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Edited by Geoffrey Winthrop-Young, Ilinca Iurascu and
Jussi Parikka

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Cultural Techniques: Preliminary Remarks

Geoffrey Winthrop-Young
University of British Columbia, Canada

Abstract
These introductory remarks outline the German concept of *Kulturtechniken* (cultural techniques) by tracing its various overlapping meanings from the late 19th century to today and linking it to developments in recent German theory. Originally related to the agricultural domain, the notion of cultural techniques was later employed to describe the interactions between humans and media, and, most recently, to account for basic operations and differentiations that give rise to an array of conceptual and ontological entities which are said to constitute culture. In the second part of the essay, cultural techniques are analyzed as a concept that allows theorists to overcome certain biases and impasses characteristic of that domain of German media theory associated with the work of the late Friedrich Kittler.

Keywords
cultural studies, cultural techniques, German media theory, material culture

This special issue of *Theory, Culture & Society* is dedicated to *Kulturtechniken* ('cultural techniques'), one of the most interesting and fertile concepts to have emerged in German cultural theory over the last decades.[1] Our goal was to compile a collection that can serve as both archive and toolbox. For readers with a more historically-oriented interest in the multilayered past of the concept, we included important earlier proposals to define *Kulturtechniken* as well as more recent attempts to (re)write the history of the concept in light of current theory debates. For those more concerned with possible applications and implications, we encouraged contributors to apply their particular understanding of *Kulturtechniken* to new, sometimes unexpected, domains – from servants and swarms all the way to the basic reconfiguration of our understanding of time and machinic temporality. We are, in short, interested in

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Corresponding author:
Geoffrey Winthrop-Young, University of British Columbia, 1873 East Mall, Vancouver, BC V6T 1Z1, Canada.
Email: winthrop@interchange.ubc.ca
http://www.sagepub.net/tcs/

unfolding the concept and probing its use value. Our two guiding questions are: What are cultural techniques? And what can be done with the concept?

These questions, however, are as easy to pose as they are difficult to answer. Although several contributions – especially those by Bernard Geoghegan and Bernhard Siegert – will provide in-depth historical overviews, it is necessary to add a couple of preliminary observations. These remarks will not answer the question posed in our title; they will at best serve to trace the obstacles that stand in the way of a satisfactory response. The basic difficulties arise from four closely related points to be elaborated below. (i) The term *Kulturtechniken* entered the German language on three separate occasions with three different conceptual inflections. (ii) Matters would be easier if more recent employments of the term had retired older meanings, but unfortunately all three are still in use. (iii) It is not always clear which meaning theorists have in mind (if indeed they have any particular one in mind); moreover, some theorists like to play the meanings off against each other. (iv) This conceptual jousting is related to attempts to deploy the term in line with particular theory agendas. In other words, 'cultural techniques' is a multi-layered term that is often shoehorned into fairly specific approaches. Rather than tackling the question 'What are cultural techniques?', it makes more sense to ask: 'What is the question to which the concept of cultural techniques claims to be an answer?'

With this in mind, the following observations will offer a mixture of signposts and side planks designed to provide some orientation in the maze of possible definitions and to prevent the reader from being thrown off balance by the sudden changes in direction between the papers. We will proceed in two steps. First, we will review the three different meanings of *Kulturtechniken*. In each case it will be necessary to foreground ramifications and implications of the particular way in which the term is used. Second, the emergence of the term's third and theoretically most sophisticated meaning will be related to a specific juncture in recent German cultural theory. To anticipate one of our principal conclusions, the most important issues addressed by the culture-technical approach are related to problems arising from the development of so-called German media theory. While Jussi Parikka's Afterword will survey what has come out of the lively German discussions – achievements, shortcomings and promising points of contact across the Channel and the Atlantic – these preliminary observations will focus on what went into the concept, and why on occasion it did not go in peacefully.

Triple Entry

The term *Kulturtechniken* first gained prominence in the late 19th century, at which point it referred to large-scale amelioration procedures

such as irrigating and draining arable tracts of land, straightening river beds, or constructing water reservoirs. It also included the study and practice of hydrology and geodesy. K., the hapless surveyor unable to gain entrance to Franz Kafka's *Castle*, is a *Kulturtechniker*. This first instantiation of *Kulturtechnik*, usually translated into English as 'rural' or 'environmental engineering', is still very much in use. But more importantly (and irritatingly), it is at times tactically *put to use* by some who have a very different meaning in mind.

It is crucial to highlight some of the implications and ramifications of this first emergence. If *Kulturtechnik* refers to rural engineering, then the *Kultur* in question is far removed from more refined notions of *Kultur* or culture as 'the best that has been thought and said'. Matthew Arnold was concerned with culture and anarchy, not with ploughing and draining. In this particular context *Kultur*/culture is first and foremost a matter of *agriculture*. As many of our contributors would point out, this particular inflection of the term appeals to its etymological roots: culture, Latin *cultura,* derives from *colere* ('tend, guard, cultivate, till'), but the initial meaning was soon overrun by a sequence of semantic tribal migrations which turned culture – that 'damned word' Raymond Williams wished he had never heard (Williams, 1979: 154) – into a concept as overloaded as it is indispensable (for an overview see Williams, 1983: 97–103). To rephrase the initial reference to husbandry on a more abstract level, culture is that which is ameliorated, nurtured, rendered habitable and, as a consequence, structurally opposed to nature, which is seen as either actively resistant (the hoarding dragon that must be killed to release the powers of circulation) or indifferent (the swamp that must be drained, the plains that must be settled). But now a question arises that will haunt *Kulturtechnik* throughout its conceptual metamorphoses: which of the two domains does this act of creation by means of separation belong to? Is using a plough to draw a line in the ground in order to create a future city space set off from the surrounding land itself already part of that city? In that case matters would be easy: culture creates itself in an act of immaculate self-conception that is always already cultural. Culture would be culture all the way down. Or do the operations involved in drawing this line belong to neither side? A proper understanding of culture may require that the latter be dissolved into cultural techniques that are neither cultural nor natural in any originary sense because they generate this distinction in the first place.

The second emergence of *Kulturtechniken* around the 1970s is linked to the growing awareness of modern – that is, analog and increasingly digital – media as the dubious shapers of society. To speak of cultural techniques in this context is to acknowledge the skills and aptitudes necessary to master the new media ecology. Watching television, for instance, requires specific technological know-how (identifying the on/off button, mastering the remote, programming the VCR) as well as

equally medium-specific mental and conceptual skills such as under-
standing audiovisual referentiality structures, assessing the fictionality
status of different programs, interacting with media-specific narrative
formats, or the ability to distinguish between intended and unintended
messages. All these skills, aptitudes and abilities are part of the
Kulturtechniken des Fernsehens, the cultural techniques of television. At
this point, *Kulturtechnik* comes close to what in English is referred to as
'media competence'. Very soon, however, this focus on modern media
technologies was expanded and 'basic' skills such as counting and writing
came to be labelled *elementare Kulturtechniken* ('elementary cultural
techniques').

Once again we must unravel the implications. If the first, agricultural
instantiation of the term aimed at techniques that transformed nature
into culture, this second usage of *Kulturtechniken* implies a very similar
operation: it indicates a culturalization of technology, in particular, of
those media technologies frequently denounced as inimical to culture.
First we enculture what allegedly preceded culture, now we enculture
what threatens to erode it. This latter move, however, is highly ambiva-
lent, and its thrust or bias depends on which part of the compound noun
Kulturtechnik you choose to privilege. Does *Kultur* rule over *Technik*, or
is *Kultur* subsumed under *Technik*? If you opt for the former, you are
extending the sovereignty of culture into the domain of technology. You
are, as it were, treating media technologies like the barbarians on the
other side of wall who may enter and become part of the empire of
culture once it is assured that they support established cultural para-
digms. If they submit to Roman rule, they will gain Roman citizenship.
Bernhard Siegert, who spent his intellectual novitiate in the anti-
humanist red-light district of Freiburg of the early 1980s, is quick to
discern a retrograde agenda at work here. Methodological procedures
and hermeneutic paradigms developed in the high typographic age of
humanist literacy are striving to co-opt technological domains they do
not understand to support an anthropocentrism they have not thought
through. On the other hand, if you grant priority to the *Technik* in
Kulturtechnik, the thrust is reversed. Rather than projecting notions of
culture into (future) technology, technology is retrojected into (past) cul-
ture. The materiality and technicity so obviously on display in modern
media technologies is now recognized to already have permeated their
allegedly untechnical, more 'natural' predecessors – including the so-
called elementary cultural techniques like writing, drawing and counting.
Cultural techniques reveal that there never was a document of culture
that was not also one of technology.

A second important ambiguity concerns the question whether acquir-
ing the skills and aptitudes required to handle a given technology or
procedure confirms our traditional role as the masters of our tools and
protocols, or whether we are in fact dealing with the reverse process in

the course of which we are inscribed by things and routines. We can detect the faint outlines of Hegel's master/slave dialectic: Are we really the masters of our domain, or is the feeling of mastery a delusion created and sustained by those we believe we have mastered? Are we duped by the cunning of our tools? In her contribution Cornelia Vismann recasts this question in a legal light by introducing the question of sovereignty. How sovereign are we when we interact with tools that prescribe their own usage, have an inbuilt purpose, and constrain our actions with their material properties?

> One must therefore draw a distinction between persons, who *de jure* act autonomously, and cultural techniques, which *de facto* determine the entire course of action. To inquire about cultural techniques is not to ask about the feasibility, success, chances and risks of certain innovations and inventions in the domain of the subject. Instead, it is to ask about the self-management or auto-praxis [*Eigenpraxis*] of media and things, which determine the scope of the subject's field of action.

This formulation would in theory still allow for the notion of a pre-existing sovereign subject that by engaging with 'media or things' forfeits some of its sovereignty but that reasserts it once it withdraws into an unsullied state of non-intervention (for instance, Cartesian contemplation). But we know better (as does Vismann). We can see the next, more radical conclusion rapidly approaching: namely, that the very subject whose sovereignty is under debate was created by the operations which are then said to limit its 'field of action'.

At this point we have crossed over into the third meaning of *Kulturtechnik*, which emerged around the turn of the millennium within the newly established domain of institutionalized *Kulturwissenschaften*. While this theoretically most informed instantiation draws on the preceding two, it is also fuelled by philosophical and anthropological considerations. More precisely: it radicalizes the key points of the first two meanings to such a degree that cultural techniques come to transcend the confines of literary studies, media theory and cultural studies and enter the domain of philosophy and anthropology. In order to understand the latter the best point of entry is to return to the ambiguities of the second meaning and unfold their radical implications.

Dressing down Man and Being

To repeat, the second instantiation of *Kulturtechnik* referred to the skills and aptitudes involved in mastering a given technology. This meaning of the term, no doubt, pays homage to the rapidly expanding and

increasingly complex technical, social, and administrative mediation processes that characterize life in modern society. So extensive are these processes that it was only a matter of time before observers started to question the precarious status of its three core entities: (i) the subject performing these operations; (ii) the basic concepts, ideas and notions that appear to guide these operations; and (iii) the object manipulated by these operations. To put it in a nutshell: so much is happening between here and there, so difficult has it become to get a grip on the procedures that lead from here to there, that we are forced to confront the possibility that there was never a 'here' or 'there' to begin with; both are a product of the between.

Let us start with (iii), that is, the notion that tools, operations protocols and/or procedures create the object. In his contribution to this issue Sebastian Vehlken offers a media archaeology of swarm research. Historically, the analysis of swarming and emergent behaviour is not merely assisted by, it fundamentally depends on storage and computing technologies superior to the processing speeds of the human sensorium. Whether or not media determine political swarms is up to debate; they certainly determine our ability to think of swarms in the first place (Vehlken, 2012: 413). On the object as well as the meta-level, then, swarms are the ultimate performance (and product) of cultural techniques: they would not be without media, and their emergent behaviour illustrates the way in which so many other, ontologically seemingly far more secure objects emerge from culture-technical operations.

This leads us directly to (ii) – the emergence of basic concepts and guiding notions from cultural techniques. It is at this point in the debate that students will inevitably encounter a now canonical passage by Thomas Macho (which is quoted in several essays in this issue):

> Cultural techniques – such as writing, reading, painting, counting, making music – are always older than the concepts that are generated from them. People wrote long before they conceptualized writing or alphabets; millennia passed before pictures and statues gave rise to the concept of the image; and until today, people sing or make music without knowing anything about tones or musical notation systems. Counting, too, is older than the notion of numbers. To be sure, most cultures counted or performed certain mathematical operations; but they did not necessarily derive from this a concept of number. (Macho, 2003: 179)

We did not start out with the idea or concept of *the* number and then derive from it our quotidian counting operations; rather, early counting practices in time generated the notion of the number. Think, for instance, of Denise Schmandt-Besserat's (1996) acclaimed history of writing. Writing may have turned into the visible representation of spoken

language, but that is not how it began. Rather, there was a sequence of exaptations in the course of which humans came to reflect on language and communication in terms of the sign systems they employed. Writing emerged from early accounting practices involving tokens; the tokens were gradually abstracted into signs; and finally, the resulting sign value was used to approximate names for taxation purposes. Counting and accounting precede writing. It is at this point that the idea of writing as supplement to the spoken word can take hold. Procedural chains and connecting operations give rise to notions and concepts that are then endowed with a certain ontological distinctiveness – and which are therefore in need of a techno-material deconstruction.

Finally, point (i), the subject. If ideas, concepts and in some cases the objects themselves emerge from basic operations, then it is only logical to assume that this also applies to the agent performing these operations. Once again, the recourse to elementary cultural techniques provides the best example. (Indeed, it is highly instructive to observe how in discussing elementary cultural techniques theorists like Siegert and Vismann will – not without a certain polemical panache – invoke the first, agricultural meaning of *Kulturtechnik*, enrich it with the theoretical sophistication of the third meaning, and then deploy it to both encircle and challenge the humanist overtones of the second.) After introducing the notion of limited and transferred sovereignty mentioned above, Vismann arrives at a more radical diagnosis:

> To start with an elementary and archaic cultural technique, a plough drawing a line in the ground: the agricultural tool determines the political act; and the operation itself produces the subject, who will then claim mastery over both the tool and the action associated with it. Thus, the *Imperium Romanum* is the result of drawing a line – a gesture which, not accidentally, was held sacred in Roman law. Someone advances to the position of legal owner in a similar fashion, by drawing a line, marking one's territory – ownership does not exist prior to that act.

Macho stresses how guiding notions – many of which are the subsequent beneficiaries of philosophical ennoblement – arise from as yet non-conceptualized quotidian practices; Vismann, in turn, stresses how culture-technical operations coalesce into entities that are subsequently viewed as the agents or subjects running these operations (and who receive similar philosophical blessings). Students of German philosophy will realize that we have moved from the idealist pastures of the Hegelian master/slave into the more arduous Heideggerian territory of ontic-ontological distinctions. Indeed, one pithy way to describe the rise of *Kulturtechniken* in German cultural theory is to label it part of a large-scale, albeit largely uncoordinated, Heidegger update. As the resolutely

anti- or counter-Platonic stance of the Macho quote above indicates, the study of cultural techniques aims at revealing the ontic operations that underlie and give rise to ontological distinctions which are then liable to take over thought. The older Heidegger came to oppose philosophy to *Denken* (thinking); the study of cultural techniques provides a kind of flanking manoeuvre by relating the thinking of *Sein* (Being) to the processing and operating of bits and pieces of *Seiendes* (beings).

The anthropological implications are arguably a great deal more important and interesting. They are closely related to the philosophical implications, which comes as no surprise given that in the German intellectual tradition *Anthropologie* is as closely related to philosophy as Anglo-American anthropology is to ethnology. To understand what is at stake it is crucial to point out that, from the point of view of the culture-technical approach, the human body is no less of an inscription surface than any other storage medium, including the human mind. Cultural techniques therefore include what Marcel Mauss termed body techniques (*techniques du corps*). Indeed, Mauss's famous 1934 lecture on body techniques is indispensable for an expanded understanding of cultural techniques. After briefly addressing swimming, marching and trench digging (the initial focus on athletic and military activities is no coincidence), Mauss provides a more peaceful but no less revealing example:

> I was ill in New York. I wondered where previously I had seen girls walking as my nurses walked .... At last I realised that it was at the cinema. Returning to France, I noticed how common this gait was, especially in Paris; the girls were French and they too were walking in this way. In fact, American walking fashions had begun to arrive over here, thanks to the cinema. This was an idea I could generalise. (Mauss, 1973: 72)

The essence of this generalization is not to redraw the boundary between nature and culture in favour of the latter, but to redefine it as a zone of constant exchange that has no predetermined location. Walking is not just a matter of physiology, gravity and kinetics, it involves chains of operations that link ambulatory abilities to cultural protocols. It is not just a species marker or biological given, it is always already the interaction between the fact that you can walk and the expectation that you could or should walk in particular ways.

The basic anthropological implication consists in the retrojection backwards into the dawn of species developments: what we call *the human* is always already an emergent product arising from the processual interaction of domains that in time are all too neatly divided up into the technical and the human, with the former relegated to a secondary, supplementary status. Once again, one of the most elementary techniques

offers one the most illuminating examples: doors. In a recent essay, Siegert – taking his cue from Georg Simmel's beautiful 1909 essay on 'Bridge and Door' (Simmel, 1994) – describes doors as thresholds that create and process the distinction between inside and outside. Here we are back to the question raised at the outset: Is the door a part of the inside or the outside? Is that which draws the boundary between nature and culture itself part of nature or culture? It is of course possible to summon the eager spectre of Carl Schmitt and invoke a sovereignty that is of a different order than the distinctions it imposes. But it is more promising to follow the lead of theorists like Siegert (2007: 31–5) and Erhard Schüttpelz (2006) and employ the fertile concept of the parasite as developed by Michel Serres. A parasite is not something that comes to prey on already existing structures (like pirates congregating on busy shipping lanes). Rather, the structures as well as what it connects come into being as a result of operations involving the always already present third party. Any act of communication is an act of excluding the third party which thereby both is and is not part of the communication. In the culture-technical approach, this act of excluding the parasitical third has its analogue in the way structures and entities tend to render invisible the constitutive technical operations they arise from.

But to return to immediate anthropological implications. Once you move from doors, gates and portals to fences, pens and corrals – that is, once you consider the elementary cultural techniques of creating enclosed spaces for catching, keeping, and breeding animals – you are creating operative thresholds that effectively generate different species confronting each other across that divide. Humans did not come about on their own; we are not a Münchhausen species able to pull ourselves out of our pre-hominid swamp by our own hair. The human is not human all the way down. Instead we emerged, quite literally, from doors and gates while domesticated animals – in opposition to which we were able to identify ourselves as a species – emerged on the other side:

> Thus the difference between human beings and animals is one that could not be thought without the mediation of a cultural technique. In this not only tools and weapons . . . play an essential role; so, too, does the invention of the door, whose first form was presumably the gate [*Gatter*] . . . The door appears much more as a medium of coe-volutionary domestication of animals and human beings. (Siegert, 2012: 8)

Once again, cultural techniques refer to processing operations that frequently coalesce into entities which are subsequently viewed as the agents or sources running these operations. Procedural chains and connecting techniques give rise to notions and objects that are then endowed with essentialized identities. Underneath our ontological distinctions (if not even our own

evolution) are constitutive, media-dependent ontic operations that need to be teased out by means of techno-material deconstruction.

But with quotes like the one above, the German study of the cultural techniques of hominization is targeting an area of research that is also of crucial interest to concurrent development in the North American post-humanities: the co-evolution of humans and technology. Cultural techniques are also anthropotechnics. Leaving aside the conspicuous Heidegger-based similarities to Bernard Stiegler, it is possible – and, above all, very interesting – to draw connections between the work of Siegert, Schüttpelz and Vismann on the one hand and that of David Wills, Cary Wolfe, Katherine Hayles and Donna Haraway on the other (further see Winthrop-Young, 2009). Yet once again, Siegert is quick to draw a dividing line:

> While the American side pursues a deconstruction of the anthropological difference with a strong ethical focus, the Germans are more concerned with technological or medial fabrications or artifices. From the point of view of the cultural techniques approach, anthropological differences are less the effect of a stubborn anthropo-phallo-carno-centric metaphysics than the result of culture-technical and media-technological practices...Human and non-human animals are always already recursively intertwined because the irreducible multiplicity and historicity of the anthropological is always already processed by cultural techniques and media technologies....Without this technologically oriented decentering there is the danger of confusing ethics with sentimentality: the human/animal difference remains caught in a mirror stage, and the humanity that is exorcised from humans is simply transferred onto animals which now appear as the better humans.

Others may want to debate the validity of this distinction or try their hand at reconciling the competitive enterprises; we are more concerned with identifying what is behind the insistence on this mid-Atlantic divide. The emphasis on media-technological practices and medial fabrications, the reference to sentimentality, and the impatience with rituals of deconstruction that do not include an informed technological focus – where does this come from? Where have we heard similar appeals? There are several sources (Heidegger inevitably comes to mind), but it is not difficult to pinpoint the most obvious one.

