

The Multifaceted Relationship between Fear and Technology

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The Max Planck Institute for Human Development invited international scholars from diverse fields, such as history of technology, emotions, science, education and media, as well as social anthropology, philosophy, sociology and clinical psychology to conceptualize the complex relationship of fear and technology. After the successful conference of the German association of history of technology (Gesellschaft für Technikgeschichte, GTG) on „Technikemotionen“ in May 2018, this workshop promised to be the next fruitful endeavor that aimed at further bringing the history of technology and the history of emotions into conversation.

The first evening started with the keynote of MARGARET MORRIS (Seattle, WA) who challenged the picture of technology (exemplified by the smartphone) as a driver for social isolation with fascinating insights from her research in clinical psychology and her experience as an app developer. Drawing on interviews she has conducted, she described case studies in which smart lights were used to solve partnership conflicts, apps helped in anger management and mood-recognition and online games helped in overcoming social anxiety. Morris reminded the audience that the effects of technology are not predetermined, that we should try to shape it to our objectives and push it „to cultivate meaningful connections“ with others.

BETTINA HITZER (Berlin) and MARTINA HEßLER (Hamburg) started the second day

with a warm welcome in the name of the group of organizers and the institute's director Ute Frevert. In the following introduction they not only reflected on concepts of fear and technology, but also sketched approaches of the history of emotions and the history of technology as well as research desiderata and potentials on their intersections. The eight guiding questions and remarks that they developed turned out to be a very useful frame for the interdisciplinary group of participants during the workshop. Amongst others, Hitzer and Heßler plead for a careful consideration of context, interpretations and social scripts related to technology in order not to get into the trap of technological determinism. They furthermore called for opening the 'black box' of technology, not to take it as a given, and to think about its specificities and materiality as they relate to fear.

The first panel entitled „Causing Fears“ started with the paper of ZACHARY LOEB (Philadelphia, PA) who reconstructed reflections on 'fearsome dangers of technology' from the correspondence and the works of Erich Fromm and Lewis Mumford. During the friendship between the German psychologist and the American historian both fought against the rampant tech-optimism of the post war decades. They reminded the public in their books, articles and editorials that there were good reasons to be fearful in the 'dark age' that was prospecting atomic warfare. Loeb demonstrated in his talk that it were often not the technical objects that they feared but the worldviews that were embedded in them.

OLGA GALANOVA (Bochum / Bielefeld) analyzed the relation of technology and fear in the context of Stasi surveillance and taped telephone conversations – amongst others from the files of the East-German singer-songwriter and dissident Wolf Biermann. Fear existed among those who were taped as well as among the Stasi officers themselves as they were controlled by colleagues during their operations. Galanova demonstrated that those who feared that they have been taped developed techniques 'to bridge uncertainty' by the abortion of the communication, obfuscation, misleading and concealing as well as provocation and challenging.

„Can technology tell us something new about our emotion or our way we do science about emotion?“ This question stood in the centre of the talk of DANIEL WHITE (Berlin) who opened the second panel on „Cultivating Fears“. White’s analysis was based on anthropological research he conducted with bureaucrats and robotic engineers in Japan. He described the translation of theories and models of emotions (like Paul Ekman’s six basic emotions) into machines, and reflected on how anxiety might be re-envisioned through emerging technologies of affect. His case studies ranged from wristbands that measure body activities over cameras observing blood-vessel change in the face, to face recognition software used in well known humanoid robots, like SoftBank’s „Pepper“. People’s attempts to adapt to Pepper’s ability to react to certain (universal) face expressions that White described, led to a vital debate about whether this encounter should be seen as step towards a global homogenization of emotions or an enrichment.

ASTHA JAISWAL (Gandhinagar), who was connected to the panel via Skype, presented her research on the ‘fear-based hype’ around cord blood banking in India. She analyzed the discursive strategies in promotional material of private blood banks and conducted interviews. Jaiswal argued that the banks not only failed to provide trustful information but actively used fear-based narratives, pushing parents and families to store their child’s stem cells at these institutions.

