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Discourse Networks
1800 / 1900

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Technological Media

A medium is a medium is a medium. As the sentence says, there is no difference between occult and technological media. Their truth is fatality, their field the unconscious. And because the unconscious never finds an illusory belief, the unconscious can only be stored.

In the discourse network of 1900, psychophysical experiments were incorporated as so many random generators that produce discourses without sense or thought. The ordinary, purposeful use of language—so-called communication with others—is excluded. Syllabic hodgepodge and automatic writing, the language of children and the insane—none of it is meant for understanding ears or eyes; all of it takes the quickest path from experimental conditions to data storage. Good, old-fashioned handwriting is the storage mechanism for automatic writing, with the slight modification that Gertrude Stein watches her hands like separate machines with a modicum of curiosity rather than commanding them to write particular signs.¹ In other cases, deposition into writing is impossible, because the random generators produce effects only at extremely high speeds. Automatic writing and reading already exhibit a tendency toward increasing speed: the tempo of dictation races ahead of the hands, that of reading exceeds the articulating organs.² Thus, in order to retain anything at all, psychophysics had to join with the new media that revolutionized optics and acoustics circa 1900. These, of course, are Edison's two great innovations: film and the gramophone.

The long process that culminated in the Lumières' cinematographs was dictated by the technical-industrial necessity of surpassing the human eye's limited capability to process single images. The birth of film was attended by Eadweard J. Muybridge's serial photographs, Etienne-Jules Marey and G. E. J. Demeny's photographic gun, and Johann Heinrich Ernemann's slow-motion photography. The gramophone also depended on being able to function at speeds slower than people can talk. It could not have been invented—contemporaries were wrong about this¹—before Jean-Baptiste-Joseph Fourier's mathematical analyses of amplitude or Helmholtz's studies in physiological acoustics. The technical simulation of both optical and acoustical processes presupposed analyses made possible by the speed of the apparatuses themselves. Voice reproduction required a frequency band between 90 and 1,200 Hertz even for the fundamental tones; studies of body movements required illumination speeds in the realm of milliseconds.

The ability to record sense data technologically shifted the entire discourse network circa 1900. For the first time in history, writing ceased to be synonymous with the serial storage of data. The technological record-
ning of the real entered into competition with the symbolic registration of the Symbolic. The wonderfully super-elevated Edison whom Philippe Viliers de l'Isle-Adam made the hero of his Tomorrow's Eve concisely formulated the new development. Musing among his devices and apparatuses, he begins a monologue, ignored by literary theorists, that will bring Lessing's Laocoon up to date in 1886.

The Word Made Flesh paid little attention to the exterior and sensible parts either of writing or of speech. He wrote on only one occasion, and then on the ground. No doubt he valued, in the speaking of a word, only the indefinable beyondness with which personal magnetism inspired by faith can fill a word the moment it pronounces it. Who knows if all the rest isn't trivial by comparison? Still, the fact remains, He allowed men only to print his testament, not to put it on the phonograph. Otherwise, instead of saying, "Read the Holy Scriptures," we would be saying, "Listen to the Sacred Vibrations."

Believers in the Book were prohibited in the name of their Lord from celebrating the exteriority and sensuality of the word and scripture. The permitted medium of printing made it possible to bypass signs for sense, the "beyond" of the senses. Only under the counter-command "Hear the sacred vibrations!" does the symbolic registration of the Symbolic lose its monopoly. Vibrations, even in God's voice, are frequencies far below the threshold of perception and notation for single movements. Neither the Bible nor the primer can record them. Therefore, phonograph's Papa, as Edison is known in the novel, rethinks the sacred itself. He dreams of ideal phonographs capable of registering the "oracles of Dodona" and "chants of the Sybils" (to say nothing of pure "noise") in indestructible recordings for "sonorous archives of copper."4 The dreams of an American engineer dreamed by a French symbolist come quite close to the strange occurrences in Münsterberg's laboratory. What the student as medium could hardly note down for all her psychotechnical ecstasy is caught by the gramophone as medium—the murmuring and whispering of unconscious oracles.

But not all women of 1900, as oracles or students, were abreast of their age and technology. Among the Germans there were still feminine readers. Anna Pomke, "a timid, well brought-up girl," can only regret "that the phonograph was not invented in 1800." For, as she confesses to a favorite professor: "I would so much like to have heard Goethe's voice! He was said to have such a beautiful vocal organ, and everything he said was so meaningful. Oh, if only he had been able to speak into the gramophone! Oh! Oh!"5 Among the believers in culture, holy vibrations are not sibylline whisperings but the tone and content of a voice that has long delighted feminine readers in the imaginary and that must now do so in the real. A loving professor, however, could not resist that sigh of longing and the wish to modernize a love of books. Abnossah Pschorr sneaks into the cemetery, makes a secret mold of Goethe's skeleton, reconstructs the larynx, wires it to a phonograph, and puts together this fine composite of physiology and technology in the office of the Goethe House. For "whenever Goethe spoke, his voice created vibrations," whose reverberations "become weaker with the passage of time, but which cannot actually cease." To filter the sound of Goethe's voice out of the noise of all the discourse that had occurred, one fed impulses into a "receiving organ" that simulated his larynx, with the help of an amplification device that was brand-new in 1916.6 Accordingly, Salomo Friedlaender's story is called "Goethe Speaks into the Gramophone." The story has a sad and logical ending: no engine can stand having women love not the invention itself but its output. In jealous competition between media, Professor Pschorr destroys the only recording of the beautiful, monstrous, and absent voice that in 1800 commanded an entire discourse network.

A roll capable of recording Dodonian oracles, a roll capable simply of recording the poet: those were the writer's dreams in 1900. The lyric poet and feuilletonist, bohemian and amateur, who came up with the technical principle of the phonograph in 1877, gathered all these dreams in verse under the significant title Inscription.

Comme les traits dans les camées
J'ai voulu que les voix aimées
Soient un bien, qu'on garde à jamais,
Et puissent répéter le rêve
Musical de l'heure trop brève;
Le temps veut fuir, je le soumet.

Like the faces in cameos
I wanted beloved voices
To be a fortune which one keeps forever,
And which can repeat the musical
Dream of the too short hour;
Time would flee, I subdue it.7

But Charles Cros, the writer, only pointed toward the phonograph and never built it. The deeds of Edison, the practical man, are more profane, less erotic, and more forgettable than writers' dreams or novelistic fantasies. Precisely that is their greatness. The phonograph and the typewriter exist for the same reason. Edison was nearly deaf, and the blind were foremost among the builders of typewriters. Media, like psychophysical experiments, begin with a physiological deficiency. The very first tin-foil roll to record a voice, on December 6, 1877, registered the shouts of its inventor, a voice that remained distant and unreachable to his actual ears. Edison roared "Mary Had a Little Lamb" into the phonograph's bell-mouth.8

The history of sound recording did not begin with oracles or poets, but
with children's songs, though in the roar of a deaf and childish engine. In 1888, however, when his gramophone had just gone into mass production, Edison began to market dolls in which the speech roll had been recorded by young girls. Again one heard—the hit among twelve choices—"Mary Had a Little Lamb," but this time as a child's song sung by a child. When Villiers, with a symbolist's love of oracles and sibyls, had Edison listen via stereophonic recording and playback devices to his young daughter sing "ring-around-a-rosy" in front of the laboratory, he approached the engineer's profane illumination.13

Talking dolls also mark the turning point between two discourse networks. Kempelen's and Maelzel's mechanical children of 1778 and 1823 repeated the minimal signifiers of loving parents for those parents. Circa 1800 there was no child's language independent of pedagogical feedback. In the Edison talking doll, by contrast, real children sang children's songs about little Marys and their lambs. The century of the child began with such self-relatedness, unreachable by any Mama/Papa psychology.