Kittler Determines Our Situation

The papers contained in this issue were written over the last decade, with the earliest (Krämer and Bredekamp) dating back to 2003. The temporal

frame thus largely coincides with a decade that witnessed not only the rapid institutional rise of cultural techniques research in Germany, but also the internationalization of so-called German media theory – a cluster of work commonly associated with the late Friedrich Kittler. Kittler, no doubt, casts a long shadow over this issue, which in many respects is a sequel to the 2007 *Theory, Culture & Society* special issue dedicated to his work. It is no coincidence that several of our contributors were at one point or another his students or collaborators. The title of Bernard Geoghegan's contribution, 'After Kittler', is particularly apposite. In German it would be '*Nach Kittler*' – *nach* means both 'after' and 'according to'. But *nach* or according to Kittler, what should come *nach* or after him? Furthermore, to speak of a time 'after' Kittler implies the drawing of a line beyond which he did not venture. Is there such a line? Or is it maybe more of a moving frontier? However, we should not overrate Kittler. As Parikka points out, you cannot lay all of the recent cultural techniques scholarship at Kittler's doorstep. Much of it has little to do with him; a lot would meet with his disapproval. Nonetheless, to fine-tune our opening question: cultural techniques can be better understood when viewed as the response to questions or quandaries that arose from media-theoretical work best represented by Kittler's contributions.

One of the more peculiar qualities of Kittler's media-theoretical work is the uneasy juxtaposition of a wealth of detailed case studies and the ongoing insistence on the impact of historically changing 'discourse networks' on the one hand, and a reluctance to define medium and/or media on the other. Students learn a lot about the operations and effects of media but less so what media are. This feature is related to the fact that in Kittler's theory the term 'media' appears to operate in at least three different registers. First, it denotes a new *object of study*. Those who once interpreted texts are now scrutinizing phonographs, typewriters, and computers. Second, as Siegert will discuss in greater detail, it denotes a new *approach* to old objects of study: the usual repository of established disciplinary phantoms – body, mind, sense, senses, meaning, truth, communication, consciousness, etc. – are now dissected as thoroughly mediated constructs. Third, it is a *rhetorical device* itching for a good fight. Especially in the anti-humanist heyday from the late 1970s to the early 1990s, it is a polemically deployed counter-term carrying a volatile anti-hermeneutic charge. *Media*, then, is many things, ranging from a verbal club liberally applied to those stuck in old meaning-seeking paradigms to a kind of conceptual defamiliarization tool designed to break the narcotic spell deviantly servile technologies cast on their users.

Such conceptual fracturing has its consequences. With the spread and institutionalization of media theory its ability to shake up minds and disciplines was bound to diminish. Prolonged provocation inevitably devolves into nonproductive tedium, especially if recycled within the safety of established academic programs. Not coincidentally, the last

couple of years have witnessed a small but significant deployment of titles in which the existence of media is either referred to in the past tense (e.g. Pias, 2011) or denied (e.g. Siegert, 2003; Horn, 2007). This is not only a reflection of the technological issue that, as Kittler would have it, the digitization of channels and information 'will erase the very concept of medium' (Kittler, 1999: 2); it also signals the abdication of *media* as a cutting-edge conceptual shibboleth. Unfortunately, this has not prevented some of Kittler's more dedicated and hence less original disciples to continue to write like it's 1999 and indulge in ever more detailed readings of ever more arcane technologies. Media theory can forfeit its relevance in many ways; one of the safest is to engage in increasingly stale artifactualism.

But how to escape the narrowing tunnel? One response – and one which deserves greater attention in the Anglosphere – has been the rise of *Medienphilosophie* or media philosophy. In contributions by scholars such as Sybille Krämer or Dieter Mersch, the basic gesture is to move from *media* (and all the overly artifactual, instrumental and/or determinist connotations the term has accumulated) to *mediality*, though without abandoning the crucial Kittlerian lessons gained from scrutinizing the former. Media philosophy reflects on the generalizations derived from the preceding medium-specific studies and attempts a definition of mediality, yet it refuses to reacquire the instrumental naivety or techno-centric assumptions of bygone theory decades. One of the core points is to provide an account of mediality as something that belongs neither to the perceiving subject nor the perceived object and which, as a third, enables perception by removing itself from perception (for a short introduction see Mersch, 2006: 219–28).

This is very similar to an understanding of cultural techniques as a 'third' obscured by what emerges from its operations. As Geoghegan will discuss in greater detail, the ascendancy of *Kulturtechniken* may be seen as a response to some of the problems and potential cul-de-sacs of Kittler's media theory. The pronounced anti-humanism in combination with the scorn Kittler heaped on nebulous constructs like 'society' may have been a necessary inoculation against the instrumentalist, anthropocentric or technically uninformed ways of dealing with the materialities of storage and communication, but by the mid-1990s, when Kittler's own apocalyptic anti-humanism had passed its peak, it too had run its course. Here the culture-technical approach offers a viable alternative or escape route. To speak of operations and connections allows those inspired by the Kittler effect to speak of practices without saying society; to readmit human actors allows them to speak of agency without saying subjects; and to speak of recursions allows them to speak of history without implying narratives of continuity or social teleology. Among other things the third meaning of cultural techniques is an answer to questions raised by Kittler's work.

Of course there is an alternative, which, to put it bluntly, comes with an interesting bid to out-Kittler Kittler. As Parikka has emphasized, this is most clearly on display in the media-archaeological work of Wolfgang Ernst (further see Parikka, 2011). While Markus Krajewski's contribution on service as a cultural technique combines *human* servants (Jeeves) and *electronic* servers (AskJeeves.com) by establishing recursive connections between the two, Ernst discusses the more radical perspective that these recursive operations are exclusively composed of inter-machinic processes proceeding in machine time. This is not the end of history, yet it marks the awareness of a machine history that needs to be told – if it can be told at all – in ways that radically depart from human historiography (further see Winthrop-Young, 2013). Here, the *Technik* in *Kulturtechnik* clearly gains the upper hand. To offer one of those irresponsible generalizations that come easily to outside observers, it appears that, like Hegel, to whom he is occasionally compared, Kittler has inspired a bifurcation into right and left Kittlerians. Nothing, we suggest, reveals this division more than applying the concept of cultural techniques to his work. Scholars like Siegert, Vismann and Krajewski would qualify as left Kittlerians: his anti-hermeneutic stance is transformed by them into a less intransigent post-hermeneutic approach involving certain notions of praxis and limited human agency that Kittler was prone to eschew. Ernst, on the other hand, would be a right Kittlerian by subordinating whatever human element may be involved in cultural techniques to the closed times and circuits of technological recursions.

Overview

To reflect the issues sketched above, we have divided the collection into two parts made up of four papers each (excluding these preliminary remarks and Parikka's Afterword). The first part contains introductions and historical accounts. It leads off with a short paper by Sybille Krämer and Horst Bredekamp, 'Culture, Technology, Cultural Techniques: Moving beyond Text', originally published in 2003. It represents the first systematic attempt to provide, in point form, a concise summary of the new concept of cultural techniques, and it comes with the appeal that the use of the concept should result in moving the study of culture beyond established textual domains, thereby debunking the myth of culture as discourse. Thomas Macho's contribution seeks to fine-tune the concept by restricting cultural techniques to symbolic technologies that allow for self-referential recursion. These recursions, in turn, are crucial for the generation of humans as – to quote the title of the paper – 'Second-Order Animals'. Cultural techniques, in short, are first and foremost techniques of identity. The following papers by Bernhard Siegert (who will take issue with Macho's restriction) and Bernard Geoghegan are more retrospective and historical in scope. In his paper 'Cultural

Techniques, or the End of the Intellectual Postwar Era in German Media Theory', Siegert relates the (re)emergence of the concept to recent changes in both the political and intellectual domain and then proceeds to outline his post-hermeneutic account of *Kulturtechniken* as chains of operations that link humans, things and media. Geoghegan's paper, 'After Kittler: On the Cultural Techniques of Recent German Media Theory', addresses some of the specific moments in German post-war theory outlined above, but it presents a much wider and more detailed view of the diverse meanings and Kittlerian origins of *Kulturtechnik* than was offered here.

The second part contains papers primarily concerned with applications and implications. As already mentioned, Cornelia Vismann's contribution, 'Cultural Techniques and Sovereignty', probes the implications of cultural techniques for the field of legal philosophy. If cultural techniques connect and thereby define the agency of humans and objects (which in Vismann's famous formulation are objects and subjects, respectively, connected to cultural techniques acting as verbs), it becomes the analyst's task to reverse-engineer this wiring: from the emergent fiction of human sovereignty back to the techniques that enabled it in the first place. Markus Krajewski's contribution, 'The Power of Small Gestures: On the Cultural Technique of Service', offers an intriguing case study that conceptualizes the history of servants and servers as a cultural technique revolving around an increasingly technologized interplay of bodily gestures on the one hand and tools and instruments on the other. Sebastian Vehlken's 'Zootechnologies: Swarming as a Cultural Technique' addresses the way in which cultural techniques are involved in the exploration of swarming, both in the biological and political domain. Finally, Wolfgang Ernst's 'From Media History to *Zeitkritik*' discusses the implications imposed on cultural techniques by the ways in which technical media produce and process their own distinct time. Ernst's discussion has the added bonus of tying together cultural techniques with another very promising current German theory strand, media archaeology. But that is another chapter (see Parikka, 2012; Ebeling, 2012; Ernst, 2013) we hope readers will be encouraged to explore.

Note

1. Over the years *Kulturtechniken* has been rendered into English as 'cultural technologies', 'cultural techniques' and 'culture technics' (with and without a dash). Leaving aside the differences between *Kultur* and culture as well as the problematic transformation of the noun *Kultur* into the adjective 'cultural', the principal quandary is the word *Technik*. Its semantic amplitude ranges from gadgets, artefacts and infrastructure all the way to skills, routines and procedures – it is thus wide enough to be translated as technology, technique, or technics. *Medientechniken*, for instance, are media technologies rather than

media techniques, but *Körpertechniken* are body techniques rather than body technologies. The corresponding difficulty on the English side is the comparatively narrow range of 'technology' which, ironically, is in part a result of the flattening of the term that occurred in the early 20th century in the course of the Anglophone processing of imported German social theories, especially Marxism (further see Schatzberg). We have decided in favour of 'cultural techniques'. This is not an ideal solution; in some instances it may well be the inferior choice. However, a full understanding of *Kulturtechniken* involves drills, routines, skills, habituations or *techniques* as much as tools, gadgets, artefacts or *technologies*. At rock bottom, *techniques* covers more of *technologies* than vice versa.

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Acknowledgements and Dedication

Geoffrey Winthrop-Young is Professor of German at the University of British Columbia in Vancouver, Canada. Among his publications are *Kittler and the Media* (Cambridge, 2011) and *Friedrich Kittler zur Einführung* (Hamburg, 2005), as well as translations of works by Friedrich Kittler, Cornelia Vismann and Eva Horn.

Culture, Technology, Cultural Techniques – Moving Beyond Text[1]

Sybille Krämer
Free University, Berlin

Horst Bredekamp
Humboldt University, Berlin

Abstract
Originally published in 2003, this article presents one of the first attempts to provide a systematic summary of the new concept of cultural technique. It is, in essence, an extended checklist aimed at overcoming the textualist bias of traditional cultural theory by highlighting what is elided by this bias. On the one hand, to speak of cultural techniques redirects our attention to material and physical practices that all too often assume the shape of inconspicuous quotidian practices resistant to accustomed investigations of meaning. On the other hand, cultural techniques also comprise sign systems such as musical notation or arithmetical formulas located outside the domain of the hegemony of alphabetical literacy. The rise of the latter in particular is indebted to the impact of the digital – both as a domain of technology and a source of theoretical reorientation. Together, these aspects require a paradigmatic change that challenges and supersedes the traditional 'discursivism' of cultural theory.

1. For a long time, perhaps for too long, culture was seen only as text (see Lenk, 1996). Hardly any other trope has had as formative an impact on the culture-theoretical debates of the last decades as this semiotic and structuralist baseline. The metaphor of text dominated until the 1980s,

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Corresponding author:
Prof. Dr. Sybille Krämer, Freie Universität, Institut für Philosophie, Habelschwerdter Allee 30, D-14195 Berlin, Germany.
Email: sybkram@zedat.fu-berlin.de
http://www.sagepub.net/tcs/

transforming the world of culture into a world of discursive signs and referents. In that way, it helped deepen the rift between the natural sciences and the humanities and cultural sciences.

Isn't it odd, however, that the historical semantics of 'culture' (see Böhme, 1996) refers back to agrarian methods and operations and to hand-based crafts? 'Culture' has its largely prosaic origins in the tilling of a field (*cultura agri*) and in gardening work (*cultura horti*); it is first and foremost the work with things – their cultivation – that surround us on a daily basis. Indeed, Latin words such as *colere*, *culture*, and *cultura* harbor the etymological traces of a conception of culture centering around techniques and rites, skills and practices that provide for the stability of lived-in space and the continuity of time, and have thus made our world into a human world by 'cultivating' (or de-primitivizing) it (Böhme, 1996: 54). Culture contains an impulse toward action: it is what is 'done and practiced' (Busche, 2000: 70).

The evolution of the concept of culture, however, 'forgets' its genesis. Over time, the material and technical elements of culture recede further and further into the background, as the term is 'refined' into a *cultura animi* with the intention of 'spiritualizing' it. This spiritualization expresses itself in the educational values of science, art, and philosophy. All it required in the 20th century was a 'linguistic turn' (the 'discovery' of language as the pivot for the conception of ourselves and the world) to facilitate the congruence of culture and the symbolic, that is, the identification of culture with all that is semiotically given and interpretable. And so it came to pass that the procedures of textual analysis and hermeneutics advanced to become the favorite model for the understanding of cultural orders.

2. This discursivization of culture has – at least – three notable effects:
a. *Misjudging the epistemic power of the image*. The hierarchy between language and image, in terms of priority and import, has become indirectly proportional to the facility with which images of all kinds – photographs, film, and television – have usurped our everyday world. Practices that create images are cultural property, as long as they can be assigned to the realm of art, which is to say, as long as they are sufficiently removed from science and knowledge. Understood as the silent stepsister of language, without the potential for argumentation or, even more important, knowledge-generation, the world of pictures accrues cultural significance in the form of paintings and the mass media. The rest are illustrations...
b. *The disavowal of mathematical formalisms*. Those who insist on an intimate relationship with western culture acknowledge without shame that they don't want to have any truck with formulas. The fear of

formulas is almost a cultural property in and of itself, and formalism is often suspected of entailing self-alienation. When Edmund Husserl described the mathematization and formalization of the modern sciences as a crisis in the experience-ability of life, he echoed the anxieties of the European tradition of culture (see Husserl, 1970). One common view holds that where letters morph into formulas, content and interpretation go out the window; the manipulation of alphabetic and numerical signs is blocking sense and understanding. Language surrenders its symbolic power in its pact with numbers and becomes a quasi-diabolic technique.
 c. The lopsided concentration of media-historical and media-theoretical research on the *relationship between orality and literacy*. Media are assigned a role in cultural history whenever they appear as 'intralinguistic' phenomena, that is, during the transition from speech to writing. In that way, the relationship between orality and literacy could easily be promoted to a special branch within the humanities, with the implication that writing could be understood as a purely discursive phenomenon, that is, as phonographic writing. Musical notation, the operative languages of algebraic and arithmetical formulas, logical calculus, and program 'languages' are all characterized by a graphism independent of sound, and thus remain outside the boundaries of the traditional concept of language-based literacy.

This 'Abc' of a discursive concept of culture can be reduced to a polemical formula: the direction of our changing meaning of culture goes from technique to text, from things to symbols, from processing to interpreting. And where things are the other way round – where texts function as techniques (as in the computing protocols of mathematics), where symbols reveal their manipulable materiality, and where differences in interpretation become secondary to the algorithms of operative sets – they will inevitably be suspected of being a retreat of the discourse-based concept of culture in the face of the advancing techno-mathematical mechanics of civilization.

3. In 1936, when Alan Turing formulated the intuitive concept of computable functions with the help of his model of a Turing machine (Turing, 1937), it was no more than a further proposition in a series of mathematically equivalent propositions coming from Gödel, Church, Kleene, Post, and Markov (see Krämer, 1988: 157). Nonetheless, his model differed from those of his mathematical rivals: it is no coincidence that Turing lent his name to the shift from the 'Gutenberg Galaxy' to the 'Turing Galaxy'. Three elements of his Turing machine are central to this shift (see Krämer, 1991: 4). Turing opens up a cognitive dimension with his claim that his mathematical formalism renders explicit what a human calculator does when working with paper and pencil, which is to say,

when writing. Second, he further develops the convertibility between the symbolic and the technical already surmised by Leibniz, and along with it the convertibility between the semiotic and the physical, and, by extension, between software and hardware. And he finally projects the Turing machine as a universal medium by showing that there are universal Turing machines capable of imitating every special Turing machine because the codes of the latter can be inscribed – that is, programmed – onto the strip of the universal machine.

Thus Turing demonstrates to what degree (formal) texts can simultaneously be machines, and vice versa. The Turing machine marks the point when mind and machine are no longer at odds with one another, but acknowledge their relationship (their family resemblance, as it were). At the same time, Turing's inspirations proved incapable of softening the hardened structures of modern culture, perhaps precisely because of his use of mathematical language. In order for that to happen a discourse was required that could claim to follow in the tradition of the humanities, albeit in a culturalist guise.

4. It is indeed no longer possible to ignore the signs that the idea of culture-as-text is eroding. At the moment, we can identify at least four frontlines of this process of 'erosion':

a. *The recognition that culture-creating practices are fluid*. 'Culture' is no longer confined to what is enshrined in works, monuments, and documents in stable and statutory form. Originating in the field of language theory, the debate on 'performance' and 'performativity' has spilled over and into the social and culture sciences as well as aesthetic and art history, in the process relativizing the focus on text and representations by emphasizing the significance of cultures through acts, implementations, rituals and routines (Wirth, 2002). The English term 'cultural studies' has made everyday practices into a legitimate object of study (Böhme et al., 2000: 12). The demarcation between 'high' and 'low' culture has lost its sharply polarized distinction.

b. *Uncovering 'silent processes' of knowledge*. For a long time, science has been seen as the embodiment of theory and the search for evidence centered around a propositional and language-based form of knowledge. But recently the history of science has discovered the technical and symbolic practices (Bredekamp, 2001) housed in labs, studios, and lecture halls, which are responsible for communicating and exhibiting 'objects of knowledge' in the first place (see Bredekamp, 2003; Latour, 1989). Theories of knowledge, in turn, have shifted attention to non-propositional forms of knowledge, that is, implied and embodied knowledge manifesting and legitimating itself through the handling of objects and instruments.

c. *A willingness to de-hermeneuticize the notions of 'mind' and 'sense.'*
Philologists explore the material and medial foundations of literature
cultures; they reconstruct the emergence of sense out of non-sense (see
Gumbrecht, 1996). The social sciences investigate communication as a
social operation. Media theory, which transformed the 'linguistic turn'
into a 'medial turn', reconstructs the technological dimension of media
by showing that media not only communicate, they also produce what
they communicate (see Kittler, 1997). The formative effects of mathem-
atics on culture and the prehistory of the computer and computer science
furthermore suggest (as envisaged by Turing) that the symbolic and the
machinic relate to one another like two sides of the same coin (Krämer,
1988).
d. *The epistemological dimension of imagery*. The eye of the mind is any-
thing but blind (see Heintz and Huber, 2001). Rather, for both the his-
tory of cognition and our practices of knowledge, visuality is anything
but a merely illustrative sideshow – it constitutes the irreducible center
for the research and evidentiary context of the sciences. In the emerging
discipline of imagology, 'the iconology of the present' (a term coined by
Horst Bredekamp and Gottfried Boehm [e.g. Boehm, 2001]), technical
images are investigated precisely on the basis of their aesthetic potential
as the indispensable element for the formation of scientific objectivity.
While Husserl in his 'crisis statement' lamented de-sensualization and
abstraction as the residue of scientific development, it on the contrary
becomes clear now that it is precisely the sensualization – the aesthetici-
zation – of invisible processes and theoretical objects that are the fuel of
scientific change.[2]

To summarize: the 'textualization' of culture has reached its limits. By
transgressing those boundaries, the concept of culture assumes new con-
tours. Culture is no longer a matter of monolithic immobility congealed
in works, documents or monuments, but liquefies into our everyday prac-
tices with objects, symbols, instruments and machines. The right of exclu-
sivity, which language used to claim for itself (with regard to representing
culture), is no longer unchallenged. It is in the (inter)play with language,
images, writing, and machines – in the reciprocity between the symbolic
and the technical, between discourse and the iconic – that cultures emerge
and reproduce.

5. Is it a coincidence that the technological phenomenon of the net-
worked computer emerges at the intersection of the four tendencies we
have just described? The computer regulates almost all productive pro-
cesses; it coordinates the social communication of our society and inter-
venes in the production of knowledge. It manages all that precisely by
having fully permeated the routines and practices of our everyday world.

It is the everyday technology for us all. As a Turing machine made real, it reveals and enacts how formalism and machine, symbol and technology, interpenetrate and how their functional processes can mutually substitute for one another. Both medium and machine, it demonstrates that the transfer of signs fundamentally depends on the technical processing as data. And the binary system as a universal digital code reminds us that the computer does not just squash the potential of writing in the flood of digitized images, but that, on the contrary, it gives it a new lease on life by bringing it back into play as the elementary vision of the technological and the machinic. Numerical simulation ushers in a form of writing which makes possible new forms of scientific visualization that, in turn, are establishing themselves as a third form of scientific practice side by side with lab work and theorization.

The use of computers has hence advanced to the level of a cultural technique. If, however, the long-term effects of computerization are in 'the nature' of a cultural technique, is it not advisable to subsume the varying discourses undermining a text-based notion of culture under the heading of 'cultural technique' and thus to endow them with a focused and programmatic direction? Cultural techniques are the hotbed of any culture. Analyzing the physiognomy of a culture means investigating its cultural techniques. *The history of culture always already is the history of its cultural techniques*, just as the history of science cannot be decoupled from the changes in the everyday techniques of perception, communication, representation, archiving, counting, measuring . . .

