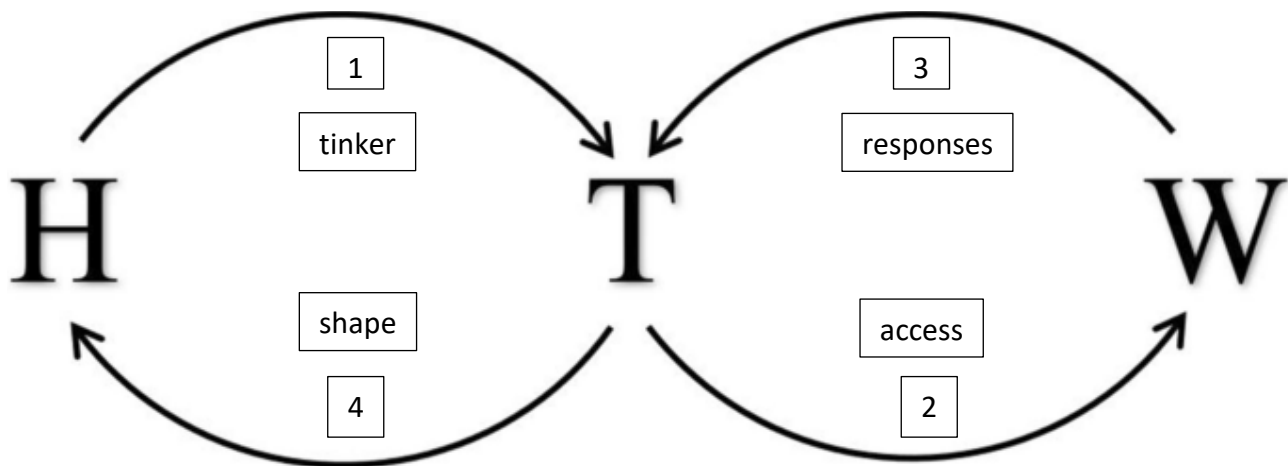


Denominating the Movements in the Lemniscate of Technology

Lars Botin and Tom Børsen

Aalborg University/CPH

The hermeneutic lemniscate (of technology) was originally introduced by Olya Kudina (2021) and inspired by Hans Georg Gadamer's hermeneutic circle, Don Ihde's material hermeneutics and Peter-Paul Verbeek's human-technology-world relations. In this paper we will try to qualify the four movements in the lemniscate to further the understanding of how technology is interdeterrment for how the other components in the lemniscate, humans and world, are under constant pressure and change.



The first movement (1) is from human to technology and is concerned with how we design and manufacture technology. We have identified this movement as *tinkering*. Users, designers, engineers etc. tinker with technologies in multistable ways to achieve something. The second movement (2) regards the intentional and unintentional implications of technology in the world. Technologies give *access* to the world. The third movement (3) is the responsiveness of the world in relation to technological innovation of sustainable and responsible solutions. The world produces *responses*, and it makes queries, proposals and demands to technologies. The fourth movement (4) regards the potentials and capacities of technology to form humans, and their interpretations of the world and themselves. Technologies *shape* our experiences, behaviors, understandings, and bodies.

Humans tinker and are shaped by and with technology (1 & 4). It is what Gilles Deleuze has defined as a constant *becoming*, characterized by effects and events, and framed by processes and verbs. World, on the other hand, is substantial *being* of causes (2 & 3), framed by *things* and adjectives/substantives (Deleuze 1990/2004). In this way the lemniscate can be divided into two distinct spheres, even though interdependent and intertwined.

On the left-hand side effects and events are driven by tinkering and shaping, and on the right-hand side causes manifest in tangible *things*. Deleuze writes: "On one hand there are singular proper

names, substantives, and general adjectives which indicate limits, pauses, rests, and presences (2 & 3); on the other there are verbs carrying of with them becoming and its train of reversible events and infinitely dividing their present into past and future (1 & 4)" (Deleuze 1990/2004, p. 30).

Kudina stresses that there is no chronology in the lemniscate, and you can enter wherever is appropriate, furthermore that technology is not central, but aligned with humans and world. We see technology as gateway and -keeper in between the two spheres of effects and causes, hence deterrent for how humans and world co-constitute in past, present and future by and with technology.

Keywords: Lemniscate of technology, Becoming and Being, postphenomenology, Deleuze

References:

Deleuze, G. (1990/2004): *The Logic of Sense*. London/New York: Continuum

Gadamer, H.-G. (1960/2011): *Truth and Method*. London/New York: Continuum

Ihde, D. (1998): *Expanding Hermeneutics. Visualism in Science*. Evanston, Illinois; Northwestern University Press

Kudina, Olya (2021): "Alexa, who am I?": Voice Assistants and Hermeneutic Lemniscate as the Technologically Mediated Sense-Making. *Hum Stud*, **44**, 233-253

Verbeek, P.-P. (2011): *Moralizing Technology. Understanding and Designing the Morality of Things*. Chicago/London: The Chicago University Press