According to Ellen Key, The Century of the Child brought an end to "soul murder" in school. Instead of establishing pedagogical norms for what should be spoken by children, one gave free reign to language games. But these standards (in spite of all child's-century oracles) were technological from the beginning. There cannot be any children's language unfiltered through the language of adults until discourses can be recorded in their positive reality. The classical pedagogical dream of forming adults with analytic, slow-motion pronunciation—walking phoneme archives for their children—became obsolete. Edison's invention was not called a phonograph for nothing: it registers real sounds rather than translating them into phonemic equivalences as an alphabet does. Emile Berliner's more modern device, which replaced rolls with records, was not called a gramophone for nothing: true to its name, it retains "the sounds of letters" and has a writing angel as its trademark.13

Technologically possible manipulations determine what in fact can become a discourse.14 The phonograph and gramophone allow slow-motion studies of single sounds far below the perception threshold of even Stephanie's ideal mothers. Though the frequency bandwidth possible circa 1900 could not match the entire speech spectrum and particularly distorted s-sounds (with frequencies up to 6kHz), this was not a handicap. The talking machine moved into laboratories and schools very soon after its invention. In laboratories its very distortions made it possible to measure hearing. In schools it was useful because "it is essential for achieving an accurate impression of the most fleeting, unrepresentable, and yet so important, characteristic aspects of language, of line phonetics (speech melody) and of line rhythm," whereas (because of its accurate recording) it "is not suited for pure pronunciation practice." Thus wrote Ernst Surkamp, publisher of a journal that is nearly impossible to locate today, Instruction and Talking Machines—as if any further demonstration that the epoch of High German phonetic norms is past were necessary. Of course, talking machines can create "a store of readily accessible language sounds in exemplary, faultless accent" and dictatorially inscribe schoolchildren with language sounds or universal keyboards. But they can do more and different things. To the student Rilke, whose physics teacher had his students reconstruct and experiment with a phonograph that he had acquired as soon as the machine was on the market, the registered sounds opened "as it were, a new and infinitely delicate point in the texture of reality." The fact that a purely empirical phonetics (in rigorous distinction to phonology) suddenly became possible led to storing real phenomena according to technical standards rather than to regulating them according to educational norms. One could record the wild army that Nietzsche despised of ever getting down. Because "dialects in schools deserve every possible encouragement, the talking machine can be effective in that its undistorted oral presentations nourish one's delight in a native language."15

In the discourse network of 1900, media rehabilitated dialects, those of groups like those of children. Not the delight of the subjects but the delight of the researcher came to power. In the absence of normativization, this delight brought to light discourses that previously had never passed a recording threshold—"a new and infinitely delicate point in the texture of reality."

On the second German Art-Education Day in Herder's Weimar, a speaker dismissed the unified language that for a hundred years had ruled over teachers and students.

The school-age child brings his own language to school, his native language, his family language, the language of his playmates, his own naive, intuitive language: our task and our desire is to teach him our language, the language of our poets and thinkers. . . . But isn't it asking a great deal when we demand that children, from the first day of school, speak nothing but school language? . . . It is not long before the children will be overtaken by books and book language: a child learns to read. Reading, however, weakens and cuts across—it cannot be otherwise—the child's coherent, fluent speech, and book language begins more and more to
influence and control school language; finally, in its often foreign and refined way, it creates a child who is now shy and monosyllabic.\textsuperscript{20}

This speaker admits that book language represents a never-spoken exception and impedes actual speech. The most fluent speaker is the one who, like children or the writer of \textit{Ecce Homo}, never reads a line. Therefore progressive pedagogues can only compete with the media. Like the bell of a recording phonograph, they absorb every freely flowing word, every native pun of children’s dialects.

Christian Morgenstern, the child of German letters, immediately recognized and exploited this development. Even if he was later to declare in mediocre verse that the gramophone was the work of the devil—before his master, Rudolf Steiner, said the same thing\textsuperscript{21}—his heroes knew better.

\begin{quote}
Korf und Palmström nehmen Lektionen,
um das Wetter-Wendische zu lernen.
Täglich pilgern sie zu den modernen
Ollendorffschen Sprachlehrgrammophonen.
\end{quote}

\begin{quote}
Dort nun lassen sie mit vielen andern,
welche gleichfalls steile Charaktere
(gleich als obs ein Ziel für Edle wäre),
sich im Wetter-Wendischen bewandern.
\end{quote}

\begin{quote}
Dies Idiom behebt den Geist der Schwere,
macht sie unster, launisch und choleraisch . . .
Doch die Sache bleibt nur peripherisch.
Und sie werden wieder—Charaktere.
\end{quote}

Korf and Palmström are taking lessons
From Ollendorff’s didactic gramophones;
To learn Weather-Wendish’s grammar and tone,
They wander hence for daily sessions.

\begin{quote}
There they put with all the rest,
Who are stiff characters, too, it seems,
(the place attracts elite esteem)
Their Weather-Wendish to the test.
The idiom tends to untie fettets,
Make people moody, things look dismal,
But still it all remains peripheral,
and they revert once more—to characters.\textsuperscript{22}
\end{quote}

This poem, entitled “Language Studies,” may be an exact description—except that Surkamp would be a more appropriate name than Ollendorff. Heinrich Ollendorff’s method of language instruction emphasized conversation more than the rules of grammar, but Surkamp’s company had at the time a near-monopoly on language-instructional gramophones and strongly encouraged dialects in the schools. In 1913 Korf and Palmström could choose among more than a thousand instructional records. The fact that they chose Weather-Wendish legitimately established the new status of dialects as an autonomy of “naive and intuitive” children’s language.\textsuperscript{23} The play on ethnography and weather reports is like the children’s puns and jokes that were recorded by the psychologist Stanley Hall.

Words, in connection with rhyme, rhythm, alliteration, cadence, etc., or even without these, simply as sound-pictures, often absorb the attention of children, and yield them a really aesthetic pleasure either quite independently of their meaning or to the utter bewilderment of it. They hear fancied words in noises and sounds of nature and animals, and are persistent puffers. As butterflies make butter or eat it or give it by squeezing, so grasshoppers give grass, bees give heads and beans, kittens grow on the pussy-willow, and all honey is from honeysuckles, and even a poplin dress is made of poplar-trees.\textsuperscript{24}

. . . and so on and so forth, until even the Wends speak Weather-Wendish. Their fantastical Slavic has its grave opposite in what the art-educators designated as the weakening, intimidating high idiom. Either there are characters, individuals, and the one norm, or gramophonics raises all the unstable, capricious changes in speech to the level of standards. Then “there is in fact no reason, as long as one recognizes Wendish as a language, that the same recognition should not be extended to Weather-Wendish.”\textsuperscript{25}

Korf and Palmström, of course, broke off their gramophone studies and became characters—that is, and not only in Greek, letters once more. Morgenstern’s simulated children’s language remained high idiom, written language, which quickly made its way into children’s readers and dissertations.\textsuperscript{26} Discourses that had previously never been able to cross a recording threshold were stored and returned; the gramophone had paid its debt.

But heroes in poems were not the only ones to discover the talking machine. Those who wrote poems were also tempted to give it a try. In 1897 the Wilhelmine poet laureate, Ernst von Wildenbruch, was probably the first German writer to record his voice on a wax roll. (His Kaiser had long since preceded him.) Wildenbruch wrote a poem expressly for the occasion, “For the Phonographic Recording of His Voice”; the history of its transmission says it all. The \textit{Collected Works} did not collect it; Walter Bruch, who as the inventor of the PAL television system had access to archives of historical recordings, had to transcribe the verses from the roll. They will be quoted here in a form that will horrify poets, composers, and Germanists.

\textsuperscript{2} \textit{Wendisch} is the language of the Wends, a Slavic group that once inhabited parts of eastern Germany. [Trans.]
Shapes can constrain the human visage, the eye be held fast in an image, only the voice, born in breath, bodiless dies and flies off.

The fawning face can deceive the eye, the sound of the voice can never lie, thus to me is the phonograph the soul’s own true photograph, which brings what is hidden to light and forces the past to speak. Hear then, for in this sound you will look into the soul of Ernst von Wildenbruch.16

A copious writer, Wildenbruch did not always rhyme so poorly. But in the moment he took leave of the Gutenberg galaxy, he was overcome by written language. As if in Gertrude Stein’s dark oracle, an inevitability appears and does away with all poetic freedoms. Wildenbruch had to talk into a black phonographic speaker, which stored pure sounds rather than his words and notions. Of course, the voice did not cease being born in breath; it retains the vibration fundamental to classical-romantic lyric poetry; but—and this is too empirical or trivial a fact for Foucault’s grandly styled history of discourse—the voice can no longer be pure poetic breath that vanishes even as it is heard and leaves no trace. What once necessarily escaped becomes inescapable; the bodiless becomes material.

The gramophone is not quite as volatile, capricious, and secondary as Korf and Palmström thought. The lyric poet Wildenbruch reacted like a rat in a test labyrinth. His musings on physiognomy and photography, which allow their subjects cunning countermeasures and escape hatches, circumscribe only the optical medium that he was familiar with: writing. When the phonograph forces the hidden to speak, however, it sets a trap for speakers. With it, speakers are not identified in the symbolic with a name, or in the imaginary by hero-reader identifications, but in the real. And that is not child’s play. Wildenbruch alluded to the symbolic and imaginary registers when he coupled the sound of the poem with his own noble proper name and a look into his poetic soul in order not to speak of the real, the speaking body.

Herder dreamed long before Anna Pomke of an improved “reading and notational system” in which one “will probably also find a way of designating the characteristic substance and tone of a lyric piece.”22 With the gramophone’s capacity to record lyric poetry, the dream becomes at once reality and nightmare. It is one thing to write proudly about the phonographic recording of all voices, as Charles Cros did; it is another thing to write, as Wildenbruch did, “For the Phonographic Recording of His Voice” and then to have to speak it. What good are the poetic mnemonic techniques of rhyme and meter when wax rolls can store not only substance and tone but real sounds? Like Alfred Débien’s defiant motto, “Not phonography, but art,”28 Wildenbruch’s poetaster rhymes bear witness to an embittered competition between poetry and technological media.