6. What, then, does 'cultural technique' signify? The agricultural origins of the term may be significant, but further elaboration is necessary. Terms that fertilize the work of various disciplines and establish relationships among them are allowed to retain a certain level of non-specificity. And yet, any analysis from the point of view of cultural techniques shares some characteristic features. As a concrete example, let us take a look at the written computations in the decimal system, a cultural technique of foundational importance for the Gutenberg era that had become canonical by the 15th century following the introduction of Indo-Arabic numbers in Europe.

Paralleling the dissemination of Indo-Arabic numbers in Europe, and their corresponding algorithms, object-based computation, as in the case of a computation board (or an abacus), gave way to computation with graphic signs on paper. However: what 'counts' with the numbers is that they can be manipulated following schematic rules. Computing with numbers can be realized as the operation of the sequencing of signs. The signs function as sensorial or visual markers, or as texture; they embody a structure of signification that needs to be physically produced

and manipulated in the space between the eye and the hand. For that reason, the algorithms of computation, which are not subject to interpretation, share such great affinities with technical-material practices: a computer – not to be confused with a human mathematician! – will be calculating all the more correctly the more it behaves like a machine. There is a growing divide between 'knowing how' and 'knowing that'; skill and knowledge are going their separate ways. The daily use of operative signs removes the burden and complexities of interpretation. Calculus is always already a kind of 'mechanism of forgetting'. In order to calculate correctly, we don't need to be able to provide an answer to the question, 'What is a zero?' Calculating correctly does not require a theory of numbers or algorithms, and for that very reason ushers in an unforeseen explosion of mathematical competence in daily life: computing with Indian numbers is no longer the exclusive privilege of ecclesiastical and academic circles but enters the world of merchants and the curricula of general education: thank God for Adam Riese! (Ries, 1892; see also Menninger, 1979, II: 254).

Written computation, however, does not only lodge itself in the practices of everyday life and change what 'everybody' can do. Almost all the major mathematical breakthroughs in the 16th and 17th centuries bear witness to the ingenuity of the decimal calculus, which is grounded in the algorithmic operations of signs for numbers. That is true for the introduction of letter-based computation through François Viète, who prepared the way for symbolic algebra by transferring computation with numbers to alphabetic signs and hence generalized algebraic rules in writable form (Viète, 1970). That is true of René Descartes, who by recoding geometrical figures into arithmetical sequences of numbers founded analytical geometry (Descartes, 1981). And it is true for Gottfried Wilhelm Leibniz's infinitesimal calculus, which translates the efficiency of the decimal calculus with finite numbers into the range of numbers infinitely large and small (Leibniz, 1846). In so doing, he rendered mute the vexing question of whether or not infinitely large and small numbers exist in actuality in executing correct calculations about these numbers. And it was Leibniz who, with the invention of the binary alphabet, spelled out 'the spirit of calculus' as the effect of a symbolic machine (Leibniz, 1966). Moreover, the physical manipulation with calculable signs also gives birth to new, that is, theoretical, objects: the evolution of the number zero is a case in point, as are such mathematical objects as differential equations or imaginary numbers. On the one hand, the aesthetic of calculus is such that it 'feeds' entities into the register of sensory perception that would otherwise be cognitively invisible; at the same time, however, such an aesthetic produces and constitutes these kinds of 'objects' at the moment of their visualization in the first place.

In conclusion, cultural techniques are promoting the achievements of intelligence through the senses and the externalizing operationalization

of thought processes. Cognition does not remain locked up in any invisible interiority; on the contrary, intelligence and spirit advance to become a kind of distributive, and hence collective, phenomenon that is determined by the hands-on contact humans have with things and symbolic and technical artifacts.

7. Let's recapitulate the outlines of the cultural-technical perspective: cultural techniques are (a) operative processes that enable work with things and symbols; (b) they are based on a separation between an implied 'know how' and an explicit 'know that'; (c) they can be understood as skills that habituate and regularize the body's movements and that express themselves in everyday fluid practices; (d) at the same time, such techniques can provide the aesthetic and material-technical foundation for scientific innovation and new theoretical objects; (e) the media innovations accruing in the wake of changing cultural techniques are located in a reciprocity of print and image, sound and number, which, in turn; (f) opens up new exploratory spaces for perception, communication, and cognition; and (g) these exploratory spaces come into view where disciplinary boundaries become permeable and lay bare phenomena and relationships whose profile precisely does *not* coincide with the boundaries of specific disciplines.

Translated by Michael Wutz

Notes

1. This article was previously published as: 'Kultur, Technik, Kulturtechnik: Wider die Diskursivierung der Kultur', in Krämer S and Bredekamp H (eds) *Bild, Schrift, Zahl*. Munich: Fink, 2003, pp. 11–22.
2. '...we must make clear to ourselves the *strangeness*...that everything which manifests itself as real through the specific sense qualities must have its *mathematical index*. ...The whole of infinite nature, taken as a concrete universe of causality – for this was inherent in that strange conception – became [the object] of *a peculiarly applied mathematics*' (Husserl, 1970: 37).

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Sybille Krämer studied history, philosophy and political science in Hamburg and Marburg. She received her PhD in 1976, completed her *Habilitation* in Düsseldorf in 1988 and was appointed Professor of

Theoretical Philosophy at the Freie Universität Berlin in 1989. Among her most important publications are *Technik, Gesellschaft und Natur. Versuch über ihren Zusammenhang* (Frankfurt, 1982), *Symbolische Maschinen. Die Idee der Formalisierung in geschichtlichem Abriß* (Darmstadt, 1988) and *Medium, Bote, Übertragung. Kleine Metaphysik der Medialität* (Frankfurt, 2008).

Horst Bredekamp studied philosophy and sociology in Munich, Berlin and Hamburg. After teaching at the University of Hamburg he was appointed Professor of Art History at the Humboldt University in Berlin. He has published widely on the art of the Renaissance, Mannerism, art and technology, and political iconography. In 2001 he received the Sigmund-Freud Prize for scientific prose.

Michael Wutz (PhD, Emory University) is Brady Presidential Distinguished Professor in the Department of English at Weber State University, in Ogden, Utah, and the editor of *Weber – The Contemporary West*. He is the co-editor of *Reading Matters: Narrative in the New Media Ecology* (Cornell University Press, 1997), the co-translator of Friedrich Kittler's *Gramophone, Film, Typewriter* (Stanford University Press, 1999, with Geoffrey Winthrop-Young), and the author of *Enduring Words: Narrative in a Changing Media Ecology* (University of Alabama Press, 2009).

Second-Order Animals: Cultural Techniques of Identity and Identification

Thomas Macho
Humboldt University, Germany

Abstract

This paper explores the thesis that the concept of cultural techniques should be strictly limited to symbolic technologies that allow for self-referential recursions. Writing enables one to write about writing itself; painting itself can be depicted in painting; films may feature other films. In other words, cultural techniques are defined by their ability to thematize themselves; they are second-order techniques as opposed to first-order techniques like cooking or tilling a field. To illustrate his thesis, Macho discusses a sequence of historical examples, from body signs and death masks to digital code and ID papers. These examples serve to reiterate another basic proposal that is already announced in the paper's title. The recursive, self-observing qualities of cultural techniques make them a 'technology of the self' and thus render them indispensable for the generation, repetition and maintenance of identity.

1. Symbolic Animals

Ever since Aristotle, humans have been seen as animals capable of speaking and inventing, ordering and manipulating signs. In contrast to most other animals, they make use of alphabets, number sequences, notation systems or codes: they practice cultural techniques. The term does not encompass all the techniques a culture has at its disposal, but strictly those techniques that make symbolic work possible. Every culture is

Corresponding author:
Thomas Macho, Humboldt-Universität zu Berlin, Institut für Kulturwissenschaft, Georgenstr. 47, Raum 4.29, Berlin, 10117, Germany.
Email: thomas.macho@cms.hu-berlin.de

grounded in numerous techniques that guarantee its survival, such as the techniques of fire use, hunting, the making of clothes and tools, nutrition and cooking, agriculture, economy, or social organization. Primates, too, are in possession of some of those techniques, which is why Frans de Waal (2001) rightly assigns the term 'cultures' to them. Human cultures, however, are not simply composites of these multiple techniques, but evolve out of their symbolic concentration. This symbolic work endows all other activities with their specific meaning; it gives order to the world and enables cultures to develop self-reflexive concepts. Symbolic work requires specific cultural techniques, such as speaking, translating and understanding, forming and representing, calculating and measuring, writing and reading, singing and making music.

Cultural techniques differ from all other techniques through their potential self-referentiality, a pragmatics of recursion. From their very beginnings, speaking can be spoken about and communication be communicated. We can produce paintings that depict paintings or painters; films often feature other films. One can only calculate and measure with reference to calculation and measurement. And one can of course write about writing, sing about singing, and read about reading. On the other hand, it is impossible to thematize fire while making a fire, just as it is impossible to thematize field tilling while tilling a field, cooking while cooking, and hunting while hunting. We may talk about recipes or hunting practices, represent a fire in pictorial or dramatic form, or sketch a new building, but in order to do so we need to avail ourselves of the techniques of symbolic work, which is to say, we are not making a fire, hunting, cooking, or building at that very moment. Using a phrase coming out of systems theory, we could say that cultural techniques are *second-order techniques*.

As second-order techniques, cultural techniques have from their very beginning been operating as techniques of self-reflection, identity formation and identification. Even today, the majority of cultural techniques serve as vehicles of self-description, self-legitimation, and authentication, whether in the form of pictures, writings or numbers: be they portraits and passport photos, signs of the body (such as fingerprints), seals, stamps, coats of arms or logos, signatures and signs, or numerical codes (ranging from one's personal and social security number to the PIN-code at the ATM). Cultural techniques have always been practiced as 'technologies of the self' (in the sense of Michel Foucault, 1988). They constitute subjects that have evolved out of a multiplicity of recursions and media, not simply a singular 'mirror stage', as with Lacan (2002 [1977]).

2. Body Signs

The history of these 'technologies of the self' begins in prehistorical darkness. When the Paleolithic cult caves in France and Spain were

first explored, scientists did not only see the impressive and realistic rep-
resentations of numerous animals, but also spotted occasional hand
prints. These prints were either positives, whereby a painted hand was
pressed onto the rock, or negatives, meaning that the artists traced the
contour of a stretched-out hand with dabs of color or a blowing tube.
(See, for example, the prints in the caves of Pech-Merle, Gargas, El
Castillo, Tibiran, Bayron, La Baume-Latrone, Rocamadour, Bernifal,
Font-de-Gaume, Le Portel [cf. Leroi-Gourhan, 1982], or in Chauvet in
the Ardèche Valley, which was not discovered until 1994 [cf. Chauvet
et al., 1995: 30, 112]). Sometimes these prints would appear in isolation,
other times they appeared in clusters. In Gargas, for example, scientists
identified 150 red and black hands, 50 in El Castillo, and 12 in Tibiran
and Pech-Merle. Originally, the prehistorian Henri Breuil assumed that
virtually all of the impressions were those of left hands; later, scientists
recognized that those impressions contained some made of right hands
(with the back). Most of the hands are so small that they were first
thought to be impressions of women and children (which was given fur-
ther credence by the fact that the caves of Niaux, Aldène or Pech-Merle
contained numerous impressions of the feet of children in the loamy soil).
Most puzzling were the hand impressions in Gargas: a substantial
number of hands appeared to have mutilated or twisted fingers, which
was originally assumed to be evidence of archaic practices of ritualized
amputations. Only later – as is so often the case with prehistoric
research – were scientists able to correct their dramatic observations:
upon closer scrutiny, it became evident that the fingers of those hands
that had been placed with their back against the rock were bent inward
and, in some instances, retouched and shortened afterwards.

The meaning of these hand prints and their performative practices
remains unclear. Are they connected to the abstract symbols, sticks or
spirals, that André Leroi-Gourhan classified as gender indications? Were
they produced in the course of magic rituals of 'rebirth' of animals or
humans, as was surmised by Max Raphael (1979) or Hans Peter Duerr
(1984)? Or were these hand prints indeed the first signs of origination, as
Martin Schaub assumes:

> The artists of the prehistoric caves have exempted themselves
> almost completely out of their works. Yet the imprint of their
> hand is everywhere: as greeting, memory, signature?...Did the art-
> ists in these caves write, or sign their artworks? What is the signifi-
> cance of the 'mutilated' hands one can see every once in a while? Are
> they hunting inscriptions, 'priestly' signs, the commemoration of a
> visit, a communication with the dead and descendants, signs of
> remembrance, traces of rituals, signs of magical empowerment,
> grave inscriptions? Many theories have been advanced, but nothing

is conclusive except for the proud gesture that says 'I' and 'here.' I, my hand, and here is the testimony to that. (1996: 84)

Already in antiquity it was common to sign contracts with an impression of fingers, but as a medium of crime detection – as a modern technique of identification by the police – 'fingerprints' were not popularized until the late 19th century (Galton, 1965 [1892]). At that point, they no longer operated as active but passive signs of the body – they had been used for thousands of years, when it came to branding cattle or marking slaves or prisoners.

3. Seals, Stamps and Coats of Arms

From a technical perspective, the history of body signs can be seen as a chapter in the history of 'impressions', which always predate expressions. What is being 'impressed' are either parts of the body (such as hands or fingers), or objects onto a surface (such as plaster, clay, or wax). The technique of 'imprinting' does not differentiate between bodies and arti-facts, between practices of embodiment and the use of objects extending the body. Every imprint requires a '*carrier* or a material substrate, *a gesture* producing that very imprint (usually a gesture of impression, or at least of touch), and a mechanical result, that is, an indented or pro-truding mark' (Didi-Huberman, 1999: 14, emphasis in original). This imprint, however, is not tied to specific objects. In the case of an authen-tication, the imprint should produce a mark that points to its maker – a sign that should not be mistaken for an unintended trace, but rather be decipherable and legible as a specific and individual signature. While humans often take care not to leave any 'detectable' traces, these imprints, on the contrary, should by their very definition indicate who made them.

Perhaps it was this strategic intention which served to discredit body signs, for it is difficult to discern whether the trace of a body, a hand, a finger, or a foot was produced by accident or by design. Who knows whether it was not for that very reason that Paleolithic hand prints had to be retouched after the fact? The history of pictures and of writing can, hence, be told as the history of instruments necessary for making impres-sions: stencils, pencils, brushes, quills. The first signs of authentication were imprinted onto clay tablets or urns with seals and stamps as early as 4000 BC. At first people used carved bones or stones to leave specific patterns, ornaments, or marks in the clay; only later did they use metal or precious stones. The seals left individual, unmistakable imprints; if they served as a personal emblem, they were often worn like ornaments: stable and reliable elements on a body whose organic extensions were capable of producing fleeting and ambiguous traces only. In the Orient, for example, people liked to wear pin seals as bracelets – small, cylindrical

pins with pictures or cuneiform writings. Seal rings with the imprint of their wearers became popular in Greek antiquity. (We, too, by the way, are fond of wearing our preferred writing instruments close to us, in chest pockets or purses.)

The ecclesiastical and secular authorities of the Middle Ages, for their part, developed differentiated systems of signs as an index of status and affiliation. Royal dynasties, noble families, knights, but also popes, cardinals, bishops and later the guilds used colors and signs that had to be composed into coats of arms, following the art of heraldry. The code of heraldry distinguished between seven primary colors: the 'lacquer colors' red, blue, green, and black, the 'metals' gold and silver, as well as purple (violet), which could be used as both a lacquer and metal color. Coats of arms were assembled in accordance with the rule to alternate lacquer colors with metals. They were used not only in the service of representation, but also identified friends and enemies during battle.

4. Speaking Objects

Seals, pin seals and stamps were (and are) objects giving voice to other objects. Until today, their most important function has consisted in combining texts, pictures, or objects with an I or a person into a speech act. With the help of a seal or stamp, a speech act is transferred onto an object; the resultant artifact proclaims, for example, who has made or authorized it, or who owns it (aside from the motifs that it represents in its image, text, or materiality). Basically, seals function the way speech acts do in relation to a written text or a painted picture; the seal and stamp represent – either as an object or ornament – the externally materialized voice of authority or the author. That's why the charge of 'safekeeping a seal' in the advanced civilizations of old was entrusted to the highest-ranking civil servants, because the 'custodian of the seal', in a sense, exercised control over the voice of the king, his 'second body'. Today's English 'Lord Chancellor', formerly the presiding officer of the House of Lords and head of the Judiciary, evolved from the 'Custodian of the Great Seal', and France and Italy retained that title for their minister of justice as well. In the Holy Roman Empire, the Margrave of Mainz served as 'Arch-Chancellor' and '*sigilli custos*' until 1806, and even in the bureaucracies of today stamps bearing a so-called 'official seal' are kept under lock and key.

The history of seals (and later of signets in Greek antiquity) can also be associated with the development of inscribed objects – i.e. vases or statues – which have of late become of interest to archaeologists. The Italian epigraphy expert Mario Burzachechi described these artifacts as 'speaking objects' or '*oggetti parlanti*' to account for the curious fact that most of their inscriptions were in the first person and – because of words running together – make sense only when read aloud (1962: 3–54).

Reading in such an arrangement can be understood as a kind of 'over-whelming' of the reader by the 'speaking' statue or artifact, as Jesper Svenbro has argued.

> The object of inscription is named in the first person, the writer, by contrast, in the third. (Objects naming the writer in the third person have only been found dating back to about 550 BC, and they do so, in part, to hide the real authority identified by the 'I'.) A 6th century amphora may serve as an example: 'I have been made by Kleimachos and I belong to him (*ekeínou eimí*).' When you read this Kleimachos will no longer be here; he will be gone, which is com-municated well by the demonstrative pronoun *ekeínos*. (*Ekei-nos* is the demonstrative pronoun of the third person pointing to the fact that the person is not 'here,' but 'there,' 'away from here' (*ekeí*).) The amphora itself, by contrast, is here. Nobody can claim the 'I' in the inscription. Kleimachos cannot do that. He writes onto his own amphora because he already anticipates his future absence (otherwise, it would not be worth his while to write on it). (1999: 74).

5. Portraits and Death Masks

Portraits and self-portraits are among the most important cultural tech-niques of self-reflection. What is unclear is when precisely humans began to depict their own faces. The Paleolithic caves contained few represen-tations of humans, let alone portraits. For a couple of millennia artisans painted animals almost exclusively, but virtually no humans; and if human representations were etched into the rock they were typically not given facial features. The artisans of the Old Stone Age had 'a variety of materials at their disposal and an arsenal of powerful images from everyday life, with which they transformed caves into holy places', but they did not make portraits of members of their own species. 'The rep-ertoire of images was to find its apex in the magnificent, richly rendered galleries at Lascaux in the southwestern part of France. Lascaux has been called the Sistine Chapel of the Stone Age. It is a holy place where spir-itual thinking has been externalized, where the drama of the imaginative life is depicted. And yet in this cave, among hundreds of images, there is not a single example of a human face' (Landau, 1989: 189).

In the 1960s, during her excavations at the site of the Neolithic town of Jericho, the British archaeologist Kathleen Kenyon discovered a series of human skulls that were artfully decorated. Through the retrospective application of layers of lime and plaster, those faces were given a face lift, as it were, to counter the effects of facial decomposition. Terry Landau writes that 'each face is distinct and strongly individual. Each is made with a purpose. That purpose was to perpetuate life beyond

death by replacing the transient flesh with something more enduring' (1989: 192). Flesh decomposes but bones last; skin can be conserved, much in contrast to the innards. The qualities of various materials such as stone, metal, wood, clay, plaster or wax correspond to these differences, and these qualities determine how and in what way the materiality of a corpse can be transmuted into the form of a picture or statue.

Georges Didi-Huberman, for example, points out that the famed golden masks of the royal graves of Mycenae, dating back to the 16th century BC, were apparently 'made directly from a face' and meant to represent the 'three-dimensionality of the head'; they reproduced '*the suggestion of resemblance through touch*'. At the same time, '*the attention to modeling and the hammer work*' evident in these masks also points to 'a solid schematism' which testifies to 'the predominance of *ornamental thinking* in the representation of the human form'. What has to be factored in is that the 'dialectical treatment of physical touch and ornament' would be unthinkable 'if the gold plate as carrier metal were not as extraordinarily pliable as it is, and if the imprinting process were not inherently reversible. Gold plate can be worked on from both sides' (1999: 34, emphasis in original).

Hans Belting connected the fundamental paradox of the deceased – his 'present absence' (Landsberg, 1973: 14) – with the oldest impulses of the visual and plastic arts.

> The real meaning of the picture is in its representation of something that is absent, and can only be present in pictorial form. It makes visible, not what *is* in the picture, but can only *appear in* the picture. The picture of a deceased, in that sense, is not an anomaly, but the ur-meaning of what a picture is in the first place. The deceased is always already an absence and death itself an unbearable absence whose void the picture served to fill and make bearable.

But this second picture is only a response to the first picture, as Belting notes (*pace* Maurice Blanchot):

> Death itself is already present in the very picture because the corpse has already morphed into an image that merely resembles the body of the living person ... The living person is no longer a body, but only the image of one. Nobody can resemble himself. He [or she] does it only in an image or as a corpse.

Dying, in that sense, means to be transformed into the 'image of oneself'.

