Film Projectors as Microscopes: Ray L. Birdwhistell and Microanalysis of Interaction (1955-1975)

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The Movement Movement

In the 1960's anthropologist Ray L. Birdwhistell became prominent for research on what he named "kinesics" or the study of body motion patterns in communication. Affordable 16 mm film and the new video technology was making careful study of face-to-face interaction and bodily communication feasible. In the 1960's this research grew into a veritable "movement movement" and Birdwhistell was its prime mover. He directed a lab at the Eastern Pennsylvania Psychiatric Institute in Philadelphia with a fully equipped 16 mm film studio, a resident cinematographer, an artist who illustrated research findings, and numerous graduate students and visitors who conferred with him and colleague, Albert E. Scheflen. Although Birdwhistell published just one book, Kinesics and Context, he was a prolific speaker who challenged age-old assumptions about the psychology and anthropology of "body language." The observations of Birdwhistell and other researchers who explored the potentials of microanalyzing behavior from film and videotape became a powerful argument for the importance of film documentation, especially films of uninterrupted, full-body shots of people in everyday interactions. They showed how movie films and projectors can be to anthropology and psychology what slides and microscopes are to biology. Publications from the time do not adequately capture the productivity and excitement of what was an interdisciplinary endeavor involving an informal network of anthropologists, ethologists, linguistics and psychiatrists. Birdwhistell was at the hub of this network. Many conferred with him and he helped connect researchers doing related work. He was pivotal in determining who received research grants from the National Institute of Mental Health for studies of communication at a time when the NIMH was the primary source for such funding in the United States.

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Today Birdwhistell is largely unknown and rarely cited, even within books on nonverbal communication. As someone who is nearing forty years of research on face-to-face interaction patterns, I find the arc of his career a remarkable cautionary tale. I am a clinical psychologist, not an anthropologist, and I have primarily studied psychotherapy interactions and forensic interviews. In the early 1960's I was a research assistant to the dance notation expert, Irmgard Bartenieff (whose work with Alan Lomax is the subject of Allison Jablonko's paper in this issue). The fact that Irmgard was a dancer and physical therapist and I was a psychology student did not limit our contacts. You were a member of this informal club if your work was interesting enough to be mentioned during the small seminars and private film demonstrations that became the medium for transmitting ideas and discoveries.

To an extent, of course, inclusion in these small meetings depended on who you knew, but it was not difficult for serious professionals or doctoral students to visit the research facility of Birdwhistell in Philadelphia or the lab that Schefflen would set up in New York in the mid-60s. No matter what your focus—greeting rituals, turn-taking signals in conversation, behavior in public places, cross-cultural comparisons of spatial positioning or proxemics, the organization of speech-motion patterns, quasi-courtship behavior at cocktail parties—if you were closely observing behavior and interested in identifying recurrent in vivo patterns, you were an unofficial member of a consortium that made up in vitality what it lacked in organization and professional identity. The focus of your observations was of less consequence than your discoveries, whether they dealt with chimpanzees, stickleback fish, human infants, schizophrenic adults, people from Stone Age cultures, Philadelphiaans at a cocktail party, or whomever.

To locate the members of the network, it helped to know the code words of the time, "visible behavior," "face-to-face interaction," "proxemics," "kinesics," "communication systems." Schefflen would title one of his books Body Language and Social Order in deference to publishing demands to reach a wider audience, but for various reasons, researchers objected to the terms "body language" and "nonverbal communication." Birdwhistell remarked that "nonverbal communication" was akin to saying "noncardiac physiology." Margaret Mead argued that a discipline should not be called what it is not. There were few if any academic posts for specialists in kinesics, and the researchers who pursued this subject were often mavericks who questioned time-honored approaches. Articles were scattered over a wide range of journals, no one of which was a reliable home for them except Semiotica, the journal edited by Thomas A. Sebeok. In the 1970's The Journal of Nonverbal Behavior was established for the publication of articles on kinesics, proxemics and paralinguistic behavior, but it has
primarily been receptive to experimental research, not the descriptive microanalyses. By the mid-60's the activity of the informal network had become sufficient to warrant academic conferences devoted exclusively to nonverbal behavior and to face-to-face interaction, and the published proceedings of these conferences gave a good picture of research at the time (Sebeok, Hayes and Bateson, 1964; Wolfgang, 1979, Davis, 1982). However, to appreciate what Birdwhistell and other researchers were attempting and why, we have to look at the precursors of the 60's movement movement.