Sound is a complex of physiological data that are impossible to put into writing or to counterfeit. In the discourse network of 1900, psychophysics and media subvert the imaginary body image that individuals have of themselves and substitute a forlornly positive. The phonograph is called the true photograph of the soul; graphology is called the “X-ray” of handwritten “indiscretions.”29

Mocking the doctrine of psychological physiognomy in 1800, philosophers could joke: nothing more was required than a decision of the individual to make itself incomprehensible for centuries.30 That is what Wildenbruch hoped to accomplish with his line about the fawning face deceiving the eyes of the physiognomist; but given a machine that dodges the tricks people use with one another, the laughter has died away after a century. Phonography means the death of the author; it stores a mortal voice rather than eternal thoughts and turns of phrase. The past that the phonograph forces to speak is only Wildenbruch’s helpless euphemism for his singular body, which was posthumous even while he lived.

The death of man and the preservation of corporeal evidence are one. In a brilliant essay, Carlo Ginzburg has shown that around 1900 a new paradigm of knowledge gained ascendancy, one that operated only with unfakeable, that is, unconscious and meaningless, details—in aesthetics as well as in psychoanalysis and criminology.31 Thus a writer in Scientific American said of the phonograph, which was just then going into mass production, “It can be used as a reliable witness in criminal investigations.”32 The individual of 1800, who was an individual universal, did not survive this fine-grained investigation. What one can know of a human being today has nothing to do with the 4,000 pages that Sartre, posing the same question, devoted to the psychology of Flaubert. One can record people’s voices, their fingerprints, their parapraxes. Ginzburg also underestimates the modernity of these encroachments when he puts the origin of the gathering of evidence among prehistoric hunters and Renaissance physicians. The snow that helped trackers was an accident; Edison’s tin-foil roll or Francis Galton’s fingerprint archive were purposely prepared recording surfaces for data that could be neither stored nor evaluated without machines.

Thus Wildenbruch’s mediocre verse points out whom the phonograph benefits. A lyric poet immortalized in the grooves on a record enters, not the pantheon, but the archive of the new “deposition psychology.” Under this name William Stern and others instituted a science based on the superiority of technical over literary storage devices. Whether for criminals or for the insane, the use of “stylized depictions often produces a false impression of the examination and obscures the psychological significance of individual statements.” Because each answer “is, from the point of view of experimental psychology, a reaction to the operative stimulus in the question,” experimenters and investigators provoke counteractics...
in their subjects as long as they use the bureaucratic medium of writing. If, however, one selects "the use of the phonograph as an ideal method," then, especially if the recording is done secretly, any parasitic feedback between the stimulus and the reaction will be prevented. Secrecy is "absolutely essential" with children in order to "guarantee the genuine innocence of their responses."24

As a photograph of the soul, the talking machine put an end to the innocent doctrine of innocence. Circa 1800 innocence was a historical-philosophical limit concept; it referred to a region it itself made impossible. "Once the soul speaks, then oh!, it is no longer the soul that speaks." Although this loss of the soul's identity with itself had been attributed to the progress of the human race or to the division of labor, it resulted, in the final analysis, simply from the technological impossibility of storing the newly discovered voice in any form except that of writing. Olympia's automatized "oh" would otherwise never have been so fascinating and terrifying. Circa 1900, by contrast, the builders of automatons had carried the day. There was no longer any innocence below the recording threshold; there was only the tactical rule of anticipating counter-reactions while recording. But the innocence that comes into being where bodies and media technologies come into contact is called flight of ideas.

In order to investigate "glossophysical" disturbances, or those that, beyond alalia or aphasia, affect entire sequences of speech, the Viennese psychiatrist Erwin Stransky devised a new type of experimental procedure. After having "shut out as far as possible all extraneous sense stimuli," Stransky had his subjects "look and speak directly into the painted black tube" of a phonographic receiver for one minute.25 The subjects were selected partly from among Stransky's psychiatric colleagues, partly from among his patients. The principal distinction between the cohorts, however, was that most of the patients reacted with fright to the intentionally stimulus-free (that is, blank) field of the receiver, with the unfortunate result that their responses had to be recorded stenographically rather than phonographically.26 But in the absence of any transcendental norm, psychiatrists and psychiatric patients exhibited the same speech behavior. After an initial trial period, they could produce nonsense for one minute (the recording time for one roll). The command to speak as much and as quickly as possible, together with a recorder capable of registering more material at a quicker pace than the alphabet, brought about an experimentally guaranteed hodgepodge of words. As in the experiments of Ebbinghaus, the initial difficulties resulted from the paradoxical imperative to bracket the operative imperatives of normal speech.

In the beginning, it was normal for subjects to get no further than the first few sentences; they would stall and claim that nothing occurred to them, that they could no longer speak. . . . We are ordinarily so accustomed to thinking under the direction of general concepts that we constantly fall back into this tendency whenever we are presented with a particular aim, even when this aim consists in shutting out all general concepts . . . Only when the subjects realized that searching for verbal ideas was completely unnecessary, that these ideas would come spontaneously and profusely to the foreground, did the initial stalling rapidly cease so we could proceed to the actual experiment.27

From a technological medium that records their voices without asking for hidden thoughts or ideas, experimental subjects learned "the release of linguistic expression from mental life" through their own bodies. In its "autonomy," language proceeds without any need to look for signifieds. Nietzsche announced long before Stransky that he learned to find once he grew weary of seeking; long after Stransky, Breton urged writers to trust the inexhaustible murmur.

The resultant output is all practically interchangeable. Automatic writing generates sentences reminiscent of "Rose is a rose is a rose." Stransky's phonograph records the sequence, "Hope, green belief, green, green, green, green is an emerald, an emerald is green, a sapphire is green, a—a sapphire is green, green is, that isn't right."28 etc. Henceforth speech knows only tautology and contradiction, the two empty, informationless extremes of truth values.29 In identifying the new artistic age of technical reproduction with film, Benjamin singled out the movie screen as making the single image obsolete and therefore establishing the rule of distraction, rather than bourgeois concentration. But the principle applies more generally and rigorously. Film has no privileged position among the media that have revolutionized literature and art. All have brought about, in exact psychiatric terms, the flight of ideas; corresponding terms in cultural criticism, such as "distraction," remain euphemistic.

Stransky's phonograph did not record mere lapses in attention or moments of distraction; it registered disdain for political and pedagogical norms, norms that would not have endured for a day were it not for a normativized language.30 The catatonic Heinrich H., for instance, responded to test questions concerning the nature of state and school regulations thus:

The state is many people living together, hour by hour, places separated by hours, bordered by mountains on four sides.

[School regulation] is that law over school-age children who are often in conditions of illness, when they stay home and when they should be working out on the land. Alternate daily, when they work for two days and go to school for two days, they change every week. When they work for a week and go to school for a week,
all school-age children who are ill and have to stay home and save time, thus save time, stay home, perhaps to work, perhaps to cook, perhaps to wash carrots. Responses on the order of vegetable stew effectively dismantle the powers on which education had been based since 1800. Fritz Mauthner's prophecy that "the states will one day have to pay for making their schools into institutions in which the minds of children are systematically destroyed" was fulfilled before it was written. What the technological media record is their own opposition to the state and school. People who are encouraged to speak more quickly than they think, that is, to outpace the controlling function, necessarily begin guerrilla warfare against disciplinary power. The one who not only forgets, but in a Nietzschean manner also forgets his forgetfulness, always delivers, like Kafka's drunken man, the Description of a Struggle:

Now the drunk jerked up his eyebrows so that a brightness appeared between them and his eyes, and he explained in fits and starts: "It's like this, you see—I'm sleepy, you see, so that's why I'm going to sleep. — You see, I've a brother-in-law on the Wenzelsplatz—that's where I'm going, for I live there, for that's where I have my bed—so I'll be off. — But I don't know his name, you see, or where he lives—seems I've forgotten—but never mind, for I don't even know if I have a brother-in-law at all. — But I'll be off now, you see. — Do you think I'll find him?"

Stransky hoped that by using a neutral recording device he would avoid the psychophysical danger of producing mere "laboratory artifacts," or of programming the response into the stimulus; yet steno- and phonographic recording functions like alcohol in the passage from Kafka. It provokes the provocative responses that no self-respecting servant of the state or educational bureaucrat would have wanted to write down. As catchphrases pronounced by the experimenter, "state" and "school" can no longer be submerged under any more general heading. Psychiatry also realized, then, that "enumerations"—catchphrases, inventories, address books, grammars—are themselves instances of the flight of ideas; to which the pedagogy of learning impairments could respond that hyperactive children's flight of ideas was a result of enumerative textbooks. Thus when Stransky stated that "the formation of general concepts" might have been inhibited for "pathological or experimental reasons," the "or" should be replaced by an equal sign.

