Scrutinizing: Film and the Microanalysis of Behavior

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When I am trying to decipher a worn and damaged inscription I know very well that before I begin answering the question “What does that mark mean?” I must first assure myself that the mark is not accidental but is part of the inscription; that is to say, I must first answer the question “Does it mean anything?” An affirmative answer, i.e. the statement “That mark means something,” causes the question to arise, “What does it mean?” —R.G. Collingwood, An Essay on Metaphysics (1940)

The idea of nonverbal communication was hardly unknown to the premodern period; yet it was just as often a subject of amusement as it was one deserving of serious inquiry. Indeed there are many versions of a tale in which two persons converse using nonverbal signs, not realizing that these signs which they use hold different meanings for each individual. In the first book of Pantagruel, from 1532, Rabelais in his greatness simply brought to its zenith a tradition that predates him by over three centuries. The actors of this dumbshow were, customarily, a Roman and a Greek. Those in Rabelais’s telling are an English scholar named Thaumaste and a French libertine, Panurge, who agree to debate “by signs only, without speech.” First the scholar “raised his two hands separately high in the air, clenching all the tips of his fingers in the form that is known in the language of Chinon as the hen’s arse, and struck the nails of one against the other four times. Then he opened them and struck the one with the flat of the other, making a sharp noise.” Panurge in response “lifted his right hand in the air, and placed his thumb inside his right nostril, holding his four fingers stretched out and arranged in their natural order, parallel to the tip of his nose, shutting his left eye entirely and winking with the right, at the same time deeply depressing his eyebrows and lids.” After several more rounds the reader must reckon that Panurge will win; for if the latter has not read his Bede and Plotinus he at least knows how to wreak havoc on the timid. He slaps, claps, and pounds on his chest; repeatedly thrusts a finger in and out of the circle formed by the fingers of his opposite hand; manually penetrates his ear, mouth, and anus, making all kinds of sucking and
popping sounds in the process; shakes and brandishes his “thrice mighty codpiece”—until the scholar becomes so alarmed that he soils himself, audibly. He thanks his hosts for their contributions to learning and goes his merry way. Meanwhile the spectators “understood nothing of these signs,” and neither has the reader. That the name of Thaumaste is derived from the Greek noun *thaumastos*, or “wonder,” and the ancient Hebrew *Tau*, or “sign,” is Rabelais’s final touch of irony. For only a pedant finds esoteric wisdom in a sexual pantomime, or ciphers in a body.

But let us remove these grunting, gesticulating, overexcited men to the auditorium of some twentieth-century college or clinic. Let us assume that their audience consists of linguists, anthropologists, psychiatrists, and cyberneticians—a professional audience that would gladly forego the humanist’s laughter for the objective appraisal of human events. Then the picture suddenly changes from the tale of an idiot, signifying nothing, to one of progression in a steadily ascending series. Thumb-in-nostril or nail-against-palm need not be found in any dictionary of gesture. They need only be found in this immanent context wherein one party moves, the other responds, and the first cannot help but respond to the response. Two human figures and two streams of behavior are creating hereabout them a communications matrix that permeates them both. Finger and face movements in controlled variation produce in their recipient first trembling, now paleness, then sweating, then a brutal rush of flatus. There is movement toward victory for the one and a drubbing for the other; there is pattern and meaning in their kinetic inscriptions.

The questions posed by the audience will reflect that assumption. The linguist might ask, “What are the structures of these streams of behavior, and do those structures bear any semblance to grammatical structures?” The anthropologist: “Are these forms of behavior merely personal styles, or representative of cultural differences between the English and the French?” The psychiatrist: “Does the behavior reveal mental health on the one hand or, on the other, mental imbalance?” And, finally, the cybernetician: “What regularities or processes of feedback help guide this behavior and bring it to completion?” Their questions would of course go without answer if they did not have a record of the behavior itself. So they purchase a 16 mm sound movie camera, forever preserving the behavioral stream, as well as a projector, specially modified, which allows them to scrutinize that stream with unusual exactitude.

1. Ray Birdwhistell, Theorist and Filmmaker
If we replace the Rabelaisian freak show with, say, a doctor and a patient, or a family at the zoo, or a social gathering at a middle-class London hotel, we no longer have fantasy but historical fact.
Interdisciplinary endeavor, new theories of interaction, the utilization of sound film and its attendant devices: these are the features of microanalysis of behavior as developed in the United States after the Second World War. Microanalysis denotes the mechanically aided, fine-grained inspection of recorded material, while behavior implies the social interaction of two or more persons in a typical setting.

Theoretical interest in the study of interaction can be seen to develop in various fields throughout the first decades of the twentieth century—in the philosophical pragmatism of George Herbert Mead, in the psychoanalytic psychiatry of Harry Stack Sullivan, in the general impetus of cultural anthropology after Franz Boas. But to muse on such behavior and to analyze it formally, microscopically, are quite different things. The latter necessitates agreed-upon procedures that will order and regulate the production of knowledge; it requires, that is, a cultural technique, which Bernhard Siegert defines as “a more or less complex actor network that comprises technological objects as well as the operative chains . . . that configure or constitute them.” Methods of analysis are useless unless one has records to repeatedly analyze; the production of records is equally useless if one does not know just how to use them. The cultural technique is what binds them together, thus changing the shape of each, until method is geared toward a certain form of record and the record is optimized for the method preferred.

That is why the microanalysis of behavior did not really crystallize until the arrival of Ray Birdwhistell (1918–1994) on the American scene in 1952, the year he published the Introduction to Kinesics: An Annotation System for Analysis of Body Motion and Gesture. In him were united the most fashionable theories of social behavior, the most advanced means of analyzing behavior, the utilization of cinema to record this behavior, and the institutional sponsorship that made such work possible. Trained in anthropology at the University of Chicago, he received his Ph.D. there in 1951. Little of his work, however, seems to have been explicitly directed at professional anthropologists. Papers were typically given at venues such as the American Psychological Association, the American Society of Clinical Hypnosis, the International Symposium on Communication Theory and Research, or the American Association for the Advancement of Science; they were published in journals of psychiatry or linguistics or in edited volumes such as Explorations in Communication (1960), Communication: Concepts and Perspectives (1967), Human Communication: Theoretical Explorations (1974), and so on. The titles alone give some sense of the circles in which he moved over the course of three decades of research on behavior.

Kinesics, the field Birdwhistell named and developed, was intended by him as the rigorous study of “body motion communication.” The
choice of words is important and reflects a certain difficulty in delimiting his inquiry. “Body language” would narrow the field prematurely by assuming an easy homology between body motion and speech. “Gesture” he felt to have only folk-psychological validity, applicable to just the smallest portion of communicative units. And “nonverbal communication,” he joked, was about as coherent as “noncardiac physiology,” a phrase that had only to be uttered for one to hear the ring of sophistry. “Body motion communication,” on the other hand, made clear that the subject of inquiry was in fact the body that moves, and that its movement was of interest insofar as it was patterned for the purpose, conscious or not, of communication with others.

The word communication has its own historicity, and over the course of the twentieth century had grown catholic indeed. No longer did it name a mentalistic process in which the information from one mind was delivered to another, as from teacher to student or priest to parishioner. Communication was simply a condition of existence in which all living organisms were always enmeshed. To those who were engaged in the communication sciences, life could live only in dynamic exchange with the several components of its circumambient surround; the human being was not appreciably any different; and as soon as life was sentient, that is to say irritable, it was embedded in networks or contexts of communication. “The unit of analysis is not the person,” said Birdwhistell. “What we call a person is a moment in this order of theorizing.”

Theories were worth little, however, if their creators were unable to describe in concrete detail at least some of the ways in which an organism participates in an interorganismic process. To this end Birdwhistell devised his own system of descriptive kinesics, explicitly modeled on that of linguistics. And the abstraction of behavior “into manageable morphological classes” would, he hoped, soon enable the study of “social performance” that was his true aim. The unit he called “kine,” then, was any positional displacement of any part of the human figure. Kines became “kinemes” when they had contrastive value within a group of speakers (and movers). Thus the lifting of an eyebrow would eventually become a stare, with the shock or the fear that its staring implied, while its lowering movement might presently yield a squint. Such kinemes emerged from the undifferentiated spectrum of kines just as phonemes emerged from the prelinguistic spectrum of sound—kine and kineme then being the objects of different forms of inquiry whose main differentia was the presence of meaning. Other neologisms dutifully followed these in train. “Kinemorphs” resembled words and their stem forms, combining several kinemes in simultaneous presentation. A “kinemorphic construction” was roughly like a sentence, with kinemes and
kinemorphs succeeding each other in time. To these were added kinesic markers of stress, markers of tense, parakinesic modifiers, and so on and so forth, until an entire quasilinguistic structure was steadily built up. Learning these distinctions is not terribly important, though they do give a sense of how the analyst handled the kinesic material that came to him on celluloid.