The third panel on „Contesting Fears“ was opened by the talk of CHRISTIAN GÖTTER (München) in which he reconstructed fear in the debates surrounding nuclear power in Great Britain and Germany. According to him, fear played a formative role in the military and civil use of nuclear energy – for its proponents as much as for its opponents. Götter proposed ‘seven variables’ to describe the relationship between fear and technology, reaching from *authorship* („Who is talking about fear, and about whose fear?“) over *condition* („Is it actively experienced, is it acclaimed?“), *direction* („Fear for or of sth?“), *intensity* („A wide field from panic over fear and anxiety to a mild disquiet is possible“), *reaction* („...to emotion within the

field of paralysis, flight, repression, acceptance and fight“), *immediacy* (fear triggered by the technology itself, its surroundings or consequences, or seen as a remedy of fear) to *universality* („Are fears connected to technology in general or are they dependent on certain forms, or on certain groups of users?“).

SERENITY SUTHERLAND (Oswego, NY) aimed at tracing back fear in debates about artificial intelligence (AI). The time span of over 150 years that she chose for her analysis provided interesting insights into human-machine relations as well as different levels of AI (such as purely reactive intelligence, limited memory, theory of mind, self-awareness) and the fears accompanying them. The connection between Henry Adam’s reflections on the dynamo around 1900 and today’s AI debate appeared to be a bit artificial, especially as Sutherland didn’t expand further on historical ruptures and shifts but rather focused on analogies. However, with her critical evaluation of Amazon’s Mechanical Turk („a marketplace for work that requires human intelligence“) and the COMPAS risk assessment software that aims at predicting recidivism, she kicked off a vibrant discussion on why there is no(t yet a) broad anti-AI movement.

In the evening lecture of KARENA KALMBACH (Eindhoven) fear came into the spotlight as driver of technological innovation and implementation. Based on her studies on nuclear power debates and the reflections from her interdisciplinary research group in Eindhoven, Kalmbach plead for extending the often used approach of ‘fear of technology’. In her analytical framework that assumed a coproduction of fear and technology, she proposed instead perspectives of ‘fear by technology’, ‘fear for technology’, ‘technology against fear’, and ‘technology by fear’. Turning the ‘fear of technology’ approach upside down this way led to a lively debate among the participants about preliminary works from the history of science and technology that speak to the proposed perspectives – a row that could have been complemented by environmental history as well.

THOMAS ZELLER (College Park, MD) started the fourth panel on „Enduring Fears“ with a rich analysis of public debates about automotive fatalities in postwar Germany and

the US. He found that fears in this context became mediated into new techniques, implemented by educational programs, as well as in new technologies, like seatbelts, airbags or the crumple zone. Zeller observed that while the debate in Germany was focused on improving the roads to deal with accidents, in the US the discussion was directed more towards the improvement of the automobile itself. His talk illustrated very well that emotions not only manifested in regimes but were also embedded in technological artefacts.

ARTEMIS YAGOU (München) aimed to uncover connections between tech-toys and fears of future between the mid-19th and mid-20th century. She showed how bridge-toy sets were used as an attempt to restore public trust after collapses of bridge constructions, how toys were used to keep kids away from 'dangerous, uncontrollable streets' and strengthen their 'discipline' and 'rational thinking'. She argued that the anthropomorphic appearance of robot toys was supposed to calm the fear of modernity, automatization and mechanization of the contemporaries. With her talk, Yagou also directed the attention of the group to questions of gender, as construction toys were mainly produced for boys, whose parents dreamt of brilliant careers in engineering.

WESLEY SHRUM (Baton Rouge, LA) has been on field work in a project dealing with communication technologies in Africa when he found himself in the middle of the Ebola outbreak in 2014. Shrum described the fear that he encountered in the studies that he consequently started in regard to the use of communication technology in context of epidemics as a 'locative fear' – a fear of spaces (that might be dangerous, even though empty), a fear of people, even if not visibly sick. In his talk he proposed the categorization of epidemics like Ebola and Zika („Zbola“) in compliance with Actor-Network-Theory as 'fire objects', defined as „shifting patterns of presence and absence in the composition of certain objects [who] manifest in dramatic different ways from one location to the another [...] sometimes [...] creative, sometimes destructive.“¹

The last panel entitled „Fighting Fears“ started with GINEVRA SANVITALE's (Eindhoven) historical analyses of a behavioral sci-

entific research program, called CAAP. The focus of the program that started in the 1970s shifted over the decades from research on 'computer attitudes' to 'anxiety' and computer-phobia'. Sanvitale skillfully applied the concept of three bodies² to reconstruct features of a future 'computer age society' envisioned by authors of the CAAP program. She found the CAAP literature to contain a dominant narrative of 'the fear of being left behind' that served to promote the usage of computers.

