Ordinary Technoethics

MICHEL PUECH

Philosophy, Paris-Sorbonne University, Paris, France

Email: michel.puech@paris-sorbonne.fr

Web site: http://michel.puech.free.fr

ABSTRACT

From recent philosophy of technology emerges the need for an ethical assessment of the ordinary use of technological devices, in particular telephones, computers, and all kind of digital artifacts. The usual method of academic ethics, which is a top-down deduction starting with metaethics and ending in applied ethics, appears to be largely unproductive for this task. It provides "ideal" advice, that is to say formal and often sterile. As in the opposition between "ordinary language" philosophy and "ideal language" philosophy, the ordinary requires attention and an ethical investigation of the complex and pervasive use of everyday technological devices. Some examples indicate how a bottom-up reinvention of the ethics of technology can help in numerous techno-philosophical predicaments, including ethical sustainability.

This paper resists “Ideal Technoethics”, which is implicit in mainstream academic applied ethics approaches and is currently favored by the bureaucratic implementation of ethics in public and private affairs. Instead, some trends in philosophy of technology emphasize the importance of *ordinary* technologically-laden behaviors. If we take this approach one step further, it leads to ordinary technoethics. In my take on ordinary technology, values are construed differently, starting from the importance of the ordinary use of technology (humble devices and focal[1] familiar practices). The *primacy of use* in the history of the Internet provides a paradigm for the ordinary empowerment of users. What are the ethical consequences of this empowerment, and how is the average human being today equipped to address them in the innumerable micro-actions of ordinary life?

Technoethics

Technoethics as a research and practice field is situated in between philosophy of technology and applied ethics. What happens at the intersection of these two cultural domains is more significant than ever since we can hope from it a new inspiration to tackle the cultural crisis of modernity. This crisis implies the search for a more sustainable civilization, but this requirement does not mean much unless we give “sustainable” a definite meaning. I suggest the following ethical meaning for “sustainable”: the capacity to be accountable for one's actions (personal and collective). It excludes this rampant interpretation: the wish to maintain and perpetuate our welfare and power.

Much has been done in technoethics, from its first conception in the context of philosophy of science and technology (Bunge, 1977) to its current use in handbooks

(Luppicini and Adell, 2008) and field research (Ess, 2009). Carl Mitcham has spelled out what has to be done: “Our thesis is that properly appreciated, technology can and should likewise serve as a unifying theme across specific applied ethics discussions – and that the time has come for deep and systematic investigation of the connections between applied ethics and the philosophy of technology, that is, to move reflections of technology from the margins to the center of applied ethics” (Mitcham, 1997, p. 163). He identified clearly enough where the major hurdle is: “Although one aim of the academic study of ethics and technology has been to bridge the two cultures' divide, applied ethics expertise sometimes creates a new version of the very difference it would overcome. The real promise of applied ethics will only be realized when such reflection both transforms technical decision making and enters the public realm”. (Mitcham, 1997, p. 18).

Ordinary

The expression “ordinary ethics” refers to the split between “ideal language” and “ordinary language” in analytical philosophy. This story took place a long time ago, in the middle of the 20th century, somewhere in England between Cambridge and Oxford. *The Linguistic Turn* (Rorty, 1967) provides the sacred texts for a common narrative in English speaking countries. It recounts the first emergence of analytical philosophy as a philosophy of language taking over philosophy and then the conflict between ideal and ordinary language. This conflict inaugurated a “metaphilosophical” divorce in analytic philosophy between the ideal language school and the ordinary language school. The former is linked to logical empiricism and is a largely neo-positivistic project to construct science as a perfect language, including the social and human sciences. The latter is linked to Wittgenstein II and its

champion was J. L. Austin.

Ordinary language philosophy launched a deflationist project to scrutinize real uses of language in everyday life and to describe its implicit metaphysics. Ordinary language assumptions and implicit logic provide an ordinary metaphysics, always complex, sometimes smart. Austin's dissections of excuses for instance gave a precise, concrete, and palatable form to ordinary language methods and results. But do they lead anywhere? The masters of ordinary language philosophy evolved a sort of aporetic snobbery. A never-ending game of reinterpretations and refinements prevents any conclusion and practical use of some ordinary language masterpieces. This aristocratic snobbery was entirely abandoned by the posterity of ordinary language philosophy when it mixed with American pragmatism. Following from this encounter, a fecund alliance of Deweyan style pragmatism (Hickman, 1990) and ordinary language methods is still active in the background of technoethics.

