Fine-grained analysis:
Talk therapy, indexicalized media, and the microscopic science of the face-to-face

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ABSTRACT

“Mechanical objectivity,” which Daston and Galison trace to the mid–19th century, often coincided with efforts to inscribe nature ‘directly’, such as through automatic registering machines; but what did this inscription entail? Addressing this requires that we re-examine indexicalization: the shift in semiotic ideology whereby medial technologies are imagined and acted upon as if they preserved material traces of the real. Indexicalization is no simple reflex of mechanical objectivity and is more varied and consequential than commonly imagined. I demonstrate this by returning to the sciences of face-to-face interaction, which crystallized in postwar America but drew inspiration from earlier research on talk therapy. Returning to efforts to record “objectively” psychoanalysis sessions in the early 1930s, I chronicle a shift in the technosemiotic mediation of knowledge. Whereas transcripts were originally “verbatim” records of literal content, researchers came to seek tacit, symptomological signs. And whereas mechanical recording was introduced to avoid an observer effect, it was later deemed necessary to preserve indexical traces for fine-grained analysis. This indexicalization had ontological as well as epistemological effects, and it was inspired not by mechanical objectivity but by the parallel capacities of the perceptive psychoanalyst and receptive mechanical recorder, both virtuosic in registering the indexical richness of the communicative unconscious.

Keywords: objectivity, indexicality, interaction, media, semiotics, microanalysis, psychoanalysis, epistemology.

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Discourse may be treated as one long “slip of the tongue.”

- Theodore Schwartz, Review of The First Five Minutes, A Sample of Microscopic Interview Analysis, 1960

In their magisterial history of objectivity, Daston and Galison chronicle how “mechanical objectivity” burst onto the scene in the mid-nineteenth century. Their caption names a family resemblance among epistemological practices in diverse sciences, all seized by distrust of human subjectivity. While it had once been a virtue for the scientist to rely on his discerning, disciplined faculties, suspicions deepened about his mediating mind and will. In response, many sought to reduce or eliminate this human element. “Mechanical” didn’t necessarily mean machines—standardized procedure and protocol could suffice—but machines epitomized this turn from and against the subjective. This ethic of human non-interference coincided with efforts to register the real more directly and faithfully. “Camera obscura tracings, photographs, and the inscriptions of self-registering instruments were all, at one time or another, touted as nature’s own utterances” (emphasis mine). Elsewhere in Objectivity we hear this refrain, that the mechanical suppression of subjectivity occurred alongside efforts to let nature express itself. Mechanical objectivity and mechanical inscription were two sides of the same proverbial coin.

I turn here toward the inscriptive side of mechanical objectivity, whose complexities have been underestimated. It is perhaps no surprise that our interest in objectivity should come at the expense of the inscriptive methods exploited in its name, because these methods were usually meant to bypass the humans in order to let nature speak. In foregrounding this inscriptive mediation, I direct attention to the semiotic ideologies that accompanied it, ideologies that exploited the indexical affordances of inscriptive technologies for epistemological ends. While I use indexicality somewhat loosely to accommodate historical specificity in semiotic ideology, the notion is the familiar Peircian one for signs related to their objects by existential contiguity, like smoke that points to fire, a weather vane to wind, “I” to the speaker who utters it. And to encourage attention to the practices and processes whereby indexical relations become evident to social actors, I term this indexicalization or, in stricter Peircian terms, dicentization.  

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1 Lorraine Daston and Peter Galison, Objectivity (Cambridge, Mass: Zone Books, distributed by the MIT Press, 2007).
2 Ibid. 256.
3 I use “inscription” for familiarity, recalling works like Timothy Lenoir, Inscribing Science: Scientific Texts and the Materiality of Communication (Stanford, Calif.: Stanford University Press, 1998). As an analytic, “inscription” is misleading and arguably better approached as technosemiotic transduction, on which, see note 5.
4 In Peircian terms this is dicentization, because this does not concern indexical signs qua signs but rather their interpretive treatment as indexicals. See Christopher Ball, "On Dicentization," Journal of Linguistic Anthropology 24, no. 2 (2014): 151–173. I leave many Peircian distinctions at bay, including those that distinguish conventionalized from unconventionalized indexicals (e.g. the deictic expression “I” versus smoke as an index of fire). Nor do I raise the issue of “likeness” through Peirce’s notions of iconicity and rhematicity. Indexicality overlaps empirically with iconicity, especially as interaction analysts care not just about the fact that a sign in a transcript indicates an object (e.g. a psychodynamic dimension of the analyssand), but
It is well known that 19th-century mechanical objectivity was accompanied by the proliferation of “mechanical forms of writing or image making, generally with little or no intervention of the human hand.” This inscrptional enthusiasm is evident onomastically by the spate of instruments formed from -graph. Even as the graphical method iconically “represent[ed] scientific phenomena or data, by lines and points in a co-ordinate system,” these machines got their epistemic backing from their point-by-point indexical correspondence with nature. It was indexicality that ensured that nature was talking.

Indexicalized Media and Mechanical Objectivity

There is a real affinity between mechanical objectivity and indexical inscription, but we should pry the two apart to understand how they come together and to appreciate the far-reaching effects that can result. The need to take indexicalization seriously is evident, if only implicitly, in recent histories and archaeologies of media that show how misleading the expression “indexical media” is. Used by some in media and film studies, this expression epitomizes the tendency to think that media like the photograph and film bear a non-arbitrary relationship to the real by virtue of an indexical link that is understood narrowly as ‘causal’. Photosensitive paper faithfully registers the impresses of light, for instance. This idea of indexical media has been used as a sign-post in a dubious plot-line of media death under digitization, for once untethered from the objects to which these media were once causally hitched, such media, the story goes, are dematerialized and subject to unfettered editing and recontextualization. Astute commentators of late have

also with the way that sign exhibits qualities of the object such one can glean information from it. This is important epistemologically insofar as the transcript is understood to model the original therapeutic session. In spotlighting the indexical dimensions of these practices, I approximate the semiotic ideologies here that exhibit a preoccupation with indexicality.


6 Ibid.
spelled out how this gets Peirce and the phenomena under investigation wrong. I underscore here how “indexical media” presupposes what we need to explain: how do media come to be understood and treated as indexical? And, most relevant for the history of science, how and with what effects do such indexicalized media become objects of epistemological longing?

I address these questions through a study of media indexicalization in the sciences of human interaction. I return to efforts to record and transcribe talk therapy using sound recording technologies, which began in the early 1930s and intensified during the postwar period as face-to-face interaction coalesced as an object of knowledge. I narrate the slow, laborious, and fraught manner in which the indexical potential of sound recording technology became a focus of epistemological interest. In this respect, I build on histories that demonstrate, though seldom in these terms, that the indexicality of media technologies cannot be taken for granted.

Recall, for example, the fitful career of media indexicality in Edison’s early phonograph. Some sense of indexicality always accompanied discourses of “fidelity,” but these discourses were neither stable nor intuitive. Fidelity required that one first ontologically distinguish playback sounds from “sources” to demonstrate that the two were even linked. As Emily Thompson suggests, fidelity didn’t mean one thing because Edison’s phonograph wasn’t imagined to do one thing. One sense of fidelity did trumpet the phonograph’s power to preserve traces of the acoustic real, a capacity we may call indexical fidelity; here the medial role of the recorder is downplayed—it is im-mediatized—as one is invited to hear playback as the vivid if not auratic


On epistemological desire, see Karin Knorr-Cetina, "Sociality with Objects: Social Relations in Postsocial Knowledge," *Theory, Culture & Society* 14, no. 4 (1997):1–30. Indexicality is not always and equally epistemological. Sociolinguists may scrutinize the phonological variation of an “accent,” for instance, for the demographic facts it betrays, but in social life this indexicality is rarely something one strains to know and may be mobilized for ends other than the epistemological, as with ludic and parodic performances of linguistic diversity on stage and screen. Writing on experimental systems, Rheinberger described an internal dialectic whereby “epistemic things” become foci of aspirational knowledge and may later become backgrounded as unproblematic “technical objects.” Hans-Jörg Rheinberger, *Toward a History of Epistemic Things: Synthesizing Proteins in the Test Tube* (Stanford, Calif.: Stanford University Press, 1997). This dialectic cannot reveal the source and effects of desire here. The epistemological longing toward indexicality was kindled, I argue, through the parallel receptive capacities of human and machine and, more generally, by the lure of a communicative unconscious.


