the use of the trachea as a resonator, and descriptions of the means by which birds such as the mynah produce imitations of the human voice.

An original hypothesis relates to the means by which harmonics are produced in bird sounds. Also new is the interpretation of data on frequency and time perception. These data point up the ability of birds to repeat behavioral displays (specifically, songs) with extraordinary precision. Sounds may thus provide a useful tool for studying the feedback necessary for the production of such precise patterns or displays.

The techniques of analysis used by the author are described, and details of the equipment are supplied separately. The discussion is documented with clear, well-prepared, and well-reproduced illustrations of sound spectrograms, oscillograms, plots of instantaneous frequency changes, and harmonic spectra. Of these only sound spectrograms have been used commonly in recent papers on bird sound. Here each sound usually is illustrated by more than one kind. The limitations and advantages of each thus become obvious. Two LP records provide aural examples of many sounds specifically studied by the author, and make possible individual corroboration.

The main problem in the book is due to the inadequacy of available information on syringeal anatomy and function. The gross anatomy and variation within the syrinx, in the traditional sense, have been described frequently. The functional anatomy of most syringeal components is based primarily on circumstantial evidence, and definitive experiments on their contribution to sound production are few. The author utilizes the available information well, and makes new hypotheses about the action of several components, based on his analyses of sounds. Here his greatest contributions are those hypotheses and his pointing out critical experiments which still need to be done. Such experiments may or may not support his hypotheses, but if not they should suggest refinements or better alternatives.

This book deserves the careful consideration of those interested in biological systems of communication, functional anatomists, many physiologists, ornithologists, ethologists, and those interested in the physics of sound. It is clear and readable and is of special value as an example of an interdisciplinary approach to biological and scientific problems.

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# Ends and Meanings

**Symbols in Society.** HUGH DALZIEL DUNCAN. Oxford University Press, New York, 1968. xvi + 262 pp. $6.75.

This book is a clear, cogent distillation of many years of concern with its subject. There is considerable continuity in theme and standpoint with Duncan's earlier books, in which the classic contributions to a theory of symbolic communication were analyzed (*1*). Admirers of those books will be glad to have Duncan speaking now entirely in his own behalf, setting forth the propositions he has found essential. He writes out of concern not only for an impasse in sociological theory, but also for the needs of a democratic social order.

Duncan's basic question is: How do symbols create and sustain order in social relationships? His argument with what he regards as the "mechanist" school dominant in sociology is that symbolic communication is recognized as central to social order, yet either is left unanalyzed or is analyzed in terms of almost everything except itself. Communication is itself, however, a radical motive of human activity, requiring explanation in its own terms. To those who analyze it solely in terms of purposes and contents, Duncan insists on attention to structure (form, style) as well. How people communicate, the forms of communication available to and used by them, determine what is communicated as much as the what determines the how. Much talk of social action as patterned, integrated, or organized is mere assumption—of what the form consists is never demonstrated. To those who analyze "structures" alone or, worse, only one component of structure (such as media), Duncan insists on attention to personal purpose and social function. (In a trenchant phrase, "grammar cannot be separated from rhetoric.")

Duncan considers that games and (social) drama have been peculiarly American models of social interaction, both in social theory (George Herbert Mead, and Kenneth Burke, to whom the book is dedicated) and in ordinary life. Presumably he does not think that symbolic analysis of communication would be less essential elsewhere, only that it is especially relevant here. In any case, communication is not to be explained, in his view, in terms of cognitive models alone. To adapt Malinowski's terms, it is not only a "countersign of thought" but also a "mode of action." The crux of the matter is that communication must be explained through structure as it functions in action. The major part of the book develops this theme by way of sets of propositions. Twelve are axiomatic, intended to make clear basic assumptions about communication, significant symbols, and social hierarchy. Twenty-four are termed theoretical, and elaborate the initial assumptions in terms of a sociodramatic model of human relationships. Thirty-five are termed methodological; they contain more specific indications of how the model can be used as a tool in thinking about and analyzing social action. The propositions are summarized in the table of contents, which is an admirable guide to the book.

Duncan is committed to democracy and pessimistic about its chances, given the conclusion (adopted from Burke) that creation and maintenance of social order inexorably generate corresponding conceptions of disorder and real or symbolic scapegoats and victims, and the evidence of the principle in recent times. (*Mein Kampf* and Nazi Germany, the Stalin purges, McCarthyism and Vietnam are noted examples, but the real proof of the principle would lie in the everyday ubiquity of explanations that say it is not the particular institution that is to blame for trouble but some element foreign to it. It is not that such explanations never have part of the truth, but that their logic is to deny the possibility of internal causes of conflict and error.) For Duncan, the great revolution of our time is the creation of "sociodramas" (including public interpretation of

events in terms of sacrifice and victimage) in which not few but all participate. (The diffusion of self-immolation from Vietnam to the United States, Germany, and Prague is a case in point.) He concludes his book: "The new audiences created by modern means of communication want their voices to be heard, and to be heard in dialogue." The admonition is in keeping with his view of the role of the social studies: to create a method of criticism (in the sense of analysis and understanding) that can help men to face the incongruity between ends and means in social action and, in the face of inevitable social change that must appear as disorder to many, help temper the power of victimage.