The problem with ideal applied ethics

The controversy between the ideal and the ordinary is no longer active in philosophy, in these terms at least, even if the divide between analytical and continental philosophy still follows some of its fracture lines.

My point is limited to the field of ethics and my intention is to start from this naive interpretation: there exists an ideal technoethics trend in mainstream academic applied ethics. So far so well. But alas it turns out more than often to be misleading, deceptive, and counterproductive. As a result of this drifting process, ideal technoethics has given birth to a new language, an Orwellian ethical newspeak, within which scholastic disputes and agreements flourish at will. An academic can easily assure an enviable rate of publication by harnessing this language. Public and

private institutions are now the home of an ethical technocracy, an establishment in charge of ethical affairs. They produce an impressive number of charts, advice, and recommendations. Alas my experience in the academy and in corporate consulting has taught me that the expertise in this literature has nothing to do with anything ethical (in the ordinary meaning of the term).

This situation is linked to the current conception of ethics as a three-level scholastic pyramid: metaethics / normative ethics / applied ethics.

Metaethics questions "How is ethics possible?" (ironically, does it require a metametaethics to understand how metaethics itself is possible?). Normative ethics tries to formulate the rules, the norms, the duties, or moral values (moral content and moral abstract principles). In the end, applied ethics must derive field-specific norms and values from (general) normative ethical options. The applications are an open list of human practices: medicine, business, engineering, warfare, parenting... This pyramid is the entry gate for students and visitors of ethics. The doorway is so cluttered that the vast majority of incomers and intruders never proceed further.

My concern is about the meaning of "applied" in "applied ethics". It does not mean "applied to reality", as the occasional visitor would certainly take it. "Applied" refers to a top-down scholastic derivation, which entails in each case designing a matrix to intertwine a field-specific ontology and off-the-shelf formal "principles" (supplied by normative ethics). Real application by real people in real situations is not the business of applied ethics (ironically, does it require an applied applied ethics to apply applied ethics?).

Why is it a problem? Because the alleged system of modern ethics does not work[2] precisely where it is supposed to work. When you are in the field, you see what

happens. People read, or pretend to read the Ethical Committee Recommendations, they pin the Ethical Chart to the wall and let out a sigh of already-disheartened-hope-with-a-touch-of-exasperation. More than often, this deep sigh will be the only pragmatic outcome of it all. In very unlucky cases, and only in the United States perhaps, unpleasant outcomes may occur: somebody can be fired or a lawsuit can turn out differently because of the ethical chart that people were obliged to sign or "validate" by a mouse-click. Ideal applied ethics is presented as the method for ethical improvement in each and every corporate brochure and website, but specific ground level effects simply do not exist.

We can explain *why* this practice of ethics does not work. To put it in the words of F. J. Varela, the neurologist who inquired into the pragmatics of values: ethical action always happens in context, in the "immediate coping with what is confronting us" concretely (Varela, 1999, p. 5). Ethical action does not start in a judgment, following deliberate analysis. Ethics is "skill", not knowledge, said Varela in a striking formula. It can be an expertise, but a transparent one, not the scholastic art of conclusions drawn from principles. "We acquire our ethical behavior in much the same way we acquire all other modes of behavior: they become transparent to us as we grow up in society" (Varela, 1999, p. 24). Since we grow up in a technological environment, these transparent skills are now about microwave ovens and telephones, computers and cars.

The *transparent skills* of language are an illuminating parallel. A native uses a specific brain circuitry for his/her mother tongue. In this way, one or more languages are acquired in a process very different from learning foreign languages at school, languages never used in real life. Today's academic ethics sounds like a dead language with no use outside the classroom. "Digital natives", defined by Prensky

(2001) as the generation born with computers, give us a model for ordinary ethics through the way they elaborate capacities of learning and performing technologically. Now, couldn't we imagine "ethical natives"? Native speakers of a language are neither magnificent rhetoricians nor poets. The majority of them speak an ordinary language, more or less correctly and elegantly. They do not "apply" an ideal grammar. Ordinary ethics belongs to the ordinary doers of ethical actions, acting like natives.