See Chapter 5 of Sterne.
presence of a spatiotemporally distinct ‘source’. When Edison later decided to market the phonograph for business, fidelity veered toward what Thompson calls “audibility and intelligibility,” where indexicality took a back seat to “the retrievable truth of the message.” When the Edison company again shifted marketing toward music playback, indexical fidelity returned as the “quality of tone” that created “the illusion of real presence.” Indexicality flitted in and out of fidelity as it followed the machine’s fortunes.

Equally instructive is the inception of gramophone recordings in colonial South India, as detailed by Amanda Weidman. Gramophone promoters knew indexical fidelity needed demonstration. Some of the earliest recordings in Madras featured vikatam performers—Tamil mimicry artists. These artists conjured with bare voice naturalistic scenes of urban life: trains whistling by; noisy horse-cart drivers; the chirps of birds and prattle of city denizens. Precariously ‘new’, the machine’s indexical fidelity was introduced through an implicit comparison with a familiar category of human recorder.

Of the many reminders that indexicality does not inhere in technology, the most resounding has been Walter Benjamin’s notion of an “optical unconscious.” Benjamin developed this in relation to new visual media, which he thought could expand the perceptual envelope. In cases inspired by Benjamin, we learn that media manipulation is key. An ethnography of jazz pedagogy, for instance, details how instructors slow recordings to heighten aural sensitivity and grant access to an “acoustic unconscious,” and a recent historical essay on Ray Birdwhistell’s film-based

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12 On Edison’s machine and its functions, see Lisa Gitelman, Scripts, Grooves, and Writing Machines: Representing Technology in the Edison Era (Stanford, Calif.: Stanford University Press, 1999).
13 Ibid. p. 137.
14 Ibid. p. 138, 135.
science of embodied communication similarly credits media manipulation, especially frame-by-frame analysis. There are no indexical media without considerable labor.

These media histories are relevant for the history of science when the media in question matter in the laboratory or field, as they do here, but they apply to all inscriptions media whose epistemological relevance turns on a foregrounded indexicality.

This essay complicates the link between mechanical objectivity and indexicalized inscription. First, indexicalization is no simple reflex of mechanical objectivity. Indexicalization here happened well after the strictures of mechanical objectivity. It was afforded by mechanical objectivity but not inspired by it. It was inspired instead by the parallel capacities of human and machine—the receptive psychoanalyst and receptive mechanical recorder respectively.

The first efforts to record and transcribe psychoanalysis sessions in the early 1930s were motivated by mechanical objectivity, but sound recording became a solution not because it was more objective than, say, human stenography, but because, as Freud argued, human observers risked disrupting the intimate therapeutic process of transference. What if one used mechanical sound recording technologies that didn’t require human observers and could, with some ingenuity, be done unobtrusively if not invisibly? In 1929, the two researchers featured below—Earl F. Zinn under the auspices of the Social Science Research Council (SSRC), Harold D. Lasswell of the University of Chicago’s political science department—abandoned human stenographers and note-takers and repurposed wax-cylinder dictation machines that had been marketed for business. With recordings they sought “objective,” “verbatim” transcripts. Psychoanalysis had been scientifically suspect for some time, so getting transcripts was one way to begin to settle the matter. And because Zinn and Lasswell were sympathetic with Freud’s talking cure, they were, in effect, helping scientize psychoanalysis by recording it.

Zinn and Lasswell originally desired only a verbatim transcript that preserved the literal, denotational, what-is-said of discourse—what many simply called “the content.” In contrast, later researchers strained to preserve tacit symptomological indicators—indexical signs. In its extreme form, the transcript became indexically saturated, a text that facilitated and became legible through “fine-grained,” “microscopic” analysis. Transcripts changed normatively from verbatim to indexically saturated texts.

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20 From the standpoint of Daston and Galison’s chronology, mechanical objectivity arrived late for psychoanalysis, a practice often seen as a holdout against empirical science.
The distinction between the verbatim and indexically saturated transcript is heuristic and ideal-typical; in practice, indexicalization was never categorical and always gradient, admitting of degrees. Nor was it sudden. Indeed, this tendency arguably developed over time for Zinn and Lasswell. Through comparing Zinn and Lasswell with the midcentury work, *The First Five Minutes: A Sample of Microscopic Interview* (1960), I illustrate how the indexically saturated transcript emerged as a new ideal that made transcription akin to forms of diagnostic imaging whose legibility required a trained eye. A verbatim transcription could be unproblematically “read,” but an indexically saturated transcript demanded disciplined observation—“professional vision.” It demanded fine-grained analysis.

A second lesson here is that indexicalization was never exclusively about inscription. It encompassed recording, transcription, analysis—even the human analyst. The indexically saturated transcript paralleled a new appreciation for what recording technology could do. It approximated and drew out affordances of the technologies used to produce it, namely, their capacity for indexical fidelity. This fidelity was one sense of accuracy, an accuracy rarely exploited in social-scientific sound recordings and never for knowledge about discursive interaction.

Third, indexicalization exceeded its official epistemics. It affected ontology, for under strong indexicalization, discursive interaction itself seemed teeming with tacit little signs. Indexicalization helped give interaction its trademark size, for the more indexically saturated the media, the less one had to analyze—and, indeed, the less one could analyze—which nurtured the impression that this object of knowledge was intrinsically small-scale. In this respect indexicalization had hidden costs and unintended effects that illustrate how indexicalization was anything but easy. By turns alluring and maddening, indexicalization nurtured the hope that one could put one’s finger on the nerve of unconscious interpersonal life. But no matter how detailed the transcripts were, it never seemed enough, and a similar dissatisfaction infected the source media. Even the kaleidoscopes of sound-film could seem impoverished, for the more indexical saturation one craved, the closer one edged toward the interpersonal real for which no media was a substitute.

