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OXFORD

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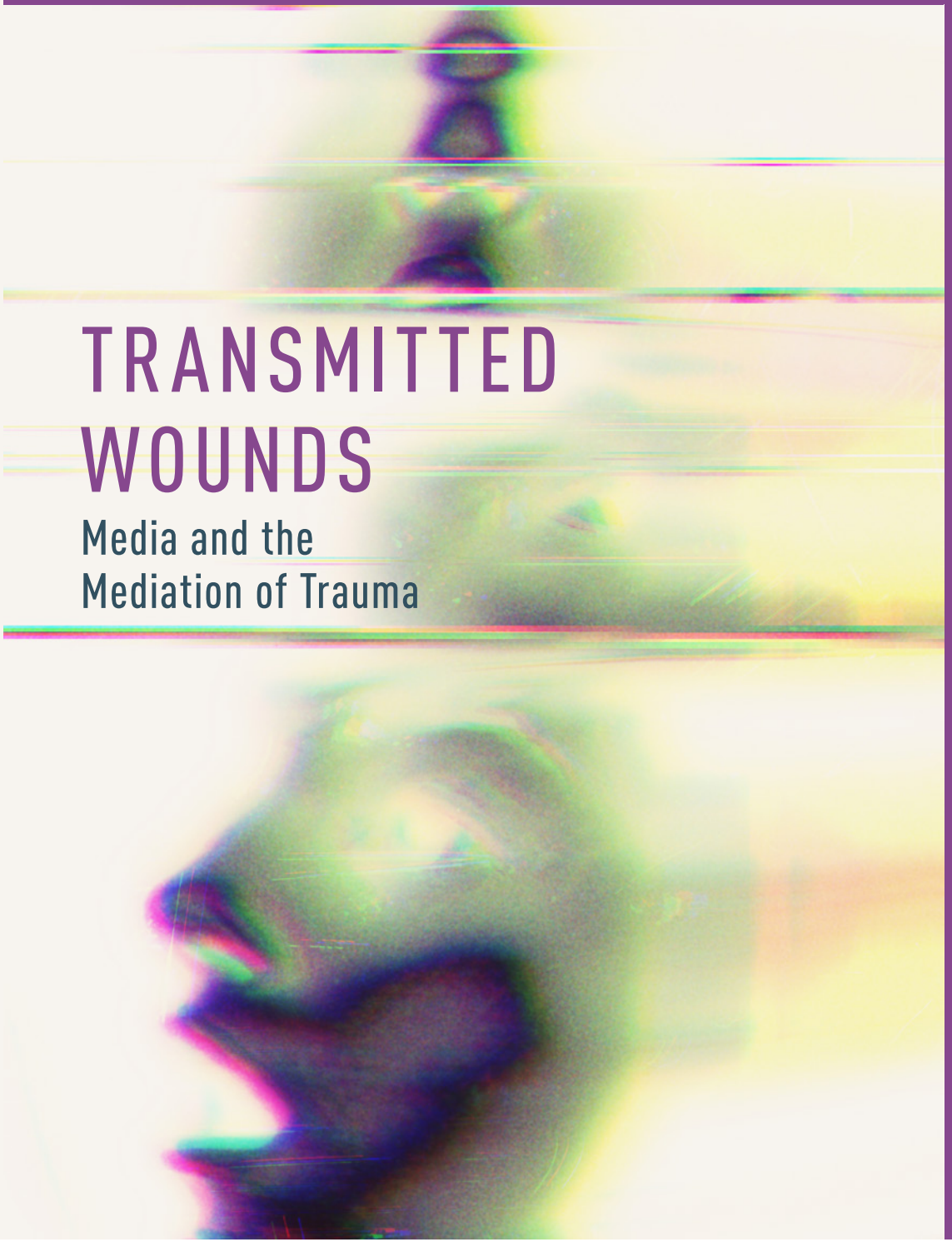

TRANSMITTED WOUNDS

Media and the Mediation of Trauma

In *Transmitted Wounds*, Amit Pinchevski explores the ways media technology and logic shape the social life of trauma both clinically and culturally. Bringing media theory to bear on trauma theory, Pinchevski reveals the technical operations that inform the conception and experience of traumatic impact and memory. He offers a bold thesis about the deep association of media and trauma: media bear witness to the human failure to bear witness, making the traumatic technologically transmissible and reproducible.

Taking up a number of case studies—the radio broadcasts of the Eichmann trial, the videotaping of Holocaust testimonies, recent psychiatric debates about trauma through media following the 9/11 attacks, current controversy surrounding drone operators' post-trauma, digital platforms of algorithmic-holographic witnessing, and virtual reality exposure therapy for PTSD—Pinchevski demonstrates how the technological mediation of trauma feeds into the traumatic condition itself. The result is a novel understanding of media as constituting the material conditions for trauma to appear as something that cannot be fully approached and yet somehow must be.

While drawing on contemporary materialist media theory, especially the work of Friedrich Kittler and his followers, Pinchevski goes beyond the

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anti-humanistic tendency characterizing the materialist approach, discovering media as bearing out the human vulnerability epitomized in trauma, and finding therein a basis for moral concern in the face of violence and atrocity. *Transmitted Wounds* unfolds the ethical and political stakes involved in the technological transmission of mental wounds across clinical, literary, and cultural contexts.

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Advance Praise for ***TRANSMITTED WOUNDS***

"This book delves into the combustible mixture of mind and media. Amit Pinchevski follows the hint in recent media theory that media are not just cultural artifacts to be interpreted but fundamental infrastructures that constitute and provide access to whatever it is we think of as mind. His media formulation of trauma as the mediation of failed mediation may well become, once its full resonances are absorbed, field-defining. The book is a fascinating study for thoroughly tying together media and trauma, but it achieves much more by asking key moral questions about the meaning of immediacy, presence, and telepresence in the face of some of the major catastrophes of our time."

—John Durham Peters, María Rosa Menocal Professor of English and of Film & Media Studies, Yale University

"This thought-provoking book gives us new ways to understand the mediation of trauma and collective memory and the relationship between technology and human suffering. Eloquent and wise, Pinchevski's book raises urgent moral and political questions we all need to keep asking."

—Katie Trumpener, Emily Sanford Professor of Comparative Literature and English, Yale University

"A highly original intervention into trauma theory. Pinchevksi's deft and erudite analyses shine a light on how the digital is shaping memories of traumatic pasts in new ways. Tackling an exciting range of material from videography and testimony to the uses of virtual reality for therapy, this is an outstanding research book which every student of memory should read."

—Anna Reading, Professor of Culture and Creative Industries, King's College, University of London, and Western Sydney University, Australia, and author of *Gender and Memory in the Globital Age* (2016)

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Introduction

The Mediation of Failed Mediation

In 1995 Binjamin Wilkomirski published a book that was to become a source of fierce controversy. *Fragments: Memories of a Wartime Childhood* recounts Wilkomirski's experiences of surviving alone two concentration camps as a small Jewish child from Poland. Having lived most of his life as Bruno Dössekker, the adopted son of a Swiss couple, Wilkomirski claimed to have discovered his true identity through a long psychoanalytic process, which led to writing his story. The book quickly received popular and critical acclaim and won a number of literary prizes, including the National Jewish Book Award. What happened next is fairly well-known: a 1998 newspaper article cast doubt as to the authenticity of Wilkomirski's account, revealing instead the story of a Bruno Grosjean, the illegitimate son of an unmarried woman who had given him away for adoption in Switzerland. The book's publisher then commissioned a historian to look into the allegations, which were consequently found to be correct. The book previously described as "achingly beautiful" and "morally important" was now declared as fake and its author a fraud.[1] The Wilkomirski case has since figured in debates on Holocaust memory as a cautionary tale about the facility in which one can pass as a survivor—and convince a worldwide audience. The book was discontinued as memoir only later to be released in tandem with the historical study finding it false.