From philosophy of technology towards ordinary technoethics

The meaning of "ethos" must be precisely set and clarified in order to start afresh from traditional morality. I want to reclaim for ethics a notion of *ethos* meaning *effective behavior* – as in "ethology". Let us derive *ethics* from the Greek ἔθος (*ethos)*: custom, habit, deliberate personal behavior (facts and actions). It makes a difference when ethics is understood as deriving from ἔθος (*ethos)* and not from ἦθος (*êthos*) meaning moral character (a disposition, a virtuality).

Therefore, for ordinary technoethics, values are *practices* embedded in use. They are not lip service paid to preexisting norms, formal casuistic, international agreements, or imposed charts. Ordinary technoethics as *praxis* can reach a level of virtuosity and even attain (practical) wisdom. What is at stake is the practice (not the definition) of ethical behavior in a real situation, which is always complex and context-sensitive. This capacity relies on acquired skills; it calls upon intuitions tested by patient training and critical self-awareness. In some cases, quasi-embodied self-defense reflexes can make sense *ethically*, for immediate response in a crisis, exactly as self-defense training gives one the skills to save his/her (physical) integrity by immediate reaction. Ethics as practice of an ethos is embodied in ordinary behaviors. It is acquired through practice. The Stoic notion of ethical training,

askesis, can be seen as the daily practice of one's ethical gymnastics, not the artificial breeding of a competitor for the show-business and advertisement industry treacherously called “sport”.

This relatively new line of thought is cognate with some parts of the recent philosophy of technology where the importance of *ordinary* technologically laden behaviors has been recognized. The leading influence here is Albert Borgmann about focal things and practices (Borgmann, 1984; 1995). A “focal” activity is the center of a cultural constellation of human interactions (with humans and non-humans) and values. Cooking a real meal for a real dinner, for instance, is a focal activity and a clear case of ordinary technoethics. Borgmann, or phenomenological authors in the wake of Don Ihde, provide a rich and methodologically sophisticated collection of studies about our *ordinary involvement with artifacts* and the profound consequences of the intimately technological texture of our life (Verbeek, 2005).

Ordinary technoethics takes into account the implicit *values* in this ordinary involvement with artifacts and brings them to the forefront. Philosophy of technology is more concerned with the *ontology* of our ordinary dealing with artifacts. Ordinary technoethics expands this ontology towards the *ethics* of this specific existential structure. It investigates not only the significance of ordinary artifacts and technology-related behaviors, that is to say their ontological and symbolic meanings. Ordinary technoethics expands the *hermeneutics* of ordinary artifacts to their *ethics*. It takes into account the growing importance of the *intrinsic value* in man-made things and artifact-mediated activities. Natural things, in environmental ethics, are not the only possible possessor of intrinsic value. We must take into account the intrinsic value of ordinary artifacts. Some philosophers even suggest that information in itself is an intrinsic value (Floridi, 2004), which is certainly the new frontier for

technoethics.

But let us remain in contact with concrete objects. From personal computers to fridges, what they mean for us has nothing irremediably "undignified" in it. On the contrary, the category of *vernacular,* defined and exemplified by Ivan Illich, is of real help to understand our world[3]. The vernacular is the world of homemade non-commercial things and skills, managed and handled by the individual and his/her local community, not by institutions, not by professional experts. The mother tongue is one of these precious commons. Domestic labor belongs eminently to this category, and it includes educating, cooking, basic hygiene, and security skills... This very rich and pregnant world of non-institutional and non-commercial values gives the context for *vernacular values* (Illich, 1980). Quite a lot of these values today are correlated with ordinary artifacts and this is exactly the field of ordinary technoethics.

Focal things and vernacular culture depend on skills, not on principles. All these humble devices and familiar practices command the progressive learning of ethical skills. These skills are not limited to "nostalgic" (Heideggerian) contexts, chopping wood and cooking homemade marmalade. Writing an email is such an ethically laden ordinary activity. When writing an email, you may wonder whether an email is more appropriate in the given situation than a phone call, or texting, or writing a letter, or a chat online, a Skype conversation, and so on. You may carefully consider when to send it, to which one of the person's addresses, the length of the message, what kind of signature to put at the end, and so on. These kinds of considerations involve ethical assessments, and the skills for assessing these values are constantly applied and learned in everyone's ordinary life, private and professional. As far as I know, nothing in it comes from school, moral lectures, or pious readings. Emails have been a spectacular empowerment for ordinary users. In corporations and in everyday life,

all these ethical skills, practical training, and acquired sensibility build up the *ordinary* empowerment of users that characterizes the Internet as a whole. The Internet is not exactly an extraordinary technology, there is more to it: the extraordinary human and social flourishing that emerges from technology. The *ordinary empowerment* of users, consumers, and citizens is the ethical phenomenon of today.