> The terror of death resides in the fact that a speaking and breathing body transforms, at one fell swoop and in front of everybody, into a mute image ... Humans were helplessly exposed to the experience of

life commuting into its own image upon death. They lost the deceased, who had participated in the life of the community, to a mere image.

Belting argues that it was only this contingent experience of 'becoming an image' that prompted humans to make pictures or statues on their own.

Now it was an artificial image that countered the other image, the corpse. Through the act of making images humans became active in their attempt to resist the experience and terror of death. (Belting, 1996: 94)

Later it became common practice to make an imprint of the faces of the deceased. The Latin term 'larva' designates an actor's mask as well as the ghost of a dead person. This double meaning is not coincidental; it refers to the well-known custom of letting the dead reappear as bearers of masks. The Romans routinely made waxen imprints and masks of prominent figures in public life, which were preserved as effigies and displayed during various parades. According to the historian Polybius (2nd century BC), such waxen imprints were first used during burial ceremonies, later mounted in ancestral portrait galleries, and publicly displayed (and decorated) for appropriate occasions. At funerals or sacrificial ceremonies, powerful ancestors were represented either through dressed-up effigies or actors wearing the respective death masks. Romulus and Pompey participated in this way at the funeral of Emperor Augustus, aside from the Emperor himself (Von Schlosser, 1993: 21).

6. Mirror Images and Shadows

Humans and animals change into their image not just in death, but also with each reflection and in every shadow. It is certainly true that reflections and shadows don't produce lasting signs, as Umberto Eco has emphasized (cf. Eco, 1995: 9–37). Maybe it was for that very reason that both were viewed with suspicion in antiquity. Back then most mirrors were construed not as flat surfaces but as convex or concave mirrors suitable for optical experiments. Reflections were given legitimate status neither in everyday life nor in scientific experiments, which may well have been attributable to materials from which mirrors were constructed. The mirrors of Archimedes, like many other mirrors dating from the 4th century BC, were presumably made from bronze; later, almost every other conceivable metal was used for the making of mirrors, provided it was suitable for scraping and polishing. Greece had its first school for mirror makers about a century following the birth of Plato, where artisans were taught how to smooth and polish a metal plate with sand without scratching it. Romans and Etruscans had a preference for silver mirrors. Beginning with the first

century BC, gold mirrors became part of a preferred medium of payment for servants among the upper classes. As a general rule, metal mirrors were not particularly large; they were mostly conceived as hand mirrors (including a handle) or fold-out mirrors (with a stand). The depth of field and color fidelity of metal mirrors can hardly be compared to the quality standards of mirrors today.

It was only in the 14th century that the first glass-based mirrors were made in Venice, the center of European glass blowing. The reasons for this delay, especially given that glasses, glass containers and windows had been made for centuries, are evident: much in contrast to metal, glass cannot be rendered smooth and polished. Glass planes have to be cast perfectly, usually as hollow cylinders that have to be pried apart afterwards. The first glass mirrors did not come close to an undistorted reflection. Nevertheless, glass mirrors almost instantaneously held a triumphant entry into European households. In 14th-century Venice, wealthy men and women

> took to ostentatiously wearing glass mirrors about the neck on gold chains as pendant jewelry. While the image in the glass might be disappointingly poor, the image of a mirror-wearer in the eyes of others was one of unmistakable affluence. Men carried swords with small mirrors set in the hilt. Royalty collected sets of glass mirrors framed in ivory, silver, and gold, which were displayed more than they were used. Early mirrors had more flash than function, and given their poor reflective quality, they probably served best as bric-à-brac. (Panati, 1989: 230)

The breakthrough into the modern production of mirrors did not occur until the 17th century. In 1687 the French glassmaker Bernard Perrot secured the patent for a uniform rolling process of glass planes. Since then, it has become possible to produce not only optical mirrors or cosmetic hand-held or fold-out mirrors but also life-sized mirrors for walls and stands. Thanks to that technology, spaces could quite literally be 'representative', such as the Great Hall of Mirrors in Versailles, which was built in 1686. Thanks to the new technology for mirror production, the magic of mirrors could be defined anew. Previously, that magic had fascinated luminaries in such forms as Archimedes' concave mirror, *Lorrain-Glas*, the medieval *magia naturalis*, and the catoptric theater of illusions in the Baroque: if the old mirrors produced a magic of transformation, distortion, refraction, transmission, combustion, reduction and magnification, the new mirrors (beginning in the second half of the 17th century) made possible a magic of doubling, deceptive resemblance, reproduction and representation. If the deception in the case of an old mirror produced the appearance of an object in distorted form and at the wrong place, the deceptive effect of a new mirror yielded an

object in its natural form and at the right place, except that it appeared in a symmetrically reciprocal, that is, inverted, space.

Simply put: the 'cabinet of mirrors', a disorienting labyrinth that is still a feature at some carnivals, was surpassed by the hall of mirrors, which demonstrates the serial reproduction of the king (as can be seen on the title page of Thomas Hobbes' *Leviathan* of 1651). The magic of transformation took a back seat to the magic of repetition, just as the magic of craftsmanship took a backseat to the miraculous machines of industrial consumption. Ovid's monsters in the *Metamorphoses* (from werewolves to sirens) were surpassed by the doppelgänger of the Romantic period.

The history of shadows proceeded differently. While a reflection could, in essence, be made into a real and stable representation only with the advent of photography, fixing a shadow was possible as early as in antiquity. In his *Natural History*, Pliny the Elder tells the following, well-known myth of the origin of painting:

> We have no certain knowledge as to the commencement of the art of painting... The Egyptians assert that it was invented among themselves, six thousand years before it passed into Greece; a vain boast, it is very evident. As to the Greeks, some say that it was invented at Sicyon, others at Corinth; but they all agree that it originated in tracing lines round the human shadow. The first stage of the art, they say, was this, the second stage being the employment of single colours; a process known as 'monochromaton,' after it had become more complicated, and which is still in use at the present day... On painting we have now said enough, and more than enough; but it will be only proper to append some accounts of the plastic art. Butades, a potter of Sicyon, was the first who invented, at Corinth, the art of modelling portraits in the earth which he used in his trade. It was through his daughter that he made the discovery; who, being deeply in love with a young man about to depart on a long journey, traced the profile of his face, as thrown upon the wall by the light of the lamp. Upon seeing this, her father filled in the outline, by compressing clay upon the surface, and so made a face in relief, which he then hardened by fire along with other articles of pottery. (Book 35, chs. 5, 43)

It might be appropriate to mention that the young man went to war and did not return, but his shadow (which was said to travel into the underworld) was captured and fixed as an image before his death.

The technique of shadow painting (*skiagraphy*) was very popular in Greece. This technique is intimately linked with the cultural techniques of geometry and astronomy, where the shadow cast by a shadow shaft

(*gnomon*) was retraced and used for measurement (of temporal and spatial relations):

> A shaft of the sundial or gnomon casts shadows on the ground or on the face of the dial according to the positions of the stars and the Sun throughout the year. From Anaximander on, apparently, Greek physicists knew that these readings indicated certain occurrences in the sky. The light from above describes on the earth or on the page a pattern which imitates or represents the forms and real positions of the universe, through the intermediary of the stylus.
>
> As nobody in those days really needed a clock, and as the hours varied enormously since summer and winter days, whatever their length or brevity, were always divided into twelve, the sundial was rarely used for telling the time. Thus it was not replaced by the timepiece but was used as an instrument of scientific research in its own right, demonstrating a model of the world, giving the length of shadows at midday on the longest and shortest days, and indicating the equinoxes, solstices and latitude of place, for example. It was more of an observatory than a clock. We do not really know why the shaft or pin is called a gnomon, but we do know that this word designates that which understands, decides, judges, interprets or distinguishes the rule which makes knowledge possible. The construction of the sundial brings natural light and shadow into play, intercepted by this ruler, a tool of knowledge.
>
> To this end, [astronomers] were able to construct a rule as precise as the stylus which writes. The black ink on the white page reflects the ancient shadows cast by the sun via the pointer or sundial. This point writes unaided on the marble or the sand as if the world knew itself. (Serres, 1995: 79–80)

Cultural techniques as technologies of the self: even the physiognomic tables of Johann Caspar Lavater work with shadowy outlines to represent individual (and yet typological) facial features.

7. Signs and Signatures

Seals and stamps produced 'speaking objects' long before epigraphics came onto the scene, and they served as precursors not only of signs but trademarks as well. Already, by 50 BC, Roman ceramics circulated as *terra sigillata* through the civilized world. Imprints of seals conveyed information about the manufacturer and the craftsman making the product. Individual pieces received a signature, in that sense: a name

functioned as testimony of the manufacturer, and later the owner. At that time, of course, hardly anybody signed anything. In Roman antiquity, with its highly differentiated contractual laws, the imprint of a thumb was frequently sufficient. In the Middle Ages, people marked contracts with three crosses. And yet, as early as 439, a Roman law stipulated that a will could be signed if its content should be kept secret from witnesses present at the signing; sales contracts too were signed by name every once in a while. In royal communications, seals were – well into the Middle Ages – favored over hand signatures, which were relatively rare, or three crosses, which certainly made possible the famous 'forgeries' of numerous Merovingian documents or the Donation of Constantine.

The modern system of a personal signature in one's own hand presupposed not only comprehensive literacy (at least of the elite) but also a judicial system including personal and civil rights and, above all, an acute awareness of the meaning of proper names as a marker of individuality and distinction. During the Middle Ages it was more often clothing, jewelry, a coat of arms or related attributes that indicated one's social status and rank, less so one's proper name. For that reason, any history of signatures is more directly connected to the techniques of cataloguing and systematizing personal names than to any social and historical investigation into the evolution of the European naming system (the way margraves, lieges, or saints were given their titles). 'As impressive as the evolution of personal identity may strike us in some medieval sources, the written identification of a single person was not just the triumph of the individual, but first of all the result of his registration' (Groebner, 2004: 51).

Keeping lists of personal names began in the 13th century. Confessional lists kept by church authorities were soon followed by lists of lawbreakers (both sentenced and at large), heretics and people burned at stakes – and eventually by a list of taxpayers in the 15th century. The word 'signature', in fact, does not appear until 1536; the English legal system anchored the principle of signature in its statutes in the 17th century. The gradual popularization of the signature in early modernity is also attributable to the invention of print, which (following centuries of perfected calligraphy) facilitated the gradual process of individualized handwriting and, to date, occasionally inspires children (and their adult counterparts) to practice their own signature.

8. Autographs

With the rise of the signature as a distinguishing marker of personality and identity, seals and stamps were replaced once more by signs of the body: signatures, after all (unlike seals and stamps), have to be made manually, in one's own hand. They endow handwriting generally with an

iconic quality, not just the signatures of artists that accrued exponentially beginning in the 15th century: a 'typeface' that is not only legally binding, but can also be understood as an individual's trace, a sign of character. In 1622, the Italian doctor and professor of medicine Camillo Baldi published the first treatise on the meaning of handwriting at the University of Bologna, with the following title: *Come da un lettera missiva si conoscano la natura e qualità dello scrittore* (1992). It would of course be a while for these first steps in the direction of graphology to be developed. More immediately, knowledge of character – a kind of proto-psychology – ushered in physiognomy, the study of faces. In the third volume of *Physiognomic Fragments* (1777), Lavater illustrated five tables in his study with corresponding handwriting samples, but he remained skeptical with regard to handwriting's range of interpretations. Before handwriting could be associated with the interiority of the subject, the peoples of Europe had to be alphabetized. Hegel in *The Phenomenology of Mind* compared one's handwriting with one's voice:

> The simple lines of the hand, then, the ring and compass of the voice, as also the individual peculiarity of the language used: or again this idiosyncrasy of language, as expressed where the hand gives it more durable existence than the voice can do, viz., in writing, especially in the particular style of 'handwriting' – all this is an expression of the inner. (1949: 343)

The many representations (and expressions) of this 'interiority', however, had to be first registered and decoded. One year before *The Phenomenology of Mind* first appeared, Moreau de la Sarthe, a doctor and professor of medicine in Paris, published a translation of Lavater's *Physiognomic Fragments*; his developments of Lavater's ideas influenced a number of French clerics who were subsequently preoccupied with the interpretation of handwriting. Abbé Jean-Hippolyte Michon's *Système de graphologie* appeared in 1875, precisely one hundred years after the publication of the first volume of Lavater's *Fragments*. This work, which first introduced the term graphology, was followed by *Méthode pratique de graphologie* in 1878. Michon's system was based on a semiotic relationship of graphological signs – of chirographic idiosyncrasies that were associated with '*signes fixes*' – with corresponding dispositions of character. The publications coming out of Michon's school of thinking, such as the *Traité pratique de Graphologie* in 1885 by Jules Crépieux-Jamin, the son of a watch maker, were quickly translated into German. The German Graphological Society was founded in 1896 by Ludwig Klages, Laura von Albertini, and Hans Heinrich Busse. Between 1900 and 1908, the society published the *Graphologische Monatshefte*. In 1917, Klages published the treatise *Handwriting and Character*. Hardly any other work by a German philosopher and psychologist has remained

as popular as this one: it is still in print as *Gemeinverständliche Abriß der graphologischen Technik* ('An accessible sketch of graphological techniques'), and, as of 1989, has gone through 29 editions, including numerous examples and handwriting samples.

9. Digital Signature and Numerical Codes

The technological revolutions of the computer age have caused a disempowerment of images and handwriting. These days, hardly anybody practices personal handwriting, which ratifies what Georg Simmel (in *The Philosophy of Money*, 1990 [1900]) noted on the typewriter: 'Writing, an external concrete activity but one that still has a typically individual form', is counteracted

> in favor of [the typewriter's] mechanical uniformity. On the other hand, this has a dual advantage: first, the written page now only conveys its pure content without any support or disturbance from its written form, and second, it avoids revealing the most personal element, which is so often true of handwriting, in superficial and unimportant as well in the most intimate communications. (1990 [1900]: 509)

In the meantime, the ubiquity and strategic rationalization of the various forms of electronic writing have pushed handwriting even further to the sidelines than Simmel ever anticipated. For that very reason, the precious traces of 'the most personal element' were reframed as antiques and rarities and (as with autographs) became highly desired collectors' items at auctions triggering bidding wars. For the photos and autographs of stars, computer data and emails are as yet no match.

Photographic portraits and signatures have become rare documents today, fetishes of VIPs. Even in the everyday world, by the way, people sign less and less. Physical signs of one's own manual dexterity are increasingly replaced by a new type of seal and stamp: the digital signature. Financial transactions are processed and authorized by PIN codes and routing numbers; numerical codes facilitate all imaginable orders, purchases, and sales. Accounts, insurances, personal data, phone lines and identities are all expressed in sequences of numbers. Numerical codes have pushed names into the background. Digital signatures evolved from (military) cryptology and were introduced in the early 1980s. For the past couple of years they have enjoyed virtually the same legal status as a handwritten signature. Such laws were first passed in the United States, as with the 'Utah Digital Signature Act' of 1995, and then in Germany (the 'Digital Signature Act' of 1997). Digital signatures are increasingly serving as signatures in global knowledge societies. They fulfill the demands of 'privacy and authentication' no longer by employing hands and faces but

rather through the use of memories and mnemotechnologies. Whoever forgets his code gets disconnected – because a code must be remembered and never be written down (as banks and telecommunications companies remind us time and again). To put it bluntly: if you want to be an individual today, you have to be able to memorize numerical sequences.

10. Identity and Identification

As I have tried to illustrate in the preceding examples, the epistemological framework for this paper assumes that cultural techniques – such as speaking, translating, writing, reading, picturing, calculating, or measuring – can reflect upon themselves: in speaking about speaking, in writing about writing, in pictures about pictures, in various number or measure-based recursions. Only by being recursive can cultural techniques rotate and refer to one another. A writing person can be pictured, and a picture or a mathematical operation can be written about. And, of course, we can speak of writing, calculating or measuring, and we can measure the act of speaking (with the help of, say, a water meter), or picture it (with a caption), or simply write it down. Understood as recursive techniques of symbolic work, cultural techniques can be described and practiced as 'technologies of self' in a Foucauldian sense, or, more precisely, as techniques of identity. In a certain sense, they generate the subjects that, retrospectively, come to understand themselves as the preconditions and nodal points of their very operations. However, the structure of the sentences articulating a self-reflective identity – the aporetic 'self-consciousness' of idealist philosophy, so to speak – is not a self-identical 'I = I'. Instead, they encode the proposition 'I know that I p', as Ernst Tugendhat (1979) has demonstrated in his linguistic lectures on self-consciousness and self-determination. Thirty years ago, Tugendhat (together with Wittgenstein) assumed a 'linguistic turn'. This paradigm shift has, in the past 30 years, not only been replaced or complemented by a series of other 'turns', such as 'the pictorial turn' or 'the sonic turn', but has been elevated to the level of cultural-technical generality.

The possible recursions of cultural techniques are what generate questions of identity and identification in the first place; they produce recursive relationships, which differ from tautologies in that they require media: screens and mirrors, paper and books, instruments of measurement and calculation, sound and visual storage equipment, computer. Cultural techniques cannot be practiced without media, but they cannot simply be reduced to media technologies either. Even if it is unclear which cultural technique should be considered the first, it is safe to argue that cultural techniques are always already older than their media and that they are certainly older than the terms which emerged from them. People wrote long before any notions of writing or the

alphabet were conceived; pictures and statues did not inspire the idea of a picture until thousands of years later; to date, some people still sing and make music without any conception of tone or a system of notes. Counting, too, is older than numbers. Most known cultures did, no doubt, count or perform certain mathematical operations, but they did not necessarily derive the notion of a number from such operations. As early as during the Paleolithic era, people recorded forms of counting, which is evident from various notched-in bones. We do not, however, know what events or objects were counted: hunting records, the moon-rise, menstruation cycles (cf. Leroi-Gourhan, 1993: 370; Marshack, 1991; Barrow, 1992: 31–33; De Mause, 1982: 272–3)? It was quite possible to count without corresponding words or signs, such as with the aid of notches in bones, fingers, or stones that were meant to represent the object to be counted: animals in a herd, soldiers, or distances (as with the Greek hodometer).

The cultural technique of counting does not necessarily force abstract systems of numbers into being. Some languages, for example, use different numerals for different classes of objects. In 1881, Franz Boas published a table of numerals used by native peoples in Canada, in which he documented the systems of numerals for flat, round and long objects, and for humans, canoes and measurements. In his catalogue, he makes it clear that any hypothesis about the evolution of mathematical abstractions should be approached with caution; the Canadian natives, after all, were familiar with plain numerals and measuring terms as well. The history of cuneiform writing, in fact, even suggests that plain numerals may be older than numerals attached to concrete objects. This leads to the conclusion that the use of plain numerals is independent of the definition of any abstract notion of numbers. Codes, it appears, may not need any systematic foundations to function precisely.

Translated by Michael Wutz

Note

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Thomas Macho received his PhD from the University of Vienna in 1976 and completed his Habilitation at the University of Klagenfurt in 1983. In 1993 he was appointed Professor of Cultural History at Humboldt University in Berlin. Among his major publications are *Todesmetaphern. Zur Logik der Grenzerfahrung* (Frankfurt 1983), *Das zeremonielle Tier. Rituale – Feste – Zeiten zwischen den Zeiten* (Vienna 2004) and *Vorbilder* (Munich 2011).

Michael Wutz (PhD, Emory University) is Brady Presidential Distinguished Professor in the Department of English at Weber State University and the editor of *Weber: The Contemporary West*. He is the co-editor of *Reading Matters: Narrative in the New Media Ecology* (Cornell University Press, 1997), the co-translator of Friedrich Kittler's *Gramophone, Film, Typewriter* (Stanford University Press, 1999, with Geoffrey Winthrop-Young), and the author of *Enduring Words: Narrative in a Changing Media Ecology* (University of Alabama Press, 2009).

Cultural Techniques: Or the End of the Intellectual Postwar Era in German Media Theory[1]

Bernhard Siegert
Bauhaus-Universität Weimar, Germany

Abstract

This paper seeks to introduce cultural techniques to an Anglophone readership. Specifically geared towards an Anglophone readership, the paper relates the re-emergence of cultural techniques (a concept first employed in the 19th century in an agricultural context) to the changing intellectual constellation of postwar Germany. More specifically, it traces how the concept evolved from – and reacted against – so-called German media theory, a decidedly anti-hermeneutic and anti-humanist current of thought frequently associated with the work of Friedrich Kittler. Post-hermeneutic rather than anti-hermeneutic in its outlook, the reconceptualization of cultural techniques aims at presenting them as chains of operations that link humans, things, media and even animals. To investigate cultural techniques is to shift the analytic gaze from ontological distinctions to the ontic operations that gave rise to the former in the first place. As Siegert points out, this shift recalls certain concurrent developments within the North American posthumanities; the paper therefore also includes a discussion of the similarities and differences between German and North American posthumanism.

