SOCIAL HACKING, REVISITED

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What is a hacker? The same question was brought up in 1999 in Cornelia Sollfrank's lecture on the "next Cyberfeminist International" in Rotterdam, and answered, provisionally at least, with the nine definitions of the "jargon file", the famous self-written Internet dictionary of computer hackers:

> (1) A person who enjoys exploring the details of programmable systems and how to stretch their capabilities, as opposed to most users who prefer to learn only the minimum necessary.
> (2) One who programs enthusiastically (even obsessively) or who enjoys programming rather than just theorizing about programming.
> (3) A person capable of appreciating hack value.
> (4) A person who is good at programming quickly.
> (5) An expert at a particular program, or one who frequently works with or on it; as in 'a Unix hacker'. (Definitions 1 through 5 are correlated, and people who fit them congregate.)
> (6) An expert or enthusiast of any kind. One might be an astronomy hacker, for example.
> (7) One who enjoys the intellectual challenge of creatively overcoming or circumventing limitations.
> (8) (deprecating) A malicious meddler who tries to discover sensitive information by poking around. Hence 'password hacker', 'network hacker'. The correct term for this sense is "cracker."

Sollfrank observes that at least the definitions no. 6 and 7 are not restricted to computer technology, thus allowing „to expand the term to include all

Date: April 1st, 2003.

kinds of systems“,[1]. One could also draw the opposite conclusion and regard computer hacking as a fairly young specimen of the old art of trickery and manipulation of systems. In that light, the hacker self-definitions no. 6 and 7 wouldn't be expand on the others, but the latter would just be special cases of the former; a reading supported, for example, by the most ancient Western emblem of system manipulation, the trojan horse, as it was told by Homer, and whose general meaning the hackers described in definition no. 8 supplied with the more special concept of a computer program which, secretly slipped into a computer from outside, camouflages as a system program to spy upon confidential user data.

What is then a hack? Just as the term "hacker" describes various kinds of people who handle systems in unconventional ways, "hack" describes this very acitivity itself, be it as a trick or deception, as an efficacious, but conceptionally unclean intervention (like a "patch" or a "bugfix"), or as a solution that is at once ingeniously simple and elegant, absorbing an abundance of issues in the most dense possible form. Since, as a "hack", Ulysses' wooden horse in fact didn't exist but in the medium of language and as an artistic product of Homer's epic, it comes to no surprise that the theory of the art of language and oration was likewise the first to put down a theory of the "hack". It is telling that, 250 years after Homer, it chose the same topic of the Trojan war for this purpose. One of the two still known orations of Gorgias of Leontini, who brought the art of rhetoric from Sicily to Greece in the fifth century b.c., is the "Encomium of Helen". By acquitting the person who was guilty of the Trojan war and thus refuting the historical common sense with seemingly striking arguments, the speech is a demo program for the power of persuasion. Gorgias' actual hack is his use of recursion: Helena, he argues, might have been persuaded to act the way she did, with language being too powerful for humans to easily resist it:

> Their persuasions by means of fictions are innumerable; for if everyone had recollection of the past, knowledge of the present, and foreknowledge of the future, the power of speech would not be so great. But as it is, when men can neither remember the past nor observe the present nor prophesy the future, deception is easy; so that most men offer opinion as advice to the soul. But opinion, being unreliable, involves those who accept it in equally uncertain fortunes.

[1]Cornelia Sollfrank, Women Hackers – a report from the mission to locate subversive women on the net, in: next Cyberfeminist International, Rotterdam 1999, `http://www.obn.org/hackers/text1.htm`

[2]orgias, Encomium on Helen, in: Kathleen Freeman, Ancilla to the Pre-Socratic Philosophers, Cambridge: Harvard University Press, 1948, 131-33

Persuasion is used here as an argument to persuade the audience. Thus the power of language becomes a self-fulfilling prophecy, a claim embedding its own performative proof. This hack has its philosophical implication that truth is a mere effect, generated by speech, manipulations, art. In his posthumous fragment "On Truth and Lie in an Extra-Moral Sense", the classical philologist Friedrich Nietzsche argues: "What, then, is truth? A mobile army of metaphors, metonyms, and anthropomorphisms–in short, a sum of human relations which have been enhanced, transposed, and embellished poetically and rhetorically, and which after long use seem firm, canonical, and obligatory to a people: truths are illusions about which one has forgotten that this is what they are; metaphors which are worn out and without sensuous power; coins which have lost their pictures and now matter only as metal, no longer as coins."[3]