The very fact that flight of ideas governed both sides of the experimental situation allowed it to be transposed into other media. By substituting ordinary writing materials for the phonograph and artificial laboratory artifacts for phonographic ones, one could achieve "the release of linguistic expression from mental life" in literature as well. The physician Gottfried Benn demonstrated this when he had his fellow physician Jef van Pameelen "enter the foyer of a hospital for prostitutes" and registered the associations of this his doppelgänger with phonographic fidelity. To be sure, nothing at all occurs to the subject Pameelen. In his "dread at his inability to experience anything" he sees only "an empty hall with a clock." But hardly have these words escaped him when a disembodied "voice" sounds above him. "An empty hall with a clock? Further! Extension! Yield! The doorman's apartment? The hairpins on the ground? The garden on the right? And so?" There are only disconnected catchphrases, but like "state" or "school regulations" they demand continuation, if only into ideational flight. Acting the part, as if to make things easier for his archivist, Pameelen consents to the flight of catchphrases:

PAMEELEN (acting the part): I know a house very similar to the one you have just described, Herr Doctor! I entered it on a warm spring morning; first there was an empty hallway with a clock, the doorman's apartment was on the right, hairpins were lying on the ground, very funny, and on the right there was a small garden, a bed of roses in the middle, two wethers grazed tethered to the grass, probably the Aquarian goats.

Truly an "epistemological drama" (as The Survey Director is subtitled): although it dutifully, indeed exhaustively runs through the catalogue of questions, Pameelen's answer confuses identity, the epistemological bedrock, with mere sameness. Clearly drama (long before Peter Handke's Kaspar) is about speaking rather than action. Identity falls into simulacrum without any extradiscursive context. Empty words circulate between Pameelen and the voice with no figure behind it, words without points of view, address, or reference, determined and guided by the imperative of association. The voice notes down Pameelen's veneratological joke about the Aquarian goats as a "very good," namely, "distant association that plays on the meaning of hospital with a light, humorous touch." The medical profession does not exempt one from the status of experimental subject in drama any more than it does in a laboratory full of phonographs. The voice that directs Pameelen is anything but transcendent—he addresses it as "Herr Doctor!" This experimenter shares Stransky's insight that any search for verbal ideas is superfluous. Whenever "peripheral fatigue" or "cortical fading" in Pameelen's "brain" hinder the associations, the doctor cracks his whip and commands "further!" Pameelen is obviously among the "worst cases" of imbecility who "already grow tired of the procedure by the 5th reaction." With his whip, however, the doctor (like the phonograph) commands speech at a tempo that separates discourse from mental life or "experiential perspectives." Drama, once the genre of free subjects, becomes pathological or experimental.

This is because free subjects appear in books of philosophy, whereas
experimental subjects appear in the field of psychophysics. "The one science that most strongly captures the world's attention throws its light and shadow across prose fiction as well. Since about 1860 this has been pathology, physiological and psychological."

Thus the enigma of the whip-brandishing Herr Doctor can be quickly clarified. One need only write out the previously quoted dramatic dialogue in the following manner:

**VOICE**

**PAMEELEN**

Hall with a clock? first there was an empty hallway with a clock

Doorman's apartment doorman's apartment on the right

Hairpins on the floor? there were hairpins on the floor, very funny

A garden on the right and to the right there was a small garden, a bed of roses in the middle

Next read one of many published pages of interviews that the psychiatrist Ziehen conducted with school children in Jena.

O. G., 12 years, 9 months. Father tailor. School performance quite variable, average. July 3, 1898. 9 A.M. Previously one hour of class (reading and explanation of a poem about the Pied Piper of Hamelin).

**STIMULUS WORD**

**RESPONSE**

**Teacher** Herr Stichling (teacher, with whom he was just in class)

**Father** my father

**Snow** some fell (thought of yesterday's snowfall)

**Blood** when an animal is slaughtered (thought of a cow he saw slaughtered the day before yesterday)

**Rat** how the rat catcher lures the rats into the trap

**Snow** white ("that's on the ground")

Consider, finally, that Ziehen's *Idea Associations of the Child* aimed to "determine the speed of association," indeed "to determine the association process and its speed under special conditions (fatigue, etc.)," and one will have also deduced the special condition of the whip. From this, it is only a step to recognizing that the head physician of the psychiatric intern Gottfried Benn was none other than Professor Theodor Ziehen.

It hardly matters whether the experimental subject is a child or a doctor, is O. G., J. v. P., or G. B. For the physician Werff Rönne, the hero of Benn's first novella, to practice random association without the whip of an experimenter, is merely a further transposition of psychophysical techniques into literature. But the only genre that can present an experimenter and an experimental subject as separate agents is the drama. The hero of Benn's novella, by contrast, stands under an order of association that functions despotically because it has transposed itself into flesh and blood. The laboratory artifact becomes absolute. No interpretation could recognize it. Only the schoolchildren in Jena with whom Ziehen experimented, while attending to his patient Nietzsche on the side, would have known why Rönne would intensify, in a continuous commentary that is also the narrative perspective, the mumbo jumbo he hears in the doctors' mess over the strangely soft tropical fruit. He can do nothing else. "It was only a matter of transmission, all the particulars remained untouched; who was he to appropriate or oversee or, resisting, to create?"

Verbal transmission as neurosis, without any basis in a transcendental or creative Poet's ego; medial selection without reference to the real, to the incomprehensible background of all media—even in his delirium, Rönne obeys orders. Pameelen has to transmit the doorman's apartment, hairpins, the hospital hallway, and goats, and Rönne has to transmit everything heard and said. What his acquaintances in the mess say, what they associate with this, what he himself says and associates with what is said and associated—it all becomes impossibly exhausting. "The struggle between associations, that's the final ego—he thought and walked back to the institute."

Where else should one go, except into a catatonic stupor? That at least allows Rönne to forget his forgetful project leader. But before final paralysis, the failed doctor extends his associations to their material basis, the brain itself. "I have to keep investigating what might have happened to me. What if the forceps had dug a little deeper into the skull at this point? What if I had been hit repeatedly on a particular spot on the head? What is it with brains, anyway?" In an aporetic attempt to get behind his own thinking, that is, to localize it using his own medical knowledge, Rönne literally sacrifices his knowing subjectivity. The fact that he has words and associations at all becomes an improbable exception to the countless possible deficits and disturbances. Language ceases to be a bastion of inwardsness; the gesture that simulates turning his brain inside out also reverses the condition of language into one of chance and exteriority.

Therefore Rönne (in direct descent from Nietzsche) never encounters a "word that reached me." When blows to the head lead to aphasia in one instance, to associations and words in others, the preconditions of Poetry become one more casualty. The word that had always reached people operates at a certain psychic reaction threshold, which was called the discourse of nature and the nature of discourse. Psychophysics does away with both of them. Thus nothing remains for a psychiatrist who has become a psychiatric case, like Rönne, and who nonetheless wants to be reached by something, nothing remains but to undertake The Journey into other media.

He looked down the street and saw where to go.

He rushed into the twilight of a movie house, into the unconscious of the first
Sartre fled his grandfather, a man of letters, who like all the bourgeoisie went faithfully to the theater only to be able to go home “insidiously prepared for ceremonial destinies.” The movie release Rönne from a discourse that is as incessant as it is empty. Two literary descriptions of film celebrate, in simple solidarity, “the unconscious of the first floor” and “the living night” of the projections as the end of the book’s monopoly. Film transposed into the technological real what Poetry had promised in the age of alphabetization and granted through the fantasy of the library. Both cineasts attribute the highest, that is, unconscious pleasure to the heroes and audience; both submerge themselves in a crowd that is bodily contact and not merely (as in Faust) a philosophic humanity; both blend into boundless identification with the phantasmagoria. One transfers words spoken at the Cross to film, the other writes more garrulously, but in the same vein.

All of this was one and the same: it was Destiny. The hero dismounted, put out the fuse, the traitor sprang at him, a duel with knives began: but the accidents of the duel likewise partook of the rigor of the musical development: they were fake accidents which ill concealed the universal order. What joy when the last knife stroke coincided with the last chord! I was utterly content, I had found the world in which I wanted to live, I touched the absolute.44

Habent sua fata libelli. There were times when the Absolute was manifest to people as a gallery of images of Spirit, that is, as poetic-philosophical writing. There are other times when it departs from the heaps of paper. Coherence, identification, universality—all the honorary titles conferred upon the book by universal alphabetization are transferred to the media, at least among the common people. Just as in 1800 the new fantasy of the library, despised by scholars, became the joy of women, children, and the uneducated, so too, a century later, did the apparatus of film, despised by library fantasists. A psychiatrist who has sunk to the level of a patient meets an acquaintance at the movies “with wife and child”; among the Sartres, mother and son go to the movies, whereas the writer and theater-goer grandfather can only ask stupid questions: “Look here, Simonnot, you who are a serious man, do you understand it? My daughter takes my grandson to the cinema!” And M. Simonnot replied, in a conciliatory tone: ‘I’ve never been, but my wife sometimes goes.’45

As technological media, the gramophone and film store acoustical and optical data serially with superhuman precision. Invented at the same time by the same engineers, they launched a two-pronged attack on a monopoly that had not been granted to the book until the time of universal alphabetization: a monopoly on the storage of serial data. Circa 1900, the ersatz sensuality of Poetry could be replaced, not by Nature, but by

floor. Reddish light stood in large calyces of flat flowers up to hidden lamps. The sound of violins, nearby and warmly played, scraped over the curve of his brain, drawing out a truly sweet tone. Shoulders leaned against shoulders, in devotion: whispering, closing together, touching, happiness. A man came toward him, with wife and child, signaling familiarity, his mouth wide and laughing gaily. But Rönne no longer recognized him. He had entered into the film, into the sharp gestures, the mythic force.