The book is one with which I am much in sympathy. As social "medicine," I would recommend it with little or no reservation. As medicine for social science, it has many virtues and much wisdom, but also limitations that I must point out. First, a social scientist persuaded to adopt the book's perspective will have to search elsewhere for ways to do so. In itself this is only an observation; the book does not set out to provide techniques or a guide to literature. Since Duncan regards existing sociological methods as at best only partially adequate, the implicit injunction may be to absorb the perspective, then create the methods needed. Perhaps it is thought that the reader as citizen must discover for himself the analysis appropriate to his situation (*2*). Even so, for the reader as scientist there are further difficulties.

The chief difficulty is due to the form of presentation. Duncan intends his propositions as points in conversation, but the propositions themselves are categorical, even where quite specific features of analysis are concerned: five elements in the structure of social action, eleven contents of acts and social experience, five types of audience, seven basic forms of social drama, ten types of linkage between the first five elements (stage, act, roles, means, and principle of social order invoked). Such enumerations may be well and good for exposition, but as social theory they fail. (In Duncan's own terms, their form determines what is communicated and so contradicts his intent.) The critical problem in analysis of communication, the essential first step, is to treat the number and nature of such categories as problematic.

Perhaps the best demonstration of Duncan's point as to the absence of serious work is the perpetuation of categorical models of the communication situation, such as the familiar ones with a dyad labeled speaker : hearer, source : destination, or the like. As soon as one begins to analyze actual systems, one finds that communicative rules may specify one participant (without regard to role as speaker or hearer), or three or more (a speaker distinct from sender or addressor, hearers distinct from addressees, intermediaries, and so on), and that much of social importance is revealed in getting the rules right. Duncan's five-element model (adapted from Burke) does not imply this particular mistake but does not correct it either. Where Burke devoted a book to explicating the terms with actual analyses (*3*), Duncan lets them pass unexamined. To cite some critical omissions: under situation, one must distinguish spatial and temporal setting from culturally defined scenes; means of expression must be elaborated to distinguish channels, codes, styles and genres, and relations of dependence among them; kinds of acts, and ends in view, cannot be restricted to those consciously invoking social order. The plurality of functions served in communication (including reference and expression) must be recognized from the outset. Analysis of symbolic communication limited to this one function is as inadequate as linguistic analysis limited to the single function of reference. In this fundamental respect Duncan unwittingly parallels the structuralist standpoint to which he objects.

If one wishes to encourage research, the last thing one can wish to suggest is that the general results are already available as a set of cubbyholes. One needs to phrase one's propositions as *questions,* that can be asked of new situations, and that can disclose categories and dimensions that surprise one. (The social and scientific motives coincide here.) Social scientists and humanists have barely begun the task of developing an adequate general set of concepts and dimensions for communicative acts—a truly comparative rhetoric, if you will—and it is this that makes the research Duncan would encourage so exciting. There is so much to be found.

I must add a note of regret that all of us still so commonly speak within the dialect of a single tribe—for Duncan, sociology. Problems of communication cut across inherited disciplinary boundaries. Indeed, there may be more work contributory to Duncan's purpose today in anthropology and folklore than in sociology. Certainly just such attention to the structure and role of communicative form is an important, perhaps the most salient, trend. Cultural analysis of communication itself is being recognized as a discipline, under its own name, and as part of English and literary criticism (*4*). And Kenneth Burke, from whom Duncan has gained so much, is much read in these fields too.

In this connection, note that Duncan's first methodological proposition—rightly first—is that statements about structure and function of symbolic acts must be demonstrated within the symbolic event itself. He compares sociology unfavorably with literature and art, where analyses are constantly referred to the data, publicly accessible, that support them. Anthropologists, folklorists, linguists, and culturally oriented literary critics provide most of the work for which Duncan calls, because their training commonly includes the requisite linguistic and ethnographic skills. The tradition of symbolic interaction within sociology has remained mostly a theoretical gadfly just because it has not taken the step from insistence on the role of language and symbolic acts to analysis of the implicit form and textural detail through which that role is accessible in a given case. Some sociologists are taking this step (*5*). Only if sociologists more generally change their training and orientation to include such skills can their discipline play a major part in what may be seen as a general transition from philosophies to ethnographies of symbolic forms.

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**References and Notes**

1. H. D. Duncan, *Language and Literature in Society* (Univ. of Chicago Press, Chicago, 1953); *Communication and Social Order* (Bedminster, New York, 1962).
2. Still it is surprising to find no mention of Erving Goffman, whose work is generally regarded as a major contribution to the understanding of face-to-face interaction along lines very much like those advocated by Duncan. See *Presentation of Self in Everday Life* (Doubleday, Garden City, N.Y., 1959); *Behavior in Public Places* (Macmillan, New York, 1963); *Interaction Ritual* (Aldine, New York, 1967).
3. K. Burke, *The Grammar of Motives* (Prentice-Hall, New York, 1945).
4. Of work to hand in anthropology, cf. J. L. Peacock, *Rites of Modernization: Symbolic and Social Aspects of Indonesian Proletarian Drama* (Univ. of Chicago Press, Chicago, 1968). For cultural analysis of communication, cf. Richard Hoggart, "The Literary Imagination and the Study of Society" (Centre for Contemporary Cultural Studies, Birmingham University, Occasional Papers, No. 3), and Raymond Williams, *The Long Revolution* (Columbia Univ. Press, New York, 1961) and *Communications* (Penguin, London, 1962).
5. In addition to Goffman one may mention Basil Bernstein, Howard Becker, Harold Garfinkel, Harvey Sacks, and Emmanuel Schegloff.