Three crucial years mark the turning points in Birdwhistell’s intellectual, professional, and technical trajectory. In 1952 he was a junior anthropologist under the temporary employ of the U.S. Foreign Service Institute. There, in the spare hours between the training of diplomats, he finished the prolegomenon to his new field of study. In 1956 he gained access to a series of films produced by ethnographer-epistemologist Gregory Bateson. The larger project on which the two of them worked, at Stanford and elsewhere, would be the first sustained attempt to correlate speech and kinesics in a psychotherapy context. Finally in 1959 he was appointed senior research scientist in the Temple Research Division at the Eastern Pennsylvania Psychiatric Institute, with seemingly infinite film stock and time at his disposal. Only at this point can we speak of microanalysis as an integrated process, or one that knew itself well enough to produce its own objects.

Of what precisely did that process consist? First a filmic record was made or obtained. It had to be a record of some typical persons communicating typically. Nor was novelty a value on the other side of the camera, whose framing was regulated to remove any trace of the filmmaker’s personality. To highlight this person over that one, or this limb over that one, was to introduce a prejudice that would wreck objectivity. Hence proper observation of dyadic interaction was an all-inclusive view of both members of the dyad. The same went for three, four, five persons or more. If such a view proved impossible then multiple cameras might be run simultaneously. The ideal film was a continuous one-to-one record of the original event in which no detail, however trivial, was denied its own proper segment of screen; for that which had once been consigned to triviality might turn out to be key to the entire transaction. And what had been so preserved across the grain of the filmstrip required a mechanism that could audit its hideaways. The analytic projector (and its technical variants) allowed infinite repetition at a variety of speeds, thus doing for behavior what the microscope had done for cell life. And as the behavioral stream broke apart into stuttering intervals, its multiform units were marked down by the analyst, first in a preliminary fashion and later exhaustively. For the sake of convenience he or she went one by one through the physical regions—now the legs, now the arms—until the whole human figure had been carved up and canvassed. The attempt was then made to see whether those regions
were functioning independently like notes or in conjunction like chords. One would also have to correlate the data of kinesics with the various data of the vocalic stream. Four years might be lavished on the analysis of a thirty-minute record or one hundred hours on one single second.\(^\text{15}\)

“In summary,” said Birdwhistell, “the movie camera, when used together with the slow-motion analyzer, makes possible observation and analysis of human social behavior which has hitherto been hidden from comparative analysis.”\(^\text{16}\) But the technology of cinema is not incidental. From frame to projector it is an independent structure with values of its own. Hence we must grant it a role equivalent to the conceptual schemata it seems only to serve, taking as our object of study not only the human protagonist with scientific ambitions but the chain of operations linking human and implement as well. One could describe them as working in tandem; one could also describe them as egging each other on; and as we chronicle these exploits of microanalysis we do well to keep in mind its most fundamental temptation.

I call this temptation “hermeneutic hypertrophy,” or the swelling of interpretation beyond its normal bounds. Microanalysis, as a hermeneutic procedure, holds to the belief that movements of the body have some significance within an interpersonal field. The form of hypertrophy, on the other hand, is a distinct product of the cinema: it comes with the user’s ability to view a given object at various speeds, to pause and to loop and to otherwise manipulate. One lifts out the data by slowing down the filmstrip and repeating short increments, yet the process of lifting tends to merge imperceptibly with the creation of new forms by those very same means. Anyone who has edited film, and in the process of editing watched the same length of footage numberless times, is likely to have noticed new details emerge that were not apprehended on a casual viewing—and new relations among the details progressively ascertained. Things that happen simultaneously now seem to be connected; when they transpire between people they are fraught with significance. The individual film frame promotes the illusion that all within its purview is part of one whole, and with each repetition of a pre-recorded segment what was seen as contingent, or not seen at all, may now find its place in more meaningful arrangements. Figure A moves a shoulder just as Figure B rises from a chair. How are they related? What do they mean? Such questions are indices of a particular hermeneutic. When asked of all movements they have undergone hypertrophy.\(^\text{17}\)

II. The U.S. Foreign Service Institute and the Invention of Kinesics
There is a story, perhaps apocryphal, in which Gregory Bateson and Margaret Mead are showing a film from their Balinese fieldwork.
Presently a young man speaks up from the audience: “But did you see what the mother did with the baby after she took him out of the bath?” Birdwhistell became famous for such flashes of insight, which he doled out at conferences or on local TV talk shows. Assuming that this incident took place in 1943 at the University of Chicago, where he was then enrolled as a doctoral student in the Department of Anthropology, he would have been about twenty-five years old.

This Balinese footage was collected from 1936 to 1938 and proved a watershed moment in visual anthropology. More important to Birdwhistell, however, was *Balinese Character: A Photographic Analysis*, which Bateson and Mead had just published in 1942. The volume was illustrated with 759 images from an archive of over 25,000 negatives. Each was laid out in sequential or comparative fashion, and each was accompanied by field notes and commentary. Plate 16, for instance, showed a dancing master manipulating his student’s passive body, teaching him not only the dance but also the form of puppet-complex that, said the authors, marked Bali as a whole. “In general, we found that any attempt to select for special details was fatal, and that the best results were obtained when the photography was most rapid and almost random... without wondering which moves might be most significant.” It was a crucial point of method that Birdwhistell would adhere to when he began making records of human behavior.

David Efron was also experimenting with camera analysis of behavior during this same period. He, like Mead a decade prior, had studied anthropology with Boas at Columbia University, and he too tried to film only those interactional sequences that would have happened anyway had he not been on the scene: on streets, in restaurants, in places of worship, or wherever he could find two or more people engaging in dialogue. The films could then be shown to random observers for their various assessments (“The hand of this fellow jumps around like a squirrel!”), but Efron’s major innovation was to project these same films onto coordinate paper, one frame at a time, so as to trace out paths of movement as they gradually emerged. Two immigrant communities of lower Manhattan, the Italian and the Jewish, were the juxtaposed objects of his book *Gesture and Environment: A Tentative Study* (1941). Where the gestures of Italians were found to be rounded and ample, and those of Jewish subjects angular and cramped, their assimilated descendants did not move in either style; for what had been so assimilated were not only values but also, ineluctably, the forms of behavior of the American middle class. And this comparative emphasis, based as it was on a premise of cultural relativism, was another strong influence on the development of kinesics.

Already in 1927, Edward Sapir had suggested that gesture was
patterned and so would comprise “an elaborate and secret code that is written nowhere, known by none, and understood by all.” For Birdwhistell, the task was to make good on that “brilliant intuition” by one of his avowed intellectual heroes. He had seen what skilled workers could accomplish with cameras, had seen the way in which memory was extended by the permanence of the filmstrip and subjectivity defeated by the objectivity of the lens. The dream of behavioral science, founded on sure principles, preoccupied his efforts through much of the 1940s. His first opportunity to develop it systematically and with the required expertise came in 1952, when he accepted a six-month appointment at the U.S. Foreign Service Institute (FSI) as a visiting lecturer in psychology.

Birdwhistell has described himself as a child of the Great Depression, and for him this entailed that every able citizen had some responsibility to be “socially useful” in one way or another. Either one could promote social betterment directly, through advocacy, or do so indirectly through the creation of knowledge regarding society and the place of “man” within it. At FSI he seems to have done a bit of both. Though his immediate task was to train traveling diplomats in the rudiments of cross-cultural communication, he used his spare hours to complete the Introduction to Kinesics, which the institute first published in crude photo-offset. Birdwhistell rarely spoke about this phase of his career, either in writings of the period or in later retrospect. Yet the specific concatenation of intellectual and institutional factors was not without import for the development of his microanalytic project.

The presence of anthropologists at a government agency housed within the U.S. Department of State requires some explanation. Indeed, to have come of age as an anthropologist during this period was to enter the profession at the height of its entanglement with American government. Throughout World War II, federal money had flowed freely into anthropological research so long as it devoted itself to the critical study of enemy regions. Understanding the motives of a Japanese, a German, a Russian—to make sense of the cultural patterns in which each was reared—was felt to be a first precondition for probabilistic conjecture and psychological warfare. Emphasis then shifted after the war from the prediction of enemy movements to the peaceful administration of the occupied territories. The shift was most marked in the Point IV or Technical Assistance program initiated by President Harry S. Truman in 1949. The ostensible goal of Point IV—to make modern science and industrial resources “available for the improvement and growth of underdeveloped areas”—was Cold War doublespeak for a form of aid meant to check the spread of communism through the establishment of debts. Congress first allotted $24.2 million for programs of this type in 1950 and $140
million the following year. The FSI had been employing anthropologists since 1947 to help prepare its diplomats for overseas service, and with the arrival in its offices of Edward T. Hall four years later a similar training was doled out to the Point IV employees.26

Hall’s teaching of anthropology was considered novel for the time. His “microcultural” approach was the anthropological corollary to the microanalytic procedure that would soon meet it halfway. If culture was traditionally conceived as a body of symbols, stories, myths, and beliefs, microculture dealt with the seemingly trivial details of (for example) child rearing, play, shopping, and courtship—all now said to be as patterned and stereotyped as a regional dialect. Culture was actualized in the minute-by-minute, second-by-second unfolding of social interaction; it was as manifest in the spacing of persons while they chatted on the sidewalk as it was in cosmologies and in networks of kinship. Truly it was nothing more than emergent activity in a particular context, a set of patterned behaviors the majority of which were totally unknown to those who daily enacted them.