Precedents: Anthropology

The study of bodily expression has a history reaching at least as far back as Greek and Roman treatises on gesture in oratory. But in 1872 Charles Darwin ushered in modern scientific study of kinesics with The Expression of Emotions in Man and Animals, a behavioral companion to The Origin of the Species and a touchstone for anthropologists, ethologists and psychologists interested in body communication to this day. In the 1920s and 30s, experimental psychologists devoted considerable attention to bodily and facial expression as a royal road to inner psychological states. Birdwhistell would criticize their search for universal expressions of emotion in the face and body. The "movement movement" of the 60s was in part a revolt against expressionism and the assumptions of experimental psychologists. Birdwhistell (1970:34) would assert: "Insofar as I have been able to determine, just as there are no universal words, no sound complexes, which carry the same meaning the world over, there are no body motions, facial expressions, or gestures which provoke identical responses the world over. A body can be bowed in grief, in humility, in laughter, or in readiness for aggression. A 'smile' in one society portrays friendliness, in another embarrassment, and, in still another may contain a warning that, unless tension is reduced, hostility and attack will follow."

The 1960s movement movement contained reactions against psychoanalytic theory and psychology's search for universal emotions, but it was inspired primarily from developments in anthropology, ethology, interpersonal psychiatry and cybernetics/systems theory. In anthropology, Franz Boas set the stage in 1930 when he and a Russian anthropologist, Julia Averkieva, took motion pictures of Kwakiutl everyday life and ceremony in the American Northwest. As Jay Ruby (1980:7) documented, Boas "was one of the first anthropologists, and perhaps the first social scientist anywhere, to use the motion picture camera to generate data in natural settings (as opposed to a laboratory) in order to study gesture, motor habits, and dance as
manifestations of culture." So it was not a coincidence that the best study of cultural differences in gesture was completed by Boas' student, David Efron. Argentinian and Jewish, Efron contested Nazi claims that gesture style, like head shape and facial features, reflected racial differences, and to the Nazis, racial inferiority. In the late 1930s Efron took films of men talking on street corners in Little Italy and in the Lower East Side Jewish neighborhoods of New York City. He also worked with an artist named Stuyvesant Van Veen who beautifully illustrated Efron's meticulous frame-by-frame analysis of the gesture patterns. After filming first generation speakers, Efron then observed second generation Jewish and Italian students while they delivered speeches at the Hillel and Newman Club meetings at Columbia University. Efron found that the students were fast losing the gesture styles of their parents. So much for innate racial difference in body movement patterns. At the same time, the anthropologist Eliot D. Chapple was searching for ways to study culture that transcended language differences and did not depend on informants. He opined that what all peoples have in common when they interact is the element of time and the synchronization of actions. Chapple studied conversation, not because he was interested so much in speech per se, as in action and interaction. Conversation was one form of interaction. He did not rely on film or video, he used direct observation, but his ideas permeated the 1960's movement movement, and spawned decades of research on "rhythms of dialogue." Consider the word "interaction." It is so common, it doesn't seem possible that it was coined at one time. Chapple fixed this term securely into the research lexicon. Chapple was apparently so far ahead of his time that whole decades of his research have been overlooked. He developed a workable event recorder for behavioral research in the 1940's, and he was doing computer analyses of interaction patterns in the early 60's. He preceded all of the researchers of the movement movement by thirty years when he knocked down a wall in a Harvard building in the late 1930's to create a one-way screen for observing people talking to each other. Chapple told me that in the late 30's his "interaction chronography" studies of conversation were considered an immoral invasion of privacy by some who argued that people's relationships should not be studied so intimately by scientists. How times have changed!