**Objective transcripts, by hand or machine?**

When Zinn and Lasswell first sought to study psychoanalysis objectively, it was not obvious that they should bother with mechanical sound recording. This, despite the fact that no less than Edison himself had trumpeted its utility for science when he casted about for the uses of his phonograph:

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The most skillful observers, listeners and realistic novelists, or even stenographers, cannot reproduce a conversation exactly as it occurred. The account they give is more or less generalized. But the phonograph receives, and then transmits to our ears again, every least thing that was said--exactly as it was said--with the faultless fidelity of an instantaneous photograph. We shall now for the first time know what conversation really is; just as we have learned, only within a few years, through the instantaneous photograph, what attitudes are taken by the horse in motion. 24

Like the storied chronophotography of Muybridge, whose studies of horse locomotion promised to reveal what evaded the naked eye, so discursive interaction—“conversation”—may one day be analyzed. Edison touted his machine’s indexical fidelity as he likened the phonographic to the photographic. 25

Only in the postwar period did social scientists really begin to exploit this indexical potential to study human communication. Before Zinn and Lasswell, psychological studies occasionally used recorders like the Ediphone and Dictaphone dictation machines, but discourse was not the focus. In anthropology some promoted sound recording, but mostly for salvage ethnography. The idea was to preserve and curate dying languages and cultures—not produce recordings and transcripts that would allow one to study discourse itself. 26


26 See discussions by Richard Bauman on speech memorialization. Richard Bauman, ““Better Than Any Monument”: Envisioning Museums of the Spoken Word," Museum Anthropology Review 5, no. 1–2 (2011):1–13. See also Chapter 6 of Sterne. On fidelity and salvage ethnography, see, for example, Walter J. Fewkes "On the Use of the Phonograph in the Study of the Languages of American Indians," Science 15, no. 378 (1890):267–269. To save the “fast disappearing languages of races” (p. 267) Fewkes did praise the phonograph’s indexical fidelity, stressing how it could capture “inflections, gutturals, accents, and sounds in aboriginal dialects” (ibid 267–268), but this was programmatic with respect to research. Equally programmatic were the suggestions of Edward Sapir on voice and the unconscious. In an interdisciplinary colloquium on the unconscious in the mid–1920s, Sapir, friend and colleague of Lasswell, suggested that one might access personality by scrutinizing variation in the human voice. For this Sapir sought a Speak-o-Phone sound recorder around the time Lasswell began research on psychoanalysis. (Letter from Edward Sapir to L.D. White, Executive Secretary of the Local Community Research Committee 25 February 1930. Department of Anthropology Records, Box 9. University of Chicago Special Collections.) Sapir even characterized this as an “almost microscopic study of actual speech records”—much as later microanalytic research would do. American Psychiatric Association. Committee on Relations with the Social Sciences., Proceedings of the First Colloquium on Personality Investigation, Held Dec. 1–2, 1928 [in] New York City (Baltimore: Lord Baltimore Press, 1929):39. Sapir left Chicago before he could
Even when they first decided to record mechanically, Lasswell and Zinn cared little about indexical fidelity. Of course they cared about capturing what people said, because psychoanalysis turned on verbal signs such as free associations. For objective transcripts of “content,” one didn’t need machines. Stenography by hand was equally objective. It is telling that although Adolf Meyer promoted copious record-keeping in psychiatric hospitals, which included what he considered “verbatim” records of his patients’ spontaneous discourse rather than only paraphrases and summaries, he felt, as others did, that note-taking and stenography were objective enough. When Zinn began to enjoy success with dictation machines in 1930 he wrote to Meyer and argued that stenography really was inferior to mechanical recording. That he had to argue this reveals the general view that you could get objective transcripts in many ways.

“Verbatim” transcripts, after all, officially recorded only the denotational what-is-said of discourse. Later, psychiatrists like Henry Brosin would look back upon works like Freud’s *Psychopathology of Everyday Life* (1901) and read it as a call to study what people unintentionally “give off” in contrast to what they “give.” This was an indexicalized view of communication for which the human hand and ear were ill-suited, but transcripts here were objective records to be read for “content.”

But how could the analyst record when he was expected to remain receptive? He couldn’t stop and write, and notes written afterwards would be selective due to limitations of memory. And one couldn’t recruit a note-taker because of a pernicious observer effect. Freud advised the analyst to let attention float freely and avoid note-taking, “[f]or as soon as anyone deliberately attempt this but his student Stanley Newman conducted research in this spirit in the late 1930s at Yale.


concentrates his attention to a certain degree, he begins to select from the material before him.” He imagined exceptions, like the need to jot down significant dates or dream imagery. He acknowledged but dismissed the desire to collect “verbatim records” to assess psychoanalysis scientifically. Records wouldn’t be enough, he argued, and the therapeutic cost high, for third-party observation would disrupt transference, the interactional acting out of psychopathology that may manifest itself as resistances toward free association. To bypass this observer effect and satisfy mechanical objectivity, Zinn and Lasswell turned to recording technologies.

**Earl F. Zinn’s wax-cylinder psychoanalysis**

In 1929, after seven years as Executive Secretary of the National Research Council’s (NRC) Committee for Research on Sex Problems, Earl Zinn had a new job. He became director of the New York based Committee for the Study of Personality, a SSRC subcommittee housed under the Committee on the Family. A private donor had asked the NRC to explore the “objective recording of psychoanalytic data,” as the SSRC wrote in its annual report, adding that this was a “difficult field as yet virgin to rigorously controlled scientific exploration.”

The original request did not actually call for the “objective recording” of psychoanalysis but only for its application. In December 1928 philanthropist George Coe Graves pledged $20,000 a year for three years, provided that the SSRC conduct research on “problems concerned with the interaction of personalities within the family,” and, crucially, that “the psychoanalytic technique [be] one of the methods employed.” Graves’ request came from conversations with Zinn, and Zinn surely had a hand in shaping what this request meant. Back in 1925 and 1926, while surveying research in Europe on behalf of the Committee on Sex, Zinn interviewed psychologists and psychoanalysts. In a letter to Robert Yerkes, Zinn complained that the analysts seemed unconcerned about the “scientific validity of their data” and even proposed that they convene a conference session on the “problem of research methods.” When Zinn reported his findings for the NRC, he added that “the Secretary is strongly of the opinion that an experimental examination of the [psychoanalytic] method is feasible, and that it would prove fruitful.”

The SSRC decided to proceed cautiously. Zinn’s study would be exploratory. As Zinn reported, “the logical first step in such an evaluation would be to collect as accurately and completely as possible the basic data of psychoanalysis, which are verbal productions of both

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33 Robert Yerkes Papers (hereafter *Yerkes Papers*). MS 569, Series I, Box 54, Folder 1043. Letter from Zinn to Yerkes. March 14, 1926. Yale University.
patient and analyst during the course of an analysis.” He would “test and perfect the method of mechanical recording and . . . experiment with the technique of conducting analyses under these conditions.” In part to insulate itself from any legal fallout, the SSRC had Zinn’s group go it alone and incorporate itself, whence the “Committee for the Study of Personality, Inc.” Its experimental period would last up to 18 months and begin by 1 October 1929. Zinn would be its director.

Zinn requested a laboratory in New York City. He would enlist accredited analysts and hire three secretaries to transcribe discourse. Partnering with Alexander Grand Bell’s Dictaphone Company, Zinn began trial recordings in January 1930 and by spring announced success in recording “accurately.” Accuracy meant a faithful transcript of content. Although one needed to keep the hidden microphone within four feet of speakers, Zinn wrote to Adolf Meyers that he could now “record clearly ordinary conversation” and even capture speech that fell to a whisper. It was not that Zinn wanted to record how speech could sometimes fall to a whisper or spike in loudness. The what not the how of speech mattered.

Although nonhumans replaced human recorders, Zinn had to make these machines disappear. Even when out of sight and connected by wire, they hummed and whirred. Zinn placed his in an adjoining room to avoid feedback but especially to hide the equipment and mute noise. He used a condenser microphone and four-stage amplifier, and his customized dictation machine featured a double mandrel for continuous recording. To Meyers, Zinn assured him that he was “successful in arranging things so that our consultation room differs in appearance not at all from the ordinary doctor’s office.” He had engineered a naturalistic recording environment.

Zinn’s secretaries used dedicated playback (“transcribing”) machines to prepare the transcripts. As his wax cylinders had to be shaved for reuse, he had them transcribed promptly and retained no permanent sound records. Once he achieved recording “accuracy”--again, in a non-indexicalized sense--Zinn turned to “quantity production” by trying to record the course of analysis for a few patients.

