

Craft, leisure, and end-user innovation

How hacking is conceived in social science research

Susann Wagenknecht

<introduction>

concepts of hacking in
in academic research

„In letzter Zeit gibt es eine auffällige Häufung von Befragungen und wissenschaftlichen Studien zu Hackern und Piraten, wie die Szene funktioniert und so weiter, auch bei Hackerspaces und insbesondere auch bei Gruppen wie Occupy und co. Wenn so jemand bei euch anklopft, sagt ihm bitte nichts. Nur weil die freundlich und nett wirken, muss man noch nicht kooperieren.

Nanu, hat der Fefe was gegen Wissenschaft? Nein. Aber was die meisten nicht auf dem Radar haben: Solche "Studien" werden von den Bösen gemacht. Dahinter stecken Public Relations Consulting-Firmen, Risk-Management-Firmen, Politikberatung, Thinktanks. Die haben Angst vor uns und wollen uns ausforschen. Und wie macht man das? Man schickt unverdächtige V-Leute. In diesem Fall nerdige Wissenschaftler, die freundlich anfragen.“

– *Fefes Blog, Feb. 2013*

<my backstory>

i. hacking as creative
and ad-hoc

Hacking is “appropriating, modifying, or ‘kludging’ existing resources (devices, hardware, software, or anything within reach) to suit other purposes, often in an ingenious fashion.”

– *Paradiso et al., 2008*

“opportunistic”, “ad hoc”

– *Hartmann et al., 2008; Bardzell et al., 2014*

ii. hacking as
innovation

“innovative leisure practice”

– *Wang & Kaye, 2011*

“end-user innovation”, “product development”

– *von Hippel & Paradiso, 2008*

“speed up prototype development”

– *Zimmerman, 2008*

“Our research suggests that we need to see the hackerspace not just as a place that amortizes the cost of a laser cutter and a 3D printer across hundreds of people. It is a place where people are experimenting with new ideas about the relationships amongst corporations, designers, and consumers.”

– *Lindtner et al., 2014*

“from hobby to entrepreneurial practice”

– *Lindtner et al., 2014*

iii. hacking means
transgression

“transgressive craft”

– *Steinmetz, 2014*

“illicit”

– *Taylor, 1999*

iv. hacking as
challenging technological
determinism

“... hacking both demands and refutes technological determinism ... Hackers presume that the technologies involved in computers and networks will determine certain actions and they presume also it is possible for them to alter and recreate such determinations.”

– *Jordan, 2008*

v. hacking as
practiced liberalism

“Hacking, so often marginalized or misunderstood in popular culture as the practice of deviant subculture, ... in fact reveals the continuing relevance, if also the contradictions, of the liberal traditions to the digital present.”

– *Coleman, 2011*

vi. hacking as challenging
the standard story of
'first design, then use'

<conclusion>

- Jeffrey Bardzell, Shaowen Bardzell, and Austin Toombs. 2014. Now that's definitely a proper hack: self-made tools in hackerspaces. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '14). ACM, New York, NY, USA, 473–476.
- Gabriella Coleman. 2011. Hacker Politics and Publics. *Public Culture* 23, 3 (2011), 511–516.
- Gabriella Coleman. 2013. Coding Freedom. The Ethics and Aesthetics of Hacking. Princeton University Press, Princeton and Oxford.
- Gabriella Coleman and Alex Golub. 2008. Hacker practice: Moral genres and the cultural articulation of liberalism. *Anthropological Theory* 8, 3 (2008), 255–277.
- Kai Denker. 2014. Heroes Yet Criminals of the German Computer Revolution. In *Hacking Europe. From Computer Cultures to Demoscenes*, Gerard Alberts and Ruth Oldenziel (Eds.). Springer, London, Chapter 8, 167–187.
- Fefes Blog, Feb 7, 2013, <https://blog.fefe.de/?ts=afed4222>
- Stephen Flowers. 2008. Harnessing the hackers: The emergence and exploitation of Outlaw Innovation. *Research Policy* 37, 2 (2008), 177–193.
- Sarah Fox, Rachel Rose Ulgado, and Daniela K. Rosner. 2015. Hacking Culture, Not Devices: Access and Recognition in Feminist Hackersaces. In Proceedings of the 18th ACM Conference on Computer Supported Cooperative Work & Social Computing (CSCW '15). ACM, New York, NY, USA, 56–68.
- Christiane Funken. 2010. Der Hacker. In Diven, Hacker, Spekulanten – Sozialfiguren der Gegenwart, Stephan Moebius and Markus Schroer (Eds.). Suhrkamp, Frankfurt, 190–205.