Standing large before the sea, he wrapped himself in his coat, its skirts flapping in the fresh breeze; he attacked the air as he would an animal, and how the drink cooled the last of the tribe.

How he stamped, how vigorously he bent his knee. He wiped away the ashes, indifferent, as if possessed by great things that awaited him in the letter brought by the old servant, on whose knee the ancestor once sat.

The old man walked nobly up to the woman at the spring. How marvellous the nanny was, as she put her handkerchief to her breast. What a lovely playmate! Like a deer among young bulls! What a silvery beard!

Rönne hardly breathed, careful not to break it.

Then it was done, it had come to pass.

The movement and spirit had come together over the ruins of the period of sickness, with nothing in between. The arm sailed clearly from an impulse; from light to the hip, a bright swing, from branch to branch.42

A movie theater in the suburbs of Brussels in 1916 is this Christological goal of all journeys. The novella makes what was accomplished in the film unambiguously clear. “Movement” can now be recorded in the technological real, no longer only in the imaginary.43 Rönne, the man whom no word reaches, is not altogether beyond contact, but his reaction threshold functions physiologically rather than psychically. Film establishes immediate connections between technology and the body, stimulus and response, which make imaginary connections unnecessary. Reflexes, as in Pavlov’s animals, occur with “nothing in between”: they are between sensory impulses and motoric reactions. This is true of the figures optically portrayed in the silent film; it is true of the accompanying music. The violins playing in the dark theater become an immediate presence for the physiologically schooled listener: just as in Schönberg’s “Pierrot lunaire,” they play on the curves of his brain.44 For that reason the individual named Rönne, who in the medium of language had just renewed acquaintance, falls into a condition for which his contemporary psychiatrists had the fine word asymbolia: Rönne no longer recognizes anyone.

Psychiatry or no, asymbolia is the structure of the movies.45 One autobiographer who (as the sad title of his book, The Words, already indicates) later became only a writer, wrote of his first visits to the movies: “We had the same mental age. I was seven years old and knew how to read, [the new art] was twelve years old and did not know how to talk.”46 The new medium, whether in Paris in 1912 or Brussels in 1916, presented language deficits as happiness. With his mother, who loved movies,
technologies. The gramophone empties out words by bypassing their imaginary aspect (signifieds) for their real aspects (the physiology of the voice). Only a Wildenbruch could still believe that a device would be properly attentive to his soul, to the imaginary itself. Film devalues words by setting their referents, the necessary, transcendent, indeed absurd reference points for discourse, right before one’s eyes. When Novalis read rightly, a real, visible world unfolded within him in the wake of the words. Rönne, struck with “mythic force” by the facticity of gestures and things in the silent film, no longer needs such magic.

Writers were justified in complaining that “the word is gradually losing credit” and “is already something somewhat too conspicuous and at the same time oddly undifferentiated for us today.” 70 To use Lacan’s methodological distinction between symbolic, real, and imaginary, two of these three functions, which constitute all information systems, became separable from writing circa 1900. The real of speaking took place in the gramophone; the imaginary produced in speaking or writing belonged to film. Hanns Heinz Ewers, author and screenplay writer of The Student of Prague, stated this distribution (though with a certain bias): “I hate Thomas Alva Edison, because we owe to him one of the most heinous of inventions: the phonograph! Yet I love him: he redeemed everything when he returned fantasy to the matter-of-fact world—in the movies!” 71

While record grooves recorded bodies and their heinous waste material, the movies took over the fantastic or imaginary things that for a century had been called Poetry. Münsterberg, inventor in word and deed of psychotechnology, provided in 1916 the first historical theory of film in his demonstration that film techniques like projection and cutting, close-up and flashback, technically implement psychic processes such as hallucination and association, recollection and attention, rather than, like plays or novels, stimulating these processes descriptively with words. 72 As mechanized psychotechnology the “world of the movie” has “become synonymous with illusion and fantasy, turning society into what Joyce called an ‘allnight newsreel,’ that substitutes a ‘reel’ world for reality. . . . His verdict on the ‘automatic writing’ that is photography was the abnihilization of the etym.” 73

In 1800 words went about their task of creating a real, visible world in such an undifferentiated way that visions and faces, which the book described for the purpose of recruiting authors, shared only one trait with their readers. Film exhibits its figures in such detail that “the realistic” is “raised into the realm of the fantastic,” which sucks up every theme of imaginative literature. 74 Quite logically, early German silent films repeatedly took up the motif of the doppelgänger. In Golem, in The Other, in The Cabinet of Dr. Caligari, in The Student of Prague—everywhere dop-

gelgängers appear as metaphors for the screen and its aesthetic. A film trick demonstrates what happens to people when the new medium takes hold of them. These doppelgängers, instead of sharing a single trait with their originals, as in a book or screenplay, are the heroes of the films and therefore the focus of identification. With its guaranteed perfection in preserving evidence, film does not need, like the solitary hero of a romantic novel, to talk the reader into identification; what the moviegoer Rönne called his entry into film can occur automatically and wordlessly.

Movies thus took the place of the fantasy of the library. All the tricks that once magically transformed words into sequential hallucinations are recalled and surpassed. “In the movies,” not just the “most beautiful” but also the “most common” is “miraculous.” 75 Like any unconscious, the unconscious of the movie house is determined by the pleasure principle.

The schoolboy wants to see the prairies of his Westerns; he wants to see strange people in strange circumstances; he wants to see the lush, primitive banks of Asian rivers. The modest bureaucrat and the housewife locked into her household long for the shimmering celebrations of elegant society, for the far coasts and mountains to which they will never travel. . . . The working man in his everyday routine becomes a romantic as soon as he has some free time. He doesn’t want to see anything realistic; rather, the realistic should be raised into an imaginary, fantastic realm. . . . One finds all this in the movies. 76

To counter this triumphant competition, literature has two options. One easy option tends toward “trivializing mechanisms”: namely, while underwriting the technological media, to join them.” Since 1900 many writers have given up on getting their names into the poetic pantheon and, intentionally or not, have worked for the media. Whereas Wildenbruch summoned up pathos and spoke his name and soul into the phonograph, other lyric poets, preferring anonymity and success, produced texts for phonographic hits. The first screenplay writers also remained anonymous. When Heinrich Lautensack in 1913 published the written text of a screenplay after the film had been shot, the sensational use of his name demonstrated “that real poets, too, have written films, even if anonymously (how many might have done that, because of the money, over the years!).” Before Lautensack, “H. H. Ewers [was] probably the only known author whose name appeared with his films.” 77

Mass literature has been identified as non-value ever since hermeneutic reading guides distinguished between works and mass products, repeated rereading and reading mania. But when texts could be transposed to other media, the difference became one of method of production. The judgment that “the best novel and best drama are degraded into dime novels in the movies, full of sensationalism and make-believe” can be reversed. 78 Audiovisual sensuousness, also employed by high literary texts
in 1800, became the speciality of books that aimed at hallucinatory effects with the methodical efficiency of digital-analog converters. Turn-of-the-century bestsellers were quickly made into films: historical novels like *Quo Vadis* (whose writer won the Nobel Prize), stories of doppelgängers like *The Golem*, psychopathological thrillers like Paul Lindau's *The Other*, to say nothing of *Buddenbrooks*. For "the Paul Lindaus have their merits and their immortality." They were there when the type-writer made the publishing process more economical; they knew what was going on when psychophysics reduced the mystery of the soul to feasibilities. Their books thus appeared where they belonged: on the movie screen. Lindau's "Other" is a district attorney; when a crime occurs in his house, he uses the best criminological methods to gather evidence, only to discover that he himself, as doppelgänger or schizophrenic like Jekyll and Hyde, was the perpetrator. A year earlier, Hallers, the district attorney, had had a riding accident and injured the occipital lobe, on which brain localization theories focus.

Of course, role inversion was characteristic of literary heroes like Rönne and literary techniques like automatic writing circa 1900, but only in film could hallucination become real and indices like a clock or portrait bring about unambiguous identifications. Criminology and psychopathology work with the same technologies as the entertainment industry.