While Wilkomirski's memories may have been fabricated, the way they were depicted in the book is a fairly accurate description of traumatic memory. Even if the content of these memories is made-up their structure very much conforms to a

psychology textbook entry on post-trauma. Evidently Wilkomirski was aware of this fact, as in the afterword to the book, he urges others in a similar situation to "cry out their own traumatic childhood memories."[2] Curiously, his so-called traumatic memories seem to be of a very specific nature: "My early childhood memories are planted, first and foremost, in exact snapshots of my photographic memory and in the feelings imprinted in them;" they are "a rubble field of isolated images and events…shards that keep surfacing against the orderly grain of grown-up life and escaping the laws of logic"; and when recollected "The first pictures surface one by one, like upbeats, flashes of light, with no discernable connection, but sharp and clear. Just pictures, almost no thoughts attached."[3] What Wilkomirski describes here is quite telling: his painful memories bear a certain technical nature—snapshots, imprints, images, flashes—that defy rational recounting. These metaphors—all draw from media technology—suggest a kind of corporeal memory emerging involuntarily from the depths of the psyche.

In investigating the case, novelist Elena Lappin discovered that during his long identity quest, Wilkomirski had been a voracious consumer of documents, books, and particularly films about the Holocaust. As she affirms, "Wilkomirski often refers to his memories as being film-like. They are, I believe, more than that: they are, I believe, derived from films."[4] The film-like quality of his memories may therefore explain not only the source of the fakery but moreover its media technological structure. There is a media story behind Wilkomirski's story: not only did the content of his memories come from film but also presumably the form, that is, the way traumatic memories are supposed to appear in the mind, which happens to correspond closely with the prevailing clinical understating of the posttraumatic condition. If Wilkomirski recycled details about the Holocaust from the media, he likewise

recycled the traumatic conjuring up of such details as evoked by media depictions. In a way, Wilkomirski short-circuited mind and media in accounting for trauma. And it is arguably the media logic of his traumatic memory that contributed to the authenticity of the purported recollection. What if such transferences between media and trauma as demonstrated by the Wilkomirski case are more than incidental? What if the media connections and connotations of trauma are telling of deeper epistemological and ontological formations? What if they bespeak something essential about the traumatic condition itself? This book takes these possibilities seriously and sets out to explore their implications.

From Representation to Mediation

The proliferation of trauma theory in various fields of the humanities and social sciences has created a crowded academic discourse with numerous discussions on the figurations of trauma and traumatic memory in literature, art, mass media, and popular culture. An enduring preoccupation in these discussions is the representation of trauma, that is, the ways in which trauma is represented, signified and performed in literary, filmic, artistic or popular cultural texts. Janet Walker exemplifies this approach when speaking of "the ability of certain films and videos to externalize, publicize, and historicize traumatic material that would otherwise remain at the level of internal, individual psychology."[5] Walker's view seems to presuppose two interconnected notions: first, that the traumatic material which certain films and videos supposedly make manifest draws from a preexisting, strictly interior, traumatic mentality that is subsequently externalized; second, that such traumatic material is a type of representational content that can be transferred through media, specifically of the visual kind. Similarly, Ann Kaplan comments on the match between "the visuality

common to traumatic symptoms (flashbacks, hallucinations, dreams) and the ways in which visual media like cinema become the mechanisms through which a culture can unconsciously address its traumatic hauntings."[6] Here, too, media are seen as conveyers of traumatic content, reenacting on a grand scale the inner experience of the private mind.

This book proposes to approach the relation between media and trauma from a different perspective: as a question of mediation rather than of representation. Under consideration is not the way trauma and traumatic memory, as specific identifiable contents, figure in the media (film, television, photography and other popular culture portrayals of traumatic experience), but rather media as partaking in the very construction of the traumatic itself. Rather than probing the ways the traumatic shows up in the media, this study seeks to understand the traumatic as something that is made manifest through media technological rendering. In this I follow a recent trend in media theory which considers media not simply as technical carriers of preformulated meanings but as systems that give rise to and shape meanings. More than message circulation, media encompass the platforms enabling message circulation. Media constitute the "materialities of communication," to use Hans Ulrich Gumbrecht's phrase[7], the systems that underlie and make possible the production of meaning; or as John Durham Peters puts it: "media are our infrastructures of being, the habitats and materials through which we act and are."[8] What this means in the present context is shifting the focus away from investigating the representation of trauma in the media and refocusing instead on media as setting the conditions of possibility for traumatic representations. If, as Walker suggests, certain films and videos are capable of delivering traumatic materials, it is arguably because such materials (like Wilkomirski's snapshots, images and flashes) are already shaped in

accordance with technological principles akin to film and video. Or if, as Kaplan suggests, visual media can enact traumatic symptoms on a cultural level, it is possibly because visual media, more than merely circulating preexisting traumatic contents, fundamentally suffuse contents reckoned to be traumatic.

This book, then, is about the ways media predicate the conception and experience of mental wounds. Bringing media theory to bear on trauma theory, this book sets out to reveal the technical operations that inform the understanding of traumatic impact on bodies and minds. At issue are the ways trauma is called into being through the affinities between mind and media, which in turn serve to explicate the traumatic through a set of threshold operations between inside and outside, sense and non-sense, private and public, self and other, experience and articulation. Taking up a number of case studies, the book addresses the question of how changing media—with their associated notions, techniques and artifacts—change the understanding of trauma itself. With this perspective, I hope to bring new insight into ongoing debates about trauma and traumatic memory across the fields of media studies, memory studies, and trauma studies. The main claim I wish to advance has to do with the ways media logic and technology bear upon trauma both clinical and cultural. It is not by chance that the elusive nature of trauma, its teetering between past and present, presence and absence, proximate and distant, is often made manifest by means of media technology. Media constitute the material conditions for trauma to appear as something that cannot be fully approached and yet somehow must be. If the traumatic condition is such that it escapes ordinary cognizance, media provide alternative channels to encompass it precisely as such. Media bear witness to the human failure to bear witness, and in so doing render the traumatic tangible by means of technological reproduction. This operation of media with respect to trauma may

therefore be summarized as follows: the mediation of failed mediation. The remaining pages of this introduction further develop this claim while each of the ensuing chapters presents a different insanitation thereof.

In her influential book *Unclaimed Experiences*, Cathy Caruth describes trauma as follows: "In trauma … the outside has gone inside without mediation."[9] According to this description, trauma is a violent intrusion of the outside into the inside; it is what happens when the medium between interior and exterior does not hold. If mediation is taken to be the mental processes whose task is to mediate between the outer and the inner, then trauma is the result of failed mediation. This view draws directly from Freud's analysis in *Beyond the Pleasure Principle*, where he introduces the concept of the "protective shield" (*Reizschutz*), the psychic mechanism that, so he speculates, regulates the reception of stimuli from the environment. "*Protection against* stimuli is an almost more important function for the living organism than *reception of* stimuli," a task that Freud assigns to consciousness itself. Trauma is the breaking of the protective shield, "a breach in the otherwise efficacious barrier against stimuli."[10] Such a sudden, unexpected breach defies conscious knowledge of it while happening, only to later return and impose itself through repeated re-experiencing and symptomatic behavior—repeated attempts to come to grips with the event of losing grips. Caruth's literary reading of Freud sees here a paradigmatic case of the failure of narrative to recount history, the crisis of giving an account of an event not fully assimilated as it occurred, and returns to haunt belatedly precisely because not properly known. Trauma is the painful experience of the mind's inability to remediate failed mediation.