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36 Advisory Committee op cit. See Appendix XVI, Familial Relations; Appendix “Report of the Committee on Research in Familial Relations” (June 4, 1929), “Report of the Sub-committee on Familial Relations”
39 Ibid. Letter from Zinn to Wissler, 2 August 1929. Appendix I, p. 34.
42 Yerkes Papers. Series I, Box 54, Folder 1043. Letter from Zinn to Yerkes. February 6, 1930.
Somatic indexicality in Harold Lasswell’s exhaustive recordings

News of Zinn’s recordings reached the University of Chicago, where, as Zinn and the SSRC knew back in 1929, researchers had been up to something similar. Chicago had its own Personality Committee, a self-consciously interdisciplinary lot that in 1929 was readying itself for a move into the new Social Sciences Building. As Zinn began in late autumn 1929, Lasswell, a psychoanalytically inclined political scientist, was gearing up for a wildly ambitious, cross-disciplinary recording initiative. Lasswell’s plans resembled Zinn’s in certain basic respects. Both sought “objective” records featuring a verbatim transcript. But Lasswell wanted more. In principal, he wanted everything, for speech was part of a vast array of facts to be collected and correlated. As he complained about psychoanalytic record-keeping, he itemized what comprehensive documentation would involve.³³

You would want these documents to show every word which passed between the interviewer and the subject for the whole period. You would want these documents to include supplementary notes by the analyst would report upon the physical movements of the subject during each hour. You would want at least some of these documents to present the results of accurate measuring devices which showed how some of the bodily changes actually varied throughout the interviews (the galvanic reflex, the couch movements, respiration, blood pressure, and various other phenomena can be recorded with great precision).³³

Lasswell knew this would be laborious, so, like Zinn, he would limit himself. He would “study certain selected individuals as intensively as possible by all known methods for the sake of obtaining exhaustive records.” As for transcription, he would do this by “invisible stenographer, or a mechanical recording device.”³⁴ Note that he was not yet committed to mechanical recording and assumed verbatim transcripts could be produced in other ways; what he insisted on was objectivity without human observers. He also speaks only of collecting words and says nothing about qualities of utterance and their symptomological significance.

In listing what he wanted besides speech, Lasswell was not frugal. He wanted the “psychoanalyst’s notes on the daily interview” and the “subject’s notes on the daily interview.” He wanted “specimens of the subject’s handwriting”—a topic Lasswell researched with University of Chicago freshman. He’d need a “physical and psychometrical examination record,” and, of course, he’d need outcome data.³⁵ In his best, clinical, agentless passive voice, Lasswell even proposed, “the rigidity or the flouncing of the subject on the couch should be

³⁵ Lasswell, 1929 op cit., 1057.
³⁶ Ibid. 1066.
In a Festschrift, a friend and former student poked at Lasswell’s early “infatuation with objectivity,” adding that this led him to use “cannons to kill flies.” Lasswell’s empiricism may be compared with the fervent “life history” data collectors in Chicago sociology. Thomas and Znaniecki's *The Polish Peasant*—a voluminous, data-heavy study of Polish migrants in Chicago—saw the very city of Chicago as bristling with facts, which demanded field-based observation. Personality was similarly a wellspring of facts.

The cannon Lasswell constructed during the 1929–1930 academic year required help from colleagues, especially the physiologists. Lasswell, who spent six months training under the eclectic Elton Mayo at Harvard in 1926–1927, shared the latter’s enthusiasm for somatic indicators of psychological states that could be measured quantitatively. In this somatic semiotics, one sought evidence of otherwise gauzy, abstract claims about mind—claims that behaviorists dismissed as backward and unscientific—by pin-pointing embodied indexes of interiority such as galvanic skin response, heart rate, and respiration. Lasswell would get to the bottom of analysis, which meant getting to the body. In his *Psychopathology and Politics* (1930), he recited the aphorism of the physician, from whom “no mortal can hide his secret,” for “he whose lips are silent chatters with his fingertips and betrays himself through all his pores.” As Lasswell would later argue, somatic measures reveal what speech “means,” clinically speaking. “The subject who listlessly says ‘Of course I hate my father’ is not by this act becoming aware of hitherto repressed hatred, nor is he showing that he has necessarily achieved insight into his father hatreds”; these words are but “avowals” that must be traced to physiological states.

Physiological indicators were privileged indexicals to which all other signs, including speech, should be linked. (Rebecca Lemov notes how Lasswell’s turn to the body anticipated the fusion of Freudianism and behaviorism synthesized in the 1930s at places like Yale’s Institute of Human Relations. His research epitomized a “subjective turn” in the social sciences in which one strained to spy the mind through the aperture of the body.) Speech did not have its own indexicality; only later did he extend this sensibility to discourse, as we shall see.

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47 Ibid. 1061.
Lasswell’s first trial took place in the Spring Quarter of 1930. Zinn engineered a naturalistic recording environment, yet Lasswell was content to remove only the human observers. His room resembled an intrusive lab, save for the obligatory couch on which the subject could recline. Lasswell sat behind a desk. Before free association began, psychologist and physician Richard Jenkins conducted a physical examination and physical anthropologist Wilton Krogman took anthropometrical measurements. As for the “verbatim record of each interview,” this was recorded mechanically with a “condenser microphone . . . to pick up the sound in the interviewing room,” sound “amplified and the recording done by special cutting heads on ordinary dictaphone rolls.” Lasswell didn’t bother hiding the microphone. For physiological measures, Lasswell enlisted the help of psychophysiologist Nathan Shock and benefited from technical assistance from Chester William Darrow and lie detector specialist Leonard Keeler. Lasswell himself would jot down “movements of the subject,” and, to synchronize these, “a time marker [would be] . . . used to make a signal on the moving film and in the acoustic machinery.”

In his utopian lab, itself a disciplinary melting pot, disciplines and data would mix and meld. His project was lauded as a paragon of cross-disciplinary inquiry (and, not inconsequentially, just the kind of project that the Laura Spelman Rockefeller Memorial Fund was eager to fund.)

Progress was slow. Five years passed before Lasswell’s research surfaced in print. In a 1935 article, Lasswell could finally respond to those “inclined to criticize psychoanalysis for the subjectivity of the reported data.” Here was a “rigorous” approach that offered “more precise recording and reporting.”

Sullivan was sympathetic to Lasswell’s research. In a proposal Sullivan submitted to Chicago, he outlined an initiative bolder than Lasswell’s. Besides an “apparatus for recording extensive interviews verbatim” and all the instruments for physiological recording, he included “photographic (including stereographic and cinematographic) equipment.”

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For Lasswell’s subjects rigor meant restraint and invasive monitoring. The patient had been fitted, for instance, with a pneumatic cuff above the left ankle, a pneumograph on the chest, a “special glove-like apparatus” on his left hand. The scene must have resembled that of the portable photopolygraph (Figure 1) developed by Darrow—a pioneer in psychophysiology who had helped Lasswell. Despite the set up, Lasswell played psychoanalyst.

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Sullivan was sympathetic to Lasswell’s research. In a proposal Sullivan submitted to Chicago, he outlined an initiative bolder than Lasswell’s. Besides an “apparatus for recording extensive interviews verbatim” and all the instruments for physiological recording, he included “photographic (including stereographic and cinematographic) equipment.” Pp. 1–2, “Proposal for a unit on personal social-synthesis,” Dr. Harry Stack Sullivan. Box 9, Folder 2. University of Chicago Special Collections.


