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Research on the Relationship Between Verbal and Nonverbal Communication: Emerging Integrations

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By Stanley E. Jones and Curtis D. LeBaron

The authors argue for an integrated approach in which verbal and nonverbal messages are studied as inseparable phenomena when they occur together. Addressed are assumptions of various forms of this type of research, potential relationships of quantitative and qualitative studies, current trends found in the investigations included in this special issue, and recommendations for further work.

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Orientation

During everyday communication, especially face-to-face interaction, vocal and visible behaviors are typically coordinated in ways that provide for their mutual performance. When people talk, they also locate their bodies, assume various postures, direct their eyes, perhaps move their hands, altogether behaving in ways that constitute an interactive event. Historically, however, verbal and nonverbal messages have been studied separately, as though they were independent rather than co-occurring and interrelated phenomena. The primary purpose of this article is to call for more integrated approaches to the study of verbal and nonverbal communication so that more holistic understandings of social interaction may emerge. The eight articles that follow this essay provide examples of how such research might be conducted.

Scholars from communication and allied fields have long recognized the need for integrated approaches to the study of verbal and nonverbal behavior. There is an historical record of criticism against research that isolates verbal and nonverbal behaviors from one another. Writing about linguistic research, Adam Kendon (1977) argued that theories of language derived from a study of only speech should be thought of as special language theories, whereas general language theories would show how different aspects of behavior (visible and audible) function together.

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Similarly but conversely, Margaret Mead (1975) criticized nonverbal research for neglecting linguistic phenomena and pointed, for example, to Paul Ekman's *Darwin and Facial Expression* (1973) as a "discipline-centric approach." While Ekman advanced a theory that the meanings of certain facial expressions are universal, Mead argued that members of cultures derive meaning from facial expressions by relating them to the context in which they occur, including both verbal and nonverbal behaviors.

Another recurring criticism is that the terms "verbal" and "nonverbal" are themselves outdated and no longer useful. Some time ago, Kendon (1972) observed, "It makes no sense to speak of 'verbal communication' and 'nonverbal communication.' There is only communication" (p. 443). More recently, Streeck and Knapp (1992) suggested that the classification of communication as either "verbal" or "nonverbal" is "misleading and obsolete" (p. 5). Although we generally agree with such criticisms, we refer to "the relationship of verbal and nonverbal communication" here because this wording is likely to be recognizable to our readers—connoting a holistic study of communicative forms to see how they work in concert. Our reference to "emerging integrations" is intended in two senses: (a) the interplay of messages conveyed in different sensory modalities; and (b) the potential for different research traditions often regarded as incompatible to inform one another and even, at times, to be used in coordination with one another.

Among scholarly books, the tradition of focusing on either verbal or nonverbal communication separately continued through the 1990s, as seen in books that deal with discourse and conversation analysis (e.g., Beach, 1996; ten Have, 1999; van Dijk, 1997) and those focused on nonverbal behavior (e.g., Feldman, 1992; Poyatos, 1992). However, some recent scholarly books deal with concepts and studies involving interrelationships of different message modalities, including volumes devoted to quantitative research (e.g., Burgoon, Stern, & Dillman, 1995) and those concerned with qualitative work (e.g., Auer & Di Luzio, 1992; Duranti, 1997; Leeds-Hurwitz, 1995; Sigman, 1995).

Progress toward studying verbal and nonverbal behavior together may have been impeded by certain factors. One problem is the linear format of journals and books, which is somewhat at odds with reporting the complexities of multidimensional interactions. It is much easier to present verbal transcripts or statistical tables than it is to describe and analyze integrations among varied message modalities. Another impediment is that there is not widespread agreement about how holistic analyses should be conducted. Especially apparent is the split between quantitative and qualitative research because studies employing these methodologies are generally directed to different audiences and published in different journals (e.g., the *Journal of Nonverbal Behavior* and *Research on Language and Social Interaction*). Rarely are both kinds of research published side by side, as they are in this special issue, and even more rarely are they compared in terms of their assumptions, objectives, and potential contributions to communication theory. Obviously, in this essay we cannot resolve the definitional, epistemological, and methodological issues that are being debated in the field of communication and that impinge on the relationship between verbal and nonverbal communication.