Yet further to a literary reading, Freud's "protective shield" affords a media reading, especially with reference to his later essay on the "Mystic Writing-Pad." In

it, Freud likens the psychic apparatus to a writing device that allows repeated writing and erasing. The device consisted of a wax slab covered by a transparent sheet made of two layers: a lower waxed paper and an upper celluloid paper; separating the two layers cleared the slate for renewed writing. In this analogy, the wax slab is the unconscious, the lower layer is the system receiving the stimuli, and the upper cover is "an external protective shield against stimuli."[11] The device exemplified for Freud two mutually exclusive functions of the mind: reception and memory. The perception-consciousness system receives and passes excitations without retaining any permanent traces while the impressions that form the foundation of memory are produced in the "unconscious mnemic systems."[12] If the former is receptive but not retentive, the latter is retentive but not receptive; the one has the function of transmission and processing, the other of storage.[13] As the original trauma context of the "protective shield" remains implicit here, let us venture a speculative analogy of trauma as a tear in the protective cover that causes damage to the delicate waxed paper, consequently sending direct impact to the wax slate. With the protective and perceptive mechanisms incapacitated, the lower level is left exposed to excessive excitations, to pressures that can no longer be processed as writing. What this media parable illustrates, however reductively, is the incommensurability between the tear in the surface of writing and the act of writing itself. Trauma as the collapse of the medium as barrier prevents the functioning of the medium as a writing surface.[14] It would take alternative, external means to account for the tear.

The imagery of a violent clash between outside and inside is already captured in the word "trauma" itself, which transposes the Greek meaning of a physical wound to designate a mental wound. "Trauma" is literally a transferred wound (from body to mind, from physiology to psychology), and as such constitutes the inaugural gesture

of a long metaphorical legacy of interstitial collapse. Ian Hacking has traced the leap of trauma from body to mind to late 19th century rise of "sciences of memory" such as psychology, psychiatry and neurology, which together redefined the perimeters of the human soul.[15] Early designations such as "railway spine" (a term popularized by British surgeon John Eric Erichsen in the context of train accidents), "shell-shock" and "traumatic neurosis" (both post World War I designations, British and German, respectively) present variations of the wounding theme, together forming an account on the impact of mechanized modernity on unprepared minds and bodies.[16] While the understanding of trauma has changed considerably over the years, versions of the wounding imagery have persisted throughout. The condition now commonly known as Posttraumatic Stress Disorder (PTSD) first appeared in the Diagnostic and Statistical Manual of Mental Disorders (DSM) in 1980, where the traumatic event was described as an event "generally outside the range of usual human experience."[17] Later editions of the DSM expanded the description to include seeing, witnessing or being exposed to threatening events happening to others. The most recent DSM-V (published in 2013) accepts, for the first time, the possibility of mediated trauma (although narrowly and only when work-related). While media figure explicitly only in recent PTSD clinical definitions, media logic and technology, so I suggest, have long been fundamental to the making and performing of trauma as a psychic wound. The plausibility of trauma through media (the paradigm of which, as I claim in chapter 3, is the September 11 attacks in New York) is therefore the culmination of a lengthier historical conjunction of mental pathology and technology.

Of Traumatography

As many have noted since Freud, trauma is undergone belatedly as a traumatic memory. The failure of mediation is not experienced as it happens, in the present, but only later, and often after latency. Alan Young in his critical history of Posttraumatic Stress Disorder designates it as a pathology of time: "it permits the past (memory) to relieve itself in the present, in the form of intrusive images and thoughts and in the patient's compulsion to replay old events."[18] The traumatic event is experienced as an unresolved past, as an event that, since not completely lived through when it happened, somehow continues to take place, and is still relived, compulsively, in the present as involuntary memory. The 19th century French psychologist Pierre Janet, who was one of the first to study the phenomenon, noted that traumatic memory, unlike ordinary memories, resists narration. It remains fixed, he argued, unassimilable to linguistic recounting, and therefore undisposed to "mental liquidation."[19] The two types of memory, narrative and non-narrative, adhere to two distinct temporal orders, each suggesting a different logic of memory storage and retrieval. That the traumatic, or non-narrative type is often described in technological media terms is a point that has prompted far less curiosity than it deserves.

Further to Wilkomirski's "snapshots," "images" and "flashes" other metaphors that circulate both professionally and publicly include "imprint," "etching," a memory that is "burnt-in," "engraved," "encoded," "registered," experienced by intrusive "flashbacks," sometimes with "cinematic" or "iconic" quality. These metaphors are more than just figures of speech; they are epistemological scaffoldings. As Hans Blumenberg argued, metaphors are precursors of thought insofar as they fashion in advance the basis from which concepts and theories are to emerge.[20] In the present context, I propose that technological metaphorology is not supplemental to the

theorization of trauma but in fact fundamental to it. I will have more to say about this later on, but for now it should be noted that all the metaphors above fall under the definition of what Charles Sanders Peirce called an index: markers of direct physical relation of cause and effect, and more specifically, markings whose reference is the event of their marking. What is implied thereby is a direct and causal relation between the event and its impression, a direct imprint of the event, which is made tangible through technical terminology precisely because evoking alternative channels to ordinary human cognition and perception. Hence technological metaphors of trauma are used to designate what is assumed to be indexical—that is, non-metaphorical—relation. Indeed, debates about the accuracy of traumatic memory demonstrate continuous negotiation with the technical status of that memory, a most poignant example being the recovered memory/false memory debate revolving around cases of repressed and later recovered memories of child abuse.[21] Whether clinically accurate or not, such metaphors can only make sense given the preexisting technological context of indexical media.

Trauma presents a perennial problem of communication: how to make sense, and consequently narrate and give an account of, an experience that, strictly speaking, resists and is incompatible with narrative account. If failed mediation is the ontology of trauma, the mediation of failed mediation is its epistemology. Such mediation may proceed by symbolic means, a challenge undertaken by anyone attempting to relate traumatic memory in historical or literary formats.[22] The paradigmatic model of such symbolic mediation of trauma is arguably psychoanalysis, which essentially deems symbolization as part of the therapy itself. Yet the mediation of failed mediation is not restricted to symbolic channels, to words, meanings and narratives, written or spoken; rather, it involves, and I would even go as far as claiming is conditioned by, non-

symbolic channels provided by technological media. The chapters to follow consider media technological operations of transmission, recording and processing as constitutive of such mediations of the traumatic, at times while complementing the narrative channel, other times while directly competing with it. As I argue below, media and trauma extend to the Real—the realm that media theorist Friedrich Kittler re-appropriates from Jacques Lacan so as to recast the relation between technology and corporeality.

The emergence of trauma as a distinctively modern malaise has been the subject of a number of critical histories. Allan Young claims that PTSD is a historically specific pathology that is "glued together by the practices, technologies, and narratives with which it is diagnosed, studied, treated, and represented."[23] This does not mean the condition is not real, rather that such discursive mechanisms are what produce it as real. Ian Hacking reconstructs the history of the condition in conjunction with other mental pathologies that together demonstrate late modern preoccupation with the science of memory.[24] And in her genealogy of trauma, Ruth Leys takes issue with the notion of literal impact—the idea that trauma is an external event that befalls an unsuspecting subject, leaving in its wake a factual imprint in the form of traumatic memory. She proposes instead a more complex view that involves subjective suggestive processes of symbolization and identification: what she names the mimetic model as opposed to the literal, antimimetic model, which she criticizes. Taken together, these accounts reconstruct the processes that led to the discovery of the psyche as prone to mental injury by external pressures.