Media Theory in Germany since the 1980s

In the 1920s Ernst Cassirer's *Philosophy of Symbolic Forms* proclaimed that the critique of reason had become the critique of culture (see Cassirer, 1955: 80). Over half a century and one world war later, so-called

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Corresponding author:
Bernhard Siegert, IKKM, Bauhaus-Universität Weimar, Cranachstr. 47, 99421 Weimar, Germany.
Email: bernhard.siegert@uni-weimar.de
http://www.sagepub.net/tcs/

German media theory suggested an alternative formula: *The critique of reason becomes the critique of media*. The two axioms are difficult to reconcile; it therefore comes as no surprise that in the wake of German reunification and the subsequent country-wide reconstitution of cultural studies (*Kulturwissenschaften*), a war has been waging that pits 'culture' against 'media'. The stakes are considerable. Both parties are striving to inherit nothing less than the throne of the transcendental that has remained vacant since the abdication of the 'critique of reason'. The struggle has been concealed by a rapid succession of 'turns' and repeated attempts at pacifying the combatants by introducing ecumenical monikers like 'cultural media studies' (*kulturwissenschaftliche Medienforschung*). Around the turn of the century the war of and over German cultural studies witnessed the re-emergence of the old concept of 'cultural techniques'. Since this particular term covers a lot of what Anglophone regions like to label 'German Media Theory', it is necessary to step back and take another look at the latter in order to explain to the other side of the Channel and the Atlantic how the notion of cultural techniques' development affects – and differs from – so-called German Media Theory (for more on this observer construct see Winthrop-Young, 2006; Horn, 2007; Peters, 2008).

The difficult reception of 'German Media Theory' in Britain and North America is linked to its marked recalcitrance: it never aspired to join the Humanities in their usual playground. What arose in the 1980s in Freiburg and has come to be associated with names such as Friedrich Kittler, Klaus Theweleit, Manfred Schneider, Norbert Bolz, Raimar Zons, Georg-Christoph Tholen, Jochen Hörisch, Wolfgang Hagen, Avital Ronell (and maybe also my own) was never able to give itself an appropriate name. It definitely wasn't 'media theory'. One of the early candidates was 'media analysis' (*Medienanalyse*), a term designed to indicate a paradigmatic replacement of both psychoanalysis and discourse analysis (thus affirming both an indebtedness to and a technologically informed distancing from Lacan and Foucault).

The 'media and literature analysis' – to invoke another short-lived label – that emerged in the 1980s was not overly concerned with the theory or history of individual media. It had no intention of competing with film studies, television studies, computer science, or other such disciplines. Instead it focused primarily on literature in order to explore new histories of the mind, of the soul and of the senses. These were removed from the grasp of literary studies, philosophy, and psychoanalysis and instead transferred to a different domain: media. 'Media analysis as a frame of reference for other things', I read in the minutes of a 1992 meeting of the pioneers of the nameless science convened to sketch the future shape of media research in Germany. However, the term *media* did not identify a focus or a clearly defined set of objects ripe for investigation; instead it indicated a change of the frame of reference for the

analysis of phenomena hitherto under the purview of the established humanities. In Kittler's (in)famous words, it was a matter of 'expelling the spirit from the humanities' (see Kittler, 1980). To repeat, the objects of research that defined communication studies (press, film, television, radio – that is, primarily *mass* media) were never of great interest. Literature and media analysis replaced the emphasis on authors or styles with a sustained attention to inconspicuous technologies of knowledge (e.g., index cards, writing tools and typewriters), discourse operators (e.g., quotation marks), pedagogical media (e.g., blackboards), unclassifiable media such as phonographs or stamps, instruments like the piano, and disciplining techniques (e.g., language acquisition and alphabetization). These media, symbolic operators, and drill practices, all of which are located at the base of intellectual and cultural shifts, make up for the most part what we now refer to as cultural techniques. As indicated by Hans Ulrich Gumbrecht's famous catchphrase, this reorientation aimed to replace the hegemony of understanding, which inevitably tied meaning to a variant of subjectivity or self-presence, with 'the materialities of communication' (Gumbrecht and Pfeiffer, 1988) – the non-hermeneutic non-sense – as the base and abyss of meaning. As a result, little attention was paid to the question of what was represented in the media, or how and why it was represented in one way and not in another. In contrast to content analysis or the semantics of representation, German media theory shifted the focus from the representation of meaning to the conditions of representation, from semantics to the exterior and material conditions that constitute semantics. Media therefore was not only an alternative frame of reference for philosophy and literature but also an attempt to overcome French theory's fixation on discourse by turning it from its philosophical or archaeological head on to its historical and technological feet. While Derrida's (1998) diagnosis of Rousseau's orality remained stuck in a thoroughly ahistorical phonocentrism, this orality was now referred to historico-empirical cultural techniques of maternally centred 18th-century oral pedagogy (Kittler, 1990: 27–53). Derrida's (1987) 'postal principle', in turn, was no longer a metaphor for *différance* but a marked reminder that difference always already comes about by means of the operating principles of technical media (Siegert, 1999; Winthrop-Young, 2002). The exteriority of Lacan's signifier now also involved its implementation according to the different ways in which the real was technologically implemented. Last but not least, the focus on the materiality and technicality of meaning constitution prompted German media theorists to turn Foucault's concept of the 'historical apriori' into a 'technical apriori' by referring the Foucauldian 'archive' to media technologies.

   This archaeology of cultural systems of meaning, which some chose to vilify by affixing the ridiculous label of media or techno-determinism, was (in Nietzsche's sense of the word) a gay science. It did not write media

history but extracted it from arcane sources (arcane, that is, from the point of view of the traditional humanities) at a time when nobody had yet seriously addressed the concept of media. Moreover, it was not passion for theory that made renegade humanities scholars focus their attention on media as the material substrate of culture but archival obsession. And the many literature scholars, philosophers, anthropologists and communication experts, who were suddenly forced to realize how much there was beyond the hermeneutic reading of texts when it came to understanding the medial conditions of literature and truth or the formation of humans and their souls, were much too offended by this sudden invasion into their academic habitat to ask what theoretical justification lay behind this forced entry.

In other words, what set German media theory on a collision course with Anglo-American media studies as well as with communication studies and sociology, all of which appeared bewitched by the grand directive of social enlightenment to exclusively ponder the role of media within the public sphere, was the act of abandoning mass media and the history of communication in favour of those insignificant, unprepossessing technologies that underlie the constitution of meaning and tend to escape our usual methods of understanding. And here we come face to face with a decisive feature of this post-hermeneutic turn towards the exteriority/materiality of the signifier: there is no subject area, no ontologically identifiable domain that could be called 'media'. Harold Innis and Marshall McLuhan already emphasized that the decision taken by communication studies, sociology and economics to speak of media only in terms of mass media is woefully insufficient. Any approach to communication that places media exclusively within the 'public sphere' (which is itself a fictional construct bequeathed to us by the Enlightenment) will systematically misconstrue the abyss of non-meaning in and from which media operate. For those eager to disentangle themselves from the grip of Critical Theory, according to which media were responsible for eroding the growth of autonomous individuality and the alienation from authentic experiences (a diagnosis preached to postwar West Germany by an opinionated conglomerate composed of the Frankfurt School, the Suhrkamp publishing house, newspapers like *Die Zeit*, social sciences and philosophy departments, and bourgeois feuilletons), this abyss was referred to as 'war'. If the telegraph, the telephone or the radio were analysed as mass media at all, then it was with a view towards uncovering their military origin and exposing the negative horizon of war of mass media and their alleged public status. Hence the enthusiasm with which the early work of Paul Virilio was received in these circles (e.g., Virilio, 1989, 1994). Hence also the eagerness with which a materialities-based 'media analysis' already early on sought out allies among those historians of science who in the 1980s abandoned the history of theory in lieu of a non-teleological history of practices and technologies enacted

and performed in laboratories, instruments and 'experimental systems' (e.g., Latour and Woolgar, 1986; Rheinberger, 1997; Schmidgen, forthcoming).

'Public sphere' versus 'war': this was the polemical restriction under which German media theory of the 1980s assumed its distinct shape. To invoke the 'public sphere' was to invoke ideas such as enlightened consciousness, self-determination, freedom and so on, whereas to speak of 'war' implied an unconscious processed by symbolic media and the notion that 'freedom' was a kind of narcissism associated with the Lacanian mirror stage. Against the 'communicative reason' as an alleged *telos* of mass media, and against the technophobe obsession with semantic depth, the partisans of the unmoored signifier embraced the history of communication engineering that had been blocked out by humanist historiography. However, the history of communication was not simply denied; continuing Heidegger's history of being (*Seinsgeschichte*), it now appeared as an epoch of media rather than a horizon of meaning (see Heidegger, 2002). The goal was to reconceptualize media by moving away from the established 'logocentric' narrative that starts out with the immediacy of oral communication, passes through a differentiation into scriptographic and typographic media and then leads to the secondary orality of radio.

But if media are no longer embedded in a horizon of meaning, if they no longer constitute an ontological object, how can they be approached and observed? Answer: by reconstructing the discourse networks in which the real, the imaginary and the symbolic are stored, transmitted and processed. Is every history of paper already a media history? Is every history of the telescope a media history? Or every history of the postal system? Clearly, no. The history of paper only turns into a media history if it serves as a reference system for the analysis of bureaucratic or scientific data processing. When the chancelleries of Emperor Frederick II of Hohenstaufen replaced parchment with paper, this act decisively changed the meaning of 'power' (Vismann, 2008: 79, 84). The history of the telescope, in turn, becomes a media history if it is taken as a system of reference for an analysis of seeing (Vogl, 2007). Finally, a history of the postal system is a media history if it serves as the system of reference for a history of communication (Siegert, 1999). That is to say, media do not emerge independently and outside of specific historical practices. Yet at the same time history is itself a system of meaning that operates across a media-technological abyss of non-meaning that must remain hidden. The insistence on these media reference systems, designed as an attack on the reason- or mind-based humanist reference systems, was guided by a deeply anti-humanist rejection of the tradition of the Enlightenment and the established discursive rules of hermeneutic interpretation. This constitutes both a similarity and a difference between German media theory and that prominent portion of American posthumanist discourse

which is rooted in the history of cybernetics. Within the US, the notion of the 'posthuman' emerged from a framework defined by the blurring of the boundaries between man and machine. However, while US post-cybernetic media studies are tied to thinking about bodies and organisms, German media theory is linked to a shift in the history of meaning arising from a revolt against the hermeneutical tradition of textual interpretation and the sociological tradition of communication. As a result there is a discernible difference between the cybernetically grounded American 'posthuman' and the continental 'posthumanism' rooted in Heidegger, Derrida, Foucault and Lacan. Within the framework of cybernetics, the notion of 'becoming human' had as its point of departure an anthropologically stable humanity of the human that endured until increasing feedback systems subjected the 'human' to increasing hybridizations, in the course of which the 'human' turned either into a servomechanism attached to machines and networks, or into a machine programmed by alien software (see Hayles, 1999, 2010). By contrast, French (and German) posthumanism signalled that the humanities had awakened from their 'anthropological slumber'. This awakening, in turn, called for an anti-hermeneutic posthumanism able to deconstruct humanism as an occidental transcendental system of meaning production. For the Germans, the means to achieve this goal were 'media'. The guiding question for German media theory, therefore, was not *How did we become posthuman?* but *How was the human always already historically mixed with the non-human?*

But it was not until the new understanding of media led to the focus on cultural techniques that this variant of posthumanism was able to discern affinities with the actor-network ideas of Bruno Latour and others. Now German observers were able to discern that something similar had happened in the early 2000s in the United States, when the advent and merging of Critical Animal Studies and post-cybernetic studies brought about a new understanding of media as well as a reconceptualization of the posthuman as always already intertwined between human and non-human.

'Media' after the Postwar Era: Cultural Techniques

If the first phase of German media theory (from the early 1980s to the late 1990s) can be labelled anti-hermeneutic, the second phase (from the late 1990s to the present), which witnessed the conceptual transformation of media into cultural techniques, may be labelled post-hermeneutic. Underneath this change, which served to relieve media and technology of the burden of having to play the bogeyman of hermeneutics and Critical Theory, there was a second rupture that only gradually came to light. The new conceptual career of cultural techniques was linked to nothing less than the end of the intellectual postwar era in Germany.

The technophobia of the humanities, the imperative of Habermasian 'communicative reason', the incessant warnings against the manipulation of the masses by the media – all of this arose from the experiences of the Second World War and came to be part and parcel of the moral duty of the German postwar intellectual. (At a lecture at the Collège International de Philosophie in 1984, addressing among others Jürgen Habermas and Dieter Henrich, Werner Hamacher polemically character-ized German postwar philosophy after Heidegger *and* Adorno as 'repar-ation payments' to Anglo-Saxon common-sense rationalism and philosophies of norms and normativity.) But it was also precisely that against which the anti-hermeneutic techno-euphoria of 'media analysis' and the media-materialist readings of French theory rebelled. To polem-ically confront the public sphere with war, to oppose the technophobia of Critical Theory with Foucauldian discourse analysis, the machinic think-ing of Deleuze and Guattari, or the posthumanist Lacanian logic of the signifier, was no less a symptom of the German postwar. Not surpris-ingly, US intellectuals who had received poststructuralism as a kind of 'negative New Criticism' had difficulties coming to grips with the polem-ical tone that permeated Kittler's writings (Winthrop-Young, 2011).

It was, ironically, the fall of the Berlin Wall and the end of the GDR that helped re-direct German postwar media theory. Cultural Studies (*Kulturwissenschaften*), which in 1990 no longer existed in West Germany but had been practised in the GDR, now became one of the few Eastern heirlooms to gain acceptance in the newly united Germany. As a result, much of what maybe should not have been referred to as 'media', but was nonetheless assigned that label in order to be polemic-ally deployed against long-standing hermeneutic aspirations and Critical Theory's yearning for a non-alienated existence, could now be designated as cultural techniques. The war was over – and all the index cards, quota-tion marks, pedagogies of reading and writing, Hindu-Arabic numerals, diagrammatic writing operators, slates, pianofortes, and so on were given a new home. This implied, first, that on both a personal and an institu-tional level media history and research came to abandon the shelter granted by literature departments. I myself left the institutional spaces of *Germanistik* (the study of German language and literature) in 1993 to become an assistant professor of the History and Aesthetics of Media in the re-established Institut für Kultur- und Kunstwissenschaft at the Humboldt University in the former East Berlin. Second, by virtue of their promotion to the status of cultural techniques, media were now more than merely a 'different' frame of reference for the analysis of lit-erature, philosophy and psychoanalysis. Third, given their new concep-tual status it now became possible to endow media with their 'own' history and lay the groundwork for more systematic theoretical defin-itions. Fourth, critical attention no longer focused on revealing which media technologies provided the 'hard' base of the chimeras known as

'spirit' (*Geist*), understanding, or the public sphere. The focus is now culture itself. Nowhere is this reorientation of German media theory more noticeable than in the changed attitude towards anthropology. During the postwar phase anthropology was as ostracized as 'man' himself – whom Kittler famously kept debunking as 'so-called man' (*der sogenannte Mensch*). With the shift to cultural techniques, German media theory adopted a considerably more relaxed attitude towards an historical anthropology that relates cultural communication to technologies rather than to anthropological constants. By latching on to the old concept of cultural techniques, it signals its interest in 'anthropotechnics' (e.g., see Schüttpelz, 2006) – though it remains doubtful whether this indicates an 'anthropological turn' (Siegert, 2007).

As indicated above, this postwar turn from anti-humanism to posthumanism appears to resemble the US turn from a somewhat restricted understanding of posthumanism as a form of transhumanism (i.e., the biotechnological hybridization of human beings) to a more complex programme of *posthumanities* eager to put some distance between itself and old notions of the posthuman (see Wolfe, 2010). To be sure, what both turns have in common is a reluctance to interpret the 'post' in posthuman in an historical sense, as something that comes 'after the human'. Rather, in both cases the 'post' implies a sense of 'always already', an ontological entanglement of human and non-human. However, the non-human of the cultural techniques approach is related in the first instance to matters of technique and technology, that of the American posthumanities to biology and the biological. In North America the turn from the posthuman to the posthumanities is indebted to deconstruction; more to the point, it follows from the older Derrida's questioning of 'the animal'. In short, the German focus on the relationship between humans and machines finds its American counterpart in the questioning of the equally precarious relationship between humans and animals (Winthrop-Young, 2009).

But although the discussion of the man–machine–animal difference (i.e., the anthropological difference) also plays an important part in German discussions, and despite the links between German notions of cultural techniques and the French confluence of anthropology and technology that is now of such great importance to the American debate, critical trans-Atlantic differences remain. While the American side pursues a deconstruction of the anthropological difference with a strong ethical focus, the Germans are more concerned with technological or medial fabrications or artifices. From the point of view of the cultural techniques approach, anthropological differences are less the effect of a stubborn anthropo-phallo-carno-centric metaphysics than the result of culture-technical and media-technological practices. The difference is especially apparent in the 'zoological' works of German cultural sciences that tend to be less concerned with discussions of Heidegger, Nietzsche,

Agamben and Derrida than with the medial functions of animals – that is, with the way in which cultural techniques like domestication, breeding, or sacrificial practices in connection with the emblematization of certain medial virtues and capabilities of animals, serve to create, shift, erode and blur the anthropological difference (e.g., Schneider, 2007).

The study of cultural techniques, however, is not aimed at removing the anthropological difference between human and non-human animals by means of subtle deconstructivist refutations of the many attempts to distinguish between that 'which calls itself human' and that which is called 'animal'. Its goal is not to grant rights to animals, or deprive humans of certain privileges. Nor is it bent on critiquing the dogma of pure ontological difference. Rather, it is concerned with decentring the distinction between human and non-human by insisting on the radical technicity of this distinction – something, incidentally, that Cary Wolfe and David Wills come close to in their recent exploration of 'Animal Dasein' and the deep-seated technicity of the human (Wills, 2008; Wolfe, 2012). Human and non-human animals are always already recursively intertwined because the irreducible multiplicity and historicity of the anthropological is always already processed by cultural techniques and media technologies. Ahab's becoming-whale is not rooted in Herman Melville's bioethics but in the cultural technique of whale hunting. Without this technologically oriented decentring there is the danger of confusing ethics with sentimentality: the human/animal difference remains caught in a mirror stage, and the humanity that is exorcized from humans is simply transferred on to animals which now appear as the better humans.

But what, then, were and are cultural techniques? Conceptually we may distinguish three phases. Ever since antiquity the European understanding of culture implies that it is technologically constituted. The very word 'culture', derived from the Latin *colere* and *cultura*, refers to the development and practical usage of means of cultivating and settling the soil with homesteads and cities. As an engineering term, *Kulturtechnik*, usually translated as agricultural or rural engineering, has been around since the late 19th century. As defined by the sixth edition of *Meyers Großes Konversationslexikon* (1904), cultural techniques comprise 'all agricultural technical procedures informed by the engineering sciences that serve to improve soil conditions', such as irrigation, drainage, enclosure and river regulation. To a certain extent the post (cold) war turn of German media theory builds on this tradition. The corrals, pens and enclosures that separate hunter from prey (and that in the course of co-evolutionary domestication accentuate the anthropological difference between humans and animals), the line the plough draws across the soil, and the calendar that informs sowing, harvesting and associated rituals, are all archaic cultural techniques of hominization, time and space. Thus the concept of cultural techniques clearly and unequivocally repudiates

the ontology of philosophical concepts. Humans *as such* do not exist independently of cultural techniques of hominization, time *as such* does not exist independently of cultural techniques of time measurement, and space *as such* does not exist independently of cultural techniques of spatial control. This does not mean that the theory of cultural techniques is anti-ontological; rather, it moves ontology into the domain of ontic operations. Similar ideas relating to the production of ontological distinctions by means of ontic cultural techniques are to be found in American posthumanities, for instance, with regard to houses and the cultural techniques of dwelling (e.g., Wills, 2008: 56). This discourse, however, remains tied to the level of philosophical universals. There is no such thing as *the* house, or the house as such, there are only historically and culturally contingent cultural techniques of shielding oneself off and processing the distinction between inside and outside. What (still) separates the theory of cultural techniques from those of the posthumanities, then, is that the former focuses on empirical historical objects while the latter prefer philosophical idealizations.

Starting in the 1970s, basic skills such as reading, writing and arithmetic were referred to as elementary *Kulturtechniken*; television and information and communications technology were added in the 1980s. What separates this particular usage of the term from its more recent application is that it still reveals a traditional middle-class understanding of culture that links culture to humanist educational imperatives. 'Culture' still serves to conjure up the sphere of art, good taste and education (*Bildung*) in a Goethean sense – in other words, culture is still seen as the repository of indispensable ingredients for the formation of a 'whole human'. With this background in mind, the reference to television or the internet as cultural techniques aims at subjecting these new media to the sovereignty of the book – as opposed to a more pop-cultural usage that challenged the monopoly of the *alphabêtise* (Lacan) over our senses. By establishing a link with the older, technologically oriented understanding of culture, cultural techniques research breaks with the 19th-century middle-class tradition that conceived of culture exclusively in terms of the book reigning over all the other arts.

To be sure, within the new media-theoretical and culturalist context cultural techniques do refer to the so-called elementary cultural techniques, but they now also encompass the domains of *graphé* exceeding the alpha-numerical code. Operative forms of writing such as calculus, cards and catalogues, whose particular effectiveness rests on their intrinsic relationship to their material carrier (which serves to endow them with a certain degree of autonomy), are of considerable interest to those studying cultural techniques. By ascending to the status of a new media-theoretical and cultural studies paradigm, cultural techniques now also include means of time measurement, legal procedures, and the sacred. At the same time the concept of cultural techniques could

attain a systematic foundation in the context of palaeoanthropology, animal studies, the philosophy of technology, the anthropology of images, ethnology, fine arts, and the histories of science and law inasmuch as these disciplines became subject to the 'cultural turn' themselves.