What we can offer are concepts and interpretations that may help to initiate a dialogue on these issues. In the next section, we provide a brief history of research on verbal-nonverbal communication, and we identify some common assumptions about the nature of communication and corresponding research strategies found in different approaches. In the third section, we address potential relationships between quantitative and qualitative studies. Section four previews the articles in this special issue to highlight assumptions, theory development, and research strategies of scholars in current research. The final section makes recommendations for future research, including (a) that videotaped data be used in all observational studies of face-to-face interaction, and (b) that researchers publish not only their written analyses of data but also the actual videotaped recordings upon which those analyses are based, so that these can be inspected by readers and other scholars. These recommendations are demonstrated by this special issue, which includes a CD-ROM containing video clips from several authors.

A Brief History of Verbal-Nonverbal Research: Assumptions and Strategies

Although a distinction between verbal and nonverbal behavior is centuries old, rigorous study of the relationship of verbal and nonverbal messages began in the 1960s among mostly quantitative researchers. Many of these early investigations were based on a "channel summation" model, which depended upon a couple of key assumptions. First, this model assumed that verbal and nonverbal behaviors are generally different kinds of messages with rather different meanings and potential functions (effects). Hence, various kinds of verbal and nonverbal messages were coded separately as conveying different kinds of meanings. Second, this model assumed that the total meaning or impact of messages conveyed in different channels can be derived from the frequency, intensity, or relative weighting of acts summated across channels.

One common type of channel summation research was "channel reliance," an approach that was designed to determine what kinds of cues (verbal, vocal, facial, etc.) were more influential in determining observer perceptions (see, for example, Bugental, Kaswan, & Love, 1970; Mehrabian & Ferris, 1967; Mehrabian & Wiener, 1967). Thus, verbal and nonverbal message combinations were the independent variables, and the dependent variables were the responses of persons exposed to those messages. Subsequent research showed that the channel summation model was too simple, especially when it was used to create formulas for the relative contributions of different channels to the overall impressions of observers. For example, Hegstrom (1979) found that the effects of messages in different channels did not account for general assessments of audiences in an additive manner; rather, meaning depended on the particular combination of messages conveyed in different channels (for a review of channel reliance studies, see Burgoon, Buller, & Woodall, 1996).

In another version of the channel summation model, situational factors were manipulated to see how subjects pursued certain goals (verbal and nonverbal

behaviors thus being dependent variables). For example, Knapp, Hart, Friedrich, and Shulman (1973) induced subjects to converse with another person and then engage in leave-taking, the objective being to assess the frequency with which the leave-taker employed an array of different verbal and nonverbal behaviors. The implicit assumption was that frequent behaviors were more important in achieving closure to the conversation. As Streeck and Knapp (1992) have pointed out, such early studies were commonly flawed in the following ways:

the use of stimuli which were not derived from naturalistic observation; a focus on the behavior of a single interactant without a freely responding partner; the assumption that judgments of third party observers are isomorphic with the judgments made by interactants themselves; the assumption that the sum of isolated parts of the interaction process is . . . [equivalent to] the whole; the general inattention to the location of behavior in the stream of interaction; and others. (p. 4)

Although Streeck & Knapp's criticisms apply to many quantitative studies of the 1960s and 1970s, other investigators attempted relatively "naturalistic" studies in which people conversed (without a script) and variables were not manipulated. Underlying this type of research was a "sequential co-relational" model of the communication process, which assumed that the meaning or impact of behaviors was derived from their sequential or simultaneous relationships, or both. For example, a series of turn-taking studies was initiated by Duncan (1972) and continued by others (e.g., Cegala, Sydel, & Alexander, 1979; Duncan & Fiske, 1977). After analyzing only two interviews, Duncan (1972) identified certain "turn-relinquishing" signals (linguistic, paralinguistic, and kinesic) whereby speakers could give the conversational floor to the other person (the sequential relationship). The more relinquishing behaviors exhibited (more or less simultaneously, the co-relational aspect), the greater the likelihood that speakership would change. Duncan did not regard the meaning or effect of behavior as inherent. For instance, he observed that if a speaker held a gesture in midair while pausing, no change in speakership would occur, even when various relinquishing behaviors were exhibited—the "turn-suppressing" gesture in effect canceling out the meaning or effect of the other behaviors.

Some qualitative scholars in the 1960s and 1970s took a still more complex view of communication processes. They rejected not only the notion that verbal and nonverbal behaviors have inherent meaning, but also the use of contrived situations and the practice of focusing on one subject's behaviors apart from the influence of interaction partners. They considered how entire episodes of interaction were organized and how different behaviors functioned in combination as people coordinated meaningful patterns of interaction. Much of this research adhered to a "structural" model of communication (Kendon, 1990) designed to discover cultural determinants of behavior. Shared assumptions were (a) that the meaning or function of behaviors is derived from the total observable context of the acts (other behaviors and social situations), and (b) that people communicate primarily by enacting cultural rituals or programs together.