Eliot Chapple and Conrad Arensberg published a monograph in 1940 called Measuring Human Relations: An Introduction to the Study of the Interaction of Individuals. In it they showed that careful recording of exactly when a person becomes active and when relatively inactive or still, demonstrates that people have preferred rhythms. When two or more people interact their rhythms intermesh with more or less success, depending on the pattern of interruptions, pauses, and coordination of turn-
taking. The nature-nurture debate emerged in full force within nonverbal communication research of the 1960s, especially in the writing of Birdwhistell and the psychologist, Paul Ekman, but Chapple proposed empirical ways to address this problem decades before with his elegant measures of activity rhythms at the interface between individual temperament, social interaction, and cultural conventions.

While Chapple was developing event recording methods for the study of interaction in the lab, a student of Boas, Margaret Mead, was demonstrating the power of photographs and film to record details of everyday life easily missed in field observation. It was Mead who gave invaluable support to Birdwhistell's research. Legend has it that Birdwhistell was a younger anthropologist listening to Mead and others comment on a Balinese film when he interjected something like, "But did you see what the mother did with the baby after she took him out of the bath?" He then brought to their attention a fascinating medley of actions that occurred in a few seconds. Birdwhistell spent many years showing people what film editors know so well: if you replay a film repeatedly in real time or slow motion, actions will pop out that at first you had not noticed. And sometimes you discover details that have never been documented.

Although Birdwhistell was a prime mover in the movement movement, he was by no means head and shoulders above the rest. By the time Birdwhistell achieved a well-funded situation in which to pursue his research, Chapple had completed two decades of research and others influential to the movement movement, such as Edward T. Hall and Erving Goffman, had established international reputations. Hall used film to an extent for his research on cultural variations in the use of time and space, but his impact was primarily through his formulations and very readable books, not through presentation of specific micro-analyses from film. Goffman had a genius for taking his field observations of interaction and the reports from those doing microanalysis of films and melding them into elegant formulations on the nature of social order with descriptions so vivid, film illustrations would be almost redundant. Goffman helped Birdwhistell get published and Birdwhistell cited Goffman and Hall as major influences. Goffman was a major influence on Adam Kendon who worked for many years with Scheflen and continues to do film analyses of gesture to this day. As must be true in many disciplines, the cross-fertilization of ideas and the importance of what were in many cases long collaborations cannot be appreciated from a scan of credits and publications. The choreometrics research of Lomax and Bartenieff (discussed by Jablonko in this volume) loops directly back to Birdwhistell, because it was he who recommended that Alan Lomax consider Irmgard Bartenieff as the best person to
pursue the cross-cultural dance and work movement analysis with him. And the Cantometrics project was a collaboration of Alan Lomax and Conrad Arensberg of Columbia University.

Although Chapple, Hall, Birdwhistell and others who created the context for the movement movement were strong on theory, they were, in effect, attending to the behavioral "atoms" of everyday life, details that could be seen and heard in all manner of transactions. While the patterns that they observed were robust, they were also extremely sensitive to context and manipulation. Put another way, attempts to capture or elicit them in a controlled setting seemed to elicit patterns borne of artificial manipulation. The researchers had a great deal to say about methodology, including production of research films. Birdwhistell argued strenuously that the action of the entire body should be seen without interruption in order to study how behavior is organized in natural units. He had strong directions for making research films with a minimum of camerawork and editing. In a voice-over at the end of his film, *Microcultural Incidents in Ten Zoos*, Birdwhistell notes how even his accomplished cinematographer, Jacques Van Vlack, found it difficult to keep the camera on people as long as possible without close-ups or cuts. In a scene of two strangers at a French newsstand, Van Vlack stops shooting just as the woman and man display behaviors that would ordinarily go unnoticed. It is an example of how the cameraperson in the field unconsciously censors the action. This filmic "editor's note" is quintessential Birdwhistell. Irreverent, witty, opinionated and eye-opening. Few viewers would notice that the woman bumps the man slightly with her hip—one, two, three times. And once Birdwhistell points out their interaction, it is no surprise to see the man and woman walk off together. In the 60s and 70s such clips were worth entire dissertations as evidence of the pervasiveness and complexity of visible, yet unseen behaviors. I can still picture some of the "classics clips," most of which never had formal distribution.