This study cannot claim to match the breath of any of the above, devised as it is as a constellation of cases more than a comprehensive history or genealogy. Nevertheless, what it might contribute to ongoing critical debates about trauma is a

keen attention to the particularities of its registration: the ways trauma gets inscribed, leaves its trace, imprints itself, the way it marks, stamps and make an impression—and subsequently the particularities of its recollection: the ways it reappears, returns, and shows up, the manners of its retrieval, recall, and relieving. All these particularities (which are also the technicalities) of registration and recollection of trauma can be grouped together under one term: traumatography. Ley's critique of the literal impact thus seems to restrict traumatography to internal processes, insisting that trauma is the result of symbolic mediation by the subject rather than the failure of such mediation. And yet, Ley's own distinction between mimetic and antimimetic, symbolic and literal—the distinction at the basis of her genealogy—can itself be revealed as already underwritten by a traumatographical logic—a logic that governs the threshold operations between inside and outside. Whether mimetic or antimimetic, symbolic or literal, or going back to Janet's distinction of narrative and non-narrative memory, all these traumatic descriptors are conceivable only given a context permitting such differentiations to show up, and as such, are already subjected to traumatographical mediation. Thus trauma is necessarily mediated, but its mediation, in contradistinction to Leys, is not strictly intra-subjective but encompasses extra-subjective referencing by which the very distinction between literal and symbolic gets selected and activated, and consequently becomes intelligible. From this follows that the mediation of trauma cuts across inside and outside, both inhabiting and exceeding private minds, and in this sense may be said to be collective inasmuch as individual, extensive inasmuch as intensive.

While remaining implicit in the critical history of trauma, the conjunction of media and trauma has been at the forefront of recent debates on cultural memory in contemporary technological societies. Thomas Elsaesser has noted the affinity

between media depictions of historical experience and the temporal structure of belatedness associated with trauma. He argues that cinematic dramatizations of the past (especially of the Holocaust) have brought about "new forms of media memory" from which "the contemporary subject will have a necessarily traumatic … relation to history and memory: in the first instance to her/his own history, but more generally to all history."[25] Furthermore, trauma has a special function in the time of the collapse of grand narratives: it recovers a sense of referentiality that has been lost to the relativism of endless interpretation. In another influential account, Andreas Huyssen argues that it is impossible to think today of Holocaust memory apart from the media of its dissemination—from museums, through documentaries and photographs, to internet sites—and it is precisely owing to these media disseminations that the Holocaust has become a universal trope of traumatic memory that repeatedly migrates to other historical contexts. The cultural obsession with memory, especially traumatic, expresses a growing need for anchoring "in a world of increasing flux in ever denser networks of compressed time and space."[26] More recently Alan Meek has offered a critique of the long litany of trauma theory that links the indexical power of the media image to the historical real, calling instead for an understanding of trauma as "an attempt to articulate the crisis of the political subject" with the media playing a key role in the process.[27] Compelling as they are, these accounts still tend to approach the question of media and trauma against the horizon of cultural meanings, regarding media as mimetic platforms for contemporary culture's traumatic impulses and fantasies. What they underplay are the non-hermeneutical affordances of audiovisual media, their technologically enabled non-discursive capabilities, which are nevertheless presupposed by, and indeed anchor, each of the above accounts.[28]

Nowhere are the stakes in the mediation of traumatic memory higher than in

discussions about Holocaust remembrance. Consider Marianne Hirsch's explorations of "postmemory," the intergenerational transmission of trauma in which visual media, photography in particular, play a vital role. "More than oral or written narratives," so Hirsch contends, "photographic images that survive massive devastation and outlive their subjects and owners function as ghostly revenants from an irretrievably lost past world."[29] Rehearsing Roland Barthes's notion of the punctum, Hirsch regards photographs as bearing material and affective connection to the past; so much so that they allow later viewers to "produce in themselves the effects of traumatic repetition that plague the victims of trauma."[30] Yet here, too, a more radical conclusion should be drawn: namely, that the transmitting power of photography does not stop at conditioning postmemory but further encompasses the conditioning of the traumatic quality attributed to that memory. Recall Wilkomirski's childhood memories as snapshots and flashes: photography shapes the very structure of traumatic memory and consequently its potential transmissibility. It becomes almost impossible to think of traumatic memory—let alone of postmemory—apart from photographic traumatography.

Similar claims about traumatic transmissibility have been made with reference to cinema. Alison Landsberg posits cinematic experience as key to what she designates as "prosthetic memory": the memory derived "from a person's mass-mediated experience of a traumatic event of the past."[31] According to her, mass cultural technologies allow for affective undergoing of traumatic past events not lived through, sometimes with favorable moral outcomes. But here again arises the question of the status of the traumatic: if media can impart something of the traumatic effect of past events, is it not because what they impart, more than the depiction of the past, is the fact of it being traumatic, the sensation of what traumatic memory must feel like?

Similarly, but more cautiously, Joshua Hirsch considers the potential of cinema "to represent the Holocaust *as* a rupture, to embody that rupture for the audience, perhaps even to assist in mourning that rupture."[32] At the same time, he warns against reductive speculations of traumatic relay and against facile endorsement of vicarious trauma through media. But what if the situation cautioned against is actually telling of something more fundamental about the transmitting potential of trauma: namely, that cinematic and photographic principles are already somehow at work in the conception of trauma as rupture in experience? It is not coincidental that a notion such as flashback circulates in both clinical and cultural contexts, for what it captures is the function of media in mediating trauma across and between the two discourses. Wilkomirski may well be an extreme case of prosthetic memory turned real, or of vicarious trauma turned firsthand, but when resisting the urge to reduce it to a mere aberration the case of Wilkomirski may nonetheless provide a lesson of the degree to which traumatic processes are coextensive with mediatic operations.

In sum, the focus on mediation of trauma motivates an exploration into the conditions of possibility of traumatic representational operation. What concerns me here are the material and technical conditions that afford the enacting of trauma and traumatic memory across clinical, literary and cultural contexts. Media (re)produce the traumatic by effecting its ungraspability affectively, by imparting impact in excess of content, sensation in excess of sense. To use Bernhard Siegert's formalization, if media partake in operationalizing the distinction between sense and non-sense, signal and noise, inside and outside, here media further operationalize the effect of non-sense upon sense, of noise upon signal, and of the outside upon the inside.[33] The mediation of failed mediation bears out media's ability to mobilize the traumatic as non-discursive, non-hermeneutic effects—to generate traumatographical impressions.

As such, traumatography follows the laws of grammatology: the traumatic origin, the original moment of trauma, is always already deferred; moreover, it acquires the status of origin and original by virtue of its deferral. All the more so when trauma is taken up discursively, as part of an attempt to account for it and render it meaningful. In this recursive process, what exceeds meaning is absorbed within discourse (under designations such as the "unrepresentability of trauma" or trauma as "the crisis of representation"), and once absorbed, proceeds to operate as a representation (of the unrepresentable). Yet it should be remembered that such discursive re-appropriation presupposes and is premised on media technological capabilities without which the very invocation of the traumatic as unrepresentable would be meaningless.

Technology and Traumatology

Trauma is a central theme in the grand narrative of the shock of modernity with media acting as primary shock agents. It is possible to trace a trauma thread running throughout media theory, but for the purposes of this discussion, I attempt a partial reconstruction of that thread by considering the work of three principal representatives: Walter Benjamin, Marshall McLuhan and Friedrich Kittler. Covering together more than half of the 20th century, the three jointly form an extended report on the psychopathology of modern media as caused by the displacing and replacing of human sensoria by technological apparatuses. Whereas Benjamin and McLuhan see media as besieging the mind by exerting sensory overload whose mitigation calls for further media, Kittler sees media as infiltrating the mind only to reveal it as already technological in nature. On the one hand media as overwhelming the integrity of the mind (a Freudian theme), one the other hand media as providing channels into the mind (a Lacanian theme). This shifting of media from outside to inside the mind will

prove critical for exploring the technological mediation of trauma.