The vernacular skills and ethics of ordinary technology are acquired like a natural language: by living among people who use it, by interacting with these people, by trial and error, and in the context of a benevolent environment. It is a culture, the cultural counterpart of our technological material civilization. Perhaps, we have been fascinated so far by our tools. They were rushing over our heads like a tsunami of progress, fun and power, to the point that we never paid attention to their low-level but pervasive ethical significance.

Ordinary technoethics in context

Lifestyle ethics matters. It applies to artifacts so ordinary that they are transparent. I want to draw attention to the *micro-ethical* non-transparency of ordinary artifacts, from the fridge to the smartphone, from industrial ice-cream to Facebook. In these very different contexts, definite micro-actions and micro-skills bring about a continuous flow of micro-choices, micro-habits, micro-acceptations, micro-indignations... Ordinary ethics investigates these ethical micro-issues.

We need to learn how to talk to a person who is at the same time listening to music in her earphones or using a laptop. Her behavior has recently shifted from "offensive" to "slightly inattentive". Removing earphones from your ears in a hurry when someone talks to you or shutting down the laptop, tablet, or smartphone for the

occasion, these are new ethically laden behaviors. But symmetrically: talking naturally and remaining non-judgmental when talking to a person equipped with earphones or half absorbed in her laptop can be an ethical challenge. Talking to an audience where someone is at any moment checking the mail on the phone is everyday practice for those of us who teach students or lead business meetings. The effort not to check the mail during a family dinner or a conversation is everyday quandary for almost all of us. Technology, in this case, has an impact on the systemic whole of communication (global context and perceived values). This change in interpersonal values, for the worse or for the best, is driven by these micro-behaviors. Let us browse some of them.

Cell phone. About communication again, and economy: for cell phones, the choice of a pay-as-you-go account is an ethical choice, as opposed to a fixed rate subscription, possibly “no limit”, with a new cell phone for free once a year. When opting for either a smartphone or a “dumbphone” (just phoning and texting), the relevant factors to assess are not only costs, “needs”, and prestige, but the micro-consequences of being permanently online, reachable, informed, and spammed. Here, consumer choices validate or invalidate the global economic trends and their massive consequences. We are not globally accountable for corporations' frenzy and the tumults in political economy, but we are accountable for the micro-values we implement in the world. These micro-actions supply the energy for Leviathans and Moguls.

Mobility. Transportation and 'mobility' are in line with this argument. We should not underestimate the significance of, for instance, the habit of walking to the grocery store (instead of driving) when possible, the habit of using stairs when possible (instead of elevators or escalators), and every ordinary but ethically laden choice of

this kind. The ontological category for these actions is precisely *habitus* in Latin, *ethos* in Greek. In a public place, where escalators are crowded with valid persons (more or less overweight) and the stairs are empty, this is a (negative) image of the revolution to come.

Food. Food is a perpetual field of ethically significant micro-actions. The list of what a person eats in a day is an excellent assessment of her micro-ethics. It can be estimated in terms of self-care, economics, environmental, political concerns, and more. Here again, the technosystem that feeds us is unseen, transparent, or voluntarily ignored. A commonsense ethics of food can immensely relieve the current ecological and economical harassment of this world. In ethics, and more than anywhere else in ordinary ethics, the simple fact of perceiving the ethical relevance of something is the clincher. This ethical awareness invites the consistent agent to a more sustainable attitude. This is why any neglect for the ordinary is in itself ethically wrong. The transparency of technology is perhaps today the main provider of these micro-neglects. We are simply not aware that we are acting as moral agents, so we carry on eating out the planet, burning it up, and so on.

Energy. Do we perceive energy consumption as resulting from decisions that include alternatives? Air conditioning, overheating the flat, domestic appliances left on standby are not a value-neutral environment of modern life. They enact a systematic exploitation of natural resources that tragically ends somewhere in the oppression of human persons for securing these resources. Staying at home can be a relevant decision resulting from ordinary technoethics analysis. To skype (videoconferencing on the Web) instead of visiting, for instance, to shop online instead of driving to the mall, or just to think again before shopping, are in the same line.