Paul Byers, the Columbia University anthropologist who did photographic studies with Margaret Mead, liked to show a film of Mead discussing insurance with her broker in front of class. This "cultural event" took on new meaning when the film analysis revealed a dance no one would see without slow motion film and the conviction that it was worth looking at such minutiae. At one point a student flashes her ankle and the broker's head turns and he straightens up with heightened muscle tone—what Schefflen liked to call "courtship readiness." Then Mead crosses her leg and effectively blocks any further rapport between them.

**Precedents: Ethology and Fixed Action Patterns**
In those days there were many references to courtship and quasi-courtship behaviors in face-to-face interaction. Ethological studies of fixed action patterns and territorial behaviors of animals (Tinbergen, 1953) strongly influenced the kinesics research of the 60s. To this day researchers such as Kendon, who worked for many years with Scheflen, regard microanalysis of human interactions as a subset of animal ethology. The predominantly white male researchers of the 60s seemed particularly taken with accounts of mammalian courtship displays in which the female signals the purportedly jittery male that she is ready for a close encounter. To be fair, they regarded such ethological observations as far more than titillating observations for a popular paperback on body language. To them human behaviors akin to mammalian courtship displays appeared to facilitate contact and rapport in a wide range of encounters. For example, Scheflen described quasi-courtship behavior in therapy sessions that appeared to serve the development and maintenance of rapport.

I remember Birdwhistell remarking that after years of examining face-to-face communication, he was heartened to find that positive, order sustaining behaviors accounted for 90% of all behaviors displayed in interactions. This sounds preposterous. However did he determine it? I could not find a reference for it and I may have misheard it in a lecture or during one of our conversations, but whether my exaggeration or his, the statement is emblematic of Birdwhistell's idiosyncratic vision. When ethologists were preoccupied with dominance displays and territorial behavior, Birdwhistell was detecting countless motion signs of civility and rapport.

Birdwhistell could spend months studying a few seconds of a film. Scheflen focused on larger units of behavior and patterns occurring from two to thirty minutes. For his magnum opus Scheflen (1973) devoted four years to the microanalysis of a family therapy session. I would submit that it is the most innovative piece of behavior research to emerge from the 1960s--by anyone. The film Scheflen used was a classic Van Vlack/Birdwhistell production. In other words, it made a virtue of the most boring cinematography possible. In their studio one camera was set on a shot that included a couch, two comfortable chairs and side tables in the manner of a therapy room, so that the four participants could all be seen in full body for the entire film. The co-therapists, seen in profile, were seated in a book-end arrangement right and left of the mother and daughter who faced the camera. The film was simply run out to the end of the session without close-ups or pans or cuts. Although the participants agreed to the filming, they could not see the cinematographer who left the room after he started the film. Birdwhistell and Scheflen had found that when anyone was in the room during filming,
those on camera might start subtly interacting with them which would change the system of interaction that they were trying to record and study.