Benjamin famously described modern life as a continuous experience of duress that cuts across the metropolis, the factory, and the battlefield. Borrowing Freud's notion of the protective shield, Benjamin proceeded to speculate on the way that media technologies, such as photography and film, participate in training the human sensorium to cope with the assault of external stimuli. "Perhaps the special achievement of shock defense," he writes, "may be in its function of assigning to an incident a precise point in time in consciousness at the cost of the integrity of its contents."[34] The same logic applies to media in the sense that technical recording and reproduction of experience comes at the expense of the integrity of the experience. Hence the loss of aura due to mechanical reproduction assumes traumatic proportions: the camera is a device that transforms the haptic into optic, and the event into frame, thereby "giving the moment a posthumous shock, as it were."[35] Film is an apparatus that is "in keeping with the increased threat to his life which modern man has to face. Man's need to expose himself to shock effects contributes to his adjustment to the dangers threatening him."[36] Media function as habituation instruments to the besieged consciousness, and the more effective the shock defense the more processed the sensation.

Yet the deep effects of shock are to be found elsewhere, in the blockage of another channel: the loss of the ability to relate and narrate experience. In an essay on the passing of the storyteller, Benjamin asks ominously: "Was it not noticeable at the end of the war that men returned from the battlefield grown silent—not richer, but poorer in communicable experience?" The impact of mechanized warfare far exceeds its casualties, claiming the ability of survivors to bear witness. Modern war casts humanity against technology in extreme disproportion: "A generation that had gone to

school on a horse-drawn streetcar now stood under the open sky in which nothing remained unchanged but the clouds, and beneath these clouds, in a field of force of destructive torrents and explosions, was the tiny, fragile human body."[37] The overwhelming power of machine-driven violence makes experience dwindle, and with it the ability to communicate that experience. Benjamin documents the historical moment when trauma became associated with a systemic crisis of human perception, which extends from art through industry to combat, and whose impact on narrative as a medium of experience incapacitates the narration of history itself.

Marshall McLuhan's conception of media as the extensions of man is another example of the elective affinity between media and trauma. Like Benjamin, McLuhan sees media as protective barriers against extensive stimuli, "counter-irritants" to use his term, which through their operation further isolate, even numb, the function they so extend. McLuhan's understating of media is notoriously broad, ranging from print, photograph, phonograph and television to money, transportation and weaponry. In each case the stepping up of outside pressures demanded the exteriorization of operation in order to protect the organism from damage. It is in this sense that for McLuhan all media are posttraumatic: they are frantic technological attempts to attain equilibrium in the wake of former technological traumas. Hence the vicious cycle whereby today's protective media are the cause of future irritations, consequently creating the need for further extensions. Electric media mark the latest, most severe stage in the process wherein the extension is of the entire nervous system, "a development that suggests a desperate and suicidal autoamputation, as if the central nervous system could no longer depend on the physical organs to be protective buffers against the slings and arrows of outrageous mechanism."[38] Media have the risk of physical and psychic trauma as their *raison d'être*, a risk becoming evermore

fatal in late modernity. McLuhan seems to be on a par with Freud insofar as accounting for the consequences of the collapse of inside-outside barrier, which in his reasoning is technologically wrought.

While operating as buffers, media induce a generalized numbness that prevents recognition as to their operation. As per McLuhan, we are always late in realizing our situation, compelled to look at the present through a rear-view mirror, and likely to misunderstand a new medium in terms of the old. In this respect, approaching media as a question of content—the traditional priority of message over medium—is symptomatic of the difficulty of reaching down into the technological conditions of possibility of message production. Latency is therefore built into our understating of media. Like Freud before him, McLuhan recognizes the danger in belated awakening to emergency: "a technological extension of our bodies designed to alleviate physical stress can bring on psychic stress that may be much worse."[39] *Understanding Media* can be read as a therapeutic project of making sense of, and coming to terms with, the structural gap in our dealings with technology, one that is badly needed given the surmounting pressures of the electric age. To the extent that McLuhan offers an account on the relation between media and trauma, it is tempting to consider his logic also in reverse: not only do we externalize ourselves through media as a protective measure against trauma, we simultaneously internalize media in trying to attest to trauma as a crisis of communication and representation. Media concepts and logic—the various imprints, flashbacks and unprocessed memories—are adopted in a desperate attempt to account for the inability of giving full account. Trauma entails media inasmuch as media entail trauma.

Common to these two accounts by Benjamin and McLuhan on the crushing impact of technology on body and mind in late modernity is the conception of the

human as a vestige of earlier, less taxing times: a maladapted being whose technological dependency only further exacerbates the maladaptation. The human is always out of synch with technology, hence the reality of shock. Yet a more radical line of thought considers the human itself as transformed by technology, which might translate into a completely different understanding of the relation between media and trauma. According to Friedrich Kittler, the advent of electric media of the late 19th and early 20th century radically transformed what he called *Aufschreibesysteme* (translated as "discourse networks" but literally means writing-down or inscription systems): "the network of technologies and institutions that allow a given culture to select, store and process relevant data."[40] The introduction of the photograph, the phonograph, and the cinematograph enabled recording and storing the physical effects of light and sound without human intervention and interpretation. No longer did human data transfer have to pass through "the bottleneck of the signifier," that is, undergo symbolic mediation by means of the Ur-medium of writing. With analog media of image and sound there came about two channels of mechanical inscription—the photo-graphic and the phono-graphic—which ended the monopoly of alphabetization.

It should be noted parenthetically, but not without relevance to the present study, that the notion of *Aufschreibesystem* itself emerged from the conjunction of media and psychopathology. German Jurist Daniel Paul Schreber coined it in his 1903 book *Memories of My Nervous Illness* as part of his attempts to recount his delusions during hospitalization. He described mysterious rays, apparently coming from God or some other otherworldly entity, which invade his mind and having the ability to read all his already pre-inscribed thoughts: "*Books and other notes* are kept in which for years have been *written-down* all my thoughts, all my phrases, all my necessaries … I

presume that the writing-down is done by creatures given human shape on distant celestial bodies … their hands are led automatically, as it were, by passing rays for the purpose of making them write-down, so that later rays can again look at what has been written."[41] According to Kittler, Schreber's paranoia is the matrix for the interfusion of nervous system and information system anchored in the discourse network of 1900, and whose combined effect is the liquidation of the subject as author and owner of self-discourse. Schreber the writer discloses the psyche as already underwritten through the inscription and storage machines of his time.[42] Psychopathology reveals technology all the way down to the very origin of Kittler's "discourse networks."

Kittler conceptualized the shift of the discourse network of 1900 by utilizing Jacques Lacan triad of the Symbolic, Imaginary, and Real. In Kittler's rendering the Symbolic refers to the technological processing of data in terms of symbols and representation, the "linguistic signs in their materiality and technicity" from print to typewriter to computer. The Imaginary refers to the Lacanian mirror stage with film as the technology producing for the viewer the optical illusion of continuity and integration, "the mobile doubles that humans, unlike other primates, were able to (mis)perceive as their own body." And the Real constitutes that which escapes both representation by symbols and figuration by images, "the waist or residue that neither the mirror of the imaginary nor the grid of the symbolic can catch: the physiological accidents and stochastic disorder of bodies."[43] To Kittler, the attendant technology of the Real is phonography owing to its unselective registration of vocal and acoustic events as they happen—the materiality of voice (inflection, accent, mispronunciations) as well as the materiality of the medium (statics, hiss, noise). The mediatic instantiations of the Real are therefore of pre-symbolic and non-symbolic

enunciations of physical reality as captured through the open channels of mechanical inscription. Yet, importantly for this discussion, the Real, according to Lacan, presents itself in the form of trauma insofar as indicating corporeality that is unassimilable within, and in fact ruptures, the symbolic framework.[44] Kittler comes close to this point when stating: "in the real everything begins with coldness, dizziness and shortness of breath."[45] The Real is thus both mediatic and traumatic, but here I would go further to claim—and this claim is the crux of this study—that the Real is traumatic *because* mediatic. The story of trauma as told through media is the story of how the Real has become tantamount with the traumatic itself.