A district attorney who unconsciously (as his friend, a psychiatrist, explains to him) every night becomes his own other is a metaphor for the shift from bureaucracy to technology, from writing to media. In the unconscious of the movie house, modest bureaucrats or women trapped in their households don't want to see symbolic or real servants of the state. What they want is imaginary reversal.

Literature's other option in relation to the media is to reject them, along with the imaginary and real aspects of discourse to which they cater, and which have become the province of popular writers. Because "kirsch will never be eliminated from humanity," one group of writers renounces it.

After 1900 a high literature develops in which "the word" becomes something "too conspicuous," that is, it becomes a purely differential signifier. Once imaginary effects and real inscription have been renounced, what remains are the rituals of the symbolic. These rituals take into account neither the reaction thresholds of people nor the support of Nature. "Letters of the alphabet do not occur in nature." Words as literal anti-nature, literature as word art, the relation between both as material equality—this is their constellation in the purest art for art's sake and in the most daring games of the avant-garde. Since December 28, 1895, there has been one infallible criterion for high literature: it cannot be filmed.

When idealist aesthetics bound the various arts together as parts of a single system, sculpture, painting, music, and architecture were unambiguously determined by their respective materials—stone, sound, color, building material. Poetry, however, as the universal art, was permitted to reign over the universal medium of the imagination. It lost this special status circa 1900 in the interest of thorough equality among materials. Literature became word art put together by word producers. As if to confirm Lacan's theory of love, Kurt Schwitters was in love with his Anna because "her name [can be spelled] backwards as well as forwards: an-n-a." It is hardly controversial to make this claim with respect to the writers of experimental modernism. But even writers like Holz or Hofmannsthal, often seen as continuing the projects of Herder or Humboldt one hundred years after the fact, expressed concern to do justice to the material they worked with.

Hofmannsthal argued concisely that the basic concepts of classical-romantic Poetry were so much blabla in relation to its material, the word. "I wonder whether all the tiresome jabbering about individuality, style, character, mood, and so on has not made you lose sight of the fact that the material of poetry is words... We should be allowed to be artists who work with words, just as others work with white or colored stone, shaped metal, purified tones or dance." Less concise, but astonishing in a direct descendant of Schlegelmich, is Dithely's line that before any hermeneutics there are "sensually given signs": "stones, marble, musically formed sounds, gestures, words, and script." No voice, then, no matter how traditional its idiom, can be heard locating Poetry in an immaterial imagination. It is simply wrong to assign "an abstraction from the realm of literary-historical media to the period" in which "the paradigms of media used in positivistic literary history were widened to include film, radio, and records." What is here vaguely circumscribed as "abstraction" had long cemented the classical bond of friendship between poets and thinkers. But in 1900 film and the gramophone (radio would not appear until twenty-five years later) would lead to the very opposite result by isolating the word theoretically as well, leaving to the media its previous effects on the imagination. The rankings of the individual arts in a synchronic system inevitably shifted. But historical derivations of modernist word literature, such as Günther Sasse's, are perhaps superfluous; by presupposing a "situación in need of clarification, namely, that not until one hundred years after the thematization of language in philosophy, did the same problem become central in literature," such an approach creates more problems than it solves. But because there was once a brief friendship between literature and philosophy, literary historians still read Humboldt's philosophy instead of test series.
All the evidence indicates that the high literature of 1900 gave up its symphilsophizing because other contemporary movements gained prominence. The new sciences and technologies made it necessary to renounce the imagination. Mallarmé stated this when he answered an inquiry on the Illustrated Book with a decided “No.” “Why,” he asked in response, “don’t you go right to the cinematographs, for their sequence of images will replace, to great advantage, many books in image and text.” If reform primers and novels of artistic development cunningly used images to contribute to an imperceptible alphabetization and identification, high literature cut out everything available to the other media. For all his love of film, Kafka conveyed to his publisher his “horror” at the very thought that an illustrator of his Metamorphosis might even want to draw the insect itself. Not that, please! I don’t want to diminish the area of his authority, but issue my request only on behalf of my naturally better grasp of the story. The insect itself cannot be drawn. It cannot be drawn even from a great distance.” Literature thus occupies, with creatures or noncreatures that can only be found in words, the margin left to it by the other media. Illustrations outgrew their baby shoes, their contributory role, and learned to walk and wield power in the unconscious of the movie house; the symbolic remained, autonomous and imageless as once only God had been.

The literary ban on images allowed only two exceptions. One occurred when Stefan George wanted to document the fact that he was not a classical author and thus not for the young ladies. He gave his artist and book designer, Melchior Lechter, “a nonartistic task” that “leaves the realm of art” and ended any further collaboration between them. The Commemoration for Maximin was to be prefaced, not by the hand-drawn portrait Lechter suggested, but by Maximilian Kronberger’s photograph. Only the scandal of technological media in the midst of the ritual of letters could materialize the scandal of the master desiring a singular and real body.

The other exception was systematic. After 1900 letters were permitted to construct figures, because they had always been figures. This too directly reversed classical norms. Schleiermacher “completely” excluded from Poetry verses in dialect as well as those others “that look like an axe or bottle.” Ninety-eight years later, Apollinaire justified his Calligrammes by citing the competition of film and records.

It would have been strange if in an epoch when the popular art par excellence, the cinema, is a book of pictures, poets had not tried to compose pictures for meditative and refined minds that are not content with the crude imaginations of the makers of films. These last will become more perceptive, and one can predict the day when, the photograph and the cinema having become the only form of publication in use, the poet will have a freedom heretofore unknown. One should not be astonished if, with the means they now have at their disposal, poets set themselves to preparing this new art.

Pictures made of letters remain in the cleared area, in the technological niche of literature, without suffering any material inequality vis-à-vis the other media that, Apollinaire prophesies, will soon be the only ones. Such pictures had been despised for a century, because any emphasis on the figural quality of letters would have made it more difficult to ignore them. To achieve the psychophysical insight, to see letters “as a great quantity of strange figures on a white background,” or as calligrammes, “one has only to look at a newspaper page upside down.” The literality and materiality of the written can be realized only at the expense of readability and in limited experiments. Apollinaire and Mallarmé competed with the technological medium of film, whereas it would have seemed sufficient to distinguish letters and books from traditional painting. The call for a cult of typefaces issued by writers circa 1900 had nothing to do with fine writing, everything to do with machines. In the words of Anton Kae: “The reform movement in literature that ran parallel to the rise of the movies as a mass medium took shape against the background of the new technological media.”

Research into the localization of language replicated the typewriter. The tachistoscope of the physiologists of reading was the twin of the movie projector, with the side effect of typographically optimizing the typewriter. Brain physiology did away with the illusion that language is more “than a play of mechanical equipment learned by practice,” which is set into ordered motion by ideas, just as one can operate a sewing, adding, writing, or talking machine without needing to be familiar with its construction.” Prior to consciousness, then, there are sensory and motor, acoustical and optic language centers linked by nerve paths just as the working parts of a typewriter are connected by levers and rods. As if taking Nietzsche’s dictation style as a metaphor, brain physiology formulates the path from the sound image of the word to the hand that writes and to consciousness as an inaudible dictation, to which only autonomic reaction is appropriate at the level of consciousness. To produce actual discourse, there must be impulses in the cerebral cortex “through which the word, as an acoustical and optical image, is transposed into its sensory sound parts on a sound clavier.” All keyboards (including those that produce sounds), however, are spatial arrangements, or a sort of typewriter keyboard of language. A “cortical soundboard” virtually conjures up the lever system of the old Remingtons.
As soon as one connects the brain physiology of language with the psychophysics of the senses via the tachistoscope, the hypothetical machine in the brain becomes a real machine in front of the retina. The letters and words presented for milliseconds by the tachistoscope are aleatory choices from prepared stores or vocabularies. The procedure is only apparently arbitrary and “peculiar to our experiments.” For “as rich as the number of words in our civilized languages has gradually become, their number diminishes considerably in each language during a particular period, for a particular domain of literature, and for a particular author.”

Periods, genres, authors—all play on unconscious word keyboards and even more unconscious letter keyboards. The philosopher become experimenter Erdmann says nothing of them; instead, he presents the basic rule that words are recognized in their “totality,” that is, by those traits “in which the black marks of the letters contrast with the white background.” In which case, “the surface areas of the white background are as essential for the whole configuration as the black ones are.”