In hindsight, the notion of cultural techniques was received – maybe all too willingly – by posthumanist cultural studies because it subverted the nonsensical war of succession between 'media' and 'culture' over the vacant throne of the transcendental by subjecting the two combatants to further investigation (Schüttpelz, 2006: 90). That is to say, *media* are scrutinized with a view toward their technicity, technology is scrutinized with a view toward its instrumental and anthropological determination, and culture is scrutinized with a view toward its boundaries, its other and its idealized notion of bourgeois *Bildung*. Against this background, and drawing upon the most recent discussions, we can add five further features that characterize the theoretical profile of cultural techniques.

(i) Essentially, cultural techniques are conceived as operative chains that precede the media concepts they generate:

> Cultural techniques – such as writing, reading, painting, counting, making music – are always older than the concepts that are generated from them. People wrote long before they conceptualized writing or alphabets; millennia passed before pictures and statues gave rise to the concept of the image; and until today, people sing or make music without knowing anything about tones or musical notation systems. Counting, too, is older than the notion of numbers. To be sure, most cultures counted or performed certain mathematical operations; but they did not necessarily derive from this a concept of number. (Macho, 2003: 179)

However, operations such as counting or writing always presuppose technical objects capable of performing – and to a considerable extent, determining – these operations. As an historically given micro-network of technologies and techniques, cultural techniques are the exteriority and/or materiality of the signifier. An abacus allows for different calculations than ten fingers; a computer, in turn, allows for different calculations than an abacus. When we speak of cultural techniques, therefore, we envisage a more or less complex actor network that comprises technological objects as well as the operative chains they are part of and that configure or constitute them.

(ii) To speak of cultural techniques presupposes a notion of plural cultures. This is not only in deference to notions of multi-culturality, it also implies a posthumanist understanding of culture that no longer posits man as the exclusive subject of culture. To quote a beautiful formulation by Cornelia Vismann: 'If media theory were or had a grammar, that agency would find its expression in objects claiming the grammatical

subject position and cultural techniques standing in for verbs' (2010: 171).[2] Objects are tied into practices in order to produce something that within a given culture is addressed as a 'person'. In accordance with Philippe Descola's (2013) different 'dispositives of being' (naturalism, animism, totemism, analogism), natural things, animals, images or technological objects may also appear as persons.

(iii) In order to differentiate cultural techniques from other technologies, Thomas Macho has argued that only those techniques should be labelled cultural techniques that involve symbolic work. 'Symbolic work requires specific cultural techniques, such as speaking, translating and understanding, forming and representing, calculating and measuring, writing and reading, singing and making music' (Macho, 2008: 99).[3] Macho's suggestion is certainly very helpful when it comes to countering a detrimental inflation: nowadays planning, transparency, yoga, gaming, and even forgetting have been promoted to cultural techniques. What separates cultural techniques from all others is their potential self-reference or 'pragmatics of recursion':

> From their very beginnings, speaking can be spoken about and communication be communicated. We can produce paintings that depict paintings or painters; films often feature other films. One can only calculate and measure with reference to calculation and measurement. And one can of course write about writing, sing about singing, and read about reading. On the other hand, it's impossible to thematize fire while making a fire, just as it is impossible to thematize field tilling while tilling a field, cooking while cooking, and hunting while hunting. We may talk about recipes or hunting practices, represent a fire in pictorial or dramatic form, or sketch a new building, but in order to do so we need to avail ourselves of the techniques of symbolic work, which is to say, we are not making a fire, hunting, cooking, or building at that very moment. Building on a phrase coming out of systems theory, we could say that cultural techniques are *second-order techniques*. (Macho, 2008: 100, emphasis in original)

It is no doubt very tempting to follow a proposal of such alluring simplicity, but unfortunately it suffers from an overly reductive notion of the symbolic in combination with a too static distinction between first- and second-order techniques. Granted, you cannot thematize the making of fire while making fire, but this certainly does not apply to cooking, at least not if you pay heed to Claude Lévi-Strauss's structuralist analysis.

Cooking, a differentiated set of activities linked to food preparation, is both a technical procedure that brings about a transformation of the real and a symbolic act distinct from other possible acts. For instance, as part of the culinary triangle underlying the symbolic order of food

preparation, the act of boiling something means to neither roast nor smoke it (Lévi-Strauss, 1978: 478–490). Hence every instance of boiling, roasting or smoking is always already an act of communication because it communicates to both the inside and the outside that within a certain culture certain animals are boiled, roasted and smoked – like (or unlike) in other cultures, be they near or far. Because it is constituted by structural differences cooking does indeed thematize cooking in the act of cooking.

Furthermore, ploughing too can be a symbolic act. If, as ancient sources attest, ploughs were used to draw a sacred furrow to demarcate the limits of a new city, then this constitutes an act of writing in the sense of Greek *graphé*. To plough is in this case to engage in symbolic work because the *graphein* serves to mark the distinction between inside and outside, civilization and barbarism, an inside domain in which the law prevails and one outside in which it does not. Hence doors, as well, are a fundamental cultural technique, given that the operations of opening and closing them process and render visible the distinction between inside and outside. A door, then, is both material object and symbolic thing, a first- as well as a second-order technique. This, precisely, is the source of its distinctive power. The door is a machine by which humans are subjected to the law of the signifier. It makes a difference, Macho writes, whether you whittle and adorn an arrow or whether you shoot it at an animal (2011: 45). But does this not ontologize and universalize an occidental rationality that always already separates two different types of knowledge: culture on the one hand and technology on the other? What if the arrow can be used only after it has been 'decorated'? What if said 'decoration' is part of the arrow's technical make-up? Macho's view of the symbolic still implies some kind of tool-making animal that employs media to perform symbolic work and thus appears as the master or 'manipulator' of the symbolic. As a result the analysis elides both those techniques that enable the symbolic to enter the real and the anthropotechniques that generate the anthropological difference in the first place.

In short, it is problematic to base an understanding of cultural techniques on static concepts of technologies and symbolic work, that is, on an ontologically operating differentiation between first- and second-order techniques. Separating the two must be replaced by chains of operations and techniques. In order to situate cultural techniques *before* the grand epistemic distinction between culture and technology, sense and nonsense, code and thing, it is necessary to elaborate a *processual* (rather than ontological) definition of first- and second-order techniques. We need to focus on how recursive operative chains bring about a switch from first- to second-order techniques (and back), on how nonsense generates sense, how the symbolic is filtered out of the real or how, conversely, the symbolic is incorporated into the real, and how the material signifier is present in the signified and manages to create a physical presence effect.

   Macho himself alludes to the possibility of such a processual definition
by speaking of *potential* self-reference. One prime example is the art of
weaving. If you adhere to the rigid distinction between first- and second-
order techniques, weaving will not qualify as a cultural technique because
it does not exhibit any self-referential qualities. The term only makes
sense once a piece of tapestry depicts a piece of tapestry, or a garment
appears on a garment. Yet the very technique, the ongoing combination
of weave and pattern, always already produces an ornamental pattern
that by virtue of its technical repetition refers to itself and therefore
(according to Derrida) displays sign character (see Derrida, 1985). We
may also distinguish Marcel Mauss's so-called 'techniques of the body'
(Mauss, 1992) from cultural techniques, that is, from the different ways
in which cultures make use of bodily activities such as swimming, run-
ning, giving birth (Maye, 2010: 135). On the other hand, the recursive
chains of operation that constitute cultural techniques always already
contain bodily techniques. According to Mauss, writing, reading and
calculating, too, are techniques of the body (rather than exclusively
mental techniques); they are the results of teaching docile bodies that
today are in competition with the performance of interactive navigational
instruments.
   (iv) Every culture begins with the introduction of distinctions: inside/
outside, pure/impure, sacred/profane, female/male, human/animal,
speech/absence of speech, signal/noise, and so on. The chains that
make up these distinctions are recursive, that is, any given distinction
may be re-entered on either side of another distinction. Thus the inside/
outside distinction can be introduced on the animal side of the human/
animal distinction in order to produce the distinction between domestic
and wild animals. Or the distinction sacred/profane can be introduced on
the speech side of the speech/absence of speech distinction resulting in a
split between sacred and profane languages. The constitutive force of
these distinctions and recursions is the reason why the contingent culture
in which we live is frequently taken to be the real, 'natural' order of
things. Researching cultural techniques therefore also amounts to an
epistemological engagement with the medial conditions of whatever
lays claim to reality. However, it is crucial to keep in mind that the
distinctions in question are processed by media in the broadest sense of
the word (for instance, doors process the distinctions between inside/
outside), which therefore cannot be restricted to one or the other side
of the distinction. Rather, they assume the position of a mediating third
preceding first and second (see Serres, 1982: 53). These media are basal
cultural techniques.
   In other words, the analysis of cultural techniques observes and
describes techniques involved in operationalizing distinctions in the
real. They generate the forms in the shape of perceptible unities of dis-
tinctions. Operating a door by closing and opening it allows us to

perform, observe, encode, address and ultimately wire the difference between inside and outside (see Siegert, 2012). Concrete actions serve to distinguish them from the preceding non-differentiatedness. In more general terms, all cultural techniques are based on the transition from non-distinction to distinction and back.

Yet we always have to bear in mind that the distinction between nature and culture itself is based on a contingent, culturally processed distinction. Cultural techniques precede the distinction of nature and culture. They initiate acculturation, yet their transgressive use may just as well lead to deculturalization; inevitably they partake in determining whether something belongs to the cultural domain or not. What Lévi-Strauss wrote about the art of cooking applies to all cultural techniques: '[T]he system demonstrates that the art of cooking [...] being situated between nature and culture, has as its function to ensure their articulation one with the other' (Lévi-Strauss, 1978: 489).

(v) Cultural techniques are not only media that sustain, disseminate, internalize and institutionalize sign systems, they also destabilize cultural codes, erase signs and deterritorialize sounds and images. As well as cultures of distinction we also have cultures of de-differentiation (what once was labelled 'savage' and placed in direct opposition to culture). Cultural techniques do not only colonize bodies. Tied to specific practices and chains of operation, they also serve to de-colonize bodies, images, text and music (see Holl, 2011). Media appear as code-generating or code-destroying interfaces between cultural orders and a real that cannot be symbolized. Resorting to a different terminology, we can refer to the nature/culture framework in terms of the real and the symbolic. By assuming the position of the third, an interface between the real and the symbolic, basal cultural techniques always already imply an unmarked space. By necessarily including the unmarked space that is excluded by the processed distinctions, cultural techniques always contain the possibility of liquidating the latter. In other words, cultural techniques always have to take account of what they exclude. For instance, upon closer scrutiny it becomes apparent that musical notational systems operate against a background of what elides representation and symbolization – the sounds and noise of the real. Any state-of-the-art account of cultural techniques – more precisely, any account mindful of the *technological* state of the art – must be based on an historically informed understanding of electric and electronic media as part of the technical and mathematical operationalization of the real. It will therefore by necessity have to include what under Old European conditions had been relegated to the other side of culture: the erasure of distinctions as well as the deterritorialization and disfiguration of representations – the fall of the signifier from the height of the symbolic to the depths of the real.

Translated by Geoffrey Winthrop-Young.

Notes

1. This article is also the introductory essay in a volume on cultural techniques forthcoming from Fordham University Press.
2. The Vismann (2010) essay is part of this collection (see this issue).
3. The Macho (2008) essay is part of this collection (see this issue).

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Bernhard Siegert received his PhD from the Ruhr University Bochum in 1991 and completed his *Habilitation* at the Humboldt University in Berlin in 2001. He holds a Chair in the History and Theory of Cultural Techniques at the Bauhaus University of Weimar. Among his major publications are *Relays* (Stanford University Press, 1999), *Passage des Digitalen* (Brinkmann und Bose, 2003) and *Passagiere und Papiere* (Fink, 2006). A volume of essays on cultural techniques is forthcoming from Fordham University Press.

Geoffrey Winthrop-Young is Professor of German at the University of British Columbia in Vancouver, Canada. Among his publications are *Kittler and the Media* (Polity Press, 2011) and *Friedrich Kittler zur Einführung* (Junius, 2005) as well as translations of works by Friedrich Kittler, Cornelia Vismann and Eva Horn.

After Kittler: On the Cultural Techniques of Recent German Media Theory

Bernard Dionysius Geoghegan
Humboldt University of Berlin, Germany

Abstract

This paper offers a brief introduction and interpretation of recent research on cultural techniques (or *Kulturtechnikforschung*) in German media studies. The analysis considers three sites of conceptual dislocations that have shaped the development and legacy of media research often associated with theorist Friedrich Kittler: first, the displacement of 1980s and 1990s Kittlerian media theory towards a more praxeological style of analysis in the early 2000s; second, the philological background that allowed the antiquated German appellation for agricultural engineering, *Kulturtechniken*, to migrate into media and cultural studies; and third, the role of these conceptual dislocations in enriching media-genealogical inquiries into topics such as life, biopolitics, and practice.

Keywords

Humans or machines? Discourse or hardware? Since the mid-1980s these were the methodological orientations that divided the anthropocentrism of Anglo-American cultural studies from the technophilia of German media theory. In the past decade an emerging field of research known as *Kulturtechniken* has deconstructed these oppositions. Proponents of cultural techniques reread Friedrich Kittler's media theoretical approach of the 1980s and 1990s – known for its presupposition that a technological *a priori* defines the scope and logic of distinct cultural formations and epistemes – with a closer focus on the local practices, series, and techniques that configure medial and technological arrangements.

Corresponding author:
Bernard Dionysius Geoghegan, Humboldt University of Berlin, Georgenstraße 47 10117 Berlin, Germany.
Email: bernard.geoghegan@hu-berlin.de (www.bernardg.com)
http://www.sagepub.net/tcs/

The absence of a rigorous consensus about the scope and purview of *Kulturtechnik* speaks, in a sense, to its conceptual fertility. The difficulty starts with the term *Kulturtechniken* itself, which may be rendered in English as *cultural techniques*, *cultural technologies*, *cultural technics*, or even *culturing techniques*. Cultural theorists at the Humboldt University of Berlin (e.g. Christian Kassung, Sybille Krämer and Thomas Macho) Identify cultural techniques with rigorous and formalized symbolic systems, such as reading, writing, mathematics, music, and imagery (see Kassung and Macho, 2013; Krämer and Bredekamp, 2008; Macho, 2013). Researchers in Weimar, Siegen, and Lüneberg tend towards a more catholic definition that recognizes a broader range of formalizable cultural practices, including tacit knowledge, the class-laden rituals of Victorian servants, and the law as cultural techniques (see Schüttpelz, 2006; Engell and Siegert, 2010; Krajeswki, 2013; Vismann, 2013). Binding together these varied definitions and understandings of *Kulturtechniken* is a shared interest in describing and analysing how signs, instruments, and human practices consolidate into durable symbolic systems capable of articulating distinctions within and between cultures.

In this paper I offer a brief introduction and interpretation of research on cultural techniques by way of three conceptual dislocations. First, I consider how and why the situation of Germanophone media theory in the 1980s and 1990s was displaced and redirected towards a more praxeological style of analysis in the early 2000s; second, I examine how and why an antiquated Germanophone appellation for agricultural engineering, *Kulturtechniken*, morphed into a philosophically and conceptually charged term in media and cultural studies; and third, I conclude with reflections on how this conceptual redistribution enabled by the term *Kulturtechniken* facilitates genealogical approaches to media research and inquiry.

Towards the *a priori* of the Technological *a priori*

'We're finally allowed to talk about people!' That's how one Germanophone media theorist explained the significance of research in cultural techniques to me.[1] Of course, 'German' media theory[2] as it was developed by Kittler and his associates was full of people: mothers, madmen, artists, authors, inventors, bureaucrats, and the occasional weapons designer abound. But Kittler's media analysis maintained that these figures were at best proxies or avatars for *Aufschreibesysteme* or discourse networks composed of machinery, institutions, instruments, mathematical regimes, and inscriptions. Kittler maintained that the task of a true science of media was to drive the human out of the humanities (*Austreibung des Geistes aus den Geisteswissenschaften*) (Kittler, 1980) and reorient analysis towards a description of this discursive and instrumental infrastructure.

This assault on anthropocentrism flew in the face of contemporaneous approaches, such as that of Jürgen Habermas in West Germany or the Birmingham Centre for Cultural Studies, which argued for recovering and restoring the human interests waylaid by technical communications. Yet even for theorists harbouring such humanist and culturalist sympathies, Kittler's argument for discarding human interests and intentions in favor of analysing how medial, technical, and institutional arrangements shaped cultural forms proved remarkably fruitful. It established a style of media analysis that could transversally join together the themes and methods of literary criticism, psychoanalysis, philosophy, and electrical engineering (see Kittler, 1990, 1999).

But a certain planned obsolescence countermanded the power of this burgeoning media science. Correlating cultural form and historical change with the material specificities of distinct media platforms implied an impending denouement of both. As Kittler put it in an oft-cited passage from his tome *Gramophone, Film, Typewriter*, first published in German in 1986:

> Before the end, something is coming to an end. The general digitization of channels and information erases the differences among individual media. Sound and image, voice and text are reduced to surface effects, known to consumers as interface. Sense and the senses turn into eyewash. Their media-produced glamour will survive for an interim as a by-product of strategic programs. (Kittler, 1999: 1)

The problem with end of history arguments is they don't leave you with much to talk about once history has come and gone. For all their apocalyptic poetry about Alan Turing's universal machine and Claude Shannon's schematic account of communication, Kittler and his most fervent disciples never had much to say about media after the mid-1980s, when personal computers became a common presence in the domestic home. This seems decidedly unfitting for a theorist eulogized as 'the Derrida of the digital age' (Jeffries, 2011).

A troubling ethnocentrism further constrained the agenda of classic German media theory. For the Kittlerian media archaeologist, cultures and societies that did not rely on Western technological media could only be ignored or shoehorned into ill-suited analytical categories, such as information theory's sender-receiver model of communication.[3] In this way Kittlerian analysis suggested that the products of the North American and Western European military-industrial complex coincided with an elusive baseline or measuring stick that made sense of human cultures in general. These two shortcomings (the inability to speak to present technological media conditions combined with the inability or refusal to look beyond Western contexts), along with a conspicuous

disregard or even disdain for many political or ethical questions (Peters, 2007), set increasingly narrow horizons on the Kittlerian program.

That Kittler in his late works reoriented himself towards new problematics, such as European cultural history and mathematics in ancient Greece, might suggest his own recognition of these diminishing returns of his earlier methods. More likely, that shift in focus serves as a reminder that Friedrich Kittler was never Kittlerian, per se (indeed, few discursive founders' methods square with their eponymous schools), and that he was most at home when challenging platitudinous orthodoxies – even those assigned to his own name. Even so, this shift seemingly left his most dedicated disciples alone in the end, writing technical histories of dead media and dead theorists.

But as Nietzsche observed, true fidelity demands the courage of apostasy.[4] In the early 2000s, adepts and admirers of the Kittlerian approach turned their attention towards the more elastic concept of *Kulturtechniken*. Bernhard Siegert concisely summarizes the emerging program this way: 'The concept of cultural techniques highlights the operations or sequences of operations that historically and logically precede the media concepts generated by them' (Siegert, 2011: 15). For example, counting historically and logically precedes numbers, singing precedes formalized scales, and casual farming precedes the invention of rationalized agriculture. This observation suggests a technical and practical *a priori* to the discourse networks of classic German media theory. The task for the theorist of cultural techniques is to determine by what processes numbers, scales, or a ploughshare reciprocally and recursively modify and formalize the practices of counting, singing, and farming that generated them.

The study of such recursive processes constitutes the topological core of research on cultural technique. Put in terms familiar to German media theory of the 1980s and 1990s, cultural techniques concern the rules of selection, storage, and transmission that characterize a given system of mediation, including the formal structures that compose and constrict this process. The fact that this process comprehends both the emergence of a new symbolic system and the recursive formalization of this system accounts in some part for the ambiguity introduced in English translations. Every cultural technique (*Kulturtechnik*) tends towards becoming a cultural technology (*Kulturtechnik*). Where English sharply distinguishes and opposes these meanings, colloquial German designates their intimate and ontologically elusive conjunction.

This conceptual shift so easily likened to the formal operations of a Turing machine or cybernetic servomechanism (see Krajewski, 2013) masks a more profound dislocation in the foundations of the Kittlerian program. The rift concerns the seemingly innocuous phrase 'operations or sequences of operations that historically and logically precede'. Rather than starting with an already-organized technology,

research on cultural techniques commences with an inchoate mixture of techniques, practices, instruments, and institutional procedures that give rise to a technological set-up. The methodological specificity of research on *Kulturtechniken* is its emphasis on the configurations of instruments, practices, and signs that comprise the *a priori* of a given technical and cultural system. This is not *media archaeology* but rather an archaeology *of media*.

This effort to isolate and define symbolic sequences, and situate their specificity, almost inevitably involves recourse to aspects of anthropology with an emphasis on human practice – and, more importantly, explicitly or implicitly, some element of cross-cultural analysis. Every cultural technique always already implies cultural diversity, either within or between cultures. The Kittlerian privilege assigned to European culture and technologies of Western derivation no longer suffices for this style of analysis. Figures of class tension, barbarians, and parasites quickly proliferate (Krajewski, 2013; Vismann, 2013; Siegert, 2008). In this new set-up interlopers and alterity become necessary (but not sufficient) conditions, rather than effects, of media-technological configurations. It is the very undecidability over whether such methodological reorientations constitute violent ruptures or deep-seated revelations for media theoretical analysis that allow for the qualification of *Kulturtechnikforschung* as apostasy.