Kittler's incorporation of Lacan into media theory goes beyond heuristic purposes, for what it ultimately implies is that Lacan's three registers are themselves technologically determined—namely, that the differentiation between Symbolic, Imaginary and Real is constituted upon the discourse network of 1900 and its representative media trio: typewriter, film, gramophone. Lacanian psychoanalysis was conditioned by its attendant media regime. Lacan's later interest in cybernetics is suggestive of the subsequent media regime of computerization and digitization—what might be called the discourse network of 2000—which, to further pursue the mind-media affinity, could be seen as forming the material background for present-day cognitive sciences. According to Kittler, there is nothing coincidental in the employment of technical media "as models or metaphors for imagining the human or the soul."[46] The way we understand ourselves and our mind is always historical and therefore crucially informed by the media regime we are at. This might explain the elaborate traumatographical metaphors in the form of flashback, imprint, unconscious registration, trace, mark, and the like. For what these metaphors evoke is a direct link to the originating traumatic event, a link that is made tangible through technological

mediation: as though what light and sound are to analog media, the originating event is to traumatic memory. In both cases what is supposedly at work is a form of direct registration without recourse to symbolic mediation (the target of Ley's critique of literal impact). Media technology thus serves to explicate trauma as a mental wound—a wound that renders the mind incapable of accounting for its own wounding, and consequently calls for workarounds to approach the incapacity. It is as though the mind's failure to make sense of the event—the failure of mental mediation—calls for technical mediation in order to make it knowable.

Yet again flashback is a case in point. The history of the term cannot be summarized here, but as others have already noted, its double meaning as a filmic device for cutting back in time and a recurring posttraumatic memory is the product of mutual transferences between cinematography and psychopathology.[47] Its roots go back to the psychological analysis of film by the German-American psychologist Hugo Münsterberg, who spoke of the "cut-back" as "an objectification of our memory function."[48] Still prior to its clinical rendition, the term appeared in a 1948 letter from McLuhan to Ezra Pound, where he likens the poet's imagistic style to the influence of cinematography, as "Flash-backs providing perceptions of simultaneities."[49] It was only in the late 1960s that "flashback" became associated with psychic trauma through the work of American psychiatrist Mardi Horowitz, who was probably the first to use the term. Film also played a key role here: Horowitz had been previously involved in a research program called "trauma film paradigm," which employed distressing films to produce measurable stress effects on viewers in order to study psychic trauma (more on this in Chapter 3). From the late 1980s the term began circulating in psychiatric clinical discourse, where its status as veridical memory has been a source of continuous dispute. As Hacking notes, the tendency to regard

flashback as a privileged form of recollection has to do with the problematic construction that sets it in opposition to so-called conventional or narrative memory.[50] Accounting for the role of film in the continuous interchange between mind and media from which flashback evolved provides the material context for understanding this apparent dichotomization of memory. Film accounts for the mind's flashback mode of operation.[51] Designating a distinctively non-narrative form of posttraumatic memory, flashback has the discourse network of 1900 as its condition of possibility.

All this leads to following realization: with the introduction of the two technical channels of image and sound it became possible to witness the collapse of the symbolic channel as though from the outside, through alternative channels. Bypassing the bottleneck of the signifier opens up new ways to convey impact, especially when it comes to the failure of narrative to do so. What literary scholar Shoshana Felman identifies as the crisis of narrative in the context of Holocaust testimony (a theme running through chapters 1,2 and 4) is made available technologically as physical effects of the Real. Media and trauma converge on the Real as indicative of corporeality that underlies representation but precisely for this reason cannot be represented in itself. If the Real, to use Lacan's famous formula, is that which can be approached but never grasped, Kittler recasts the Real as approachable only through its media traces, as material contingencies that remain beyond discursive certainties.[52] The Real has a technological unconscious in the form of indexical media, making its effects prone to reproduction and manipulation. The Real is therefore thoroughly mediated, which is another way to describe what I earlier designated as traumatography: the writing-down system of trauma. If for Lacan the Real presents itself in the form of trauma, the question that arises following Kittler is of the technical-material conditions allowing for that presentation.

Agenda and Outline

Kittler's analysis serves as an inspiration for the following chapters as each takes on a different instantiation of the mediation of the traumatic Real: radiophonic, videographic, televisual, algorithmic-holographic, and digitally immersive. As this lineup shows, I find it relevant to consider the ways in which the media logic of the Real comes into play in different technologies and through distinctive configurations of minds, technologies and bodies. While each chapter is a standalone discussion, the book as a whole is comprised of two clusters, with the first three chapters focusing on analog media and the last two on digital technology. The fault lines between the discourse networks of 1900 and that of 2000 charts accurately the transformation of the Real from indexical to digital, and form the non-symbolized into the re-symbolized. That said, my agenda is not ultimately faithful to Kittler's, for in the final analysis I regard this investigation into the mediation of the traumatic Real as revealing of corporeal fragility and vulnerability. So while subscribing to Kittler's understanding of the mind as mediated by extra-psychic technical processing, I nevertheless insist on considering what Kittler consistently avoided and even deplored—namely, the ethical and political stakes involved in the technological transmission of mental wounds. Recognizing the irreducibility of pain is not necessarily antithetical to a non-anthropocentric approach to media. Indeed, the conjunction of media and trauma affords an opportunity to rethink the ontology of pain while retaining a critical perspective on the consequences of traumatic transmissions.

Chapter 1 is concerned with radio and its role in the mediation of trauma during the 1961 Eichmann trial. While the trial has been the topic of many studies,

none have considered the full significance of it being a radiophonic event. The main claim the chapter advances is that radio broadcasts from the courtroom occasioned a transformation in the status of Holocaust survivors in Israel, who had been previously seen as deeply traumatized, unable or unwilling to speak about their experiences. Taking to the airwaves facilitated a shift in the conditions by which survivors' testimonies could find public articulation: from bodies without speech into disembodied speech. For those once deemed speechless, disembodiment meant the opening of new forms of address and the liberation of new modes of expression. Radiophonic transmission elicited a double return of the repressed: on one level, the return of voice away from the body, on another level the return of the body through corporeal markers of vocality. The dialectics of embodiment and disembodiment enabled by radio during the trial invites reevaluating the status of trauma between private and public and the role of media therein.

Chapter 2 explores the media logic of the project for videotaping the testimonies of Holocaust survivors. Established at Yale University in 1979, The Fortunoff Video Archive for Holocaust Testimonies has provided source material for numerous studies on history and memory in the wake of the Holocaust, from which developed an intensive intellectual preoccupation with trauma and testimony. Many studies have engaged with the audiovisual nature of the archive, and yet the significance of this novel archival formation, and the way it shapes the production and reception of survivors' testimonies, have not yet been fully recognized. The chapter brings together the trauma and testimony discourse as developed by Dori Laub, Shoshana Felman, Lawrence Langer, and others in the context of the Yale archive, and Kittler's analysis of technical media. I argue that the trauma and testimony discourse has a technological unconscious in the form of videography, which

crucially conditioned the way traumatic memory is conceived by this discourse. It is only with an audiovisual medium capable of capturing and reproducing evidence of the fleeting unconscious that a discourse concerned with the unarticulated past becomes intelligible. The chapter offers some potentially far-reaching conclusions as to the status of trauma in contemporary debates in the humanities and social sciences.