Erdmann’s followers and critics, however, were not philosophers or hermeneutic interpreters, and they limited their investigations to the materiality of letters. They turned the tachistoscopes to speeds higher than those at which reading can take place because only disturbances and deficiencies betray the fundamental secrets of letters and forms of script. The film projector’s twin thus functions in an opposite manner. The projector, in the unconscious of the movie house, presents a continuum of the imaginary, generated through a sequence of single images so precisely chopped up by and then fed through the projector’s mechanism that the illusion of seamless unity is produced. With the tachistoscope, in the darkened laboratory of the alphabetical elite, a cut-up image assaults as a cut in order to establish out of the torment and mistaken readings of victims the physiologically optimal forms of letters and script. As with the typewriter, which has its own key for spacing, intervals are built into the experimental procedure. But they also become the test result. The tachistoscope demonstrates that on the most basic level reading consists in perceiving not letters but the differences between them, and that word recognition proceeds by hitting upon discontinuous, single letters that literally stick out. Systematically evaluated misreadings indicate that letters at x-height (vowels and some consonants) are relatively undifferentiated, but that consonants with ascenders or descenders serve as typographic recognition signals. According to Julius Zeitler, the historically renewed primacy of the letter is based on a “decomposition of the letter continuum into groups.” “There are whole series of words, analogous in their letter composition, that run through heterogeneous meanings if one letter in the same position is changed. . . . If the new meaning of the word image that has been altered in this way is to be registered, the letter must be determined, that is, it must be spelled out. When this does not occur, the original word image is constantly reassimilated, as is the original meaning along with it.”

The letter-crosswords with which Reformation primers liked to play could therefore be resurrected. One theorist of elementary education illustrated Zeitler’s theory for his deaf and dumb children with the following example:

One need only read this series as a column—and Saussure’s theory of language as a combinatory system is born. As it says in the structuralist bible:

In every such case the isolated sound, like every other unit, is chosen after a dual mental opposition. In the imaginary grouping anna, for instance, the sound m stands in syntagmatic opposition to its environing sounds and in associative opposition to all other sounds that may come to mind:

But, as Derrida was the first to rediscover, the modest letter researchers or grammatologists were more rigorous than linguistics’ founding hero. Their tachistoscope locates pure differentiality not in “sounds,” that is, in incorporeal sound images of words, but in the material signs of type. Thus the machine demonstrates and practices what structural linguistics accomplishes insofar as it writes down nonsense words such as anna, even though it stresses their use in speech. In order to engrave an example of the differentiality of phonemes into his own text, Saussure
was forced to shift to the distinction between necessary and arbitrary, graphematic and graphic differences between letters.

The value of letters is purely negative and differential. The same person can write \( t \), for instance, in different ways:

\[ \text{t} \text{t} \]

The only requirement is that the sign for \( t \) not be confused in his script with the signs used for \( l \), \( d \), etc.\(^{197}\)

It is because the example of the three handwritten \( t \)'s does not constitute an example, but is rather a conclusive demonstration with which differences in sound could never compete, that structural linguistics and psychophysical positivism belong together. Instead of continuing in the line of Schleiermacher's hermeneutics, Saussure systematized, at the price of a methodological phonocentrism, the countless scriptural facts that experiments circa 1900 produced and let stand in their facticity.

But the love of facts can also bear fruit. It might not produce a system, but it does produce typographies. Erdmann's measurement of the relation between letters and background, Zeitler's differentiation of letter recognition according to x-height, ascenders, and descenders, Oskar Messmer's calculation of the frequency of these three types in coherent texts, all culminated in a knowledge of differentiability that could become immediately practical. The secular war between Fraktur and roman scripts, for instance, no longer need be burdened with the imaginary values of Things German in opposition to the world. After simple tests with both types of script—with the tachistoscope, in low light, with beginning pupils and professors—the superiority of roman was a matter of fact. Semiotic positivism allowed Friedrich Soennecken to explain that roman consisted of two basic lines, whereas Fraktur consisted of “no less than sixty-six basic lines differing in form and size.”\(^{106}\) This sort of massive differential difference made decisions easy for researchers who published works such as The Economy and Technology of Learning: \(^{110}\) “Anyone who has ever experimented with the tachistoscope knows that the simpler a type of script is, the easier it is to learn.”\(^{111}\)

Indeed, under the conditions of pure differentiability there is nothing simpler than the opposition that, in theory and praxis, determines the current century: binary opposition. If roman consists of only two “elements, the straight line and the half circle,”\(^{112}\) then an ideal script has been found, one whose elements can be combined and analyzed quite differently from Pöhlmann's or Stephani's handwriting norms. An economy took the place of organic merging, one that (perhaps following the new standard of Morse code) technically optimized signs and the differences between them.

Thus differences appeared even in roman typeface, the very mini- mization of difference. Saussure distinguished necessary and arbitrary differences among letters; embracing necessary difference, since 1900 the various roman typefaces that reject ornament have flourished and become as pervasive as chemically pure industrial design.\(^{113}\) Forms to be filled out call for block letters; lower case and sans serif are the height of Manhattan advertising chic.

The call was answered. Because roman capital letters are what “the child first encounters at every turn”—“on street signs, street cars, post offices, train stations”\(^{114}\)—the block letters of technological information channels found their way into elementary-school instruction. Rudolph von Larisch's students in Vienna learned from a manual Instruction in Ornamental Script; but they learned a surface art that rejected all “perspective and shadow effects” of the Stephani type of word painting. The goal, “in competition with other demands,” was “a higher degree of readability”: “that the characteristic qualities of a letter be stressed with all possible force and the difference from similar letters be stressed.”\(^{115}\) Psychophysicists and structural linguists hardly say it more clearly. The medium of writing and paper no longer pretended to be a springboard to painted nature. Using uniformly thick lines, Eckmann and Peter Behrens,\(^{116}\) Larisch and Soennecken drew block letters as block letters.

The decomposition of roman letters, as it confronts elementary binary opposition, is the mirror image of their composition. To write block letters is not to connect signs with other signs but to combine discrete elements piece by piece. In the age of engineers an armature construction set replaces the growth of plants and originary script.\(^{117}\) Separate letters consisting of separate elements are based, in strict opposition to classical writing rules, on Saussure's most daring opposition: that between signs and emptiness, medium and background. “The beginner has to learn to look, not simply at the form of the letters, but constantly between the letters; he must use all the power of his vision to grasp the surface forms that arise between the letters and to assess the effect of their optical mass.”\(^{118}\) A reversal of every habit or facility thus grants the “between” the same status as the positive marks it separates. So Larisch knocked children over the head with the lesson that psychophysics produced with the tachistoscope and with newspapers turned upside down: the fact that letters are what they are only against and upon a white background. A “between” in capital block letters is a sheer autonomy. And if educators
An architect who saw this sight approached it suddenly one night, 
removed the spaces from the fence 
and built of them a residence.
The picket fence stood there dumbfounded 
with pickets wholly unsurrounded, 
a view so naked and obscene 
the Senate had to intervene.
The architect, however, flew 
to Afri- or Americo.

"The Picket Fence" is the fairy tale of a new age. Where Anselmus saw 
the woven arabesques of handwritten letters, the cold eye of the architect 
sees the opposite. One evening Larisch's imperative—to look constantly 
between the letters, to grasp the space outlined between them with all 
one's strength—is realized word for word. In so doing, the architect does 
ot discover merely how indispensable concepts of relation are. Something 
more tangible is at stake: the fact that the readability of signs is a 
function of their spatiality. The architect's manipulation of space 
demonstrates that, when the lack is lacking and no empty spaces remain, media 
disappear, "naked and obscene," into the chaos from which they were 
derived.

Consider the final stanza of "The Picket Fence" in light of the architecture 
of block letters. Whereas "the alliteration of Africa and America 
feigns an ending in -(i)ca," which also plays with the ending of oder 
the placement of "or"), a "between" appears in the realm of the grapheme: the space designated by the dash. The words of the poem, complete 
autonomies in this sense, foreground their own intervals between stem and 
ending. Morgenstern's constructed architect does not disappear into far-off lands, but into the space between signs that he had usurped.

From this vanishing point called paper, it is only a step to "the ideal of 
purely abstract, absolute poetry," an ideal of such brilliance "that it also 
means the end of poetry; it can no longer be imitated or surpassed; it is 
transcended only by the empty white page," "The Picket Fence" 
describes the binary opposition between letters or pickets [Lettern/ Latten] 
and the space between them, but "Fish's Night Song" uniquely enacts this 
opposition without any description at all. In it, the reduction to straight 
line and half curve that distinguishes roman from Fraktur scripts 
becomes textual event. Circumflex and dash, two signifiers that define 
themselves through mutual opposition and relation, are the absolute 
minimum economy of the signifier. Their binary opposition to each other, 
tended or articulated through the shared opposition of both to paper,
constitutes the poem that meets all the reading-psychological desiderata of its epoch. Period. For there is nothing more to write about a minimal signifier system.

Not only is the human voice incapable of reproducing signs prior to and beyond alphabets, but writers, by prescribing their own alphabets, can remove their texts from hermeneutic consumption. The existence of a Stefan George script in the discourse network of 1900 demonstrates that “Fish’s Night Song” is the signet of the whole system.

The Stefan George script, which Lechter fabricated and used throughout the first edition of George’s Collected Works, was adapted from George’s handwriting. But it was handwriting only in name. First, the single letters—beyond any supposed Carolingian reference—were based on a contemporary advertising grotesque. Second, any handwriting that can be transposed into reusable typeface functions fundamentally as mechanized script.