Body Techniques

An example drawn from the work of Erhard Schüttpelz (2010) illustrates certain hallmarks of cultural-technical research. His special interest in comparative and cross-cultural anthropology distinguishes him among contemporary theorists of cultural techniques but also coincides with a broader anthropological orientation that differentiates research on cultural techniques from that of classic German media theory. In his essay 'Body Techniques', Schüttpelz recounts a story told by the French ethnographer Marcel Mauss in the 1935 essay 'Techniques of the Body'. Mauss argued that distinct cultures have systematic ways of organizing everyday bodily activities, such as walking, swimming, and running. He traced the genesis of this theoretical concept to his extended stay at an American hospital in the 1920s. According to Mauss:

> A kind of revelation came to me in hospital. . . . I wondered where previously I had seen girls walking as my nurses walked. I had the time to think about it. At last I realised that it was at the cinema. Returning to France, I noticed how common this gait was, especially in Paris; the girls were French and they too were walking in this way. In fact, American walking fashions had begun to arrive over here, thanks to the cinema. This was an idea I could generalise. (Mauss, 1973: 72)

Two aspects of this story interest Schüttpelz. There is the fact of a specific technique, walking, which is disseminated and conditioned by a new technical medium, the cinema. Equally important is that the cinema itself – by breaking the actions of the human body down into a series of discrete, serial movements – makes Mauss's concept, techniques of the body, thinkable. Thus far we see the hallmark elements of classical German media theory, with its emphasis on the technological *a priori*. By emphasizing the role of a technological determinant in Mauss's concept, Schüttpelz is halfway to redefining techniques of the body as a cultural technology.

Schüttpelz embarks on a cultural-technical analysis by situating Mauss's techniques of the body within a heterogeneous set-up of techniques, technologies, and signs co-articulated by power and politics that, in turn, have implications for cultural difference and distinction. He locates the genesis of Mauss's cultural techniques of the body in Etienne Jules-Marey's famous motion studies, pointing out that these studies were allied with the late-19th-century racist and classist ethnography that sought to inventory types, such as the gait of Africans, Europeans, workers, and soldiers. Through motion photography, movement itself became a symbolic system characterizable by discrete series that could be quoted and recursively modified. These series could articulate difference *between* cultures ('European' and 'African') and *within* a culture (upper and lower classes), and they also refined existing cultural distinctions. In this way motion studies refined techniques of the body into a cultural technology of racist and classist differentiation. Subsequent interventions by cinema, Taylorism, industrialization, and colonialism enabled the French ethnographer Mauss to develop a concept that identified these new cultural formations as techniques of the body.

Although constructed and contingent, these techniques of the body also designated a real, historical, and obdurate phenomenon whose biological underpinnings closely approximate natural life forces. To exploit a certain semantic ambiguity unavailable to German, we may say that Schüttpelz's history demonstrates how a variety of cultural techniques [*Kulturtechniken*] were strategically bound together into a potent cultural technology [*Kulturtechnik*]. On their own, concepts, bodies, filmstrips, and politics are techniques; but as components of an integrated symbolic system, they become a cultural technology. Although such symbolic systems may be integrated into a single technology or *dispositif*, such arrangements are at best temporary consolidations until emergent practices and technologies displace and rearrange the constituent parts.

The Techniques of *Kultur*

A survey of methodological impasses or case studies (such as we have approximated in the preceding pages) may provide an overview to the

cultural techniques of recent German media theory. To penetrate to the core of the problematic, however, it is necessary to zero in on the term itself, *Kulturtechnik*, and its economic conjunction of pleonasm, paradox, and neologism. This combination of connotations derives from the peculiar associations of the three terms it brings together, namely: *Kultur*, derived from Latin *colere* and introduced into German in the 17th and 18th centuries to designate culture; the term *Technik*, derived from ancient Greek and introduced into German in the 18th century, signifying technique, technology, or technics; and *Kulturtechnik*, a 19th-century term for agricultural engineering that was appropriated in the 1970s and 1980s by theorists of pedagogy to designate basic competencies in reading, writing, and arithmetic. It is in the bridges and joints among these terms – which are themselves moving and dynamic, like a drawbridge mounted on buoyant piles rather than an isthmus or fixed overpass – that we find the features that define *Kulturtechnik* as a media theoretical concept.[5]

Take the term *Kultur*. Even if the term admitted easy translation, this would hardly fix or determine its semantic scope. As Raymond Williams once noted, '[c]ulture is one of the two or three most complicated words in the English language' (Williams, 1983: 87). Everyday contemporary usage in both languages (but especially in English) often implies an opposition among the terms culture, technology, and nature. Yet these oppositions are partial and historical, the result of gradual dislocations in meaning that are, in turn, reanimated and called into question by the agricultural term *Kulturtechnik*.

For example, the Latin term *colere* that furnishes the basis for the word culture grafts these three meanings together. The Latin *Agri cultura* (agriculture) did not break with nature but instead furnished a stable and enduring second nature. In ancient conceptions of *colere*, then, techniques proved constitutive to realizing the interwoven potential of nature and culture alike. Well into the 17th century, *Cultur* designated techniques of farming and husbandry.[6] Modern English and German usages retain these connotations, but typically in the specialized fields of practice that are divorced from everyday practice. In German supermarkets mushrooms farmed under controlled conditions are marketed as *Kulturchampignon*, or cultured mushrooms. *Kultur* in this context refers to a controlled mechanism for bringing forth and grooming a natural potential, whereby technique and nature work in concert.

But a peculiar transposition complicates this meaning and speaks directly to the concept's later appropriation in cultural studies. In the course of the 18th and 19th centuries a metaphorical understanding of culture as the maintenance and cultivation of human development appeared. This creeping bourgeois conception identified culture with competency in reading, writing, arithmetic, and the arts. Much as a fixed agri-culture cultivated a more refined and productive crop, proper culturing regimes

could make for a more refined and productive human subject. In these budding, blooming matrices of associations rich resources for future 'cultural sciences' (as the German language designates the field of cultural studies) take root.

This ethnocentric identification of culture with a matrix of Western European attainments was contradicted by an alternate Germanophone definition of culture as the specific and relative characteristics of a given people. Herder, for example, proposed the term culture to designate the specific ways of life characteristic of different peoples. This usage recalled the earlier, more agricultural sensibility of culture as second nature. To cite one passage from Herder's text:

> Men of all the quarters of the globe, who have perished over the ages, you have not lived solely to manure the earth with your ashes, so that at the end of time your posterity should be made happy by European culture. The very thought of a superior European culture is a blatant insult to the majesty of Nature. (cited in Williams, 1983: 89)

This conception combines increasingly fraught reactionary and progressive elements. On the one hand, there is an allusion to traditional and agricultural meanings: European culture springs up from a well-manured earth. On the other hand, Herder labels the self-conceptions of this highly refined and technical culture as an insult to the glory of nature. This conception grants recognition to the would-be nomads and barbarians outside the Greco-Roman sphere but also furnishes resources for the later racist conception that links organic culture with the blood and soil of a people.

Compounding the contradictory associations accruing around concepts of culture, Herder's usage also adduces an emerging understanding of culture as something opposed to technical or mechanical civilization. It is tempting to see a return to primeval meaning free from technical artifice. Yet this return, based on an opposition between the cultural and the technical, is the quintessence of a specifically modern set of oppositions. As noted by Hartmut Böhme, the Latin term *colere* was remarkable for its ability to use artifice to bring us closer to nature. Emerging 19th-century usage, by contrast, introduced the imaginary notion of a primeval culture purged of technique and technology. This conception is quintessentially modern and marks out a profound schism in the meaning of culture and technique that continues to trouble present-day Germanophone and Anglophone thought.

The Culture of *Technik*

This parsing of *Kultur* from technique set the stage for philosophical and vernacular reflections on the term *Technik*. Consider Heidegger's

well-known essay '*Die Frage nach der Technik*'. Although it is typically translated as 'The Question Concerning Technology', such a designation tends to obscure a major theme of the essay, namely the relation of ancient techniques [*Technik*] to modern technics [*Technik*] and modern technology [*Technik*] (Weber, 1989). Heidegger's definition of *Technik* as a general mode of bringing forth or revealing closely overlaps with notions of *colere* and *Kultur*, and his central example is drawn from agricultural practice:

> [In traditional technics t]he work of the peasant does not challenge the soil of the field. In the sowing of the grain it places the seed in the keeping of the forces of growth and watches over its increase. But meanwhile [in modern technics] even the cultivation of the field has come under the grip of another kind of setting-in-order, which *sets* upon nature. It sets upon it in the sense of challenging it. Agriculture is now the mechanized food industry. (Heidegger, 1977: 14–15, emphasis in original)

Heidegger's comparison between traditional and modern technics rests upon this ability of the word *Technik* to refer to ancient and modern, as well as human and machinic, styles of production, which stages his inquiry into the chasm that separates technique and technology in the modern era. The standard English translation suggests that Heidegger simply rejects technology. A more faithful translation and reading suggests that the use of the term *Technik* allows Heidegger to reject the late-19th-century de-technicization of culture in order to reclaim a fundamental relation between technique and technology, as well as *techné* and *colere*.

Heidegger's efforts to reunite technology, technique, and culture within *techné* speak directly to the crises surrounding technology and culture in Germany during the 1920s and 1930s. Historian Jeffrey Herf characterizes 'the battle over *Technik und Kultur*' as a centrepiece of philosophy and politics in the Weimar Republic and the Third Reich, arguing that Heidegger 'believed that the Germans had a special mission to combine *Technik* and *Kultur*' (Herf, 1984: 109). While Heidegger's conservative contemporaries often embraced a synthesis of technics and culture, in the end Heidegger remained ambivalent. Enamored of *techné* but unable to reconcile himself with modern technics, he retreated to the Greeks and *Gelassenheit* for philosophical solace.

To what extent Kittler's own work was constrained by his indebtedness to the reactionary modernist tradition remains an open question. That he rejected crude interwar nationalistic and biological racisms is clear. That he raided the works of interwar conservatives such as Heidegger, Carl Schmitt, and Ernst Jünger for a critique of West German philosophical and anti-technicist humanisms is also evident.

Yet scholars have asked whether Kittler ultimately appropriated the modernist reactionary binary of *Kultur* and *Technik* only to give a postmodern and ludic privilege to the term *Technik* (Winthrop-Young and Wutz, 1999: xxxvii–xxxviii; Berger, 2006). Dissatisfaction with such a possibly simplistic inversion points towards the peculiar appeal of *Kulturtechnik* as a concept. Binding the terms *Kultur* and *Technik* together, it elaborates an old and established debate that casts a long shadow over contemporary Germanophone scholarship. Moreover, the very joining of these terms – without explicitly surrendering, banishing, or privileging either – also suggests a heterogeneous composite of culture and technology absent from reactionary modernisms and postmodernisms. And lastly, the agricultural connotations of *Kultur* and *Kulturtechnik* allow for an introduction of those questions of life and *bios* that the likes of Heidegger and Kittler scrupulously avoided (probably due to their racist connotations in twentieth century German and European thought) but which have recently reasserted themselves as problematics for critical reflection in 21st centruy philosophy and media theory.

Of Provinces and People (The Rise of Culturing Techniques)

The introduction of the word *Kulturtechnik* into German in the 19th century to designate agricultural engineering marks the fracturing of *colere*, culture, *Cultur*, *Kultur*, techné, *technique*, *Technik,* and technology in the modern era. Once overlapping terms associated with *colere* and *techné* had, in the modern era, grown so rarified and reified that it was easier to join them together as juxtaposed terms than resolve them into a full and originary meaning. But rather like the terms *Kultur* and *Technik*, which seem to consistently waiver between relations of opposition and composition, the term *Kulturtechnik* also designates the partial consolidation and reconciliation of these terms during the 19th century. As historian John Tresch notes, 19th-century German thought gave rise to a neglected tradition of mechanical romanticism that sought to reconcile and re-imagine the relationships among mechanism and organicism (Tresch, 2012). Scientists such as Alexander von Humboldt saw in instruments and technology resources for getting closer to nature and mediating the achievement of a more harmonious – even organic – state. The name Tresch gives to this movement is mechanical romanticism. *Kulturtechnik* could be another.

In 1871 the Royal Prussian Agricultural Academy established a professorship for *Kulturtechnik* at the University of Bonn (Strecker, 1908: 3). Although agricultural engineering is perhaps the most apposite English equivalent, a more literal translation such as culturing techniques better captures this new field's position within an emerging 19th-century ethos that saw in rationalism techniques for realizing the power and potentials of nature. Charles August Vogler's *Introduction to Agricultural*

Engineering (*Grundlehren der Kulturtechnik* – first volume published in 1898) counted chemistry, mineralogy, botany, mechanics, hydraulics, economics, water management, manufacturing, and law among this new field's constituents. This rational series of interlocking distinctions for cultivating the land were supplemented by a new set of distinctions between and among lands. The volume's introduction detailed the culturing techniques peculiar to Bavaria, Saxony, Baden, Hessen, Austria, and Switzerland and exhorted the reader to recognize and celebrate the power of culturing techniques to 'serve the Fatherland and elevate national prosperity' (Strecker, 1908: 7).

This conception underscores how the term *Kulturtechnik* is no neutral engineering term. Like *Kultur* and *Technik*, from its inception it is inscribed within cultural and technological conflicts of Germanophone politics and power. To cultivate any of the three entails the delineation and reproduction of a way of life, be it reactionary or revolutionary. This continues today, as the Bonn professorship for *Kulturtechnik* advertises its commitment to incorporating environmentally sensitive (*umweltrelevanten*) concerns into its field of study. This focus on the *Umwelt* coincides with the wider reorientation across contemporary German scientific and political life toward the interpenetration of nature, technique, and human culture.

Cultural Techniques as Media Theory

Cultural techniques did not come to German media theory as a direct import from agricultural engineering. Their entry was much more mundane, as part of education and the state's concern with pedagogy and instruction. According to Schüttpelz, Kittler encountered the term as a student and instructor at the University of Freiburg in the late 1970s and early 1980s, when the term *Kulturtechniken* was resurfacing in German as a designation for competencies in reading, writing, and arithmetic (see Fritz, 1986; Schüttpelz, pers. comm.). This definition recalled the 18th- and 19th-century definition of culture as liberal arts. Characteristic of many cultural techniques, it owed its legibility to new media technologies. Theorists of pedagogy argued that these skills demanded a reassessment and redefinition in the age of media and communication technologies (Heynmann, 2008). Culture was no longer something to be taken for granted but rather a set Heynmann, 2008 NIR of techniques and a process, whereby the human subject itself was material for cultivation. Culturing techniques, then, demanded a strategic and coherent articulation of humans, techniques, and signs, which itself was adapted to the technical (and pedagogical) regimes of the epoch. Although Kittler does not seem to have developed the term in any focused way, he appears to have brought this definition with him to Berlin in the 1990s, which in turn laid the foundation for the Berlin

School's continuing preoccupation with symbolic systems of reading, writing, image-making, and music as the ur-cultural techniques.

However, at this point we go beyond historicism and anecdote and begin to identify the associations among agricultural engineering, elementary pedagogy, and media theoretical analysis that endow the term *Kulturtechnik* with such provocative interest and intrigue in recent German media theory. The first two meanings (agricultural engineering and pedagogy) are alternate iterations of a shared tradition. The former sense finds its roots in the traditions of culture as agriculture while the latter can be traced to Enlightenment notions of culture as the acquisition of literacy and numeracy. Both recall the fundamental relationship between culture and *techné*, or the process of bringing forth that must be learned and routinized. To term literacy a culturing technique is to underscore that reading and culture are cultivated and bring forth a certain kind of subject and a certain kind of society through the learning of rote procedures of selection, processing, and reproduction. This problem may be distinct from agricultural engineering but it is not wholly independent.

In a sense, the pedagogical meanings extend the symbolic and Lacanian preoccupations of classic Kittlerian media theory (i.e. 'the world of the symbolic is the world of the machine') (Kittler, 1997), while the agricultural associations provide the agitation necessary to graft alternate problematics into this line of analysis. Already in the 19th century the problem of *Kulturtechnik* broaches questions of national and cultural identity, the establishment and maintenance of experimental systems, the interweaving of nature and technics, the imbrication of practices and technology, and the routinizing of culturing procedures. The practice of rational and systematic farming entails a holistic matrix of techniques and practices that establish a logic within the soil and an order among the humans and machines tilling the soil. Farming procedures indexed to the seasons introduce a semiotic system that helps found a new order among things, practices, and signs. The results are cultural distinctions, both as an infinity of distinctions in the land and distinctions between lands. Introduced into media theoretical analysis, this overturns the anti-biologism that prevailed in nearly all Kittlerian analysis and points towards a genealogical complement or alternative to media archeology.

In contemporary usage the connotations of *Kulturtechnik* vastly exceed its designations, but this does not make the etymology any less significant. As Hans-Georg Gadamer observed:

> When you take a word in your mouth you must realize that you have not taken a tool that can be thrown aside if it will not do the job, but you are fixed in a direction of thought that comes from afar and stretches beyond you. (cited in Peters, 1988: 9)

It is this long linguistic, semantic, and conceptual itinerary that gives the term its peculiar power – what I earlier designated as a combination of pleonasm, paradox, and neologism. Pleonasm, for the redundancy between *Kultur* and *Technik* in etymological origins; paradox, for the uncomfortable conjunction they articulate between two phenomena painfully wrenched apart in the rise of European modernity; and neologism, for the way that a contemporary theorist of *Kulturtechnik* seems to coin a new word while reanimating a host of older associations that comes from afar and stretches beyond.

A cursory overview of the recent research on cultural techniques reveals how this rich history of associations returns in the present, media theoretical usage. When Schüttpelz describes techniques of the body rendered legible and rational in the age of motion photography, he also presents us with an inventory of techniques for taking a body with life and potential and endowing it with a more stable, rational form that articulates a family of distinctions within and between cultures (Schüttpelz, 2010). When Bernhard Siegert argues that 'the map is the territory', and describes the rise of modern cartographic methods as a method of rationalizing instruments, signs, and bodies around the definition and demarcation of a new territory, we cannot help but feel some sense of Latin *colere* – with its emphasis on inhabiting and cultivating the land while displacing the nomads – stirring again in our age (Siegert, 2011). When Thomas Macho and Christian Kassung argue that calendars and clocks are cultural techniques, they are also calling attention to the ways we interweave technologies, signs, and practices with the rhythms of earth, in order to consolidate a common way of life (Kassung and Macho, 2013). When Markus Krajewski details the cultural techniques by which Victorian servants selected, stored, and transmitted messages in their master's house, he reminds us that even culture itself – as second nature – must submit to cultural-technical processes that curate and cultivate (and occasionally de-realize) its potential (Krajewski, 2013).

Implicit in each of these usages is also a slinking assimilation of concepts of life, practice, and *bios* that is fundamentally lacking from the classic, Kittlerian approach to media. This also throws open analysis to a wider field of contemporary inquiry into themes such as biopolitics, ecology, and animal studies as media theoretical problems that can and should be approached by a focus on the cultural-technical systems that produce specific forms of life, environment, and species relations. This is not achieved by jettisoning the modern quarrel over *Kultur* and *Technik* but rather by reframing it with a historically grounded concept that redistributes the associations among these terms. Putting these terms together as a composite – *Kulturtechnik* or cultural technique – reminds us that they are mutually constitutive terms while also reminding us that they cannot resolve back into the holism implied by *colere* or *techné*.

This constitutive hybridity of cultural techniques, as well as their emphasis on situated and local configurations of instruments, practices, and signs, traces out the emerging status of media and cultural studies in the 21st century. Once, gramophones, film, and typewriters seemed to exhaust the dominant media forms of the epoch. Departments of 'Film Studies', 'Radio/Television/Film' and 'Cultural Studies' suggest a delineated field of study that pivoted around platforms and practices. Yet the tendency towards digitization that organized and undermined the framework of Kittlerian analysis also gutted the carefully cultivated distinction among media as well as cultural, technical, and life sciences (Jenkins, 2006; Thacker, 2005). No media archaeology offers a resolution to this dilemma. Instead, media genealogists must ask how, and under what conditions, cultural techniques strategically and temporarily consolidate these forces into coherent technologies.

Acknowledgements

Notes

1. The best short introduction and overview in English of Kittler's research can be found in Winthrop-Young and Gane (2006). Although authored too early to address Kittler's late turn towards mathematics and cultural techniques, see also Winthrop-Young and Wutz (1999). My own, very compact survey of his work can be found online at Geoghegan (2011).
2. The question of what's so German about German media theory is addressed in Horn (2008). The term 'media archaeology' is often used to loosely designate Kittlerian media theory. For a discriminating discussion of this term, see Huhtamo and Parikka (2011, esp. 8–12) and Parikka (2011).
3. Friedrich Kittler's former research assistant Paul Feigelfeld, currently of the Humboldt University of Berlin, is now redressing this problem with a dissertation dedicated to the role of Chinese and Arabic analytical techniques in shaping 'Western' cryptographical procedures. The successful completion of this project may yet open new chapters and new avenues in Kittlerian media archaeology.
4. See Friedrich Nietzsche (Book I, aphorism 32; in Nietzsche, 2001: 53). See also Nietzsche (Vol. I, Part 6, aphorism 298 and Vol. II, Part 1, aphorism 372; in Nietzsche, 1989).
5. On the bridges and joints of concepts, see Deleuze and Guattari (1994: 20).
6. Here and throughout, I have consulted *The Oxford English Dictionary*, as well as the aforementioned works by Williams and Böhme.

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Bernard Dionysius Geoghegan is a media theorist and historian of technology. He works as a Wissenchaftlicher Mitarbeiter at the Institut für Kulturwissenschaft at the Humboldt-Universität zu Berlin. In 2012 he received a dual-PhD from the Fakultät Medien of Bauhaus-Universität Weimar and the Screen Cultures program of Northwestern University.