- Bjorn Hartmann, Scott Doorley, and Scott R. Klemmer. 2008. Hacking, mashing, gluing: Understanding opportunistic design. *IEEE Pervasive Computing* 7, 3 (2008), 46–54.
- Tim Jordan. 2008. *Hacking. Digital Media and Technological Determinism*. Polity Press, London.
- Silvia Lindtner, Garnet D. Hertz, and Paul Dourish. 2014. Emerging sites of HCI innovation: hackerspaces, hardware startups & incubators. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '14)*. ACM, New York, NY, USA, 439–448.
- Joseph A. Paradiso, John Heidemann, and Thomas G. Zimmerman. 2008. Hacking is pervasive. *IEEE Pervasive Computing* 7, 3 (2008), 13–15.
- Claus Pias. 2002. Der Hacker. In *Grenzverletzer. Figuren politischer Subversion*, Eva Horn, Stefan Kaufmann, and Ulrich Bröckling (Eds.). Kadmos, Berlin, 248–270.
- Sebastian Plönges. 2012. Versuch über Hacking als soziale Form. In *Shift. #Globalisierung, #Medienkulturen, #Aktuelle Kunst*, Christine Heil, Gila Kolb, and Torsten Meyer (Eds.). Kopaed, München, 81–91.
- Daniela Rosner and Jonathan Bean. 2009. Learning from IKEA hacking: I'm not one to decoupage a tabletop and call it a day. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '09)*. ACM, New York, NY, USA, 419–422.
- Kevin F. Steinmetz. 2014. Craft(y)ness. An Ethnographic Study of Hacking. *British Journal of Criminology* 55, 1 (2014), 125–145.

- Joshua G. Tanenbaum, Amanda M. Williams, Audrey Desjardins, and Karen Tanenbaum. 2013. Democratizing technology: pleasure, utility and expressiveness in DIY and maker practice. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '13). ACM, New York, NY, USA, 2603–2612.
- Paul Taylor. 1999. Hackers. Crime in the Digital Sublime. Routledge, London.
- Douglas Thomas. 2002. Hacker Culture. University of Minnesota Press, Minneapolis.
- Orly Turgeman-Goldschmidt. 2005. Hackers' Accounts: Hacking as a Social Entertainment. *Social Science Computer Review* 23, 1 (2005), 8–23.
- Eric von Hippel and Joseph A. Paradiso. 2008. User Innovation and Hacking. *IEEE Pervasive Computing* 7, 3 (2008), 66–69.
- Susann Wagenknecht and Matthias Korn. 2016 (in press). Hacking as Transgressive Infrastructuring: Mobile Phone Networks and the German Chaos Computer Club. In Proceedings of the 19th ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW '16). ACM, New York, NY, USA.
- Tricia Wang and Joseph Kaye. 2011. Inventive leisure practices: understanding hacking communities as sites of sharing and innovation. In CHI '11 Extended Abstracts on Human Factors in Computing Systems (CHI EA '11). ACM, New York, NY, USA, 263–272.
- Thomas G. Zimmerman. 2008. Hacking in Industrial and Research Development. *IEEE Pervasive Computing* 7, 3 (2008), 16–23.