Though he did not train in psychoanalysis as Zinn later did, he did get practice doing talk therapy under Mayo. Ibid. p. 19.
Lasswell never got his exhaustive account. For one, it wasn’t easy to record speech clearly and continuously—even without engineering a naturalistic setting. A year after starting, Chicago’s personality committee complained that its “present sound-recording apparatus [was] proving unreliable.” Noting Zinn’s success in “the only other verbatim recording experiment,” the committee proposed getting the same equipment Zinn was using. In early 1932 the SSRC began pressuring Lasswell to make progress and publish. In spring 1933 Lasswell asked for more money, arguing that his results seemed to “warrant the preparation of a book which will reprint illustrative interviews which are carefully edited and show how changes in verbal reference are connected with physical changes.” The next year he promised them a “brief manuscript.”

Growing impatient, the SSRC voted that Lasswell “wind up the present phase of the study and to prepare material for publication.” The “book” Lasswell envisioned in 1933 shrank to a “brief manuscript” in 1934 and then fragmented into articles. As with his research, Lasswell had to settle for less.

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59 Personality Committee Budget Recommendations, 1931–1932. Department of Anthropology Records, Box 9, Folder 1.
60 Memorandum to the Social Science Research Committee, 11 May 1933. Harold D. Lasswell. Social Science Research Committee Records, Box 15, Folder 23. University of Chicago Library.
61 The Prolonged Interview, Budget 1934–1935. Social Science Research Committee Records, Box 12, Folder 3. University of Chicago Library.
62 Social Science Research Committee Minutes, 24 April 1934. Social Science Research Committee Records, Box II, Folder 1. University of Chicago Library.
Incipient indexicalization in Zinn’s trove of transcripts

Zinn published nothing from his early trials and didn’t need to, though he freely shared advice on sound recording. In fall 1931 Zinn, who only had a Master’s degree, sailed to Europe to train for a year at the Berlin Psychoanalytic Institute, where he worked closely with Hanns Sachs and brought his transcripts to share with the Berlin group. When he returned, misfortune struck. Zinn’s donor Graves died on a boat set for the South Seas.

Zinn tried to access the moneys left by Grave, and after some legal wrangling, he got about half. But in the end he left New York in 1933 for a two-year research stint at Worcester State Hospital in Massachusetts. Not only did he propose recording an entire course of psychoanalysis—a goal that had apparently eluded him; he also aimed at a “thorough-going testing of the psychoanalytic hypothesis.” Now trained in psychoanalysis, Zinn would be the analyst.

Zinn focused on a single schizophrenic patient, a man in his early twenties who lived in a locked ward at the hospital and had to be escorted to and from Zinn’s office. His analysis lasted from autumn 1933 to early summer 1936. When Zinn left Worcester for Yale’s Institute of Human Relations (IHR) in late 1935, he had the patient transferred to Yale’s facilities. At Worcester Zinn had kept the recording a secret, disclosing it to the patient only upon his arrival at Yale.

Zinn participated in the IHR’s famous Monday seminars and sometimes shared his material with colleagues, but, to his frustration, he never managed to publish an analysis of his transcripts. In 1939, he let them go. Typists prepared four copies of his six-volume set of some 3,000 pages, titled, somewhat misleadingly, A Psychoanalytic Study of a Schizophrenic. This wasn’t a study

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65 Zinn did shorter recordings on a few others at Worcester and at Yale. His work was remembered by midcentury psychologists as pioneering but made no headlines at Worcester. Given the prevailing somatic view of mental illness, few thought talk alone could treat serious pathologies like schizophrenia. Zinn was also the only resident psychoanalyst during his stay and his research never made the hospital’s annual reports, even though chief psychologist and director of research David Shakow was sympathetic. During his stint, Zinn served as house analyst and allegedly logged several hundred hours with Shakow alone (David Shakow, "The Contributions of the Worcester State Hospital and Post-Hall Clark University to Psychoanalysis," in Psychoanalysis, Psychotherapy, and the New England Medical Scene, 1894–1944, ed. George Edmund Gifford [New York: Science History Publications/USA, 1978]:38.)
66 Shakow recounted that Zinn “used a microphone in the head of the couch which transmitted to a pair of Dictaphone machines in an adjacent room. His secretary serviced the machines and transcribed the cylinders after each session” (Shakow, 1978, op. cit., p. 81.) Zinn’s inventory of items shipped to Yale lists only one dictation machine, and given the success of his prior setup, it is likely that Zinn used the same apparatus from New York that featured a double-mandrel recorder. At Yale he placed an order for a second recorder. If he did link two recorders, it likely happened there.
but a trove of transcripts spanning 424 sessions. Save for a few that he summarized because of technical troubles, Zinn supplied the world with what he considered “raw data.”

As language-ideological artifacts, transcripts are unavoidably selective and betray how one conceptualizes discourse and interaction. In Zinn’s case his transcripts resembled a typical play-script format that chunked speech into speaking turns by using line breaks for turn boundaries. Participants were indicated most often by role categories, “A” for analyst, “P” for patient. Proper names were changed or redacted. Standard orthography was used, as Zinn wasn’t trained to follow the linguists and use a phonetics alphabet.

That Zinn’s transcripts reveal a degree of indexicalization is evident by the details he included. To observe transference and all the resistances that crop up, he transcribed behavior that did not contribute to denotational text.

Unusual behavior, such as laughter, weeping, shouting, etc., have been indicated parenthetically in the text where they occurred, as well as breaks in the flow of associations. These latter have been indicated as “pause”, “medium pause”, “long pause.”

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* Zinn, *op. cit.*, p. iii.
Zinn also flagged major kinesic behaviors and events: the lighting of cigarettes, the opening or closing of doors, noise from the hall. As for conventions, he was not consistent, perhaps because different secretaries did the work; perhaps also because he had to recycle his wax cylinders and hence couldn’t retranscribe recordings for consistency. It wasn’t clear, for example, how he evaluated pause lengths (judgment of transcriber, the result of measurement, some combination thereof?), and the conventions themselves sometimes varied. Some transcripts were improbably free of pauses, suggesting that someone forgot to transcribe them. In listing his transcription conventions, Zinn neglected to mention that he had also transcribed variation in speech delivery such as false starts, cut-off speech, and repetitions (e.g. “It’s about - about - it’s called”). Speech overlap, interpreted as “interruptions,” were usually indicated parenthetically. Even the contemplative response cry “hmm” occasionally appeared.

Zinn may have watched for counter-transference, but his own stream of communication seemed suspiciously fluid; pauses were seldom marked and never in a context that might reveal something psychological. A pause after offering the patient a cigarette betrayed little about Zinn’s psyche. False starts, repetitions, and dysfluencies were also indicated for the patient but rarely for the analyst and, again, never in a way that invited symptomological readings. Aside from this transcriptional asymmetry, Zinn tried to preserve symptomological details. It is

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Ibid. p. 1.

unclear what his transcripts from 1930 looked like, but his comments at the time suggest that indexicality was, at the very least, not a priority. The SSRC had also insisted that he only explore the feasibility of recording and transcription and not assess psychoanalysis. Yet Zinn’s six-volume set that began mid-decade and appeared at the decade’s close suggests a measure of indexicalization. His transcript preserved some indexical traces, even if there is little evidence that he actually analyzed these microscopically.

That Zinn began to draw out the indexical potential of mechanical recording is evident when, at the end, he expressed regret about everything he missed. “Complete objectification of the psychoanalytic procedure should include visual and auditory data in addition to verbal content. These constitute no small part of the total impression.” Zinn knew that there were traces of the communicative unconscious that he had missed. Zinn also had a hard time making their indexicality analytically legible, a problem compounded, no doubt, by the sheer volume of his collection. Time and again he expressed frustration at not having published an analysis. Other scholars—notably Carl Rogers, who stumbled upon Zinn’s work rather late—borrowed his volumes, two sets of which sat on shelves at Yale. In his preface, Zinn made a final promise to publish, but that never happened, and by the mid–40s Zinn left Yale, and the academy.