Technology entered the scene in archaic dress. Larisch came up with “the ideal of a personal book” that would be “self-designed, written, ornamented, and -bound.” That is exactly what George did before Lechter and Georg Bondi made him aware of the possibility of technological reproduction. Under the pressure of media competition, high literature returned to the monastic copyists whom Gutenberg had rendered unnecessary and Anselmus had made to seem foolish. At the same time, however, the personal book (that oxymoron) was to be set in block letters that, “equal in their characteristics,” have none of the redundant differences of individual handwritten letters. According to Larisch, the historic “moment” was “favorable” for old-fashioned, manually made books because “precisely now the use of typewriters is becoming widespread.”

The ascetics of handwriting art, even when they played at being medieval, were in competition with the modern media. As soon as there were typewriters, there were fashioners of texts like Mark Twain or Paul Lindau, who had “the production means of the printing press at their disposal” on their desks. According to Marshall McLuhan, the fact that “the typewriter fuses composition and publication” brought about “an entirely new attitude to the written and printed word.” Like innovation, its effects surpassed its applications. When Larisch and George stylized their handwriting until it became a typeface, they achieved what Malling
Hansen and Nietzsche had been praised for: script "as beautiful and regular as print." Perfect lyrical creations and perfect technical objects are one and the same. 

The new relation to the printed word became printed reality in the layout of George’s books. From the time of his break with Lechter, at the latest, his books constituted an imageless cult of letters. The cry of material equality extended from the single lyrical word to the entire alphabetical medium. If modern, Morris-inspired publications, such as Goals of Internal Book Design, state in tautological conclusion that ‘“paper and type make up a book,” the poets of the George circle were “more or less the first to realize that a book consists of paper and type.”

But it is not only the fact that books of the turn of the century “looked very booklike” that places them into technological contexts. More important, the Stefan George script (as typeface, in the form of its letters, and in its orthography and punctuation) presupposed, maximized, and exploited experimentally obtained standards. In terms of the physiology of reading, it was evident that the “letters and other elements of the typeface” and “the capital and small letter should be as similar as possible.” It follows that roman is by far “more efficient” than Fraktur, which would be “unthinkable as a typewriter typeface.” The Stefan George script met just these standards; in its new letter forms for e, k, and t, capital and lowercase letters were even more alike than in ordinary roman type. George eliminated the ascenders from two of the twenty-six letters (k and t). This might seem a minimal innovation, but in combination with Grimm’s orthography (the use of small letters for nouns, the elimination of h from many th combinations, and the use of ss rather than the Eszett), it had a significant cumulative effect. Whereas the physiologist Messmer counted 270 letters above or below x-height in an ordinary text a thousand letters long, I find in George an average of only 200 extended as opposed to 800 small letters. (The same passages in Duden orthography would contain nearly one hundred more ascenders and descenders.)

Messmer could show that words such as physisiological or psychologi
cal, taken simply as collections of letters containing a high percentage of ascenders and descenders, do not convey the “unitary whole impression” that distinguishes words such as wimmern, nennen, or weinen. Extended letters quicken the pace of tachistoscopic word recognition, but in a special script or cult of the letter intended to hinder any alphabetized skipping over of letters, material equality is everything and a gain in speed is nothing. Therefore masses of words like wimmern, nennen, and weinen fill the eighteen volumes of an oeuvre whose esotericism is physiologically guaranteed. In it, homologies, recognitions, and knowing smiles are exchanged between the most aristocratic of writers and the modest experimenters of 1900. The inventor of psychotechnology confirmed an esotericism in the inventor of the Stefan George script that—a first in the history of writing—could be measured. “The fact that the elimination of capital letters from the beginning of nouns constitutes a strong check against rapid absorption can be easily verified, should readers of Stefan George find it necessary, by psychological experiment in an easily measurable procedure.”

These lines are as true as they are prophetic. Whereas readers of Nietzsche stumbled only here and there over italicized introductions, readers of George have trouble with every letter. A perfect experimental procedure forestalls understanding in order to fix the eyes on signifiers as murky as the “Fish’s Night Song.” But the readers were fascinated and forgot they were experimental subjects. In opposition to the technological media, they conjured up a secondhand old Europe. Consider Gert Mattenklott’s consideration of George: “The image of Stefan George appears finally as the sheer allegorical corpse. . . . Everything arbitrary and individual is transcribed into a meaningful universal, perhaps most clearly when George made his own handwriting resemble a typeface intended to replace the conventional one.” These lines are as false as they are Benjaminesque. Their writer is simply unaware of the technologies of his own century. The facts that the typewriter made it inevitable that handwriting should come to resemble type, that there was the project of a “world letter” to unburden memories, and that the logic of the signifier explodes the “meaning” of the age of Goethe all fall victim here to an allegory of allegory. “Conventional handwriting” is a non-concept. If histories of the material basis of literature are to be possible, apparent conventions, especially in the elemental field of writing, must be dismantled and examined as feedback control loops and programs. George, whether a corpse or not, was evidence of an epochal innovation.

No appeal to timeless conventions could ever explain why a nameless artist (not George) changed his handwriting three times between 1877 and 1894, attracting the attention of psychiatrists with the third change and landing among them with the fourth. Above all, however, conventions cannot explain why science took precisely this patient at his word or pen and made facsimiles of his handwriting. Only the assumption that the four writing experiments portray an upheaval, as if in time-lapse photography, can explain both acts of writing, that of the patient and that of the psychiatrists. Proceeding exactly as had George (who, of course, was not born writing block letters), the anonymous artist made the transition from the rounded and connected handwriting ideal of Stephani or Lindhorst to the cult of the letter. One of the first studies of its kind, entitled Handwriting of the Insane, noted that it was “in no way acciden-
tual” that patients’ handwriting lost “the normal connecting lines between adjacent letters.” As if to demonstrate the explosive force of discursive events, the isolation of letters leads to the isolation of their writers.

In 1894, the Encyclopedic Review commissioned a young medical student to query writers about the recent appearance of graphology. Mallarmé’s answer runs:

Yes, I think that writing is a clue; you say, like gesture and physiognomy, nothing more certain. Nevertheless, by profession or by taste, the writer recopies or sees first in the mirror of his mind, and then transcribes in writing once and for all, as if invariable. The immediate effect of his emotions is therefore not visible in his manuscript, but there one can judge his personality as a whole.

This states the issue directly. While graphology was being developed to provide another type of evidence, literate people fell into two subclasses: on the one hand, those whose handwriting was a direct reflection of their unconscious and so could be evaluated psychologically or criminologically; on the other, the professional writers, who were writing machines without handwriting. Among the latter, what appears to be the production of a soul is always only the reproduction on a keyboard of invariable letters. Writers’ texts therefore could not be interpreted unless graphology made “major modifications.” That is exactly what happened when Ludwig Klages studied an original manuscript of George (as was explicit.

*Here and throughout this chapter, there is a play on the etymology of Schreibmaschine (“typewriter,” but literally “writing machine”). [Trans.]*

For all the disdain of words that made him the founding hero of Bildung, Faust still believed in and obeyed the binding power of his signature. Without the bureaucratic ethos, the pact between the humane disciplines and the state would not have come about. For all his cult of the word, George, the technician in spite of himself, played a little strategic game in his commerce with the bank. A signature that, like the graphically dreaded “machinescript,” avoids “every trait of intimacy” and thus can always be forged, can be found in print. Although the technicians, on their side, soon discovered George’s trick, he did demonstrate

DAS WORT

Wunder von fern oder traum
Bracht ich an meines landes saum

Und harre bis die graue nor
Den namen fond in ihrem born

Drauf konnt ichs greifen dicht und stark
Nun blüht und glänzt es durch die morn...

Einst langt ich an nach guter fahrt
Mit einem kleinen reich und zart

Sie sucht lang und gab mir kund:
So schlief hier nichts auf sielem grund

Norauf es meiner hand entran
Und nie mein land den scharz gewann...

So lern ich trauig den verzicht:
Kein ding sei wo das wort gebracht.
something. Only as long as people believed in their inwardness did that inwardness exist. Man stands or falls with the signature of his signature. It is impossible to give exemplary status to Man and to Language in one and the same discourse network.\[47\]

Thus circa 1900 the universal bureaucratic ethos of the age of Goethe was replaced by professional ethics. In the competitive struggle of media everyone swears by a particular professionalism. It can mean nothing else when lyric poets after George prominently publish poems entitled “THE WORD.”

**The Word**

I carried to my country’s shore
Marvels and dreams, and waited for

The tall and twilit corn to tell
The names she found within the well.

Then I could grasp them, they were mine,
And here I see them bloom and shine . . .

Once I had made a happy haul
And won a rich and fragile jewel.

She peered and pondered: “Nothing lies
Below,” she said, “to match your prize.”

At this it glided from my hand
And never graced my native land.

And so I sadly came to see:
Without the word no thing can be.\[48\]