are "emergent," in the sense that they are not predictable by known principles from the character of the constituents of the molecule. [p. 320]

The properties of water are thus not predictable from a reduction to the base components  $O_2$  and  $H$ : similarly, the performative constraints on a word are not immediately derivable from a semantic-level analysis alone. What are the implications of this feature for interaction studies? The bulk of Zwicky's remarks focus on semantics; in what ways does the observation hold for nonreferentially based behavior? What are the emergent features of *communicative interactions* that are not reducible to component systems (turn-taking, topic negotiation, etc.), and how can one do research on the emergent properties of social behavior? Also, how do we reconcile Zwicky's suggestion of emergence with the arguments for reductionism expressed in the last paper, by Cloak, "Why Electromagnetism Is the Only Causal 'Spook' Required to Explain Completely Any Human Behavior or Institution"?

As I've argued throughout this review, this book makes an uneven attempt to look at human interaction and the relationships among different communication modalities. Nevertheless, there are several good papers that summarize the existing literature, offer promising new directions, and stimulate further questions.