In addition to being a neurologist and psychiatrist, Scheffen was a musician, and his rendering of the intricacies of this interaction of mother, daughter and therapists is rich with analogies to musical composition, theme and variation, harmony and counterpoint. One has only to read his lucid account of the repetitive alternation of positions and actions as they linked with verbal themes to realize how program-like and fixed face-to-face interactions can be. After working with Birdwhistell at EPPI in Philadelphia, Scheffen set up a communication lab at Bronx State Hospital that was affiliated with Albert Einstein College of Medicine’s Department of Psychiatry. Several of us in the informal network—Scheffen, Bartenieff, Kendon, Ray MacDermott, and myself—did research at Bronx State with the support of its director, Israel Zwerling, a long time patron of this research. As carefully as I had read Scheffen’s report, actually seeing the film was worth a book’s worth of description. Scheffen detected an ABABABAB pattern of interrelated positions that was highly regular. He came to understand their interactions so well from the microanalysis of this first session that when he examined what was understood to be the ninth and last therapy session of this group, he announced that it could not be the last. Although the participants had agreed to nine sessions and left EPPI after the films were made, Scheffen insisted that their interaction pattern—alternating certain positions and actions in one way, then shifting to another configuration during the second part of the session—was only half complete in the ninth session. Sure enough, the younger of the two therapists admitted that he had arranged for a tenth session with the patient, unbeknownst to his partner or the research team.

Precedents: Interpersonal Psychiatry

Note that the EPPI and Bronx State labs had anthropologists and psychotherapists studying psychotherapy interactions. Anthropologists and psychiatrists had been collaborating for a few decades, though perhaps for different reasons. For anthropologists, therapy sessions were social interactions that must have rules like those organizing group behavior in other contexts. For psychiatrists frustrated by the limits of existing treatments and the assumptions of Freudian psychology, study of therapy films promised insight into the nature of schizophrenia and what was psychotherapeutic. In the 1940s and 50s Harry Stack Sullivan and Frieda Fromm
Reichmann had spurred a minor revolution with "interpersonal psychiatry" and its emphasis on interpersonal and social factors in mental illness.

In 1959 at a major meeting of the minds, linguists, anthropologists and psychiatrists conferred at the Palo Alto [California] Center for Advanced Studies in the Behavioral Sciences. They observed a filmed therapy session together and generated a Babel-like variety of perceptions and interpretations, so they vowed to start from scratch, presume nothing about the meaning of the linguistic and kinesic behaviors displayed, and search for pattern much in the manner of cryptographers decoding unknown codes. The result was reported in *The Natural History of an Interview* by Gregory Bateson, Ray L. Birdwhistell, Henry Brosin, George Trager and Frieda Fromm-Reichmann. This work carried great symbolic weight at the time, despite the fact that few could read it because the book was not published. One of the reasons for this appeared to be release problems with the film on which it was based.

The fate of *The Natural History of an Interview* proved to be an early sign of an enduring problem in this film research. By the late sixties obtaining consent from subjects and permission to film was becoming more difficult. The best way to conduct the research and to convey the nature of the findings was with films or videotapes, but the microanalysis exposed people in highly sensitive ways, and increasingly people became reluctant to have their behavior shown to strangers, however many safeguards were established to limit viewing of the films and tapes. The National Institute of Mental Health was clearly supportive of film and videotaped studies, but there were serious dilemmas with recording psychiatric patients in particular. I know of only two of Birdwhistell's films that were distributed, *Ten Incidents* and a series of four family therapy sessions known as *The Hilcrest Films*. It was significant that distribution of *The Hilcrest Films* was very delayed and restricted apparently due to consent issues. In the late 1970's when I was directing an interdisciplinary resource called the Institute for Nonverbal Communication Research, we published a news journal called *Kinesis*. To do a feature article in *Kinesis* on the ethical problems of filming or videotaping people for micro-analysis (Lavender, Davis and Graber 1979) we interviewed several anthropologists, psychologists and members of Institutional Review Boards who were entrusted with overseeing the protection of human subjects. We also spoke to Alan Funt of the television program, *Candid Camera*. We found that anthropologists had different criteria for how to protect human subjects than psychologists did, and countries differed on rules for field recordings and film research as well. Candid Camera followed a unique rule. Alan Funt would not make films of people who knew each other, personal relationships being off limits for the pranks that they staged and
filmed. Obviously, the question of protecting filmed subjects remains a problem of great relevance to Visual Anthropology.