The new theoretical emphasis was easily vulgarized, which Hall had the foresight to accomplish himself. That Arabs like to breathe on one another as a sign of friendly intimacy, that a German will think you are inside his home if you stand on his doorstep—these were the kinds of insights that filled out the pages of his popular books.27 At FSI it had the pragmatic upshot of sparing its diplomats the wearying effort of acquiring deep and thorough knowledge of the cultures they would soon have to administrate. And though this does not seem to have bothered Hall much—his autobiography reveals a rather sanguine cast of mind—he was horrified to learn, when it was finally revealed to him, that his various early studies of microcultural behavior had been partially funded by the Central Intelligence Agency and his findings incorporated as doxa in its fearsome KUBARK manual of 1963: the blueprint for all official manuals of enhanced interrogation, also known as torture, that are still in use today.28

Dismissal from the State Department in 1955 was thus by no means the end of this anthropologist’s service.

We have no evidence that Birdwhistell’s research came to a similar end. Most likely it was too technical and turgid to be of much use to someone not personally trained by Birdwhistell himself. But one never knows; the Department of State still saw fit to circulate his report.29 Mead and Rhoda Métraux duly cite it in The Study of Culture at a Distance (1953) as among the relevant literature of modern ethnography—of particular value, that is, when culture could not be studied directly in its ethnographic surround but only via printed, acoustic, and cinematic records. The Office of Naval Research had funded such distance study for years, and without any pretense of scholarly disinterest.
Oddly, the *Introduction to Kinesics* makes no real mention of how its results were obtained; it simply presents, after brief theoretical introduction, three examples of kinesic and linguistic transcription of sequences taken from the life. The first occurred on a bus ride from Arlington, Virginia (where FSI was housed) to Washington, DC, on April 14, 1952, and consisted of a four-year-old boy informing his mother that he has to use the bathroom. The second was observed on April 17 and described the late arrival of a guest to a house party. The third was observed on April 20 when a teenage boy, smoking through a drugstore window, interacted with two chums walking by on the street. In every case the material was analyzed by Birdwhistell the following day with the aid of George L. Trager and Henry Lee Smith Jr., two innovative linguists then housed at FSI. Of course, one can analyze later only what has first been recorded at a previous time, and it seems difficult otherwise, even with the aid of sophisticated shorthand, to end up with descriptions as precise as the following: “The boy grasped her upper arm tightly, continued to frown. When no immediate response was forthcoming, he turned and thrust both knees into the lateral aspect of her left thigh.”

The analysis of linguistic stress and intonation further implies use of, if not sound film, at least some form of sound recording. But how analysis proceeded, what machines were used, what kind of facilities the FSI provided for film work, remain unknown.

The general influence of linguistics, anthropology, and burgeoning communications theory is distilled in the following four points of Birdwhistell’s manual:

A. No motion is a thing in itself. It is always a part of a pattern. There is no “meaningless” motor activity.

B. Until otherwise demonstrated, body motion patterns should be regarded as socially learned.

C. No unit of motion carries meaning per se. Meaning arises in context.

D. An informant’s statement regarding his own motion should be regarded as data rather than explanation.

That is, anything of merely physiological origin was consigned to the realm of “prekinesic” study. Yet any perceptible action that a person performed was quite capable of being patterned for communicative functioning. There were no kinesic universals, no such thing as “the” smile or “the” arm cross, that held good for all cultures. There were also no contingencies, no such thing as a “mere” smile or “mere”
arm cross, for all signals had their value in the interaction process. Movement just was relevant until proven not. And no subject had the right to tell the investigator any different.

III. The Psychiatric Setting and *The Natural History of an Interview*

The entire hermeneutic of microanalysis was thus already in place by 1952. Its procedure would further develop over the course of the decade, along with the form of hypertrophy latent in its premises. Psychotherapy, both in theory and practice, considerably furthered that coeval development—brought it, in fact, to a point of maturity. Though *The Introduction to Kinesics* does not highlight its therapeutic relevance, it is perhaps unsurprising that its art of the detail should have joined hands with this, an art of the symptom.

Not only did the FSI bring anthropologists into contact with professional linguists; it also attracted those Washington psychiatrists with whom Hall was on such close terms—people he brought around to the institute “whenever the linguists were lecturing.” He and his colleagues were, he felt, pioneering methods of real value to therapy. Too long had psychiatry dwelt upon the nature of unconscious process, a process by nature invisible and working out its “twists” in dim recesses of the mind. Communication process was, to the contrary, public and perceptible, and so could be indexed with the proper techniques. Hall’s exhortations were not lost on at least one of his visitors, Frieda Fromm-Reichmann, then an active clinician at Chestnut Lodge Sanitarium nearby.

When Fromm-Reichmann arrived at the Center for Advanced Study in the Behavioral Sciences at Stanford University in 1955 for its annual seminar, she initiated what would become the first sustained experiment in microanalysis as a tool of psychotherapy. Her ostensible goal was to understand “intuition,” which had served her so well as a practicing therapist. The efficacy of her interventions, the creation of rapport, how she knew what she knew about the patients under her care: these and other mysteries, she hoped, would be brought into the light of empirical clarity. For unless their criteria were plainly laid out, they could neither be consciously improved in oneself nor consciously taught to one’s peers in the clinic. To that end she requested Norman McQuown, another fellow at Stanford, to employ his expertise in microlinguistics on the fine-grained analysis of tape-recorded therapy.

But Fromm-Reichmann was eager to push her ongoing inquiry beyond the realm of speech sounds—she was losing her hearing—and to that end brought Birdwhistell to Stanford to chat about kinesics. His first visit to the seminar was in February 1956; by June he had become a full-fledged participant. The *Introduction to Kinesics* had gained some notoriety both academic and popular since the
pamphlet’s first appearance under federal auspices. “Better look before you move,” ran a headline in Collier’s. “A young professor feels there often are hidden meanings in body actions. Now he’s cataloguing them.” Newspapers quoted him on subjects ranging from literacy to fatherhood to the symbolism of sports cars. “Dr. Birdsong” soon appeared in one of Al Capp’s Li’l Abner cartoons. Walt Disney supposedly offered him employment, thinking kinesics might aid in the improvement of animation.

Though he declined Disney’s offer, Birdwhistell was not entirely averse to showmanship and spectacle. Many a dull conference in those years was brightened by the scholar when he saw fit to play the mime, “demonstrating in terms of facial displays a Midwestern American teenage female’s mode of greeting as distinct from that of a teenager from the deep south”; conferences were literally brightened, too, by the throw of his projector and the microcultural phenomena it transposed upon a screen. One day in October 1955 that same man-machine aggregate discharged its function at the Second Macy Conference on Group Processes. There Birdwhistell presented on the play behavior of children, ages fourteen months to eleven years, whom he filmed unawares at a Louisville playground “in order to find out what they really do.” There was, he told his audience, at least tentative evidence of learned gender characteristics and of future mental handicap in the children observed. Fromm-Reichmann, a regular participant in the multiyear conference, does not appear to have been in attendance that day; yet her path may have already crossed Birdwhistell’s by dint of the FSI, which in any case is how McQuown came to know him.

With the addition of Birdwhistell came the addition of Bateson, based upon the former’s strong recommendation. Both had originally trained as anthropologists and both expressed interest in what Bateson described, in his early book Naven (1936), as “the proper recording and analysis of human posture, gesture, intonation, laughter, etc.” But this complicated orthographic task would ultimately devolve upon Birdwhistell alone. The actual details of kinesic transcription seem largely to have bored his older friend and colleague. Still they had maintained their professional relationship since first meeting in Chicago more than ten years prior, and would continue to maintain it for more than ten years hence. Their intellectual rapport as expressed in conference conduct was itself the subject of a microanalysis carried out by Paul Byers.

With a partial changeover of fellows in 1956, the Stanford group consisted of Fromm-Reichmann and Henry Brosin, both clinical psychiatrists; McQuown and Charles Hockett, leading figures in the field of linguistics; and Birdwhistell, the anthropological kinesicist, with Bateson coming and going between his work with the mentally
ailing at the Veterans Administration Hospital in Palo Alto, California. They now called their project *The Natural History of an Interview*, a phrase to which Bateson gave precise meaning in the long introduction to their unpublished manuscript.

The method of “natural history” entailed direct observation of spontaneous phenomena, or at least observation of a record or data set gathered with “a minimum of theory” consciously in mind; and the object of a natural history could be a single “interview,” i.e. therapy session, which was a specimen of the interview species. This species, furthermore, was housed within the genus of human interaction. Its analysis thus would shed light on the structure and periodicity of all interaction. But what is interaction? One had first to begin with the nature of the individual subject. Sigmund Freud had maintained that anything that occurred among persons was meaningful because it could never truly be accidental; because, whether conscious or otherwise, it was all deeply determined by far-flung and proximate causes in the history of each. And if, reasoned Bateson, one could never “just dream,” likewise a person could not just behave. To this primary factor of psychic determinism was added a second premise, closely related, which derived from Gestaltism. Since what was so determined must emerge in behavior, it gave rise to a set of perceptible signals in an interpersonal encounter—signals to the vis-à-vis that helped her or him to define the situation and adjust her or his own behavior accordingly. Where the Gestaltists had argued “that experience is punctuated,” for Bateson this meant that “nothing never happens” among copresent persons. And if nothing never happens then even the supposed absence of signals, as with silence or rigidity, was meaningful and relevant to the one who perceived it. Finally one must reckon with the influence of cybernetics, which rendered those entities called persons into mere nodal points within a wider matrix of continuous communications. As relays for signals, such entities could have only reached their present development by the giving and receiving of millions of signals. Assuming, further, that their signal transmission was not random but patterned, one could also deduce both their past and future functioning simply by regarding a slice of the patterned present. That is to say, in five minutes of typical behavior captured on film there would no doubt be patterns discernible in the fragment that had already been operative for years, if not lifetimes.