**Discourse indexicality in Lasswell’s late trials**

In a 1935 article entitled “Verbal References and Physiological Changes During the Psychoanalytic Interview,” Lasswell summarized tentative correlations between speech and body that suggested a more indexical orientation toward conversation. Slowed speech rate, for instance, was associated with increased psychophysiological tension (as measured through heart rate and galvanic skin response), an association that offered a window onto psychoanalytic process. Speech rate—a prosodic quality of speech—had become indexicalized. But it was in a 1938 programmatic methodological essay, after his research was over, that Lasswell’s indexical sensibility spread. He used his psychoanalytic studies to suggest methods for coding discourse that could be extended to “interpersonal relationships” tout court.7

Lasswell’s essay suggested a new if limited interest in the indexical dimensions of discourse. He had chased correlations between speech and body and had privileged the body as the matrix of meaning, yet now he seemed to recognize that speech had its own indexical signs. Of note were participant deictics like *I* and *you*, whose denotational meaning derives from the context of utterance. In contemporary parlance, deictic expressions are referential indexicals, but Lasswell seemed to realize that these could also have nonreferential indexical relevance (“nonreferential,” much as a perceived accent can index demographic facts about a speaker irrespective of what that speaker is talking “about.”) If a patient, for example, starts referencing the here-and-now therapy-event using deictics and refers ‘directly’ to the analyst, this may be clinically relevant.

71 Ibid. p. iii.
73 Harold D. Lasswell, "A Provisional Classification of Symbol Data," *Psychiatry* 1, no. 2 (1938):197.
The transcripts required for this discourse analysis would not need to be terribly detailed, because indexicality was not pervasive and evident in, say, the qualities of voice or vagaries of speech production. Lasswell never treated the transcript as an indexically saturated text, which would have required him to transcribe finely and pore over less discourse with more care.

**Indexical saturation in the postwar sciences of interaction**

There was little recording-based talk therapy research in the 1930s and a lot of it beginning in the postwar and early Cold War period, when American interest in psychoanalysis peaked. By midcentury many recorded and analyzed talk therapies, be it classical psychoanalysis or Rogerian client-centered psychotherapy. The newly founded National Institute of Mental Health funded much of this research, with some venturing from sound recording to sound-film. Psychoanalysis may have been the first form of discursive interaction to be recorded systematically in the 30s, but when the sciences of the face-to-face took off after the war, therapeutic interaction assumed a special place. By the 1940s and 50s talk therapy had become a familiar object of study, while also becoming, strangely, an instance of something else. Therapy was now a token of a type, “interaction,” as it was often called, which many midcentury social scientists came to think was its own reality. This was true for many of the American “small group” researchers. Often laboratory based, technophilic, and technocratic, these researchers claimed they could study any species of interaction, from chess matches to quarreling spouses. Elevated to the status of an abstract if not sui generis object of knowledge, interaction could manifest itself in any form and place—from cockpits to classrooms. Research on interaction was something of a postwar boom industry, and therapeutic interaction enjoyed a privileged place. That is, therapeutic interaction was not only one type of interaction but often an exemplar of interaction tout court.

For talk therapy research, mechanical recording became de rigueur. Analyzing interaction became a science of signs that required machines for recording and playback, even if the very sense of what it meant to secure knowledge this way had changed by the midcentury as indexicalization took hold in certain strains of interaction research.

The indexicalization of technosemiotic mediation that began during the course of Zinn and Lasswell’s recording efforts intensified beginning in the mid to late 1950s—again, in recording-


77 The names for this object of knowledge, which include “social interaction” and “interpersonal relations,” merit reflection, although there is no place here to dwell on their differences and the projects they served.

based research on talk therapy. *The First Five Minutes, A Sample of Microscopic Interview Analysis* epitomized this.\(^7\) Coauthor and linguist Charles Hockett had participated in an interdisciplinary sound-film initiative that began in 1955 at the Center for Advanced Study in the Behavioral Sciences (CASBS) in Palo Alto and concluded in 1968.\(^8\) The “Natural History of an Interview” (NHI), as it came to be called, had gathered linguists, psychoanalysts and psychiatrists, and anthropologists to collaborate on a “fine-grained analysis” of a short, filmed psychotherapeutic interaction. *The First Five Minutes*, which benefited from NIMH support, shared much with the CASBS initiative,\(^9\) except that it examined less data and used sound rather than sound-film.\(^10\)

As its title proclaims, *The First Five Minutes* limited itself to five minutes of psychotherapeutic interaction. It offered a self-consciously microscopic approach to interaction and treated the transcript as thoroughly indexically saturated. While conceding that even this transcript was incomplete—it only covered speech—this was, they wrote, “our best attempt to represent all those audible items that ordinary English spelling omits: the pronunciation of the successive words, the intonation, the location and duration of pauses, hems and haws, sighs, gasps, coughs and throat-clearings, and such variables as rate of speech, register, volume, and tone-quality” (see Figure 3).\(^11\) And while recognizing that therapeutic interaction was special in some ways, it could illuminate dyadic forms of interaction generally. Here was a contribution to the study of interaction generally and not only to therapy.

\(^9\) Although publication fell through, this five-volume work was microfilmed and stored at the University of Chicago. Norman A. McQuown, ed. *The Natural History of an Interview*, Microfilm Collection of Manuscripts on Cultural Anthropology (Chicago: University of Chicago Library, 1971).
Mechanical recording was no longer a means to ensure non-intrusive mechanical objectivity. Interaction analysis was unimaginable without machines, for only through such methods could one be faithful to the indexical plenitude of life. Every tic, every aborted sentence, every interruption demanded inspection. The result was a lopsided book that treated snippets of speech to copious exegesis. One reviewer raised an eyebrow at a four second pause unpacked with a 40-word commentary for the patient and 45 for the therapist.  

Indexicalization and microscopic analysis were intimately related. Zinn wanted “quantity” to see the whole arc of analysis, and while Lasswell never reached Zinn, he, too, chased quantity; after all, Lasswell called his study that of the “prolonged” psychoanalytic interview. Quantity didn’t matter in *The First Five Minutes*. Rather than compare reams of transcripts, this book sampled a swatch whose threads were teased apart and magnified. Militantly naturalistic, the coauthors defended this diminution in part by railing against the “overweening drive for quick nomothetic 

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84 Ibid. p. 23.

results of high statistical reliability, whatever the cost in relevance.” They protested the processing of human subjects in “batches.” They pointedly shrunk interaction to show what could be learned from a narrow band of life. One could learn a lot from so little due to indexical saturation. A correlation: the more indexically saturated interaction was, the less discourse one could examine. Interaction could shrink till it asymptotically approached a singularity: a proverbial grain of sand that reveals, hopefully, a world.

This diminution of data was surely also a practical concession to the demands of microscopy. It was hard to look this closely. The challenges of this labor recall that of Zinn and Lasswell, who expressed frustration with their progress. Before he began, Lasswell confessed that “the bulk of a verbatim report of an hour’s conversation per day over several months is almost overwhelming” but insisted that just as historians are “accustomed to plow through whole libraries of pages about Napoleon or Bismarck,” so he would persevere. (Compare with Zinn’s trepidation, when he wrote that this is “the best sense I can make of this welter of complexity.”) Lasswell also sensed something more unsettling.

. . . [T]he phenomena which are discernible at any cross-section of the personality are inexhaustible. If the observer tries to enumerate all the body movements, all the electronic gyrations, all the nuances of social adjustment which are thinkable in such a cross-section, he is likely to become lost in aimless classification. Such an observer is quite likely to prove unable to discover hypotheses about the connections between one variable and another."