**Precedents: Systems Theory and Cybernetics**

Well before the 60s, Gregory Bateson and Margaret Mead had demonstrated that film was a powerful research tool. But Gregory had even greater influence on behavioral microanalysis through the ways in which he adapted concepts from cybernetics and systems theory to the study of face-to-face communication. In the first chapter of *The Natural History of an Interview*, after enumerating a long list of post-war developments in linguistics and psychiatry together with game theory, cybernetics, systems theory and biology, Bateson remarked, "What has happened has been the introduction into the behavioral sciences of a number of very simple, elegant, and powerful ideas all of which have to do with the nature of communication in the widest sense of the word." (1971:2)

Bateson applied these ideas to the realm of face-to-face communication in provocative ways. Although he left the grunt work of micro-analysis to linguists and kinesicists, his writing on the importance of context and system permeated this period. A film of face-to-face interaction confronts the viewer with continuous sounds and motions in complex interactions that defy a linear, action/reaction model. Bateson, Birdwhistell and Scheflen argued for methods informed by a systems model of communication, and an examination of behavior in context. Speaking of the film analysis of *The Natural History of an Interview*, Bateson (1971:8) asserted: "This placing of every signal in the context of all other signals is an essential discipline of our work. A great part of the work which Birdwhistell, [Charles] Hockett and [Norman] McQuown have had to do has involved a grueling process of synchronization. The audible stream for which Hockett and McQuown are specialists was recorded on tape and on film with an unsatisfactory sound track. The analysts had to work frame by frame through the film to establish the point in the audible sequence at which, for example, Doris turned her head or let her shoe fall away from her heel. I described our data loosely above as the aggregate of signals recorded on the film. More accurately, I should have said that our data are the individual signals or messages, each in its immediate and extended context."

Albert Scheflen repeatedly elaborated on ideas of context and system and their implications for a research methodology: "To study a system, we may break it down into parts as a step in the investigation, but we will have to then synthesize to examine organization. There are no independent variables in a system." (Scheflen 1966:303) By
the end of the 1970s, research psychologists, led by Paul Ekman, were applying traditional experimental methods to the study of nonverbal behavior and efforts to capture the complexity of interaction "in vivo" would give way to experimental manipulations.

Birdwhistell strenuously criticized experimental controls as destructive of the "naturalistic behaviors" that were the concern of the research. His arguments with psychologist Paul Ekman against universal facial expressions and the study of behaviors out of context were highly charged. Of course, their debate was one manifestation of a much larger debate, and those interesting in micro study of behavior in context were fighting an uphill battle. They could hardly defend spending four years on one film or even four years on ten films. Issues of sampling, statistical significance, reliability, validity and generalizability came to the fore. Ekman replaced Birdwhistell in the important role of arbiter of NIMH grants for nonverbal communication research, and by the 1980's the golden era of "naturalistic observation" of films and tapes ended.