Not least among the reasons for soliciting Bateson’s interest was the footage he had amassed in Palo Alto of his subjects since 1952. Both individuals and families peopled his archive, and this he made available to the seminar at Stanford. A woman patient named “Doris” was thought to be especially interesting. She had heard Bateson lecture, had seen his film *Communication and Interaction in Three*
Families (1951), and her husband “Larry” was actively interested in the new communications theory. She had been experiencing chronic anxiety regarding their marriage as well as her ability to care for their four-and-a-half-year-old son, “Billy.” The seminar’s purpose was not to render diagnosis; however, after meeting the woman in private Brosin and Fromm-Reichmann jotted down in their notebook, “Incipient psychotic?”48 They were in close contact through August 1956 with her regular therapist, Robert E. Kantor, who had first alerted his patient to Bateson’s ongoing researches.49

Of the various films in which Doris appeared, only one, GB-SU-005 (ca. 1956), was singled out for true microanalytic study. Its subjects number Bateson, Doris, and the child, though the latter is only intermittently visible due to his almost constant activity.50 This black-and-white, synchronous sound document offers a nearly continuous or one-to-one record of an interaction sequence lasting roughly ten minutes. The gaps that do occur in the image every three-and-a-half minutes are due to the necessity of hand-loading new rolls of 16 mm film. Bateson, ever assiduous, explained the specific conditions under which the film was made:

Shortly after the therapist’s conversation with Doris, Larry telephoned me to express their interest in cooperating with my work. I then made an appointment to visit the household with Mr. David M. Myers, our cameraman, bringing camera, tape recorder, and lights. Myers and I arrived punctually at four o’clock and found the house empty. We withdrew and telephoned 15 minutes later verifying that Doris had returned. She told us to come right over, but when we arrived we found her quite flurried. She had just returned from a session with the therapist, had picked up Billy from the house of a neighbor, and was exhibiting the expectable responses of a housewife unprepared to receive her visitors—let alone cameras and lights. . . . The interview, conducted in the late afternoon, was repeatedly interrupted by the noise of commuter trains, at which Doris was markedly distressed, while trying to laugh off the indignity of this interruption.51

The sequence begins with a full-shot framing. Doris and Bateson are seated at opposite ends of a three-person sofa, with the child, Billy, on the floor at Doris’s feet. A microphone juts into the image at the lower-right corner. Both adults are smoking, and Doris holds a mug of her own homemade beer. She begins to recount early trouble in nursing the child:
But it was every time he cried I would feel guilty because I would think well he’s just going to cry and what else to do and [Larry] would be hovering and over a period of time it just got to be a miserable situation . . . and, well it was pretty bad . . . and I tried to nurse him and couldn’t and was quite tired and nervous and had an ass of a pediatrician who said, “You feed that child every four hours or else.”

At this point the boy springs up, holding a toy pistol he has been fondling since the camera roll began. He exits frame right but reenters almost immediately, crossing the living room and disappearing to the left. The camera, equipped with a telephoto lens, suddenly zooms in to isolate Doris in a medium close-up, making slight adjustments to follow the swift movement of her hands. “And [Larry] was saying he’s hungry and the pediatrician was saying he’s getting too much to eat and this made a real nice situation all the way around. I was ready to throw one of them out one window and one of them out the other.” Then the camera zooms out slightly as Billy reenters with some kind of pillow or cushion, which Doris, unsure of its purpose, places behind her. As the courier departs, the zoom is adjusted to reinclude Bateson, who sips some of the home brew, smiles, and puffs his cigarette. He has not yet been able to interrupt the onrushing stream of Doris’s speech. The camera pans to follow Billy as he manipulates a toy airplane, also brought to his mother for inspection, as is a house broom several minutes later. Most famously Bateson lights the woman’s cigarette, she tugs on her heel, and the camera zooms in for a close-up of her smoking. All of this camera work would be considered bad form by later standards of behavioral research.

I have described only a fraction of the happenings of this cinematic document, which might easily be mistaken for someone’s home movie and not—as one source later put it—a scientific object “so important to the world.” So important, in fact, that analysis of the film dragged on intermittently until 1971, at which point the Natural History manuscript was deposited on microfilm at the University of Chicago Library. Fromm-Reichmann was by then
long since deceased, while Hockett and Bateson, who both contributed chapters, had moved on to other projects in 1958 and 1960 respectively.

The first microfilm reel largely consisted of methodological primers—communication, linguistics, kinesics, psychiatry—and the third reel of more specific forms of commentary based on the data furnished by Doris. Sandwiched between them was a reel whose tightly coiled surface contained, oddly, only one chapter; but what a chapter this turned out to be! Its linguistic-kinesic microtranscription of the cinematic record could not but produce over four hundred pages of cryptic orthography, because every perceivable movement and utterance on the filmstrip was marked down at intervals of three frames of film. Such excess was justified by Birdwhistell’s statement, adapted from a popular song of the 1910s, “Every little motion has a meaning all its own.” And of the three interactants it was of course Doris whose motions and meanings were scrutinized most avidly.

Her torso, especially, was seen as an index of her basic non-involvement with the people about her. While it was not unusual for a Euro-American woman to hold her torso “as a block,” Doris evinced “somewhat less cervical pivoting than is expectable and there is an almost complete absence of sacro-ilial rotation.” The oft frenetic movement both in hands and feet gave way upon analysis to this central immobility, this wall against which the child Billy timidly knocks for entrance. His presentation of diverse objects to Doris at regular intervals, his “rhythmic recurrent return” to her vicinity, had the character of compulsion, following as a rule upon bouts of impassivity in which he seemed quite unaffected by his mother’s disparagement. Yet beneath their missed connections was a deeper involvement in the process of family, which process was operative even when ostensibly nothing was happening. Thus when Doris speaks at length of her difficulties in nursing, a marked movement of her shoulder occurs in conjunction with Billy’s first movement to exit the frame: a “startling coincidence,” wrote Birdwhistell, which “prompted the team to turn their attention to the relationship between Doris and her son.”

But, whether consciously or not, the kinesicist is here distorting the historical order of the hermeneutic process. For he and his team also had access to a case history of Doris, to transcripts of her therapy, to other films of her and her family, and to yet other films of yet other troubled families. Their work was informed, too, by particular theories of the psychogenesis of mental illness, most notably those developed by Fromm-Reichmann and Bateson themselves. It was Fromm-Reichmann who first gifted psychiatry with a phrase of great import, “the schizophrenogenic mother,” or a mother who if not schizophrenic herself was likely to produce that same ailment in the
nurslings she cared for. She did this by means of her confusing and discrepant maternal interactions until a “warp” was made. And what was suffered in childhood became, in maturity, the overall “pattern” of human relations. No sudden trauma first was repressed and then resurfaced violently; rather it was pattern constantly affirmed that seemed most to blame for the adult’s present misery. 57 In this regard Fromm-Reichmann’s teachings paid tribute to those of her colleague, Harry Sullivan, who had hinted in his lectures at much the same thing: namely, that a primordial anxiety was transmitted from “mothering one” to infant by subtle and often nonverbal means—perhaps even through the tip of the nipple that was proffered for nourishment with rote regularity. 58 When we recall that Doris was advised by her “ass of a pediatrician” to feed little Billy “every four hours or else,” a demand at which she clearly took umbrage, the family picture before us immediately darkens.

Together, Fromm-Reichmann and Sullivan introduced the interpersonal emphasis into American psychiatry and, in so doing, gave fashionable mother-blaming a theoretic legitimacy. 59 Their profound extrusion of unconscious process into the shared realm of social-transactional process was fulfilled by the rise of the new family therapy, of which Bateson became such an integral part. With him, however, a new language of “communication” helped sharpen the problem, giving clarity to what might otherwise remain vague. To transmit something to another by way of “empathy” (Sullivan’s term) implied a kind of movement so graded and gradual as to resist all description. A communication or message, by contrast, was inherently discrete, and what was thought of as empathy would on closer inspection turn out to be merely a handful of messages sent simultaneously or in close succession. For Bateson, as for other family therapists, any human organism was a congealment of messages given off or received throughout its career. If it suffered from any non-organic psychopathology this, too, was a product of communication networks in which that same organism found itself caught. The most fundamental network of all was the family; its members gave and received messages as was their wont; and in the intensity of their concourse they became a superorganism whose organs were persons and whose vessels and nerves were traversed by communications. Damage in one organ was then damage inflicted by one or another of the nearby organs. Schizophrenia was but a sign of some greater affliction pervading the whole of that system called family.