Recalling ethnomethodologist and interactionist Harold Garfinkel, we may speak of Lasswell’s fear as the haunt of the plenum, the inexhaustible ‘fullness’ of reality imagined to loom at the edge of the empiricist’s categories and methods. Like the “great, blooming, buzzing confusion” of concrete experience that William James famously imputed to infants, Lasswell feared an elemental state of near infinite complexity that his empiricism had to hold at bay. As a safeguard he would set up a perimeter. After all, how could something bounded in time and space—an interview in a lab, bookended with a beginning and end, inscribed on wax cylinders and other instruments—become unmanageable? The spatiotemporal containment he engineered and moat of colleagues he gathered around him to study “the same” thing fostered the expectation that he should be able to contain the threat of the plenum. Even so, he recognized the need for disciplined if not blinkered observation. As Lasswell proposed finally in 1938, the best

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86 Pittenger, 1960, op. cit., p. 211.
87 Lasswell, 1930, op cit., 139.
88 Zinn, op. cit., p. vi.
discipline was to go thin, to develop highly schematic coding systems to test hypotheses and avoid getting lost in the blooming, buzzing fullness of interpersonal reality.

_The First Five Minutes_’ tactic for handling the plenum was to shrink interaction much, much more. Indexical saturation ran so deep that five minutes would suffice and could, in fact, still overwhelm you. “One fears and avoids direct encounter with human behavior, in all its incredible complexity, as one would shun a Gorgon’s glance,” the coauthors wrote.

It is true that the more directly and intently we examine the behavior of single human beings, the more complexity we see. A single glimpse in sharp focus can make the investigator stand aghast, if not petrified; he may decide, for the sake of his own ego, not to look again. But if he can persevere, in due time he discovers that the complexity, no matter how incredible, is not random but _patterned_. The members of any single human community share literally thousands of behavioral conventions which are as dominant as our rule of keeping to the right [on the road], but which are much more subtle than that because they are learned, acted, responded to, and taught almost entirely out of awareness.

Like the indexicalized transcript and the recorder that helped produce it, here was an indexically saturated view of interaction. Too fast and subtle to be grasped in real-time, interaction could only be known after the fact, with recordings. This technosemiotics differed from that of projective tests (e.g. Rorschach, Thematic Apperception), which also promised access to an unconscious, as it were. As Lemov details, projective tests, which were enormously popular in midcentury American social sciences, could slice through exteriors like an X-Ray to reveal “what the individual does not want to tell . . . and what he himself does not know.” For projective tests to grant epistemic access to interiors, one elicited behavior using an experimental stimulus, such as by getting a subject to find form in an amorphous inkblot. By contrast, the multimodal semiotics of interaction epitomized by _The First Five Minutes_ assumed that the unconscious was _immanent_ in communication. It was waiting to be transcribed. It needed no cause to show itself.

Methodologically, one problem with this technosemiotic microanalysis was that less really was more. The more indexically saturated the transcript, the more meticulously one had to transcribe. Norman McQuown, another linguist from the NHI project, spelled out in 1957 just how painstaking microanalysis could be. “[A]bout 120 hours were required to transcribe phonetically the first half-hour of the interview,” he reported, and another “20 hours to retranscribe a fifth of

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“Pittenger, 1960, _op. cit._, p. 211.
“ibid. 212. Although they speak of tacit, group-relative, sociocultural conventions, the analysis tends to trace signs to speaker interiority (e.g. emotion) and interpersonal meaning without establishing that these signs are conventional.
“Lemov, Rebecca, "X-Rays of Inner Worlds: The Mid-Twentieth-Century American Projective Test Movement.":257; see also Lemov 2015, _op cit._
this material and analyze it functionally.” And this was just transcription. Indeed, “five minutes is a very large sample,” The First Five Minutes coauthors wrote, that “[f]or this kind of study, a few seconds is a more common sample.”

Even with so little, the coauthors never interpretively touched bottom—as suggested by their searching, painstaking exegesis. Anything, after all, could potentially reveal something about a speaker, so what is—and, crucially, what isn’t—indexical? And even if you suspected that a sign was indexically relevant, this alone wasn’t terribly informative; it was often no mean hermeneutic feat to show what an index “really” pointed to. Peirce was acutely aware of this problem, as was psychoanalytic hermeneutics. A 1938 essay on silence, for instance, reminded analysts that silence could not be assumed to be a sign of resistance, for instance. It may index an “acting out of the silent behavior of the analyst” at one moment, an “expression of anal obstinacy and anal aggression” at another.

Reducing transcription to five minutes was an understandable response to indexical saturation. Less transcription should make microscopy manageable, even if it could never dispel the sense that more indexicality lurked. And if you couldn’t put your finger on the communicative unconscious, perhaps you needed to look more finely, some felt. An analogous cycle of frustration and intensified microscopy appears in Wilf’s study of jazz pedagogy. When students slowed playback of a master’s difficult passage, this would ironically increase acoustic complexity and make it more challenging to imitate; this frequently incited closer listening in a dynamic of “asymptotic approximation” in which they could never quite reach the source. Here, it was perhaps more common to complain not about insufficient transcriptional granularity but insufficient indexical fidelity. Richer recordings were needed. “The fullest sort of observational procedure” would be “... a film with not only a sound track but also an olfactory track, a taste track, and a touch track. There can be no question but that human beings communicate via all these sensory modalities.”

Apart from the productive tensions of this microanalytic methodology, we should observe the ascent of indexicality and its technosemiotic bundling of needs: one needs mechanical recording for accuracy qua indexical fidelity; to exploit this accuracy one needs an indexically faithful

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Footnotes:


98. Wilf, op. cit., 137.

transcript; one needs “fine-grained,” “microscopic” analysis to grasp this indexicality.26 And for such fine-grained analysis to succeed, one should keep observation small—a move motivated by indexical saturation and by the need to contain the threat of the plenum.

**Conclusion**

The midcentury indexicalization epitomized by *The First Five Minutes* had lasting effects on many sciences of the face-to-face.27 To be sure, only some midcentury interactionists argued for microscopic methods and maintained such a feverishly indexicalized view of recording and transcription, but increasingly interactionists of all stripes came to think that mechanical recording and transcript-based analysis were indispensable.

The indexicalization of technosemiotic mediation here was facilitated by mechanical objectivity but not inspired by it. It was inspired instead by the idea of a communicative unconscious that came from a dialogue and division of labor between psychiatry and communication science. What psychoanalysis classically imagined as the unconscious began to expand the imagination of communication science as early as the mid–1920s and spark interest in epistemic uses of recording technologies. As the influential “interpersonal” psychiatrist Harry Stack Sullivan once proposed, “much attention may profitably be paid to the telltale aspects of intonation, rate of speech, difficulty in enunciation, and so on and so forth,” for “[i]t is by alertness to the importance of these many things as signs or indicators of meaning, rather than by preoccupation only with the words spoken, that the psychiatric interview becomes practical” (emphasis mine).28 This indexicalization came slowly and fitfully and on the back of mechanical objectivity. By midcentury influential communication scientists could claim to have operationalized the unconscious as tacit communication that eludes casual monitoring. This required capturing new communicative details like volume and voice quality, which were being consolidated under a branch of postwar linguistic science that George Trager dubbed *paralanguage*. Nonverbal behavior—or *kinesics*, as Ray Birdwhistell called it—complemented this as talk therapy researchers

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26 Looking at less and less discourse more and more finely makes it easy to imagine that interaction is intrinsically a “micro”-level order of social reality. Most interactionist traditions came to assume this, an assumption that persists in traditions that range from Conversation Analysis in Sociology to Interactional Sociolinguistics in Linguistics. On the disciplinary scaling of objects of knowledge, see E. Summerson Carr and Michael Lempert, *Scale: Discourse and Dimensions of Social Life* (Oakland: University of California Press, 2016), introduction. On interaction in particular, see Chapter 2.