ANDIE ROTHENHÄUSLER (Karlsruhe) analyzed the use of the term/concept of enmity towards technology in the political and scientific debates in the 1970s and 1980s in Western Germany. He started with a conceptual history sketch of 'Technik' and 'Technikfeindlichkeit' and tried to re-contextualize the history of the Luddites – the 19th century English textile workers who destroyed weaving machinery and later became a famous prototype of enemies of technology even outside of the UK, for example in Germany. In his summary he underlined the necessity of historical contextualization of terms and concepts to avoid taking over the political framing from past debates. Whereas these points found broad support in the following debate, his proposal, to completely avoid the use of technology as a collective singular, was met with criticism from the discussants.

The final discussion oscillated around two questions: The first addressed methodological problems the participants encountered while bringing history of technology and history of emotions together. Amongst others, the fact that historical protagonists rarely express emotions like fear directly in sources was described as a challenge by many participants. The second asked for the potentials that the group saw in bringing these two fields together. Most of the participants emphasized that this intersection enriched their projects and helped to uncover unseen motives in their research. Emotions of fear of

¹ Mike Michael, Actor-Network-Theory. Trials, Trails and Translations, Los Angeles 2017, 157.

² The lived body, the social body, the body politic, see Nancy Scheper-Hughes and Margaret M. Lock, The Mindful Body: A Prolegomenon to Future work in Medical Anthropology, in: Medical Anthropology Quarterly 1 (1987), No 1, p. 6-41.

ten appear in a broader set of emotions that maybe should be studied together. While most of the papers discussed 'extreme emotions', it was also proposed to broaden historical emotion-technology research to 'boredom' or 'emotionlessness'. Various related fields of research were identified during the workshop as potentially informative for this intersection, such as disaster studies or psychology. Maybe one or two more talks from the field of history of emotions, like the very informative presentation of an emotional history of cancer by Bettina Hitzer in the introduction, would have balanced out the slight dominance of historians of technology in the program. Nevertheless, it has to be emphasized that the workshop lived from a very rich discussion culture, which speaks for the great potential of bringing the history of technology and history of emotions together.

Conference Overview:

Public Keynote

Margaret Morris (Seattle, WA): Challenging Fears of Technology and Isolation

Bettina Hitzer (Berlin) / Martina Heßler (Hamburg): Welcome & Introduction

Panel 1: Causing Fears

Zachary Loeb (Philadelphia, PA): You Should Be Afraid: Erich Fromm and Lewis Mumford on the Fearsome Dangers of Technology

Olga Galanova (Bochum / Bielefeld): Stasi-Surveillance of Everyday Communication in the Private Sphere

Comment: Andreas Spahn (Eindhoven)

Panel 2: Cultivating Fears

Daniel White (Berlin): The Mechanics of Fear: Re-envisioning Anxiety through Emerging Technologies of Affect

Astha Jaiswal (Gandhinagar): The Hype of Cord Blood Banking in India: Understanding the Fear Based Discourse

Comment: Anne Schmidt (Berlin)

Panel 3: Contesting Fears

Christian Götter (München): Fears and Fission – An Analysis of Variations of Fear

around Nuclear Power

Serenity Sutherland (Oswego, NY): The Rhetoric of Artificial Intelligence: Fear, Fiction and Forewarning

Comment: Alexander Gall (München)

Lecture

Karena Kalmbach (Eindhoven): Nothing to Fear than Fear itself? A Historical Study into Fears as Drivers of Technological Innovation and Implementation

Panel 4: Enduring Fears

Thomas Zeller (College Park, MD): Loving the Automobile to Death? Injuries, Mortality, Fear, and the Automobility in West Germany and the United States, 1950–2000

Artemis Yagou (München): Robots and Bricks: Using Play to Cope with a Menacing Technological Future

Wesley Shrum (Baton Rouge, LA): Technology, Zbola & Fear

Comment: Bettina Hitzer (Berlin)

Panel 5: Fighting Fears

Ginevra Sanvitale (Eindhoven): Tell Me Your Computer Attitude and I'll Tell You Who You Will Be: Fear and Computing in the Making of Future Society

Andie Rothenhäusler (Karlsruhe): What Is Technology and Is it Possible to be Afraid of it? The Debate on „Technikfeindlichkeit“ in West Germany

Comment: Martina Heßler (Hamburg)

Tagungsbericht *The Multifaceted Relationship between Fear and Technology*. 10.10.2018–12.10.2018, Berlin, in: H-Soz-Kult 23.11.2018.