When Bateson arrived at Stanford from Palo Alto, he had already been engaged with the problem of family process for three or four years. His own research with Jay Haley, Don Jackson, and John Weakland must be regarded as a vital component in the further development of The Natural History of an Interview. In their coauthored
paper of 1956, “Toward a Theory of Schizophrenia,” they identified the cognitive-behavioral and interpersonal mechanism they believed most responsible for the formation of schizophrenia, a mechanism they called the “double bind.” A bind is an injunction that cannot be disobeyed without significant distress to the one so enjoined. A double bind consists of two such injunctions that are, on the one hand, logically at odds because contradicting one another at two different levels of logical type, and, on the other hand, affectively at odds because one wants at all costs to please that authority who now asks the impossible. There is here a binding agent or “binder” and a bound agent or “bindee,” which roles were most often cast as a mother and her child respectively. Hence the injunctions were all the more forceful, their contradiction more painful, their reception by the bindee more ineluctable. And since they were just as often nonverbal as verbal they became even harder for the subject to sort out.

A young man who had fairly well recovered from an acute schizophrenic episode was visited in the hospital by his mother. He was glad to see her and impulsively put his arm around her shoulders, whereupon she stiffened. He withdrew his arm and she asked, “Don’t you love me anymore?” He then blushed, and she said, “Dear, you must not be so easily embarrassed and afraid to show your feelings.”

The authors then report that this patient soon assaulted his aide. Such an incident, they inferred, was only part of a broader pattern. Systematic distortion beginning in his childhood would account for the illness one saw in the adult.

To Bateson, at least, this conclusion came easily. He had already adjudged an entire culture, the Balinese, as similarly warped in their behavior and for similar reasons. Similar, too, were the means he employed to best render diagnosis. Movie film had then been among his most trusted research instruments, and he turned to it again in his effort to study the many troubled families of the California suburbs.

And though his Palo Alto colleagues admonished him in private for what they perceived as his methodological naïveté—for thinking that double binds might simply be photographed as they transpired—neither he nor Birdwhistell were yet deterred from this purpose in the course of their work together. Actually Birdwhistell went quite a bit further with Bateson’s footage than Bateson himself ever seems to have done. In a certain sense it became Birdwhistell’s property by dint of the labor he expended on its study. Nor was this labor limited to GB-SU-005, nor even to ancillary reels of Doris and her family. As his paper “The Age of a Baby” (1959) makes clear, he had been hard at work on an unrelated sequence from the broader
image archive—one that seemed to him particularly exciting from the standpoint of kinesics. The resulting analysis brought the double bind premise to a peak of reification. Hermeneutic hypertrophy is here at its most self-assured and naked. Most likely, its author’s soberer colleagues would not have put their names to it.63

A woman said to be suffering from schizophrenic detachment removes her infant’s diaper before placing the girl in the bathtub. Thus the banality of the content on the filmstrip is qualified by extrafilmic knowledge of etiology and symptom profile. The oldest child, in fact, “has shown serious disturbance”; the second “seems, at first glance, to be hopefully healthy.”64 What of this third and youngest, still a soft ball of clay in her mother’s shaping hands? Was she, too, being prepared for a life of mental unbalance? Careful analysis of a single occurrence would suffice to infer the probable course of development, because it was inconceivable that a task as quotidian as this changing of diaper could be performed in any fashion except that of habit. A mother does this for her child “several times a day for 18 to 30 months,” and each time is occasion for success or for misfire in the interpersonal molding of all human life.65

As the woman on the filmstrip removes the old diaper, she uses her wrist to push the girl’s arm up and away from the girl’s own body. Then with the thumb of this same hand she exerts pressure on the abdomen, a signal for the girl to lower her arm from the curtain she has momentarily grabbed hold of. After more fumbling the mother does both these things at once, pushing the arm upward while exerting secondary pressure to make it come down. Though the double bind was often described as consisting of one signal, verbal in kind, and another, which was nonverbal, in this case both signals were sent in the silence of intimacy. Different too was the scale at which the binding action was now said to occur, for the strip of behavior Birdwhistell abstracted was just forty-two film frames or 1.75 seconds. At standard speed one saw a woman removing a diaper while the baby who wears it wiggles its arm about. And yet when run in slow motion, or inspected frame by frame, one was “horror-struck by the inevitable confusion” the girl must accordingly feel pervading her body—horror-struck not only by the occurrence of contradiction but, extrapolating from the one, imagining also all the kindred tribulations the child must endure if left to the mercy of this aberrant patterning.66

Birdwhistell prided himself on such excavations of the ordinary; he conceived of the temporal spectrum as fraught with intrigue and mystery and occasional danger.67 But one should note that the microworld initially surprised him, caught him off guard as a theorist of behavior. If in 1955 he simply took interest in “animal and human play,” by 1956 he felt “growing astonishment . . . about how
much can happen to two, three, or four human beings in a tenth of a second. What occurred in the interim was in all likelihood a methodological breakthrough, prompted by new machinery and the leisure to use it.

IV. Formal Procedure at the Eastern Pennsylvania Psychiatric Institute

Certainly Birdwhistell had access by 1957 to a large-screen Moviola, a Bell and Howell time-motion analyzer (a specialized variable-speed projector), a remote-controlled projector, a reel-to-reel tape recorder, and a sophisticated soundboard. Together they formed the skeleton of his laboratory at the University of Buffalo, where he dutifully worked with his team on *The Natural History of an Interview* from 1956 to 1959—just as McQuown and Brosin continued to do, respectively, at the University of Chicago and the Western Psychiatric Institute and Clinic. The prospect of eventually publishing their research was then still a prospect and not hope against hope.

In 1959 came another major shift with Birdwhistell’s appointment to the Temple Research Division of Eastern Pennsylvania Psychiatric Institute (EPPI)—major because it offered him stable employment and solid facilities for research that was fast growing costly. Thus for ten years he would share both funding and a brain with Albert E. Schefflen, a neurologist and psychiatrist who had lately turned to communications research. Together they refined the natural-history method first developed at Stanford, with Birdwhistell handling microkinesic transcription and Schefflen fielding longer stretches of behavior. They were given the run of a film production unit housed within EPPI, with a custom-built studio, every device they could ask for, and a dedicated technician named Jacques D. Van Vlack. All of these men have left written accounts of their scientific method: the precepts governing their shooting, the machines they used to manipulate film data, and the various techniques they employed in its fine-grained analysis. This is the point at which microanalysis became a fully integrated phenomenon, with special procedures regulating the film object from its initial production to its classificatory status and, finally, to its use in a body of comparative research. That is, a formalized chain of technical operations connected the profilmic event to the camera that recorded it, the record to the archive, the archive to the viewing machine, the machine to the scientist’s eye, and the eye to the hand that inscribed the resulting data on pieces of paper.

Bateson had produced his psychiatric films not knowing they would be used for microanalytic purposes. They were now found to be wanting on a number of levels, their evidentiary value fatally compromised by their faulty technique. The close-ups and reframings of the Doris piece, for example, often elided the continuous and simultaneous nature of the human interaction it was intended to
capture—which is really to say that Myers, the cameraperson, had had far too much agency in following his interests as an observer of the scene. But if communication was truly a continuous multichannel process, effected in and between copresent persons, one had to be able to see all the relevant units at any given time; otherwise one could not know if and how the behavior observable in the one was related to the signals given off by any other. The camera, in short, had always to keep its distance from the interactions it captured, and should reframings or close-ups still be desired an additional camera could be run simultaneously. Unlike early cinema, this was not a lingering inheritance from theatrical tableaux. Rather the team at EPPI implicitly accepted a rule then ascendant in ethnographic filmmaking: “whole bodies, whole interactions, and whole people in whole acts.”\(^7\) And with a 1,200-foot magazine of 16 mm film, scenes of thirty minutes’ duration could be recorded without interruption.

EPPI was established in 1949 by the Commonwealth of Pennsylvania as a state institution for treatment, research, and training in the field of mental illness. When Birdwhistell arrived there, in 1959, he had been immersed in this discourse for more than three years. His earlier complaint that anthropologists and psychologists “speak but seldom communicate” was now rendered null by his deep sympathy with Scheflen.\(^7\) Also, for one interested in kinesics, psychotherapy sessions were both astoundingly rich in interpersonal data and easy to film from a communications standpoint. They occurred with regularity in one given space—the psychiatrist’s office—and, at thirty to fifty minutes each, were strictly delimited in time. Participants remained seated and the camera, with few exceptions, was not obliged to move in order to keep them in frame.

At EPPI and similar clinics, therapy rooms were specially built with adequate soundproofing and naturalistic lighting to enable ease of filming. Chairs and couches were arranged in a semicircle facing the camera for maximum visibility. Unobtrusive microphones were placed on a table amid the participants, hung from the ceiling, or even worn around the neck. Van Vlack reported shooting at first through a one-way mirror, but ultimately abandoned this procedure due to the extra anxiety it induced in his subjects—not to mention the negative impact of a semireflective surface on photographic exposure. He then boldly moved the camera into the session room itself, equipping its body with a wide-angle lens, and placed it on a tabletop at least twenty-five feet from the recorded participants. Clapboards, typically employed for the syncing of sound and image, were also avoided; an internal slate system was designed to replace them. The apparatus would thus be visible to all, but silent, and to further reduce the feeling of surveillance the technician made his exit once recording had begun. Hundreds of therapies were filmed
in this fashion and provided a rich archive for microanalytic studies, of which Scheflen’s *Communicational Structure*—a book-length analysis of one thirty-minute session—was the major achievement.