Prominent versions of this perspective include ethnographic studies of the type originated by Erving Goffman (e.g., 1963, 1967) and the tradition of "context analysis" exemplified by the work of Albert Scheflen (e.g., 1964, 1965, 1973) and Adam Kendon (e.g., 1990). For example, Goffman (1967) described the ways people coordinate their actions to establish culturally expected respect for one another in the process of performing ritualistic "facework." Kendon and Ferber (1973) identified six stages in programs of human greetings in formal situations, also finding variations on this pattern in less formal situations, such as when people have seen each other recently. This tradition of studying cultural influences has been carried beyond the 1970s (e.g., Erickson, 1992; Streeck, 1983), sometimes with the purpose of exploring how programs from different cultures may create problems during cross-cultural interactions (e.g., Erickson & Shultz, 1982; Gumperz, 1982, 1992).

In recent years, research on the relationship between verbal and nonverbal communication has advanced as new and more complex approaches have been introduced. A major current trend is to emphasize mutual or co-active influences. Although it is still common, among quantitative studies, for verbal and nonverbal behaviors to be coded as separate messages assumed to have distinct meanings, some researchers are attending to the interplay of messages between interactants, rather than merely the behaviors of one person in an interaction. Somewhat contrived situations are often used in such studies, but the new emphasis on mutual influence contrasts with the traditional experimental approach in which a confederate performs certain planned behaviors in order to see the effects on the other person(s). Increasingly, research subjects interact spontaneously, within the constraints of the situation. For example, when Manusov, Winchantz, and Manning (1997) had subjects engage in cross-cultural, face-to-face interactions, they found that the congruence (matching) of communicative behaviors increased over time. Another example is the work of Judee Burgoon (and associates) based on an "interaction adaptation" paradigm (e.g., Burgoon, Stern, & Dillman, 1995; Burgoon & White, 1997). The objective is to explain how psychological predispositions are related to the ways interactants respond to situational factors and especially to one another's behaviors. Thus, an assumption underlying these studies is that interactants do influence one another, often toward either divergence or congruence of behaviors, depending in part on a variety of potentially impinging factors, including cultural backgrounds, attitudes toward the interaction, and characteristics of the social situation.

Qualitative scholars have increasingly employed "microanalytic" methods, such as conversation analysis and allied approaches, which are especially sophisticated in notions of interactivity. Researchers typically examine naturally occurring communication involving two or more people who exchange messages on a real-time basis, with the focus being how people behave (an interactional question) rather than why (a cognitive question). These analysts emphasize that each speaking turn has consequences for others because talk is designed to reflect on prior turns and project future ones. Hence, verbal and nonverbal messages are not seen as inherently meaningful because communicative behaviors are subject to inference and open to negotiation among participants. Behaviors accomplish social actions

by virtue of their placement and participation within sequences of actions. When investigators do make inferences about individual, relational, institutional, or cultural influences, they generally do so only on the basis of clear internal evidence—such as from direct observation of behavior in interactions (e.g., Streeck, 1982), from ethnographic interviews with the participants (e.g., Leeds-Hurwitz, Sigman, & Sullivan, 1995), or from a combination of such methods, as when participants are asked to view themselves on videotape to bring about “stimulated recall” (e.g., Erickson & Shultz, 1982). The model of communication implied by these microanalytic studies has been described as “emergent” or “performative” (Leeds-Hurwitz, Sigman, & Sullivan, 1995). Although similar to the “structural” model (described above) in certain ways, the focus of the emergent model is not restricted to the study of cultural rituals or programs. Rather, an added assumption may be identified as follows: People not only utilize structural forms, but they also co-construct and negotiate meanings and rules in their ongoing interactions.

Microanalytic studies of the relationship between verbal and nonverbal communication usually take one of two forms. One approach involves detailed study of a collection of similar interactive instances. For example, Goodwin (1980) examined dozens of excerpts from videotaped data and explicated subtle forms of coordination between utterance-initial restarts and shifts in participants’ eye gaze toward the speaker; thus, restarts, often thought to be a problem of encoding, were found to be functional in that they reflected speaker responses to evidence of listener attentiveness. Employing examples of interactions from different cultures, Streeck (1993) demonstrated that a speaker may draw special attention to the significance of an iconic (figurative) gesture during an explanation by momentarily looking at his or her gesticulating hand, thus drawing the gaze of the listener to that gesture and helping to clarify the speaker’s meaning. The other approach involves detailed analysis of a single excerpt from a videotaped record. For example, LeBaron and Streeck (1997) examined an entire police interrogation in which the officers moved their bodies in strategic ways while speaking metaphorically about the interrogation room (and participants’ maneuvers within it), saying, for example, “You’re locked in a room and you’re looking for a window, a door, or some way out—there’s not one.” The analysis shows how the suspect’s confession was interactively brought about.