His research interests include digital media, historical epistemology, visual culture studies, software studies, the theory of cultural techniques, and the history of electrical engineering. He has held posts and fellowships at the American University of Paris, Harvard University, MIT, the Pompidou Center, Northwestern University, and the Children's Media Project. His essays appear in journals including *Critical Inquiry*, *The IEEE Annals on the History of Computing*, and *Interaction Studies*. He may be reached online at www.bernardg.com.

Cultural Techniques and Sovereignty

Cornelia Vismann

Abstract

First published in 2010, Cornelia Vismann's article has already attained the status of a classic. In a formulation inspired by linguistic theory, the author argues that the relation between cultural techniques and media can be understood in analogy to grammatical operations. Thus, cultural techniques define the agency of media and execute the procedural rules which the latter set in place. Together, they articulate a critique of subjectivity and sovereignty that proceeds by re-examining the notion of 'culture' via its agricultural origins to the current moment when the 'preservation of cultural techniques' has entered legal and academic discourse. Ultimately, despite their apparent separation from praxis, cultural techniques continue to proliferate through axes of substitution and displacement.

Keywords

cultural techniques, law, linguistics, sovereignty, symbolic order

Acting in the Medium

Cultural techniques describe what media do, what they produce, and what kinds of actions they prompt.[1] Cultural techniques define the agency of media and things. If media theory were, or had, a grammar, that agency would find its expression in objects claiming the grammatical subject position and cultural techniques standing in for verbs. Grammatical persons (and human beings alike) would then assume the place assigned for objects in a given sentence. From the perspective of media, such a reversal of positions may well be the most prominent feature of a theory of cultural techniques. Nevertheless, positions cannot be arbitrarily combined. In each case, there are specific things and media entailing specific techniques. Tools prescribe their own usage, and objects have their own operators.

Corresponding author:
Email: iurascu@mail.ubc.ca
http://www.sagepub.net/tcs/

To start with an elementary and archaic cultural technique, a plough drawing a line in the ground: the agricultural tool determines the political act; and the operation itself produces the subject, who will then claim mastery over both the tool and the action associated with it. Thus, the *Imperium Romanum* is the result of drawing a line – a gesture which, not accidentally, was held sacred in Roman law. Someone advances to the position of legal owner in a similar fashion, by drawing a line, marking one's territory – ownership does not exist prior to that act.

The default positions of media and things that set cultural techniques into motion contradict a legally sanctioned, and thereby particularly widespread, notion: namely, the claim that only the subject can carry out actions and rule over things. Nevertheless, a pre-existing relation between media and cultural techniques already determines the way things are to be handled, even before they submit to the subject's will. One could very well argue that this 'default position', common to all media and things, has its origin with those who have conceived and designed them. Thus – so the argument goes – even if a tool dictates its own usage, it is built in a manner that allows it to carry out that task. A thing is constructed with a purpose and, therefore, its manufacturer does not merely execute 'the order of things'. Still – and this is precisely what sets the study of cultural techniques apart – none of the tool's inbuilt purposes is ever independent from the given conditions of production, its material properties or spatial circumstances. One must therefore draw a distinction between persons, who *de jure* act autonomously, and cultural techniques, which *de facto* determine the entire course of action. To inquire about cultural techniques is not to ask about the feasibility, success, chances and risks of certain innovations and inventions in the domain of the subject. Instead, it is to ask about the self-management or auto-praxis [*Eigenpraxis*] of media and things, which determines the scope of the subject's field of action.

Once again, the notion of auto-praxis can be understood via a grammatical reformulation of the theory of cultural techniques. Its equivalent is a specific type of verbal construction, which describes the relation between things, media and cultural techniques as mutually interdependent: the so-called medium voice from Greek. Unlike active and passive constructions, that particular verb form signals that the acting subject is, grammatically speaking, dependent upon a third element. In the medium voice, an action doesn't derive from someone and encounter something; nor does it work the other way around. Even though the grammatical concept of the medium may seem to occupy a 'nonsensical' position (Schadewaldt, 1978: 145), between the active and the passive, it implies, at any rate, that operations can also be executed by non-personal agents that do not act in a syntactical-juridical sense. Certain actions cannot be attributed to a person; and yet, they are somehow still performed. That situation is reflected by the medium. The issue of legal accountability is

the defining feature of the medium verb form. The medium suspends the norm of clear assignations, which satisfies legal requirements as well. Perpetrators and victims, those who give orders and those who suffer them, no longer coincide with grammatical subjects and objects. The medium creates a relational middle ground here, which does not simply amount to a reversal of the two positions.

Wolfgang Schadewaldt gives the example of law-making in order to explain the medium verb form in Greek. Law-making is an operation – or, to put it differently, a cultural technique – executed by a popular assembly. Schadewaldt points out that assemblies have limited agency. They reach their own decisions only to the extent to which the pre-existing laws allow it. Law-making is therefore not an autocratic, unrestricted activity, but rather one that is conditioned by the law. That condition, however, drawn from the very legal domain as the operation that ensues from it, is not the only restriction applied to law-making. The place of assembly, the object of disputation, and the rules of decision also play a part in the production of the actual law. The word *Ding*, or *thing*, signals precisely the kind of fusion of place and matter that characterizes an assembly. The medium of Greek grammar does away with an issue which subsequently becomes the fundamental legal paradox of the sovereign ruler, simultaneously placed above and beneath the law. 'The medium guarantees that certain operations continue to be bound to their performer' (Schadewaldt, 1978: 145).

To illustrate such operations, Schadewaldt gives the example of the verb for bathing, which is used in the medium voice in Greek to suggest that the bather is carried by the water. As opposed to a spear, which is released from the hand of its thrower, the trajectory of bathing remains bound to the medium of water. The grammatical form of the medium indicates that very relational quality. Spear-throwing, on the other hand, represents a classic case of active verb formation. The difference between the spear and the water, between 'that which only initiates, and that which continues to determine a process', is one that dictates the form of the verb. Implicitly, that distinction presupposes two different ways of looking at things. The focus is either on the goal (its achievement, its failure and the suitability, or, respectively, the unsuitability of its means) or the supporting agent. The ballistic perspective (the active voice, the spear) corresponds to the logic of the law, which continuously associates means with their ends. Moreover, it also partakes of a legal narrative according to which an operation may be attributed to an agent as the source of a conflict or a legal matter. The medium-based perspective (the medium, the water) is consistent with the method of study of cultural techniques. Instead of an investigation of causes, which presupposes a search for an individual culprit in the matter, here the doer is deduced from the instrumentalities of the action and the agent is derived from the medium itself.

Consequently, as far as the study of cultural techniques is concerned, it makes no difference whether the object of inquiry is spear-throwing or bathing. A spear that is thrown and a body of water that carries a bather do not occupy different positions. Neither does law-making. Thus, things and media will always function as carriers of operations, irrespective of what is at stake in their execution: contexts, instruments or texts, everything that is and continues to be. The question that follows from here concerns the relationship between the two perspectives: the ballistic view of the law and the medium-based approach of cultural techniques. Clearly, from the vantage point of cultural techniques, the sovereign subject becomes disempowered, and it is things that are invested with agency instead. Does that amount to the end of the western idea of sovereignty? Have responsibility and accountability become useless categories? Some voices insist that the law should treat media and things in accordance with their media-theoretical importance. They propose that automata may be held criminally liable, computers close a contract and the internet assume authorial functions. Others regard such thing-oriented legal notions as nothing but a re-enactment of a great comedy of innocence, in which guilt is passed on to the blade used to commit the crime; those latter rather stick to the narrative according to which every action is assigned to an acting subject.

What are the consequences of a media-theoretical perspective that views things and media as 'performers'? Can they be granted subjective rights equal to human rights? Would legal figures be required to explain how media and things dethrone the sovereign subject, or, at least, come to share that throne with him? Such questions remain open. The fact that we ask them shows that both media and things are leaving behind, or, may even have been liberated from, their passive existence as servile objects or serviceable means. The turn against framing things in strictly passive terms partly derives from an ecological impulse, demanding that non-humans be treated equally with humans and their specific rights. To a certain extent, things have had their own share in ensuring that the instrumental perspective may not be used to adequately describe their case. In their resistance against serving specific purposes, they lay a claim to a different kind of perception, which – not accidentally – coincides with a stage of heightened attention to media and things. The study of cultural techniques has taken up the task of examining that very stage. What remains to be done is to find distinctions among objects (that is, among media and things) that correspond to those that law has long set in place for the subject, by working with different degrees of intentionality that range from premeditated acts to acts of negligence. When it comes to objects, however, the quest for a similar distinction in terms of degrees of action remains futile. As far as agency is concerned, the law holds that things and media are strictly passive. The domain of the object remains outside the scope of legal investigations. Not so in the case of

cultural techniques, where research foregrounds it as a mode of operation neither entirely detached from the acting subject nor fully independent from 'objects' (i.e. things and media).

Execution and Procedural Rules

The above-quoted passage from Schadewaldt states that certain operations, when executed in the medium voice, continue to be bound to their performer. What stands out here is the notion of execution – a concept of central importance to the approach of cultural techniques. As soon as the focus of observation shifts from ideas to techniques, from nouns to the specific steps in the operation, the attention is geared towards the execution of a particular act. To execute generally means to proceed in a structured manner. Something is executed according to plan. An operation follows a pre-established scheme, even when it appears to be an original act that has not yet been mapped out. Even acts that are seemingly new and unique do not proceed without a plan. That almost algorithmic dimension of operations becomes fully apparent when acts are repeatedly executed – for instance, in the case of rituals. But even a stone cast on an impulse follows a certain course of action. That disposition toward procedural conformity, which does not in the least contradict the spontaneity of the gesture, is already inscribed within the things and media that partake of any given operation. To derive the operational script from the resulting operation, to extract the rules of execution from the executed act itself: that is what characterizes the approach of cultural techniques.

Whether the matter at hand is a body of water or a spear, a computer or an architectural object like a door or a table, all media and things supply their own rules of execution. Such 'material' instructions of operation come from a place that is not under the agent's control. Acting independently from individual performers, and thus maintaining their potential reproducibility, they steer processes into different directions, towards different opportunities, and different persons. Such operations are sustained by a certain operational know-how, which can be learned and passed on to others. Reproducibility and learnability are among the key features of cultural techniques. All disciplines grounded in transferable praxis therefore deal with cultural techniques. That is clearly the case with the classical dogmatic disciplines of theology, medicine and law, where dogmas ensure that operations are performed independently of persons. Dogmas are therefore nothing else but the linguistic expression of particular acts of execution. They account for a certain kind of practical knowledge, which thus becomes learnable and reproducible. Not surprisingly, the Greek term *techné* is synonymous with dogma (see Herberger, 1981: 11). Not unlike dogma, techné designates the body of rules and regulations that circumscribe a particular mode of

praxis. In cases where cultural techniques are performed and mediated independently of persons, they take on a specific form, which finds its expression in written directions, notations, codes of procedure, rules of application, annotations, and other systems of signs.

   Such technical instructions are essential for the study of cultural techniques. This is particularly the case for historical studies, where the rules of execution allow cultural techniques to first assert themselves. What would we know about the powerful cultural technique of record-keeping, about its emergence, or discursive field, without the specific instructions stipulated in chancery court orders? Instructions represent a layman's ultimate form of access to implicit or *tacit knowledge*, as Bruno Latour has defined this kind of practical expertise. Instructions are akin to, but not identical with, laws. Whereas laws can be transgressed and reinforced by punishment, the rules regarding proper usage cannot be ignored – without also risking one's position or job. Those who don't go by the norms, who don't follow the rules of the trade, will be relieved of their right to exercise their activity. Technical regulations are vital for art. The procedural rules reflect its current state of affairs. Thus, when making a statement about cultural techniques, one need not speculate whether the operational instructions have been followed or not. Their presence calls attention to a particular kind of praxis. Whenever rules are implicitly stored in a machine or explicitly contained in the form of written instructions, they establish a connection between certain operations and their performers: that is to say, the agents commonly known as subjects and objects. Agents stand for both, as shown by the medium verb form in Greek. That is the premise upon which the theory of cultural techniques is built: namely, a theory of medium-based operations, which in the hands of logic, grammar and the law is split into a subject who acts and an object that serves. In the eyes of the law, the relation of mediation becomes a question of attribution. Operations are strictly attributed to personal subjects. From the perspective of cultural techniques, the category of personal subjecthood is the object of an act of assignation, and that act, in its turn, is itself a technique, one that occupies a central place in our legally defined culture. The study of cultural techniques raises questions about how things and media operate. Thereby, it traces the fiction of sovereign subjectivity, the myth of the subject as legislator, instigator or perpetrator, back to the techniques that make it possible in the first place.

Cultural Techniques – Cultural Heritage

The term 'cultural techniques' suggests there may be other kinds of techniques as well. But can anything ever be produced outside of culture (Schüttpelz, 2006: 90)? After all, techniques always wrest something away from nature, whether by fencing in an area, building a house

or setting up a system of irrigation. The opposite of cultural techniques are not culture-less techniques. There is no such thing as barbarian techniques. Culture is already implicit in techné, and *colere* implies the archaic techniques of irrigation, planting and taming, which turn nature into culture (Nanz and Siegert, 2006: 8). The counterpart of cultural techniques, therefore, is a world where techniques do not exist at all, a notion which cannot even be mentioned without using yet another cultural technique: the act of naming, which allows things to be used and studied in the first place.

If culture were nothing but a cipher for the symbolic order, which cultural techniques intervene in, or even produce, any further attempt at defining culture would be rendered superfluous. That is quite possibly the reason why cultural studies [*Kulturwissenschaften*] gave up on defining their subject matter from the very start. Beyond the scientific-institutional context, where culture meant spirit and society, the term was left potentially and necessarily open. Only the study of cultural techniques has taken it literally, and derived its meaning from *colere*, which comprises the archaic techniques of culture (in the sense of cultivation).

And yet, its scope is thereby not exhausted. Newer techniques, too, fall under the semantic field of *colere*, as illustrated by the decision of the Federal Constitutional Court regarding the Treaty of Lisbon. There is no proper definition of culture in that case either. Rather, the court derives its meaning from the techniques contained within the term *colere*. To what extent can a state lose its sovereignty without losing its identity? Called upon to answer that question, the court invoked the notion of democratic self-determination, guaranteed by the state, and justified its decision by stressing the importance of cultural specificity for democratic development. Implicitly, then, the court assumes the task of defining the terms of what is culturally specific. Quite surprisingly, what follows is not a concrete list of German cultural trademarks. Instead, the court names institutions supposed to safeguard culture, with particular emphasis on the system of schools and education, the family, language, several sectors of the media landscape and the church (Articles 240 and 260 of the Federal Constitutional Court). Ultimately, that inventory is not a far cry from the cultural techniques of education, alphabetization, reading, writing, praying, confessing, playing, as well as those techniques dictated by computers and the internet. Thus, the institutions listed by the law as guardians of culture correspond in a definite and defining way to the cultural techniques that are the object of scientific inquiry.

The juridical involvement of cultural techniques is always to be expected when legal means are deployed to prevent imminent loss. Just as cultural identity is defined against the threat of danger (in this case, the danger of the loss of sovereignty), cultural techniques, too, enter the legal discourse only when they threaten to disappear. An international agreement issued by the United Nations stipulates the measures to be taken in

order to save barely extant cultural techniques from oblivion. The intangible cultural heritage needs safeguarding – a formulation that could easily refer to cultural techniques. The UNESCO agreement concerning the preservation of the intangible cultural heritage defines its subject as follows: 'oral traditions and means of expression, social practices, rituals and celebrations, the knowledge and customs related to the interaction with nature and the universe, as well as any forms of specialized knowledge concerning traditional techniques of craftsmanship' (UNESCO, 2003). Further elaborating on those points, the text focuses on 'practices, forms of expression, knowledge and skills, as well as their respective instruments, objects, artefacts and cultural spaces'. The connections between things, media and operations established through the study of cultural techniques are thereby also applied to the domain of international law. The spaces, figures and objects that manage the sequence of steps containing default operational settings are granted legal protection.

The initiative to safeguard the intangible cultural heritage was launched around the same time as the first studies on cultural techniques, suggesting that the legal and epistemic matters are somehow connected. Research and the law intersect in a historical moment when things can be said to have outgrown their operational habits. The voiceless, inconspicuous, concrete things turn into problem cases. Practices, representations, forms of expression, knowledge and skills are no longer passed on. Their transmission stalls; their reproducibility is threatened and the instruments, objects, artefacts and cultural spaces associated with them are at risk of disappearing. They become variables. But they do not merely attract the attention of the law-maker as the guardian of media and things. Their separation from praxis brings them into the focus of research as well.

Obviously, there is no direct relation between the scientific and the legal scope of inquiry. But the coincidence between the academic institutionalization of cultural techniques and the legal move to safeguard fairy tales, dialects, popular celebrations and crafts is not altogether accidental. That coincidence results from the shared latency of their object of focus, be it classified under cultural heritage or cultural techniques. The loss of use value makes room for the application of both conservative measures and theoretical constructions. If the former preserve what the latter observe, then cultural techniques definitely carry with them a historical index. They have been co-opted into the academic field of knowledge around the turn of the millennium, concomitantly with the measures introduced to safeguard the endangered cultural heritage. And thus, the present from where this very text is written signals the moment when the basic operations of cultural techniques begin to disappear.

But their disappearance is not caused by the state's self-imposed loss of sovereignty, as is the case with the process of Europeanization.

The initial impulse for both the study of cultural techniques and the safeguarding of culture comes not from parting with the 'complacent and conceited vision of the sovereign state', as the Lisbon Treaty states (Articles 223 and 260 of the Federal Constitutional Court), but rather from the disempowerment suffered by the acting subject. The dissolution of certain fundamental distinctions underpinning the operations of the law, such as the difference between subject and object, entails a demand for new settings, for drawing new demarcation lines. A case in point is the debate concerning the question of copyright (the issue of 'Open Access'). If writing on and with the help of the internet has, indeed, become common practice, then the image of a two-step process of writing as artistic creation and economic valuation, as the product of sovereign creators and serviceable media becomes inappropriate. From the perspective of cultural techniques, the alternative would be to conceive of writing as a continuous series of acts of transfer. The real challenge now is to accommodate the idea of the non-sovereign subject to the media's own logic, that is, first and foremost, to find new, functional distinctions, especially for aspects that have so far gone untheorized.

The Order of Cultural Techniques

The theory of cultural techniques thus seems to stand under the sign of decline, led in by a series of archival processes and archae-ological projects. Nevertheless, its concern is not with saving any endangered capital from the new flood of globalization or commercialization. Rather, it seeks to describe the chain of substitutions activated by the replacement of media and things. That chain is built along axes of analogy and displacement, succession and kinship. A case in point is the axis of digitalization, which allows for a diachronic perspective on writing – diary writing, for instance, which evolves into blogging, or the autograph, which finds its extension in the electronic signature. The axis of secularization goes back even further in time. Its religious roots can still be traced in a series of cultural techniques of the law. Such, for instance, is the technique of confession, which Michel Foucault has brought to bear upon the practices of interrogation and examination. Psychoanalysis and the police thus reveal a connection to each other that does not officially appear in the founding myths of either institution.

Such axes of displacement bring a certain order to cultural techniques. The question now is whether that can be achieved by other means as well. An important role is also played by the distinction between cultural techniques that organize notions of space and time, those that Harold Innis associates with the production of states and empires. The cultural techniques that organize spatial categories comprise border regimes and surveying techniques, in short, everything that defines the act of drawing a line. Their counterparts are genealogical techniques, which govern

notions of duration, assign origins and secure the future: record-keeping, adoption and inheritance regulations, but also breeding and grafting. The former involve a legal document, while the latter imply a concrete operation performed with the help of a knife. That taxonomy calls for a further distinction between alphabetic and non-alphabetic cultural techniques. After all, the technique of irrigation is quite different from paper-based counting. Still, making can also imply text-based operations. Even without being written on paper, the founding act of drawing a line in the ground is a cartographic type of marking. It belongs to the symbolic order, irrespective of how concretely 'grounded' the act itself may turn out to be. Similarly, the scion used in the cultural technique of grafting is the carrier of particular features; implicitly then, the act of grafting may be seen as a textual operation, with no 'paperwork' involved (see Vismann, 2010).

Thus, all cultural techniques maintain or establish some form of connection to the symbolic order; the distinction between alphabetic and non-alphabetic techniques therefore only accounts for one type of classification. The cultural techniques of space and of time (i.e. genealogical techniques) make for a more fundamental distinction. Everything else is assigned to a list in which cultural techniques are grouped according to their differences and similarities, their precursors and successors. Such lists are never finite. Moreover, the making of lists is itself a cultural technique, serving as a reminder that the study of cultural techniques is folded within itself, eternally recurring and ready to be continued.

Translated by Ilinca Iurascu

Note

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Cornelia Vismann (1961–2010) was a legal historian and media theorist who last held a position as Professor for the History and Theory of Cultural Techniques at the Bauhaus University in Weimar. Her main publications include *Files: Law and Media Technology* (Stanford, 2008), *Medien der Rechtsprechung* (Frankfurt, 2011) and collections on Jacques Derrida and Pierre Legendre.

Ilinca Iurascu is Assistant Professor of German at the University of British Columbia. A former postdoctoral fellow of the Media of History – History of Media Program at the Bauhaus University Weimar, she specializes in nineteenth-century German and comparative literature, media theory and early film studies.