Medias. Ethical awareness in the face of the medias belongs to the ecology of mind in the information age. We are extraordinarily lenient with the representation of violence (on TV, movies, video games, etc.). Ordinary technoethics here takes the problem before it bursts out at a larger scale (then people say “I don't understand how our Kevin could take a gun and shoot the people he doesn't like, he was usually so quietly absorbed all day long in a video-game.... uh.... consisting in taking firearms and shooting people”). Unaware of the ethical relevance of *ordinary* games and fictions, we are surprised by “extraordinary” misdemeanors. There is a link, not a determinist influence, but an ethical environment characterized by the lack of micro-ethical sensitivity. The number of murders, gunshots, rapes, and so on that a person consumes in a day is an excellent assessment of her micro-ethics. It can be assessed with scales of mental hygiene, media submissiveness, and not to forget: time waste.

Facebook. Since nothing is more ordinary, today, than being online, ordinary technoethics considers online conduct as one of its main fields. Charles Ess (Ess, 2009) and the Association of Internet Researchers[4] explore this field and set an agenda and a method clearly departing from old-medias visions of the digital world and predigital prejudices. Facebook is for the moment (2012) the perfect case study. The obvious concern for privacy comes first, but common sense is enough to calm it down: when you open your private life to a marketing and advertising merchant, exactly as wide open as it is to your “friends”, you need not complain afterward—you'd better double-check your “friendship” circle, because there is one data-dealer undercover. More serious micro-ethical concerns crop up behind this one.

Time consumption, in any form of Facebook activity, is certainly the most important issue. We need to remember Seneca's first lesson in wisdom: reappropriate your own time![5] The time consuming attraction to Facebook is obviously correlated

with an obsessive greed for images and news, a real data-voyeurism, intertwining social exhibitionism and petty snobbery. Danah Boyd's seminal dissertation about teenagers and social networking sites gives a clue to name (and shame) the feeling of moral discomfort associated, for some of us, with Facebook's style web sites6. Boyd details the obsession with status and ranking, assessed by the number of “friends” and inventing thereby a stupid new meaning for the word “friend”: an online status dependent on a mouse-click. Facebook's atmosphere is far form “cool”: Ivy-League snobbery, highschool gossip, and teenager bullying as standards of a normal new sociability. Add the fact that all this takes place in a privatized and merchandized enclosure occupying the center of the digital commons. This fact points right to the worst menace for the independence of the Internet.

However, technoethics takes no pleasure in shallow criticism of trendy habits. Instead, it suggests a self-reliant response to the menace. Facebook-like technology is obviously contrary to basic Internet values, the ones that can be found in classical online declarations[7]. But we need no crusade against Facebook, no assertive demonstration of its intrinsic evil. All we can do is all we have to do to dislike Facebook-like sites: just micro-(non)-actions, just don't connect, ever. When “confronting” Facebook (when asked to connect by a link or by a person), we are in an ethical situation of ordinary technoethics, a typical one.

Resources and Methods

Ordinary ethics at its best can be a resource for inspiring and pragmatic methods, rather than a patronizing analysis of our time. Furthermore, a lot of cultural resources are still to be invested in technoethics provided that we can use a bottom-up method in order to achieve an ethical reappropriation of technology in ordinary praxis.

On the whole, we need to revive *wisdom* cultures. We have frantically embraced the quest for knowledge, science, and technological power, and we have abandoned the quest for wisdom. Our original miscalculation was that knowledge and power could spare us the efforts of wisdom. Now we are wondering: should we travel back to this missed crossroad? How far backward is it? Can we find an alternative road with a junction to wisdom?

To reinvent wisdom cultures in the context of modernity something must be changed in the meaning of wisdom: it cannot be heroic wisdom, featuring the sage as an exceptional hero, but *ordinary wisdom*. As for the wisdom we need, everyone can be a *junzi* (君子**),** the Confucian ordinary performer of ethics (Wong, 2011), or Seneca's "proficiens", the progressor and not professor in wisdom (Roskam, 2005). Ordinary ethics can only be reached if we globalize philosophy, and particularly if we hybridize Asian and Western thought to grow stronger concepts, robust enough to survive in modernity, robust enough not to be suffocated by "exact" science and irresistible technological power over the material world[8].

This way, we can reanimate a real *awareness of the ordinary* in the midst of the hype for futile prowess. Our "blasé Dasein" is submerged by affluence; we could use everyday a Buddhist and Zen capacity of attention to the ordinary. This attention shift introduces a specific postmodern care for small things and unremarkable moments—not far from "mindfulness" psychology practices.