experimented with sound-film.\textsuperscript{103} Trager and Birdwhistell belonged to a network of psychiatrists, linguists, and anthropologists that produced a multimodal semiotics of human interaction that demanded recording technologies for their indexical fidelity. As for the close relations between psychiatry and communication science, we may recall that two influential midcentury interactionists, sociologists Erving Goffman and Harold Garfinkel, did important early research in mental health institutions.\textsuperscript{104} But more relevant for the stream of microanalysis discussed here is the network of psychiatrists and social scientists that gathered at NHI. Stretching well beyond CASBS and lasting until the late 60s, NHI influenced generations of interaction researchers through such microanalysts as Albert Scheflen and Ray Birdwhistell at the Eastern Pennsylvania Psychiatric Institute and Henry Brosin, William Condon, and others at Western Psychiatric Institute and Clinic.\textsuperscript{105} On the West Coast, Bateson’s Palo Alto group used film to explore schizophrenia as a communicative pathology.\textsuperscript{106}

When it came to knowing the communicative unconscious, it was not the indexical receptivity of recording machines that initially lit the way but that of the observant psychoanalyst. As the entanglement of psychiatry and the communication sciences thickened, human and nonhuman recorders became comparable in their indexical receptivity—as did the figures of psychoanalyst and fine-grained interaction analyst. Likened through their dialogue, these figures were comparably skilled in reading indexical signs.\textsuperscript{107} People imagined then—as they continue to—that interaction researchers and talk-therapy clinicians share a preternatural semiotic receptivity. One requires recording machines; the other, at least in principle, does not. In his memorial for the psychoanalyst Frieda Fromm-Reichmann, who had helped spearhead the NHI collaboration, anthropologist and fellow participant Gregory Bateson wrote of her “extraordinary sensitivity to the overtones and nuances of human behavior,” even though “she felt insufficiently conscious of


\textsuperscript{104} Erving Goffman has a complicated place in this history, because he rejected mechanical recording and transcription along with the technophilic and technocratic aspects of what were then the dominant traditions of interaction analysis.

\textsuperscript{105} On the importance of NHI for interactional microanalysis, see Adam Kendon, \textit{Conducting Interaction: Patterns of Behavior in Focused Encounters} (Cambridge: Cambridge University Press, 1990): Ch. 2.

\textsuperscript{106} On Bateson’s technosemiotic research on the family, see Bernard Dionysius Geoghegan, "The Family as Machine: Film, Infrastructure, and Cybernetic Kinship in Suburban America," \textit{Grey Room} 66 (2017):70–101. Bateson later expressed regret: “‘it was from psychiatry that we got our money, and we let ourselves be strongly and disastrously influenced by the need to apply our science in that field.’” Cited in Carol Wilder, "The Palo Alto Group: Difficulties and Directions of the Interactional View for Human Communication Research," \textit{Human Communication Research} 5, no. 2 (1979):171.

\textsuperscript{107} Compare with Miyako Inoue’s writings on stenography and subject formation in late nineteenth and early twentieth century Japan, where she traces how gendered, technoscientific practices of transcription helped produce linguistic modernity. Miyako Inoue, "Stenography and Ventriloquism in Late Nineteenth Century Japan," \textit{Language & Communication} 31, no. 3 (2011):181–190.
the actual nonverbal cues from which she arrived at her conclusions.”' Echoing an aim of the NHI project that Fromm-Reichmann had led, Bateson suggested that technosemiotic mediation could make explicit her virtuosic sensitivity. Shortly before NHI, Fromm-Reichmann had conducted an exploratory study on “intuition” at Chestnut Lodge sanitarium. Using recording and transcription, she had hoped to pinpoint her communicative sources of clinical inference. In convening NHI in 1955, she turned to communication scientists for help.

Interaction microanalysts and their partners in psychiatry argued with one voice that recording-based science could improve clinical practice. Consider this in relation to the architecture of The First Five Minutes. The book featured an unusual “dutch door”-design in which the upper half was cut and separated from the lower, allowing each to swing open independently; the top held the transcript, the bottom, the analysis (see Figure 3). This meant that readers could experience interaction separately from analysis. This design, coupled with the original recordings that were supplied to clinical professionals along with the book, was immersive and pedagogical. Observation could “educate the senses,” in a strong sense.' By the midcentury many talk-therapy recording enthusiasts would argue that exposure to sound and especially sound-film was valuable for clinical training, especially since training continued to be hamstrung by the inability to observe dyadic therapy directly--again, because of a presumed observer effect. One 1950 essay argued for the vicarious experience of indexicality: “in the teaching of psychotherapy...it is important that every inflection of the voice, every whisper, yawn, sigh, slight and almost imperceptible dropping or raising of the voice be recorded with lifelike quality.” Another essay touted the benefits of listening repeatedly to five-minute-long segments, for by “tuning in to the subtleties of interaction” the clinician can cultivate “empathic capacity.”

By acting, in effect, like the fine-grained analyst, the clinician could in this way cultivate indexical receptivity. Recording-based analysis was not only an epistemological prosthesis but a pedagogy for the clinical sensorium. It could ensure that clinicians catch symptoms and make sound diagnostic inferences. We may recall how even as Freud eschewed recording, he occasionally used technological tropes that thematized human receptivity. The analyst “must adjust himself to the patient as a telephone receiver is adjusted to the transmitting microphone.”

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110 This observer effect was not left unquestioned. See, for example, Rae Shifrin Sternberg, Jean Chapman, and David Shakow, "Psychotherapy Research and the Problem of Intrusions on Privacy," Psychiatry XXI (1958):195–203.
Recording enthusiasts literalized Freud’s trope, in a way. Those with one or both feet on the talk-therapeutic side of the cross-disciplinary dialogue continued to pay deference to the faculties of virtuosic humans, even as they conceded the importance of recording-based audition and analysis. “Many researchers do not have Freud's sensitivity to hidden facts in mental life,” one essay acknowledged. “Such people can understand only when the small voice of the unconscious is, so to say, amplified.” Those on the communication science side were less sanguine about the unaided sensorium but shared the belief that full receptivity of the unconscious was possible—with machines. They used technologically mediated observation to make the fine-grained social-science analyst into a maximally sensitive “receiver”—the apotheosis of the psychoanalyst. In this sense, the midcentury technosemiotic analysis of interaction made material the receptivity prescribed by Freud. Stated in reverse, the clinical virtue of indexical receptivity insinuated itself into talk therapy research, creating the fine-grained analyst in the psychoanalyst’s image. This virtue of receptivity, along with paired notions like the communicative unconscious, offered a sense of how to know interpersonal relations. It was if these two analysts—the psychoanalytic and the fine-grained—were themselves face-to-face, and sometimes it was unclear who was analyzing whom.

Marving at the hybridity, or, worse, trying to tease out which elements belong to which field in an effort to establish provenance and chronicle disciplinary interaction, is not my point. Instead, I have detailed how this amalgam called interaction, with its changing epistemic dependencies on recording machines, came into being through an historically fitful and fraught process of indexicalization. This indexicalization was facilitated but not caused by mechanical objectivity. Indexicalization was afforded by the same media technologies introduced to get objective records unintrusively. These medial machines and transcripts were not originally designed to allow nature—here the nature of human interaction—to speak directly. Only slowly, painstakingly, through the lure of an immanent communicative unconscious and the possibility of capturing its traces by a combination of human and nonhuman faculties, did mechanical objectivity and indexical inscription converge and “indexical media” become fused.

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