If the EPPI regimen was followed, what came back from the lab was a research film document conceived along the lines of a zoological specimen. This film was then reprinted with a numerical overlay so that all of its frames were accounted for in sequence. Duration of a gesture or movement could now be marked by the analyst with fanatical exactitude, and stretches of film were identified by their frame numbers in the published writings based on them. Additionally, because sound was also recorded separately on higher-quality magnetic tape, this numerical “B roll” allowed for easier collation of the linguistic and kinesic records. Today one can tell if a film was prepared for microanalytic study based on the presence or absence of these numbers. Located as they were at the top of the frame, they could also be hidden from nonspecialist audiences by simple adjustment of the film projector’s frame line.

The first phase of analysis consisted of “soaking,” in which the film document was simply watched over and over again at standard projection speed, maybe a dozen, maybe fifty times. Soaking was the prelude to any microanalytic work, as it attuned the observer to the overall structure and patterning of a social transaction. Then, as the continuous stream began to subdivide into relatively autonomous chunks of behavior (i.e., “scenes”), portions of the data were selected for special scrutiny later on. The Doris film was, for heuristic purposes, spoken of as if it were a succession of scenes: the toy gun scene, the window scene, the pillow scene, first and second airplane scenes, first and second anger scenes, the box, bucket, cigarette scenes, and so on.

In the properly microanalytic phase that followed, the film was annotated by Birdwhistell, Scheflen, or one of their colleagues in a preliminary fashion. Standard practice involved long sheets of graph or electroencephalogram paper hung on the wall, though Scheflen himself preferred a ruled metal board on which he placed magnets of varying color and shape, each of these color and shape combinations marking off different units of the kinesic vocabulary. Such graphing enabled the overall patterning of participant movements to be seen “at a glance. . . . marked off in exact intervals of time.” Vertical lines designated the time segments, which could vary based on the investigator’s particular area of interest: “maybe eighth-seconds for a microanalysis and one- or three-second intervals for a more gross analysis.” On the horizontal plane, the various rows divvied the body up into discontinuous regions as per Birdwhistell’s original 1952 system: the head, the face, the trunk, the arms from shoulder to wrist, the hands and fingers, the legs from hip to ankle, the feet, and
finally the neck. Data were thus gathered one zone at a time, limb by limb and kine by kine; and if potential kinemorphic clusters were detected, the analyst circled them for later cross-context comparison. A “research document film annotated” was the end result of this initial review, while exhaustion of the data stream, or the asymptote of exhaustion, bestowed upon the object its final designation as a “research document film analyzed.”

Annotation could not well proceed without a proper means of playback. Clear images, rich in detail, easily decelerated and replayed, were quite indispensable if one was to study phenomena as fleeting as fluttering eyelids or lateral lumbar pivots. Standard film projectors could not serve this purpose, because the relevant data were simply too brief to emerge at the frame rates such projectors afforded. And though flatbed editors, such as the Steenbeck, might be used to this end, the image they provided was small and poorly focused and thus likely to cause eyestrain after much repeated use. Hence the adoption of an analyst or variable-speed projector, used in the main by football coaches for the retrospective analysis of games. An array of these projectors were commercially available or were specially modified to suit the kinesicist’s needs. Automatic models enabled playback at any speed below twenty-four frames per second, even one frame at a time, without strobing or flicker and without destroying the filmstrip. Manual or hand-cranked models (like the Bell and Howell) were also employed to repeatedly canvass short stretches of film at something approaching standard projection speed, “so that the movement on the film can be perceived as such, and not as a series of positional displacements”; that is, they combined analytic segmentation with the fluid gestalt of an ordinary perception, whereas half-speed, quarter-speed, or frame-by-frame viewing might induce a kind of choppiness and so render one movement in the false guise of several. Videotape in later years provided a viable alternative to the 16 mm film image.

Having explained the general procedure of microanalysis, we are now in a position to say something of its products; but until these films are properly catalogued and made available to scholars a complete sense of their range will be difficult to have. At one end of the spectrum was TRD 009 (ca. 1961), also known as “English Pub Scene” or “Pub Film,” an eighty-minute record of thirteen people conversing in the lobby of a middle-class London hotel. Similar in nature was The Hillcrest Family (1968), a “studio” film made at the EPPI facilities, in which a family of six is interviewed by four family therapists—Nathan Ackerman, Murray Bowen, Don Jackson, and Carl Whitaker—across four thirty-minute sessions. When the film was distributed to other medical professionals, each one-to-one record was followed by an interpretive addendum from whichever psychotherapist
had just been seen in action. Hence it became “a research document film with commentary.” Another variant was A Context Analysis of Family Interviews (1974), where the unedited Jackson session from Hillcrest came on one reel and an illustrated lecture—replete with color charts, slow motion, freeze-frames, and selective masking of participants—on another.

Quite different, both in form and in audience, was Microcultural Incidents in Ten Zoos (1971). Aimed not at practicing clinicians but at college students and museumgoers, its images were already worked over to a high degree of refinement—scrutinized, compared, interpreted, made palatable. Footage gathered surreptitiously at American, Chinese, English, French, Indian, Italian, and Japanese zoos throughout the first half of the 1960s, and for what appears to have been a larger comparative project, is here played and replayed at various film speeds and sometimes held in freeze-frame for careful inspection. Birdwhistell’s voiceover is the edited record of a lecture given some years prior and with the same footage. Its topics include childhood aggression, psychological imprinting, imitative behavior, and human spatial distribution (proxemics), each of them manifest as visible behavior among members of families. At a mere thirty minutes it offered the student a brief and entertaining entrée to cultural relativism, though its educational efficacy seems today rather limited by its incoherent flow and racial tone-deafness (“India on film is so complicated that I nearly went crazy”).

Perhaps its most effectively rhetorical sequence is one that is set at a zoo in Philadelphia. A middle-aged man in sunglasses hoists his young daughter onto an elevated platform so that she might gaze at the animals with an unobstructed view. “This is one I really want you to notice,” says the narration. “Father is involved—daughter’s out here—watch daughter.” It then goes on to describe, in tandem with the image, the perceived behaviors of the parent-child dyad. The girl visibly fidgets, shuffles her feet, and uses her newfound altitude to tap her posterior against the man’s abdomen. “Touching daddy, touching daddy, getting no response.” Description then shifts to the father’s reciprocal movements: “Fixes his glasses. Now—he points.” His wife, standing in the middle distance with a stroller-bound child, signals for his attention. The man turns accordingly. But “watch what daughter does when he reacts,” we are told, whereupon the girl releases her left arm from the railing, swings it back
to its full extension, and makes contact with daddy in a glancing blow of her elbow against his. Approximately twenty seconds have elapsed on the film, which is still being run at standard speed.

“Okay, now do we have that on Percepto-Scope?” asks Birdwhistell, with reference to a projector unit bearing that name. The same brief exchange between parent and child is played for the audience again at half speed, and yet again at half that. “Notice the position of father . . . maternal, maternal position here of the hand,” he observes, though his meaning or his import are not at all clear. “Father moves with daughter’s body”—and here one does begin to notice how the two decelerated figures draw ever so slightly closer together. Then, at the critical moment of the wife’s beck and call, “Father rolls his shoulders toward her.” But his attention is perfunctory and he quickly turns himself back to gaze at the animals. Now the girl has reached the apex of her movement excursion and, making contact, “imprints her father.” Her splayed arm is held in freeze-frame for a full fifteen seconds, at which point the sequence is replayed at normal speed and then stopped a second time at the crossing of elbows. In thus regaining her father’s attention she enacts, visually, a kind of symbolic barrier against the unwanted maternal intrusion.

Critical moments of human relationship are microscopic and fleeting and above all mundane. This is what the film no doubt hopes to make clear. But its mode of presentation has a further result, in that it offers to posterity a vivid demonstration of the formal procedure of microanalysis itself: the repetitive viewing of snatches of film, the hypotheses that emerge with each repetition, and the process in general by which behavioral patterns are filtered out of noise. Its narration, too, gives a sense of its most evident ideological credos: namely, that every movement has a meaning, that nothing never happens, that every change is a relevant signal and at no point can nonchange be said to occur. “There is enough information in one 4-second loop,” says the narrator, “for the average anthropologist who’s willing to work on his material to get an entire day’s class out of.” He does not mention his own multiyear efforts over similar fragments of equal duration.