The ordinary wisdom of technoethics refers to a form of self-reliance, characterized by its take on responsibility. Responsibility here does not mean accountability (justification by discourse), but rather ethical responsiveness in a very dynamical way, even if this responsiveness is ordinary, not heroic. This ordinary self-reliance is a concept to be evolved from neuroscience (Varela, 1999) to go deeper

into the idea of “ethical natives” in the technological age, as well as from Asian philosophy (Hershock, 2006) to go deeper into non-action and humility in the face of reality.

After wisdom, and certainly as a part of wisdom, the next resources to be exploited are the philosophy of *importance* and the philosophy of *care*. They provide a solid ground for an ordinary pragmatics of ethical philosophy, founded on Harry Frankfurt's emphasis on the “importance of what we care about” (Frankfurt, 1988). Frankfurt's approach suggests starting afresh from a disruptive simplification of the ethical: ask yourself what is really important and what you can do to pragmatically care. Following this inspiration, ordinary technoethics stresses the importance of micro-uses and micro-concerns with artifacts and invites us to *take care directly* (not symbolically by professing principles) provided that we have taken the time and pain necessary to determine what is important. Not urgent, or cool, or hot, but just important. This means reappropriating moral agency. This process will demonstrate by the mere fact of practice that moral agency seemed to be built-in in the artifact, most of the time, just because we did not (properly) *care*. Infobesity or energy greed thrives on the simple fact that we don't care, we don't mind.

Yet, how can we care about the ordinary of technology? The question is not a new one. It was embedded in the first conceptions of sustainability issues, as early as in the 1970s: sustain your own life in your actual environment, reappropriate the skills needed for that, and do not delegate the essential (time, health, education, environmental accountability...). To reappropriate the skills to cope with material and immaterial abundance (food, car, and cellphone calls...) consists in meditating and applying two values, satiety (being able to have enough) and frugality (caring about satiety).

In this way, the technoethical turn in our common culture will not come from above, from “World Summits” or imposed restrictions, but from the end user empowerment, as opposed to the designer-end of technological innovation. We now innovate at the bottom and with tremendous success (von Hippel, 2005). Ordinary technoethics, by essence, consciously focuses on the user-end. Even engineering ethics (designer-end) is more and more driven by real uses, which are so inventive and unpredictable. This fact is not true for hi-tech only. It holds for food hygiene (fat and sugar) or food micro-politics (organic, no palm oil), and all other sectors of the economy: we are in a position to shape the technostructure upwards from the bottom of the pyramid.

Concluding Remarks

Although the big picture is immense, like its ambition, ordinary technoethics is captured in a short list of four global shifts:

1) a shift from the scholastic to the pragmatic

2) a shift from the political to the ethical

3) a shift from delegation to personal sustainability and reappropriation (awareness, responsibility, responsiveness)

4) a shift from avidity to frugality.

The crossroad in itself, toward a sustainable lifestyle, is not a new one. But the method is disruptive and at the heart of ordinary technoethics: do not build an abstract scheme from an elite point of view and then impose it by soft power or/and hard power. Instead, construe and pursue a sustainable ethics of the ordinary, from within.

Notes

1. Borgmann 1984, chap. 23.

2. Anscombe's explanation of the general failure of global ethics was the lack of a divine law in modern times (Anscombe 1958). MacIntyre's explanation was the loss of the ancient set of moral and psychological notions (MacIntyre 1981). We are here dealing with a minor consequence at the bottom of the pyramid.

3. “In Rome, it was used from 500 B. C. to 600 A. D. to designate any value that was homebred, homemade, derived from the commons, and that a person could protect and defend though he neither bought nor sold it on the market” (Illich 1980).

4. http://http://aoir.org/

5. Seneca to Lucilius, Letter 1 – http://www.stoics.com/seneca_epistles_book_1.html.

6. Boyd 2008. This brilliant research is accessible online. For those reluctant to read hundreds of academic pages, the “biopic” of Facebook's founder (*The Social Network*, 2010) conveys an easy cinematographic initiation.

7. For a synthetic view on Internet values my suggestion is http://coreinternetvalues.org.

8. Herschock 2006, Ess 2009, Sivaraksa 2009, Puech 2010, Wong 2011.

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