But Gorgias' oration demonstrates more than that. Coupling rhetorical persuasion with recursive logic, it extends over the limits of its discipline. Not accidentally, recursive loops – i.e. procedures which proceed themselves – are a legal part of all programming languages and play a central role in such attempts at mathematical aesthetics as Douglas R. Hofstadter's book "Gödel Escher Bach". Likewise, the 'jargon file' contains entries on "recursion", which simply is a cross-reference to itself, on "recursive acronyms" and "tail recursion". Asked in an interview why hackers love recursion, MIT hacker and Free Software evangelist Richard Stallman replied: "Because it is sort of paradoxical that you can successfully define something in terms of itself, that the definition is actually meaningful."[4]

A hack therefore combines elegance of logical construction with the rhetorical force of what Latin rhetoricians first called "stupor", a force which itself cannot be described in purely logical and mathematical terms. In the Renaissance, "stupor" became a crucial term for the rhetoric and poetics of "acumen", i.e. a wit driven by "ingenium". While 17th century theory still

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[3]Friedrich Nietzsche, On Truth and Lie in an Extra-Moral Sense, Compiled from translations by Walter Kaufmann and Daniel Breazeale, http://www.geocities.com/thenietzschechannel/tls.htm

[4]The quote continues as follows: "People assume that if you define something in terms of itself that you fail to define it all. But thats not always true. The fact thats not always true, that you can define something in terms of itself and have it be well defined, thats a crucial part of computer programming." Richard Stallman interviewed in MEME 2.04, http://mbhs.bergtraum.k12.ny.us/cybereng/ebooks/stallman.htm

conceived of “ingenium” as engineering, something that, like all rhetoric, could be taught by instruction, one hundred years later the term mutated into the romanticist “genius” which could no longer be learned, but was a gift of nature. What happens then if Hackers became the new role model of the artist? Does it mean to return to an aesthetics of artistic genius not only in theory, but also in praxis given the cults among prominent hackers like Richard Stallman or crackers like Kevin Mitnick – despite all efforts of modern art and art theory to overcome this thought pattern? Or does it, on the contrary, mean to disenchant the artistic genius and redefine it in the sober terms of technical ingenuity?

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The first well-known and to date most successful act of sabotage against the Internet happened in November 1988 when the C.S. graduate student Robert Morris Jr. wrote a computer program which endlessly replicated itself through the net and thus brought countless network servers to halt. While the consequences for Morris were a probation of three years, four hundred hours of community labor and a sentence of 10,000 US dollar, the case became much expensive for the federal government of the United States. Still in 1988, funds of Defense Advanced Research Projects Agency (DARPA) were used to reshape the “Computer Emergency Response Team” of Carnegie Mellon University, Pittsburgh into the research center CERT `http://www.cert.org`. Since then, CERT systematically collects information on security holes in computer software to document them, along with bugfix recipes, in its “Advisories”. To date, CERT Advisories are a mandatory reading of computer security experts and system administrators all over the world.

Only two and a half year after the Morris worm, CERT issued a warning which no longer concerned machine codes of computer software and network protocols. In its “Advisory CA-1991-04 Social Engineering”`http://www.cert.org/advisories/CA-1991-04.html`, the institute warns of telephone calls and E-Mail which, by means of rhetorical tricks and self-disguise, persuade users into leaking their confidential access data. A typical and still popular method of crackers is to pass off themselves as service technicians and, for of an alleged maintainance routine, ask company or university employees for their user passwords.[5] The “SOCIAL ENGINEERING FAQ”, author by the anonymous entity “bernz”, therefore defines

[5]This form of “social engineering” is extensively described as well in “RFC 2504”, the security user manual of Internet standardization organizations, `http://www.faqs.org/rfcs/rfc2504.html`

"social engineering" as "cracking techniques that rely on weaknesses in wetware [– i.e.: the brain, FC –] rather than software",[6]