Taken together, the affordances of machinery and the cluster of suppositions are what shaped microanalysis as a cultural technique—which here is synonymous with hermeneutic hypertrophy. To replay
a film segment dozens or even hundreds of times could, like repetition of a word, simply render it nonsensical. But for one such as Birdwhistell who believed he was dealing “with an interdependent universe which cannot include accidental, isolated, or finally meaningless units,” that point of nihilistic despair was never countenanced or reached. For he had theory to sustain him and a regimen to sustain theory. His days were passed in and out of the clinic in the practiced observation of human behavior. With a record in hand, stored in a canister, he subjected that behavior to segmentation and description. He had about him all sorts of gadgets that enabled him to do so. He may have even had one in the privacy of his office. The slow-motion analyzer let him pause, rewind, pause, resume, slow down, rewind, until units were found and stream became structure. So he identified patterns and noted them on a graph. Then he compared them to other parts of the film or to similar situations in yet other films. Some data would be obvious and go without saying; some were so shocking that few eyes would see them because they were really not meant to be seen. “I must confess,” said Birdwhistell, that it was only after some thirty viewings and with the demand for micro-kinesic recording that I allowed myself to see that [Billy’s] hand play was patterned. I venture to suggest that early training which precluded my “seeing” male play in the genital area contributed to my concentration of attention on the little boy’s eyes and head.

If his humanism allowed it, he persisted in the effort. He could watch a film again and again and continue to enrich his understanding of its contents. How could he not? A newly observed datum, spanning one-sixth of a second, might have changed the whole picture. To reckon with life at one-sixth of a second was the most defining feature of his scientific project.

V. From Segmentation to Synthesis

In 1956 the Dutch psychologist J.H. van den Berg lamented his century’s enthronement of what Paul Ricoeur would later name the hermeneutics of suspicion. “The conclusion that symptoms have a meaning leads easily to the conclusion that everything has a meaning,” wrote van den Berg. “When, before Breuer and Freud, if a man moved his leg up and down while he was talking to his wife, and an onlooker asked what the meaning of this leg movement could be, no one would have taken the question seriously. The movement was just something that happened.” He could not well have known what was then taking place across the Atlantic in the communication sciences, where the apparatus of camera and projector were enabling the parsing of movements far shorter than a leg bounce; where
observers dutifully recorded, in a new hieroglyphic they alone could understand, every kine, kineme, kinemorph, or stance shift; and marked them not merely as physical phenomena but as units with human communicational significance.

We have seen how this particular practice developed in a particular period, the Cold War, and how its seeming remoteness from useful application was belied by its obvious institutional flexibility. Linguistics, anthropology, psychiatry, cybernetics; government, academe, psychiatric clinic; brain, hand, and machine of inscriptions—all played their part in helping to shape it. And yet still other influences, hidden or basal influences, run like an undercurrent through the more proximate factors. To enumerate them briefly will help us better to understand how its technique of segmentation could produce, in the analyst, an impression of unity. For the goal was really to work one’s way back from the atomized fragments to the total mise-en-scène—to so connect part to part, part to whole, whole to part, and one moment to the next, until the image became a great tapestry of human communication.

The first of these influences might be called social-integrational, or the belief that society is a structure especially made to perpetuate its own continuity; further, that a harmony of the manifold social relations is a necessary precondition for cooperative activity. This belief would have come to Birdwhistell early, in his graduate training at the University of Chicago. Like Fred Eggn and W. Lloyd Warner, his advisers, and like A.R. Radcliffe-Brown, whose ideas they preserved, he believed that society tended always toward non-contradiction among the many relations of which society is composed. The novelty of kinesics, as a subset of anthropology, was to remove that unity from the total social organism to the interactional microphenomena that daily maintain it, to show, for example, how the culturally sanctioned use of one’s eyelids was key to the maintenance of any social cohesion.85

The integrational aspect of Birdwhistell’s theory can be seen to inform the bulk of his writing, but only in an unpublished fragment from his tenure at Buffalo (1956–59) do we find it fully evident. This text is all the more revealing because it comes from such a crucial period of its author’s long career: a period in which the most intensive work on The Natural History of an Interview was done, hence also one in which the technics of analysis grew ever more sophisticated in relation to an ever smaller microworld. The fragment, titled “Crowd Scene,” appears to be a form of self-directed exercise, the kind of thing one does to keep the mind active and to offset the tedium that comes with more sustained forms of work. Three typewritten pages detail the demeanors of sundry men and women at a crowded intersection—not observed directly by the present analyst but
captured in a photograph lying at his side.

At first sight this scene looks as though it could be entitled “the lonely crowd.” ... But one thing can be said with confidence. These individual men and women are not free atoms detached and isolated from one another. They are, although largely out of awareness, adapting their behavior to each other and according to patterns implicit in their common culture. There is order and grouping expressed here—not simply the order imposed by the “don’t walk” sign, the traffic laws, or the structure of city streets, but order devised [derived?] from an internalized system of conventional understandings which channelizes, restricts, supports and makes possible intricate social interrelationships. . . .

Starting to the reader’s left Nos. 3 and 5 (the short man in the dark suit and the tall man in the light suit) are in an American male height differential dance. No. 3 stands arms folded, leg next to 5 extended in blocking position—as is his left shoulder. This is in mirror to 5’s right leg and shoulder. 3 has both hands concealed as he pulls shoulders back in high arm cross. 5 has right hand concealed in pocket. Note parallel facial expressions varied only by the larger man's head position which is slightly lowered and to the right. Thus 3 and 5 can both focus on an object in front of them and at the same time “keep an eye on each other”—the peripheral aspects of the eye picking up all movement. This kind of height differential between male strangers is to be regarded as customary caution rather than clear hostility. . . .

At the other side of the picture, 20, 22 and perhaps 25 illustrate a second and equally characteristic kinesic activity—“motion or stance flow.” While we cannot determine who assumed the military stance yet the parallel between the young male no. 20 and the woman no. 22, is clear. The similarity of position begins with foot placement (high heels plus background precludes her putting her toes over the curb) [and] is manifest in the hypererect bodies, projected chin and mouth and chin positioning. The analyst is tempted to complete picture of no. 25, only partially shown here, and suggest that he is participating in the dance and is at “parade rest.”86

That Birdwhistell could discern the mechanics of social integration in a single still photograph should give pause. In fact, it leads us to consider yet another hidden influence, entirely separate from content, which is the force of integration inherent in the frame of the image itself. Spatially, when a frame is placed around a group of items it seems to perform a twofold operation. By marking off these items
from a totality of items, it affirms or reaffirms the inner unification among those that remain. Typically in photography and by extension the cinema, this frame is placed around one or more people within a visible environment. And unless clearly subdivided by other and smaller frames, or known to be composite, it will be seen as an image of one time and one space whose contents are unified by concurrence and copresence. “The analyst is tempted to complete picture of no. 25, only partially shown here”; that is, he is tempted to describe as significant anything that falls within the border of the frame. Since a photograph is, after all, the fundamental unit of an analog filmstrip, serially repeated twenty-four times every second, what applied to the one would be simply extended to all those other frames that precede and succeed it.

Social integration and pictorial integration together gave rise to that formal integration most often called “aesthetic,” indicated here by repeated reference to the dance. Two men negotiate status through a “dance”; members of the crowd are participating in a “dance.” Whatever it is they might be said to communicate—whether courtship’s come-hithers or competition’s rebuffs—still they are contoured to one another in formal relations of symmetry, balance, and complementarity. Nor is this a singular instance in Birdwhistell’s corpus. We find it again in the description, from 1967, of Bateson’s “ritual dancelike lighting of Doris’ cigarette,” the “batonlike change of pace,” and “the glove-fit coherence of the rhythmic movements of the two participants” in a film he had now spent more than ten years mulling.87 The crowd, like Doris, may at first seem to consist “of unhappy or, at least, distracted and isolated people,” but also, like Doris, they know not what they dance.88 Anomie or detachment gave way upon scrutiny to this richer, pleasanter, more edifying vista.

Thus beneath the specialized language and the aridity of charts lay a motor of aesthetics with a dividend of pleasure. In short, there was unity. And if that unity neither leapt out from image to eye with instantaneous force, nor emerged under the tarrying gaze of calm contemplation, but could be found only by putting the filmstrip, so to speak, “to the question,” the satisfaction of the viewer was by no means negated by the effort involved. To impose order and even beauty on the randomness of becoming, to be both spectator and choreographer at once, was a rare opportunity by which many were seduced. True, a research document film did not aim to make art—it recorded some subjects for thirty minutes or more—but there was not a kind of beauty always latent in its frames? And though concern with aesthetics was ostensibly foreign to the labor of scientists, did that in itself render their aesthetics inoperative? Was the human figure, in its “dance” with other figures, not an endlessly fascinating object of study? And if it had not the finish of a pas de deux or a jig,
of a waltz or a tango, was it not the more striking for having unfolded unconsciously?

Its disquieting obverse was the infinite regress of data as the material of study continually subdivided into ever-smaller units. Here was a canvas never entirely filled in, a dance whose pivots and steps were never fully perceived. Pausing and looping might give rise to new kinemes; slow motion would reveal the finer degrees of synchrony. The filmstrip contained unfathomable depths that were in some cases forever to be plumbed. Its smallest units were ultimately defined only by the speed of the film that was used in their capture, and if one ran the camera at forty-eight frames per second as opposed to twenty-four, one would then have to canvass twice as many kines.

