man überall, auf Flügeln, Eierschalen . . . auf berührten und gestrichenen Scheiben von Pech und Glas . . . erblickt" (Schriften. Vol. 1. Stuttgart, 1960, 79). These ciphers created by nature precede the educational structures of the Aufschreibesystem 1800 that Kittler had identified. Nature did not (only) make another write, she—as "The Woman" (Discourse Networks 25)—wrote herself.

This self-writing of nature was first encountered and described in a preromantic laboratory in Göttingen. Georg Christoph Lichtenberg found in 1777 dust formations on the surface of his *electrophore*, a state-of-the-art electrical device, that were soon called after him "Lichtenberg figures." They brought a new visual dimension to the field of electrical research that was crucial for the scientific community as it aided electricity's transformation from a curiosity into a technology. But beyond that, Novalis, Ritter, and their fellow romantics found a different meaning in "this magic inscription." Especially since another scientist, Ernst F.F. Chladni, had produced sound figures that were directly inspired by Lichtenberg's but shared with them primarily the concept of a self-inscription of nonhuman nature, the understanding of the hieroglyphic figures as a secret language of nature began to disseminate. The perception of the figures as THE language of nature that humans just don't have the senses to comprehend—anymore, or not yet—can be found in many of the romantic texts. These hieroglyphs allegedly imprinted through nature itself resemble pure writing in a Derridean sense, where there doesn't exist any [known] "linguistic sign before writing" (Of Grammatology. Baltimore, 1976, 14). Ritter though wanted to find, or at least search for "die Ur-oder Naturschrift auf elektrischem Wege" (Fragmente aus dem Nachlasse eines jungen Physikers. Hanau, 1984, 269), and his attempts at deciphering figures for that purpose resemble Anselmus's training quite closely. With that in mind Kittler's analysis of "the construct of the originary text, which has no basis in the real" (Discourse Networks 86) may need some revision as this originary romantic text comes directly from nature and seems to have been constituted exactly by the real.

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Digital Humanities and Aesthetic Autonomy: The Afterlife of Friedrich Kittler's Discourse Networks

The cresting wave of digital humanities and the perceived threat that distant reading holds for the autonomy of literature reminds us that media-driven interpretation has been a question in German Studies for decades and the threat that works of art would be lumped together with all other documents in the universe to be sorted, filed, scanned, and searched loomed on the horizon in the early 1980s back when everyone thought Foucault's discourse analysis was the final word. The death of Friedrich Kittler reminded me of just how radical his *Aufschreibesysteme* seemed when it first appeared. *Discourse Networks*, the American translation, continues to reverberate through English departments. Published in 1990, it marks a unique and



temporary convergence of theoretical approaches to literature, a moment when the detached, macro approach of media studies overlapped happily with the micro level tradition of close reading.

The radical potential of Kittler's *Habilitationsschrift* was that it seemed to erase literature's claim to uniqueness. By setting novels equal to pedagogical manuals, Kittler was extending Foucault's discourse analysis into art. Not only did Discourse Networks seem to mediate between institutional power external to the literary text and the textual interior, thereby allowing critics to engage in a Foucaultian form of immanent analysis, Kittler's book also brought antagonist French theories into a workable compromise. By foregrounding media, Kittler seemed also to mediate between the work of art's internal organization and the pull of its historical environment, as well as between the epistemologies of Foucault, Lacan, and Derrida. One of the key aspects of this convergence was the word, or concept "discourse." Kittler, as Wellbery explained (in his introduction to Discourse Networks. Stanford, 1990, vii-xxxiii), accepted the Lacanian principle that the unconscious was the discourse of the Other; however he understood "discourse" in Foucault's terms as modes of language that were shaped by a network of pressures and resistance applied by disciplinary techniques, technology, media—all external forces that constituted the subject and the literary text. If these overlapping connotations of the word "discourse" allowed divergent theories to fuse, the eventual divergence of Kittler's and Wellbery's positions also entailed the separation of the term into two distinct meanings. Later in his career, Kittler abandoned his investigation of interiority by concentrating on media hardware as the determinant factor in modern consciousness, whereas Wellbery continued inward to produce his remarkable Lacanian account of Goethe's lyric poetry. The later Kittler was often criticized for having a reductionist account of culture, but few have questioned the Resuscitation of the Author in contemporary close-bore interpretations of Goethe poetry.

The early works of Kittler presented a wonderful interpenetration between close literary analysis and cultural history relying on Foucault. The subtle back and forth in his reading of Goethe's *Wilhelm Meisters Lehrjahre* in *Dichtung als Sozialisationspiel* (Göttingen, 1978) and *Discourse Networks*' masterful leaps from a few lines in *Faust* to the entire Enlightenment held many of us in awe. But eventually this tension tore apart, and Kittler wrote increasingly about social forces as largely determinate of subjective processes such as literature. His essay "There is no software" (*Stanford Literature Review*, 9.1, 1992, 81–90) had the same paranoid reductionism of bad old nineteenth-century Marxism, whereby individual expression is really already determined behind the scene by the forces of industrialization, or in Kittler's more updated form, machine language. The theoretical alliance Kittler had forged with his first books fell apart with the technologically determinist work, and critics who had once participated in the project of discourse analysis turned increasingly to close readings that neglected disciplinary regimes.