All technical definitions of "social engineering", respectively "social hacking", are based on the assumption that social manipulation is only a means to the end of technical manipulation. John Palumbo's standard paper „Social Engineering: What is it, why is so little said about it and what can be done¿', puts it as follows:

> Social engineering: An outside hacker's use of psychological tricks on legitimate users of a computer system, in order to gain the information (user names and passwords) he needs to gain access to the system. [7]

When Palumbo flatly identifies every „hacker" as male, his assumption oddly meets with Cornelia Sollfrank feminist empirics. Sollfrank, a member of the German hacker organization Chaos Computer Club (CCC) since the 1990s, gathered from her own research that hacking continues to be dominated by males. In the no. 66 of the CCC bulletin "Datenschleuder" ("Data Catapult") she writes of the "few representatives of the species 'female hacker' that I found" and quotes two American experts with their "strange explanations why they [female hackers] don't exist".

Computer technology, she writes, is a "resort [...] where virtually no women are around." Sollfrank addresses this problem artistically, with a double strategy of documentarism and fiction. In 1999, she invited female hackers she had met during her research – among them the long-time CCC activists Rena Tangens and Barbara Thoens – for a "women hackers" day during the "next Cyberfeminist International" in Rotterdam. In the same year, she shot a video interview with the pseudonymous female hacker Clara S0pht `http://www.artwarez.org/aw/content/rot{_}clara.html` which, when it had its debut screening on the annual CCC congress, created outrage in the audience. Sollfrank later described the situation as follows:

> It was pretty well attended, including a lot of men, who watched everything and then attacked me for not defending sufficiently Clara SOpht privacy, because she had stressed that she did not want details about herself being publicized.

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[6] bernz, THE COMPLETE SOCIAL ENGINEERING FAQ!, `http://www.morehouse.org/hin/blckcrwl/hack/soceng.txt`

[7] John Palumbo, Social Engineering: What is it, why is so little said about it and what can be done?, `http://www.sans.org/rr/social/social.htm`

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As a matter of fact, Clara S0pht didn't exist but as a fiction of the artist Cornelia Sollfrank. The whole interview was simulated, all questions and answers had been made up:

> At the end of the event I mentioned casually that the woman did not exist and that I had invented her. Some people were gobsmacked. Quite unexpectedly they had experienced art, an art which had come to them, to their congress, and talked in their language.

On the same congress, Sollfrank left an electronic birth control device for women as a fake lost-and-found item. As she had hoped, this hardware created confusion among the (male) CCC organizers; unable to figure out what it was, they prominently featured it on their lost and found web page. Both manipulations are not just art intervening into the hacker self-perception of the Chaos Computer Club, but also intervention of hacker methodology into the art of Cornelia Sollfrank. Her interest in hacker culture is thus not simply a sociological, but a systemic one. She used the video tape and the birth control device as small trojan horses, subliminal tools which leveraged the hacker congress against itself, deconstructing its discourse. The alleged experts for the subversion of systems turned out to be blind to the system they had created themselves.

Could both interventions thus be called classical "social hacks", i.e. hacks in the medium of interpersonal communication instead of hacks in the medium of program code? Suspicions that fusing art and hacker culture is the ideal of Cornelia Sollfrank‘s art are nourished by her website `http://www.artwarez.org` which tries to combine art and hacker/cracker culture by its very name and the typgraphical ASCII Art borrowings, as well as by her project "Liquid Hacking", a festival which in 2000 gathered both hackers and net artists. With her ideal, Sollfrank doesn't aim for a certain social habitus and peripherally at best for common political standpoints , but for elective affinities of the conceptual. Some passages of the "Social Engineering FAQ" could be read as a characterization of Sollfrank's art:

> Hacking takes more advantage of holes in security while the social engineering takes advantage of holes in people's common sense. [9]

[8] „Hacking the Art Operating System, Cornelia Sollfrank interviewed by Florian Cramer, `http://www.artwarez.org/aw/content/rot{_}flo.html`

[9] Anon., THE COMPLETE SOCIAL ENGINEERING FAQ!, `http://www.morehouse.org/hin/blckcrwl/hack/soceng.txt`