Conclusion

Today, I do not use 16mm film for the microanalytic research of criminal confessions that I have been conducting for three years. I use videotapes of interviews that are copied onto CD disks for playback on the computer. But like in the old days, I use only recordings in which the camera stays on the subject for the entire interview. Nothing is more frustrating for a microanalysis of behavior than camerawork and editing that cuts and limits the action and the natural phrases of movement and speech. With the CD/computer format I can protect the recordings against the wear and tear of constant replay and slow motion analysis. The moving image projected onto the computer screen is placed next to an event recording log and a key to details of speech and motion that I have written into the event recording program. This makes it possible to record changes down to .03 of a second, although for my research, .3 of a second onset is accurate enough. I use The Observer, an event recording program developed by Noldus Information Technology Inc. which is based in the Netherlands. I love my Noldus program and the ease with which I can jump from one part of an interview to another on the CD, but I miss the quality and feel of film. In the 1960's there was a fondness and respect for film that never quite transferred to video. Film lasts--most of my films from the 60s are still good, while many of my videotapes from the 70s have deteriorated miserably. Film can be held up to the light and handled, and it is easy to understand how the film image is captured and projected.
But perhaps it is not a coincidence that my earliest research was on 16mm film and I remember the clips as if I saw them yesterday. My father, Harry I. Davis, was a research chemist at Eastman Kodak for forty years, so I am from the large film family that is Rochester, New York. When I was preparing this paper, it occurred to me that a conference on the earliest developments in Visual Anthropology should also include an oral history from the developers of motion picture film. Like the cinematographers interviewed in that wonderful movie, *Visions of Light*, these scientists would be a treasure trove of experience on what works and why, on how people perceive action, how film effects and shapes perceptions—in a word on the human potentials of film. My father told fascinating Kodak film research stories from the period between 1940 and 1965. In WWII he helped in the development of high resolution reconnaissance film that would be used to track troop movements. In the post-war years he recalled how Japanese chemists visited Kodak and within a year created a color film so good that it shook up their Kodak hosts. Film can capture critical events inadvertently—and not just when the camera is on and no one realizes what it has recorded. The most stunning microanalysis of behavior from film that I know was reported to me by my father. At the height of the Cold War, Eastman Kodak Co. was almost forced to shut down production of x-ray film because by the early 1960s the radioactive fall-out from above-ground nuclear testing from as far away as China was destroying x-ray film in a factory on the east coast of the United States. No matter how tightly the buildings were sealed where the film was manufactured, Kodak workers could not keep the x-ray film from getting spotted. My father said he could tell the date and origin of a bomb test from the size and shape of the spots on x-ray film in production. The success of the 1963 Nuclear Test Ban Treaty was recorded microscopically by how clean Kodak's x-ray film became after above-ground testing was prohibited. Imagine the implications of this inadvertent record!

To spend one's time doing microanalysis of behavior from film or videotape, one has to be drawn to the smallest details. No aspect of behavior, however tiny, was trivial to Birdwhistell and those who flourished during the movement movement of the sixties and early 70s. On the contrary, they demonstrated that the most important information resides in the smallest details. Today, spurred by research on gesture and cognition (cf McNeill, 1992), there is a resurgence of interest in microanalysis of nonverbal behavior *in vivo*, and it is immensely facilitated by digital recordings and computers. Indeed computers have given microanalysis a legitimacy and cache that it never quite had in the 60's, which is ironic because the new technology does not mean the latest research on communication and interaction is more advanced. I think the
original work remains the best and most creative—from Efron's film study to Scheflen's analysis of communicational structure—perhaps because only great fervor, years of labor over a few specimens, and a belief in the possibilities against all odds lead to discoveries that capture the imagination and have an impact. I do not want to leave you with the impression that the movement movement pioneers are long gone. On the contrary, some are still alive and doing vital work. Chapple was working a book on culture and interaction until his death in the fall of 2000. Until a recent illness, Edward Hall had been actively pursuing his interests in cross-cultural communication research and training. Kendon is a leader of the new International Society for the Study of Gesture. But most of the researchers mentioned here have died, their work is out of print and unknown. Perhaps we are doomed to rediscover the wheel every two generations or so. Which is why the subject matter of the IWF conference in Goettingen may have been more cutting edge than dated.

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References


Bateson, Gregory


Birdwhistell, Ray

Chapple, E.D.


Darwin, Charles


Davis, Flora


Davis, M.


Davis, M. (ed.)


Davis, M. and D. Hadiks


Davis, M. and D. Hadiks


Davis, M. and J. Skupien


Efron, David.

Ekman, P., and W. V. Friesen

Goffman, Erving

Hall, Edward T.
1959 The Silent Dimension. New York: Doubleday & Company

Kendon, Adam

Lavender, Joan, Davis, Martha and Eden Graber
1979 Ethical Considerations. Kinesis.

McNeill, D.

Ruby, Jay

Scheflen, Albert E.

Sebeok, Thomas A.
1979 The Sign and Its Masters. Austin, Texas: University of Texas Press

Sebeok, Thomas A.; Hayes, Alfred S.; and Bateson, Mary C. (eds.)

Tingergen, Nico

Wolfgang, Aaron, ed.