Our brief review of research on verbal and nonverbal communication is but a broad overview of a wide range of topics pursued and approaches employed. Obviously, some approaches are topically related but incompatible because of their underlying assumptions. For instance, a researcher could not treat behaviors as meaningful in themselves, to be manipulated or counted (according to the channel summation model), and at the same time regard behaviors as meaningful only in context (as with context analysis). It is also clear that some approaches to research have evolved into or been subsumed by others. For instance, the assumptions of the early “sequential co-relational” model (e.g., turn-taking) are not inconsistent with later approaches to mutual influence; rather, the first seems to have been absorbed by the complexities of the second. In some cases, mergers among methods have been explicitly proposed and accomplished. For example,

Heath (1986) combined Schefflen's structural approach (albeit revised) with the emergent or performative approach of conversation analysis, toward a microanalysis of vocal and visible forms co-occurring during videotaped medical consultations (also see Leeds-Hurwitz, Sigman, & Sullivan, 1995). Another relatively major and ongoing issue is the relationship between quantitative and qualitative research traditions, which is considered next.

Regarding Quantitative and Qualitative Research

By design, this special issue includes both quantitative and qualitative studies. We hope to promote dialogue across this methodological divide, which has become unfortunately (perhaps unnecessarily) wide. Traditionally, the quantitative and qualitative paradigms have been regarded as fundamentally at odds, seemingly irreconcilable in their different understandings of the world. Nevertheless, we agree with James Anderson (1987), who saw hope for a "middle ground" or even a "synthesis" of sorts (p. 47).

In a paper entitled "Quantitative Versus Qualitative?," Janet Bavelas (1995) argued that the distinction between the two kinds of research, as it is commonly conceived, involves a number of false, dichotomized assumptions. Among these are notions that quantitative studies are objective whereas qualitative studies are subjective, that quantitative research is deductive and qualitative is inductive, and so on (artificial vs. naturalistic, generalizable vs. not generalizable, internally vs. externally valid, etc.). Take generalizability, for example. In theory, this is a stronghold of quantitative methods because qualitative studies often involve small samples of incidents for analysis. However, by the standards that scholars using statistical methods impose upon themselves, the generalizability of a study is limited to the population from which subjects for a study have been selected, and then only if the subjects have been drawn at random (or matched, in some cases) and in sufficient numbers to justify making statements about a larger population (a condition seldom met). Of course, it could be argued the other way around, that qualitative studies are more generalizable because they are more naturalistic, less artificial. Neither approach can lay exclusive claim to generalizability of findings.

Perhaps the stickiest issues, the points at which scholars from different traditions are most likely to argue against "the other side," involve epistemological distinctions. According to common conceptualization, quantitative researchers are "positivists" or "objectivists" because they regard reality as something "out there" and (with the right methods) discoverable. By contrast, qualitative researchers are said to be "interpretivists" to the extent that they regard reality as something "socially constructed" and humans (hence researchers) as necessarily symbol-using beings (hence unable to access reality directly). In the practice of research, however, these distinctions tend to blur, especially in the realm of verbal-nonverbal research where both quantitative and qualitative investigators routinely use video recordings as a basis for making "direct" observations of human behavior. Compared to studies without firsthand observation (e.g., use of surveys and informant interviews), or, in cases where firsthand observations are reported but there is no ability to replay

or reexamine an event (e.g., field notes), video technology seems to bring the investigator closer to the details of the "original" event. Video recording requires cinematic choices that are interpretative acts by their very nature, yet both qualitative and quantitative researchers tend to treat such records as nonproblematic representations of what actually happened. In short, sometimes the methodological-epistemological divide seems bigger in principle than it does in practice.

To some extent, both quantitative and qualitative scholars make reality claims, though the realities they envision may be different and the manner of their explanations may contrast. Quantitative scholars are more likely to make conclusions about multiple incidents in a corpus of data, implying that the behaviors observed are not idiosyncratic or specific to certain encounters. Qualitative scholars are more likely to analyze the details of a single case or of a specific set of interactions, thereby documenting at least one way that some communicative phenomenon may be interactionally achieved, usually avoiding questions about how frequent or commonplace the phenomenon may be. Ultimately, however, establishing a basis for intersubjective agreement is the strategy for making reality claims in both traditions. Thus, quantitative researchers operate as interpretivists when observers rate the effect of certain messages, often achieving interrater reliability through training and discussion among raters. Qualitative researchers, although sometimes acknowledging their interpretive role in creating a view of observed events, employ multiple examples and elaborate descriptions toward persuading the reader that the study is accurate (hence, objective).