Chapter 3 deals with the possibility of televisual trauma. Recent studies in psychiatry and psychology reveal a growing acceptance of the risk of trauma through the media, culminating with a qualified inclusion of such a possibility in the latest PTSD criteria as stipulated in DSM-V. Traditionally restricted to direct and immediate experience, post-trauma is now expanding to include mediated experience, especially witnessing disastrous events on television. Tracing what made this development possible, the chapter considers three key moments in the process: the "trauma film paradigm," a research program introduced in the early 1960s which employed stressful films to simulate traumatic effects on subjects; the psychiatric study into the clinical effects of watching catastrophic events on television, with the September 11 attacks as a transformative event; and recent reports on U.S. Air Force drone operators who purportedly exhibit PTSD symptoms after flying combat missions by remote, constituting thereby a new type of perpetrator trauma. My contention in this chapter is that the possibility of trauma through media reveals a conceptualization of the posttraumatic experience as one that is fundamentally informed by visual media and, as such, already predisposed to televisual trauma.

Chapters 4 and 5 deal with the question of the digital status of traumatic memory by considering two projects currently under development in the Institute for Creative Technologies at the University of Southern California: New Dimensions in Testimony, a computer generated interaction with a hologram of a Holocaust

survivor, and BRAVEMIND, a virtual reality exposure therapy program for treating veterans suffering from PTSD. What is common to the two projects goes beyond the shared institutional settings, as both provide apt cases for the changing status of traumatic memory under digitization. Specifically, they each demonstrate, in different ways, the discretization of the traumatic Real, its re-symbolization into calculative computerized routines, and concomitantly, the decoupling of traumatic memory from narrative as its traditional carrier.

In the penultimate chapter I focus on New Dimensions in Testimony, a project that combines human-computer speech interaction capabilities with three-dimensional holographic imaging to create an immersive experience of a live conversation with a Holocaust survivor. Of special importance is the employment of an algorithm to select and project prerecorded clips of the survivor in response to questions presented by an interlocutor. Its high-tech futuristic gloss of testimony notwithstanding, what makes this project worthy of serious consideration is the way it envisages the transmission of painful experiences far into the future, which raises the question of the status of traumatic memory therein. I argue that this project marks a break between testimonial narrative and traumatic memory, for what was a defining feature of bearing witness in the context of the video testimony archive—the acting out of traumatic memory upon testimonial narrative—becomes extraneous in the context of the digital database. In seeking to simulate a live testimony with a survivor for the benefit of generations to come, this project presents a deeply problematic conception of the relation between past and present, and absence and presence, as these come into play in the performing of the algorithmic-holographic testimony.

The final chapter delves into the inner workings of preset-day exposure therapy technique for PTSD and its employment of virtual reality technology. As a

cognitive-behavioral approach, exposure therapy advocates direct confrontation with the feared objet or situation as a way to achieve habituation. In so doing it positions itself as an alternative to traditional talk therapy by providing direct access to the relevant "fear structure." The chapter considers the use of VR technology in PTSD treatment as a case of what Kittler, following Münsterberg, calls psychotechnology: the recursive channeling of mind through media and of media through mind. At issue is the status of traumatic memory as a function of the mind-media correlations enacted and materialized by immersive virtual reality platform. I argue that through digital-immersive processing traumatic memory is rendered discrete and modular, and consequently made treatable by its division into separately manipulable elements. This development, I further argue, coincides with the deposing of talk and narrative as therapeutic access channels into the traumatic condition.

One final note on media and trauma: as is patently clear from the rundown of topics above, war is a thread running throughout this book. This is no doubt for essential reasons: war is a principal circumstance of trauma and has been the context of the development of the psychological understanding of trauma—from the First World War, through the Holocaust and Vietnam, to today's drone war. War occasions fateful intersections of media and trauma. Yet war has another concrete significance for this discussion. Kittler famously and provocatively deemed war as the engine of modern history: war drives technological change, which in turn drives historical change. As Geoffrey Winthrop-Young puts it, for Kittler war is motor, model and motive.[53] Combined with Kittler's anti-humanistic streak, the result is a rather unsettling viewpoint of the reality of war in recent history. Add to that the German context of the 20th century and the discomfort only intensifies. My adoption of Kittler's theory is therefore not an easy one, nor should it be, as I am fully aware of its

implications especially when it comes to a subject so profoundly defined by pain as trauma. It is my hope that, by adopting somewhat unfaithfully Kittler's framework to study the conjunction of media and trauma, the dark underside of the conjunction of media and war may come to light.

[1] Christopher Hope cited in Fiachra Gibbons and Stephen Moss, "Fragments of Fraud," *The Guardian*, October 15, 1999 https://www.theguardian.com/theguardian/1999/oct/15/features11.g24 ;Jonathan Kozol, "Children of the Camps," *The Nation*, October 28, 1996 http://www.writing.upenn.edu/~afilreis/Holocaust/children-camps-bk-review.html

[2] Binjamin Wilkomirski, *Fragments: Memories of a Wartime Childhood*, trans. Carol Brown Janeway (New York: Schocken Books, 1996), 155. The historical study of the case is by Stefan Maecher, *The Wilkomirski Affair: A Study in Biographical Truth*, trans. John E. Woods (New York: Schocken Books, 2001). For more on the Wilkomisrski case, see Michael Bernard-Donals, "Beyond the Question of Authenticity: Witness and Testimony in the Fragments Controversy," *PMLA* 116(5), 2001, 1320-1315; Andrew S. Gross and Michael J. Hoffman, "Memory, Authority, and Identity: Holocaust Studies in Light of the Wilkomirski Debate," *Biography* 27(1), 2004, 25-47; Jay Geller, "The Wilkomirski Case: *Fragments* or Figments?" *American Imago* 59(3), 2002, 343-365; Stefan Machler, "Wilkomirski the Victim: Individual Remembering as Social Interaction and Public Event," *History and Memory* 13(2), 2001, 59-95.

[3] Wilkomirski, *Fragments*, 4-5.

[4] Elena Lappin, "The Man with the Two Heads," *Granta* 66, Summer, 1999, 61.

[5] Janet Walker, *Trauma Cinema: Documenting Incest and the Holocaust* (Berkeley and Los Angeles: University of California Press, 2005), xix.

[6] Ann Kaplan, *Trauma Culture: The Politics of Terror and Loss in Media and Literature* (New Brunswick: Rutgers University Press, 2005), 69. Another example is Elaine Showalter who speaks of "hystories," the cultural narratives of hysteria—including of traumatic memory—which "multiply rapidly and uncontrollably in the era of mass media, telecommunications, and e-mail." Here, too, media are seen as conveyers of content already deemed to be traumatic, while the question of what makes them so apt for the task never arises. See, *Hystories: Hysterical Epidemics and Modern Media* (New York: Columbia University Press, 1997), 5; on the media circulation of traumatic memory, see 144-158.

[7] Hans Ulrich Gumbrecht, "A Farewell to Interpretation," in *Materialities of Communication*, eds. Hans Ulrich Gumbrecht and K. Ludwig Pfeiffer (Stanford: Stanford University Press, 1994), 389-404.

[8] John Durham Peters, *The Marvelous Clouds: Toward a Philosophy of Elemental Media* (Chicago: Chicago University Press, 2015), 15.

[9] Cathy Caruth, *Unclaimed Experience: Trauma, Narrative, and History* (Baltimore and London: The Johns Hopkins University Press, 1996), 59.