Already in his introduction to the English translation of *Discourse Networks*, Wellbery distances himself from Kittler's insistence that literary meaning is an effect of inscription techniques. "A criticism oriented by the presuppositions of exteriority and mediality has no place for creative human subjects, allows no room to psychology and its internalizations, refuses to anchor itself in a notion of universal human being" (Wellbery, xiv). For Wellbery, the poet and the poem resist the disciplinary regimes that structure subjects, whereas Kittler insists that there is no prospect of evading the guidance of pedagogues. Describing the pedagogical techniques that underlie Wilhelm Meisters Lehrjahre, Kittler provides the kind of axiomatic statement usually heard in a Cold War film about space invaders: resistance is futile. Wellbery, by contrast, echoes Adorno's insistence on form as resistance when he claims that the singularity of the lyric poem holds social control at bay. Kittler's early work promised, or threatened, to undo the most sacred tenet of German aesthetics—the autonomy of art and the cult of genius, while still allowing for detailed interpretation of the text. Foucaultian discourse analysis was supposed to shift the divisions that organized literary history to replace them with more fluid relations in which literary texts would be aligned with external discourses. The proposition that literature at the end of the eighteenth century stood apart from earlier writing was in large part predicated upon the assertion of literature's new autonomy from other social institutions.

One of the most important and perhaps unexpected effects of Friedrich Kittler's medialization of literature has been the opening it provided to early modern literature. With the devaluation of aesthetic categories in discourse analysis, early modern literature found an opportunity to assert itself. Kittler's posthermeneutic claim that fiction operates "as a means for the processing, storage and transmission of data" (Wellbery xiv) has inspired new scholarship on Baroque literature. The classical complaint that seventeenth-century novels were nothing more than encyclopedic accumulations of well-worn tropes and narratives seemed less of an insult within Kittler's model. Baroque scholars writing in Kittler's wake eagerly point out the irrelevance of Kunstautonomie for an approach to literature which emphasizes its interpenetration with early modern rhetoric, mathematics, and mnemonics, hoping thereby to have moved seventeenth century texts a little to the forefront of the academic stage. They see Kittler's interest in codes as an opportunity to revive interest in early modern novels as a form of data processing. Baroque scholars lament Germanistik's medial fixation on the Goethezeit: the fascination with the author, his work, its aesthetic and the biographical rationalization of its greatness were complements to a hermeneutic engagement with the work of art. If all fictional texts were understood in terms of their media environment, then the hierarchy created by the aesthetics of autonomy would be replaced by a periodization based on shifting epistemologies.

In describing the rise of romanticism, Kittler explained the demise of the Baroque in the terms that are obviously the model for new readings of Baroque texts: Kittler



writes: "The Republic of Scholars is endless circulation, a discourse network without producers or consumers, which simply heaves words around [...] German poetry thus begins with the Faustian experiment of trying to insert Man in to the empty slots of an obsolete discourse network" (*Discourse Networks* 4).

Of course much of Kittler's later media theory deliberately flattens the hermeneutic subjectivity he describes in Discourse Networks. Twentieth-century media operations have many of the qualities Kittler initially ascribed to Baroque writing: an endless recirculation of forms along channels driven by new technologies and the audiences they create. Capitalist media, like literature, do not hold the claims of authentic authorship in high regard. German classicism, on the other hand, argued against baroque literature that its novels and compilations were polyhistorical accumulations of material that was never sorted into an articulate composition. Novels by Lohenstein or Ziegler ran on for hundreds of pages, piling incidents upon accidents, so that critics like Immanuel Kant could compare such writing to tape worms that simply grow longer the more they digest. Data mining shares this Baroque preference for amassing information without organizing it systematically. Furthermore, it replaces the arch of classical plot development with the episodic sequencing of Baroque literature. The arbitrary manner in which archives come into existence and the unclear circumstances under which collections are amassed all indicate that historical knowledge generated by data mining does not produce an organic entity in the classical mode. Searches through large-scale data corpuses generate information series that pile one piece of information next to the other much like the Baroque polyhistorical novel.

While the radical promise of Kittler's discourse analysis to dissolve traditional aesthetic terms has supported early modern scholarship, critics writing on Goethe and Romanticism have slowly reasserted canonical aesthetic terms so that the specific disciplinary operations described in *Discourse Networks* now all too often appear as ordinary historical context outside the text, and not the omnipresent forces Kittler and Foucault described. The institutional instinct to defend literature now treats digital humanities as the newest version of the radical potential embodied in Kittler's early work.

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Kittler's German Media Histories

Geoffrey Winthrop-Young seems quite right in noting that Friedrich Kittler's media theory is specifically German; this "Germanness" is one important reason why Kittler should remain of continued interest to interdisciplinary German studies. This is the case not only because Germany is where some of the best media theory is being currently produced, nor simply because Kittler wrote on figures familiar to most members of the GSA, but because Kittler's work arose "against the background of debates about technology, humanism, and individual as well as collective identity



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