Still, there's a difference in targets. Even a social egineering hacker would rarely use holes in people's common sense to exactly expose those holes and the cracks of common sense in general. For Sollfrank however, social structures are not a vehicle, but the target of the intervention. To show up the cracks in common sense is her serious philosophical endeavor, the experiment and perpetual labor of her art to be critical without falling into essentialist traps, and self-reflexive without ending up as a merely pleasant postmodernism. Depending on the situation, Sollfrank employs digital or non-digital means for her hacks. Still, they remain "social hacks" even when they involve computer programming. The net.art generators for example, programmed on Sollfrank's commission by Ryan Johnston, Luka Frelih, Barbara Thoens and Ralf Prehn, are generative art, but not in the form of purposelessly beautiful algorithms, but as devices for intervening into social systems. In "Female Extension", for example, they were employed to automatically generate art which Sollfrank entered under a number of false female artist identities into a competition, successfully bluffing the jury into the essentialist fancy of a "female aesthetics" in net art.

Redefining the "social hack" into a hack of the social, and choosing the art system and computer culture as its playground, Sollfrank's art targets two specific social systems which, since Duchamp and since the emergence of computer hackers from the student model railroad club of the MIT around 1960, have been characterized by their playful manipulations of systems in general and themselves in particular. As a conceptual artist, Sollfrank locates herself within a history of artistic fakes and pranks, [10], something she puts up front in her installation „Improved Tele-Vision" which exposes the consecutive manipulations of a grammophone recording of Arnold Schönberg's "Verklärter Nacht" through Nam June Paik, Dieter Rot and finally Cornelia Sollfrank. Critics have liked to call such tactics and manipulations "situationist" since the revival of Guy Debord and the Situationist International the late 1980s und early 1990s; however, the situationists themselves – a latecomer post-surrealist avant-garde which started off gathering third-class abstract expressionist painters to later end up as a marxist political sect – hardly ever practiced such activities.

When reconstructing in turn the beginnings of German hacker culture, whose focal point since 1981 has been (both in positive and negative terms) the Chaos Computer Club, an evident resource is the first volume of the CCC "Hacker Bible" which in turn lays out its historical self-perception by

[10]Like they were, in a first and still very incomplete attempt, researched by Stefan Römer in his [German] book „Fake", Cologne: DuMont, 2001

including a complete reprint of the 1970s American underground newsletters “YIPL” und “TAP”. Not surprisingly, “YIPL” a.k.a. “Youth International Party Line” was one of the projects of Abbie Hoffman, the 1960s counter-cultural “YIPPIE” prankster. But unlike his other publications like “Steal This Book!”, YIPL was exclusively about “phone phreaking”, applying technical tricks to telephones to achieve gratis phone calls. While this type of hacker, the “malicious meddler” discredited in the eighth Jargon File definition, still coincides with his hostile colleagues in that his activity had been anticipated, practically and theoretically, in classical Greek epics and rhetoric, he differs from them and by this coincides with conceptual artists where he or she (a) actually aims at social structures (although with a sometimes simplistic political world view), (b) is, like Gorgias and Nietzsche, aware also of the ontology of code manipulation and (c) camouflages his or her identity.

In the early 1990s, Cornelia Sollfrank, as part of the artist group “-Innen”, experimented with a radical exercise in identity as it would later be practiced on the periphery, than in the very center of net art by the Luther Blissett project and the pseudonymous entity antiorp, alias Netchoka Nezvanova. But, as the example of Netochka Nezvanova and her secret society-style marketing for the audiovisual software she has written, shows, pseudonymity and the cult of programmer-genius are not necessarily opposites, but rather, mutual attractors. On close examination, the same holds true for the contradictions of the “hacker’s” self-image as machinists either in terms of functional elegance or functional disruption. They are two sides of the same coin when they are join, like in Gorgias, in the medium of recursion; recursion which can be just as much an elegant problem-solver in an elegant programming language such as LISP, as it is the motor of self-replication of a viral code. Cornelia Sollfrank’s hacker ethics combines them both in a playful way, disruption with elegance. It is an ideal that is however doomed to fail in the reality of art-sceptical hacker conventions.