[10] Sigmund Freud, *Beyond the Pleasure Principle*, trans. James Strachey (Mineola NY: Dover Publications, 2015) 21, 23.

[11] Sigmund Freud, *General Psychological Theory: Papers on Metapsychology*, trans. James Strachey (New York: Touchstone, 2008), 214

[12] Ibid., 216.

[13] On the transmission and storage functions in Freud's conception of the psychic apparatus, see: Jacques Derrida, *The Postcard: From Socrates to Freud and*

Beyond, trans. Alan Bass (Chicago: Chicago University Press, 1987), 344-353; Friedrich A. Kittler, *Literature, Media, Information*, trans. Stefanie Harris (Amsterdam: Overseas Publishers Association, 1997), 133-135; Thomas Elssaeser, "Freud as a Media Theorist: Mystic Writing-Pads and the Matter of Memory," *Screen* 50(1), 2009, 101-113.

[14] The "protective shield" (*Reizschutz*) makes a final appearance in Freud's last work, *An Outline of Psychoanalysis*, trans. James Strachey (New York: W. W. Norton & Company, 1969). In summarizing his life's project, Freud reconsiders the definition the ego: "From what was originally a cortical layer, equipped with the organs for receiving stimuli and with arrangements for acting as a protective shield against stimuli, a special organization has arisen which henceforward acts as an intermediary between the id and the external world. To this region of our mind we have given the name of ego," (ibid., 14). The ego performs the task of "self-preservation" by coping with outside excitations as well as with internal instincts; its strive after pleasure and avoidance of displeasure is achieved by virtue of its "intermediary" position between inside and outside. Read in conjunction with Freud's earlier speculations, this understanding of the ego as incorporating a protective shield reveals it as literally post-traumatic due to the consequences of sustaining life under duress.

[15] Ian Hacking, *Rewriting the Soul: Multiple Personality and the Sciences of Memory* (Princeton: Princeton University Press, 1995).

[16] John Eric Erichsen, *On Railway and Other Injuries of the Nervous System* (Philadelphia: Henry C. Lea, 1867). See also: Paul Lerner and Mark S. Micale, "Trauma, Psychiatry, and History: A Conceptual and Historiographical

Introduction," in *Traumatic Pasts: History, Psychiatry and Trauma in the Modern Age, 1860-1903*, eds. Mark S. Micale and Paul Lerner (Cambridge: Cambridge University Press, 2001), 1-27.

[17] American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders: DSM-III* (Washington, DC: American Psychiatric Association, 1980), 236.

[18] Allan Young, *The Harmony of Illusions: Inventing Post-Traumatic Stress Disorder* (Princeton: Princeton University Press, 1995), 7.

[19] Pierre Janet, *Psychological Healing: A Historical and Clinical Study* Vol. 1, trans. Eden and Cesar Paul (London: G. Allen & Unwin, 1925), 660-698.

[20] Hans Blumenberg, *Paradigms for a Metaphorology*, trans. Robert Savage (Ithaca: Cornell University Press, 2010).

[21] See Alan W. Scheflin, "Ground Lost: The False Memory/Recovered Memory Therapy Debate," *Psychiatric Times*, 16(11), 1999. http://www.psychiatrictimes.com/articles/ground-lost-false-memoryrecovered-memory-therapy-debate

[22] This is indeed Caruth's claim as to the inadequacy of history as a factual discourse to providing an account of trauma, since trauma remains tied to what she calls the "referential literality" of the original event (Caruth, *Unclaimed Experiences*, 16). A history of trauma, according to her, is possible only indirectly, as a literary approach that treats historical texts symptomatically, as though containing inadvertent traces of unclaimed experiences. Following this reasoning, Caruth's literary account can be read as an attempt to give account of trauma as precisely what resists accounting for.

[23] Young, *Harmony of Illusions*, 5.

[24] Hacking, *Rewriting the Soul*, especially chapters 13 and 14.

[25] Elssaesser, "Postmodernism as Mourning Work," *Screen* 42(2), 2001, 198-9.

[26] Andreas Huyssen, "Present Pasts: Media, Politics, Amnesia," *Public Culture* 12(1), 2000, 36.

[27] Alan Meek, *Media and Trauma: Theories, Histories, and Images* (New York: Routledge, 2010), 13.

[28] Elsaesser clearly rejects the possibility that media are active agents in the transformations he describes: "In the face of technological changes in our recording media and communication systems, forms of cultural memory and intersubjectivity are emerging (though they are by no means caused by them, unless the crises of the symbolic order mentioned earlier are regarded as technological in origin)" (ibid., 12).

[29] Marianne Hirsch, *The Generation of Postmemory: Writing and Visual Culture After the Holocaust* (New York: Columbia University Press, 2012), 36.

[30] Ibid., 122.

[31] Alison Landsberg, *Prosthetic Memory: The Transformation of American Remembrance in the Age of Mass Culture* (New York: Columbia University Press, 2004), 113.

[32] Joshua Hirsch, *Afterimage: Film, Trauma, and the Holocaust* (Philadelphia: Temple University Press, 2004), 7.

[33] Bernhard Siegert, "Cultural Techniques: Or the End of the Intellectual Postwar Era in German Media Theory," *Theory, Culture & Society* 30(6), 2013, 60-61.

[34] Walter Benjamin, *Illuminations: Essays and Reflections*, trans. Harry Zohn (New York: Schocken Books, 1969), 163.

[35] Ibid., 175

[36] Ibid., 250.

[37] Ibid., 84.

[38] Marshall McLuhan, *Understanding Media: The Extensions of Man* (New York: McGraw Hill, 1964), 43.

[39] Ibid., 67

[40] Friedrich A. Kittler, *Discourse Networks 1800/1900*, trans. Michael Metter with Chris Cullens (Stanford: Stanford University Press, 1990), 369.

[41] Daniel Paul Schreber, *Memories of My Nervous Illness*, trans. Ida Macalpine and Richard A. Hunter (New York: New York Review Books, 2000), 123.

[42] Kittler, *Discourse Networks*, 298-299.

[43] Friedrich A. Kittler, *Gramophone, Film, Typewriter*, trans. Geoffrey Winthrop-Young and Michael Wutz (Stanford: Stanford University Press, 1999), 15-16.

[44] Jacques Lacan, *The Seminars of Jacques Lacan: Book XI The Four Fundamental Concepts of Psychoanalysis*, trans. Alan Sheridan (New York: W. W. Norton & Company, 1998), 55.

[45] Kittler, *Gramophone, Film, Typewriter*, 15.

[46] Friedrich Kittler, *Optical Media*, trans. Anthony Enns (Cambridge: Polity, 2010), 35.

[47] See Fred H. Frankel, "The Concept of Flashback in Historical Perspective," *International Journal of Clinical and Experimental Hypnosis* 42(4), 1994, 321-336.

For an extensive study of the term in the context of film, see Maureen Turim, *Flashback in Film: Memory and History* (New York: Routledge, 1995).

[48] Hugo Münsterberg, *The Film: A Psychological Study: The Silent Photoplay in 1969* (New York: Dover Publications, 1970), 41.

[49] Marshall McLuhan, *Letters of Marshall McLuhan*, eds. Matie Molinaro, Corinne McLuhan and William Toye (Oxford: Oxford University Press, 1987), 193.

[50] Hacking, *Rewriting the Soul*, 252-253.

[51] Kittler finds evidence of the cut-back or flashback in early 20th century literature as an illustration of involuntary memory within written narrative. See Kittler, *Gramophone, Film, Typewriter*, 163-4.

[52] Alan Sheridan in Lacan, *The Seminars of Jacques Lacan*, 280.

[53] Geoffrey Winthrop-Young, *Kittler and the Media* (Cambridge: Polity, 2011), 137.