Looking back in 1966 at the previous decade of microanalytic research, Birdwhistell would write, “Tens of thousands of scientist hours have been applied to the study of this conversation”—by which he meant Bateson’s interview with Doris—“and, even though less than ten minutes of the conversation have been attacked, I doubt seriously that more than fifty percent of the significant data of those ten minutes has been located and abstracted.” At that rate one was averaging half a minute per year, depressingly small yields for a scholar and for the institutions that funded him. When he moved to the Annenberg School at the University of Pennsylvania in 1969 he did not initiate any more large-scale projects. Gradually he began to lose hold of the federal purse strings that had subsidized his research for the past twenty years. Indeed the all-important grant-dispensing bodies had had quite enough of microanalysis by the end of the following decade. So he devoted himself more fully to teaching, published precious little, and retreated into the privacy of methodological reflection. Successive researchers who followed his footsteps would be rather more circumspect when approaching their records of human behavior. They did not want to lose themselves in hermeneutic hypertrophy, in “nothing never happens,” and in the infinite regress of data that it seemed to entail.
Notes

The manuscript for this essay was read (or heard) in various forms of completion and considerably bettered by the input of Ellen Rooney, Philip Rosen, Deborah Weinstein, Joel Simundich, Bernard Geoghegan and Faith Holland, who also prepared the images. Alex Pezzati and Kate Pourshariati of the Penn Museum Archives made my visits there pleasant ones. Pam Wintle and Mark White of the Human Studies Film Archives were invaluable from a distance. Lastly I must mention Adam Kendon, who greatly facilitated and expedited my research on this subject. I thank him for sharing his memories, his knowledge, and his research materials with me, a total stranger.


3. Rabelais, 234.

4. Rabelais, 234.

5. Rabelais, 235.

6. Rabelais, 236.

7. Screech, 89–90.


17. I am also reminded of what Sigmund Freud described, with reference to the Rat Man, as an “obsession for understanding”: “He forced himself to understand the precise meaning of every syllable that was addressed to him, as though he might otherwise be missing some priceless treasure. Accordingly he kept asking: ‘What was it you said just then?’” Sigmund Freud, “Notes upon a Case of Obsessional Neurosis,” in Standard Edition of the Complete Psychological Works of Sigmund Freud, ed. and trans. James Strachey (London: Hogarth, 1974), 10:190. Obsession, however, has clinical implications and a putative etiology; hence the more neutral “hermeneutic hypertrophy.”


19. See Kendon and Sigman, 234.


24. Kendon and Sigman, 234.


29. Among his first articles was Ray Birdwhistell, “Field Methods and Techniques: Body Motion Research and Interviewing,” Human Organization 11, no. 1 (1952). This periodical was the house organ of the Society for Applied Anthropology, which supported Point IV almost as soon as it was announced.

31. One may have the impression that no film was used at this early stage of research, but see, for instance, Birdwhistell, *Kinesics and Context*, 114, 181–82. “[M]ost of the early research on body motion was done with silent film or with silent projection of sound film. . . . Designed for the analysis of filmed material, the kinegraphs are useful only for checking kinesic research with live subjects.” Furthermore, Birdwhistell had access to newsreel footage for purposes of study immediately after WWII (102).


37. Kendon and Sigman, 237.


42. “In our every meeting, even though much of the detailed and necessarily minute data I manipulate often fails to excite him, [Bateson] has supported my contention that communication is a social matter.” Ray L. Birdwhistell, “Some Discussion of Ethnography, Theory, and Method,” in *About Bateson*, ed. John Brockman (New York: Dutton, 1977), 114.

43. See Margaret Mead and Paul Byers, *The Small Conference: An Innovation in Communication* (Paris and The Hague: Mouton, 1968), 65–88. Figures “B” and “D” are not labeled but are clearly Bateson and Birdwhistell respectively, who along with “C” (Margaret Mead) “have worked together before and . . . share a position” (76).


47. Bateson, “Communication,” 34–8. See also Halpern, Beautiful Data, 41–8 (on cybernetic-algorithmic prediction) and 162–7 (on Bateson).

49. Kantor’s name appears throughout a set of documents dated 28 June, 28 July, and 23 August 1956 in box 18, Birdwhistell Papers.

50. This film goes by several names, GB-SU-005 (for “Gregory Bateson, Stanford University”) being only its formal designation. Most writers simply refer to Doris Film, but I have also seen Couch Scene in certain holdings. Although filmed in 1956, the frame counter was added somewhat later. The film can be obtained from the University of Chicago’s Digital Media Archive, https://dma.uchicago.edu.


52. Jacques D. Van Vlack, letter to Don Ledin, 30 March 1964. A scan of this letter was sent me by Joseph J. Toth of the University of Chicago Digital Media Archive.


56. Birdwhistell in Norman A. McQuown, “Collation,” in The Natural History of an Interview, ch. 9, 6.


58. “Let us assume, for example, that the infant is nursing away right merrily when something makes the mother notably anxious. That anxiety . . . immediately induces, in some fashion, anxiety in the infant.” Harry Stack Sullivan, The Interpersonal Theory of Psychiatry (New York: Norton, 1953), 94.


60. Despite later protestations (see McQuown, “Collation,” 12) that their research was not guided by this hypothesis, documentary evidence shows that a double-bind section was originally being prepared for inclusion. “Minutes of the Natural History of an Interview Project. Meeting of October 18–20, 1957 in Buffalo,” 7 November 1957, in box 17, Birdwhistell Papers.


63. Henry Brosin in 1991 offered a tempered if not hostile account of Birdwhistell’s work on The Natural History of an Interview: “Because Birdwhistell was wrong about Doris on the film and claimed too much for his interpretive powers in one sequence does not nullify his sporadic brilliant contributions. . . . I openly contradicted his flights of fantasy and tried to reason with him; Bateson and Hockett and insofar as possible McQuown simply ignored or avoided him. When administrative
or editorial debates were inevitable, we all voted for McQuown over Birdwhistell to break any deadlock.” See Stephen O. Murray, American Sociolinguistics: Theorists and Theory Groups (Amsterdam: John Benjamins, 1998), 34n24.

64. Birdwhistell, Kinesics and Context, 18–19.
66. Birdwhistell, Kinesics and Context, 23. This film is available on “Reels 1-4” of Bateson EPPI Films [DVD], Bateson Collection at the Don D. Jackson Archives, University of Louisiana at Monroe. I thank Bernard Geoghegan for sharing it with me, as I did not think it extant.
67. Hollis Frampton read Birdwhistell’s essay and wrote, “If there is a monster in hiding here, it has cunningly concealed itself within time, emerging, in Birdwhistell’s film, on four frames . . . for only one-sixth of a second.” Hollis Frampton, “Incisions in History/Segments of Eternity” (1974), in On the Camera Arts and Consecutive Matters, ed. Bruce Jenkins (Cambridge: MIT Press, 2009), 47.
70. Scheflen had been at EPPI since 1956. Birdwhistell seems first to have visited in 1958.
74. McQuown, “Collation,” 5.
75. Scheflen, Communicational Structure, 319.
76. Scheflen, Communicational Structure, 319.
77. Birdwhistell, *Introduction to Kinesics*, 36. According to Birdwhistell, the neck is rarely used by Westerners for purposes of communication.

78. Kendon, “Some Theoretical and Methodological Aspects.” 77. Among the automatic instruments, Kendon lists the L-W Athena 224A, the Selectaframe, and the Lafayette Analyzer as “widely used US models” (77).

79. The Human Studies Film Archives (HSFA) hold approximately 90,000 feet of 16 mm film used by Birdwhistell and colleagues, though this material has not really been catalogued and little is available in the form of access prints. DVDs of *Microcultural Incidents in Ten Zoos* and *A Context Analysis of Family Interviews* were until recently available for purchase from Penn State Media Sales. I viewed *The Hillcrest Family* on DVDs available from the Van Pelt Library, University of Pennsylvania. Copies of TRD 009 are held by both the Penn Museum and the HSFA, while *Microcultural Incidents* is widely available on a variety of formats (16 mm, VHS, DVD) in numerous libraries.

80. This was the basis for two papers by Adam Kendon: “Movement Coordination in Social Interaction: Some Examples Described,” *Acta Psychologica* 32, no. 2 (1970); reprinted in *Conducting Interaction*, 91–115; and “Some Relationships between Body Motion and Speech: An Analysis of an Example,” in *Studies in Dyadic Communication*, ed. Aaron Siegman and Benjamin Pope (Elmsford, NY: Pergamon, 1972), 177–216. Kendon informs me (personal communication, 4 January 2016) that the film was made concurrently with the zoo project, with no specific aim, “just as a bit of ‘trawling’ to see what you might catch.”

81. Birdwhistell mentions that the PerceptoScope was originally developed for military application (“Use of Audio-Visual Teaching Aids,” 58), but I have not found any other sources that elaborate on this. By the 1960s it was mainly used as an aid to speed-reading due to its tachistoscopic features; that is, its capacity to hold the filmstrip in place for a predetermined time interval before moving on to the next point of interest for another predetermined interval. See, for example, Anthony P. Witham, *Elementary English* 39, no. 5 (1962): 515: “This is a multi-function projector which can serve as a controller, accelerator, motion picture projector, strip film projector, tachistoscope and timer. . . . Forty-one different speeds from 120–4320 w.p.m. are possible.”


83. Birdwhistell, “Body Motion,” in *The Natural History of an Interview*, 33–34. As this passage refers to Billy’s performance in *GB-SU-005*, it is not included in the version prepared for *Kinesics and Context*.


90. See Davis, “Film Projectors as Microscopes,” 46.