A renowned qualitative researcher, Emanuel Schegloff, has argued that there is no inherent contradiction between conversation analysis and quantitative research (1993), but he cautions that researchers should follow certain procedures that are too often neglected. To illustrate, Schegloff reviewed a study in which frequencies (per minute) of laughter were counted by investigators as evidence of "sociability." Schegloff rightly argued that "per minute" calculations are an inadequate basis upon which to evaluate sociability and suggested that behaviors be counted according to whether they occur in "environments of possible relevant occurrence" (p. 103)—that is, places where such behaviors would be appropriate in an interaction. Thus, laughter, if it occurred during or after a funny remark, could be interpreted as "sociable," whereas some other sorts of laughter may be offensive (as documented in a study by Jefferson, Sacks, & Schegloff, 1987). In part, Schegloff was objecting (albeit in different terms) to the notion embraced in some quantitative studies that verbal and nonverbal behaviors have meanings in themselves. Instead, he proposed that behaviors be counted as having a certain function only when they can be seen to occur within an interactive context that provides for that function.

One implication of Schegloff's ideas is that when the two methods are used together, most often quantitative analyses would follow qualitative studies, operating as a test or extension of those prior conclusions. This is not to suggest that qualitative and quantitative investigators often approach data in complementary ways. However, there are cases where quantitative methods have been used to test, extend, or examine some aspect of prior conclusions from qualitative studies. For example, LaFrance and Mayo (1976) conducted a series of two studies about

racial differences in eye gaze behaviors during face-to-face conversations. First, they looked frame by frame ("microanalytic structural") at recordings of one Black-Black and one Black-White conversation, which showed that the Blacks face-gazed more when speaking, while the one White subject face-gazed more when listening. Second, LaFrance and Mayo used a much larger sample based on observations of public behavior (not videorecorded), which demonstrated statistically that there was less face-gazing by listening Blacks than listening Whites. A number of quantitative studies have investigated a phenomenon originally documented in qualitative research (context analysis) by Schefflen (1964), namely that postural congruence is indicative of communicative identification or empathy (Bavelas, Black, Chovil, Lemery, & Mullett, 1988; LaFrance, 1982, 1985; LaFrance & Broadbent, 1976). One discovery of this quantitative research was that postural congruence is indicative of empathy only when behaviors are mirrored, not when postures are identical in form, a finding that constituted a refinement of Schefflen's concept.

Finally, qualitative methods have occasionally been used to test and reformulate conclusions based on quantitative data. For example, Beattie (1983) treated Duncan's (1972) quantitative study and Sacks, Schegloff, and Jefferson's (1974) qualitative study of turn-taking as simply alternative approaches to getting at the same phenomenon—employing qualitative data analysis as a way of combining and revising both sets of conclusions. Thus, although a quantitative-to-qualitative investigative sequence is far less common than the reverse, Beattie's study illustrated the potential for testing hypotheses or prior findings by qualitative means, a possibility suggested some time ago by Glaser and Strauss (1967).

✓ **Current Approaches to Verbal-Nonverbal Analysis: Studies Presented in This Issue**

When planning this special issue, we solicited articles from scholars known for their work on the relationship between verbal and nonverbal communication. We made no attempt to impose a particular theme, method, or perspective on the contributors—except to ask that they examine both visible and vocal behaviors and consider theoretical issues related to such joint examination. In addition, a balance in the numbers of qualitative and quantitative studies was sought. The result is that a broad array of studies is represented, demonstrating various new ways of approaching assumptions and research strategies in this flourishing area of research.

Buck and VanLear's article is arguably the most theoretical of the contributions to this issue. Drawing on a meta-analysis of research on the effects of brain damage on communicative abilities, they challenge a traditional assumption that analogically codified messages are monitored exclusively by the right hemisphere, a notion that has been employed by some theorists to justify the study of nonverbal behavior as a separate and distinct form of communication. Basing their position on tests of pantomime reception and expression, Buck and VanLear propose that "pseudo-spontaneous communication" (intentionally manipulated nonverbal messages), like verbal symbolic behaviors, are processed by the left brain, whereas