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Towards an ontological foundation of information ethics

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Abstract. The paper presents, firstly, a brief review of the long history of information ethics beginning with the Greek concept of *parrhesia* or freedom of speech as analyzed by Michel Foucault. The recent concept of information ethics is related particularly to problems which arose in the last century with the development of computer technology and the internet. A broader concept of information ethics as dealing with the digital reconstruction of all possible phenomena leads to questions relating to digital ontology. Following Heidegger's conception of the relation between ontology and metaphysics, the author argues that ontology has to do with Being itself and not just with the Being of beings which is the matter of metaphysics. The primary aim of an ontological foundation of information ethics is to question the metaphysical ambitions of digital ontology understood as today's pervading understanding of Being. The author analyzes some challenges of digital technology, particularly with regard to the moral status of digital agents. The author argues that information ethics does not only deal with ethical questions relating to the *infosphere*. This view is contrasted with arguments presented by Luciano Floridi on the foundation of information ethics as well as on the moral status of digital agents. It is argued that a reductionist view of the human body as digital data overlooks the limits of digital ontology and gives up one basis for ethical orientation. Finally issues related to the *digital divide* as well as to intercultural aspects of information ethics are explored – and long and short-term agendas for appropriate responses are presented.

Key words: digital agents, digital ontology, human existence, information ethics, infosphere, metaphysics, reductionism

Introduction

Information ethics has a long and a short history. The long history in the Western tradition goes back to the question of *parrhesia* or freedom of speech in ancient Greece. In his lectures on *parrhesia* at the University of California at Berkeley Michel Foucault analyzes the difference between *parrhesia* and rhetoric (Foucault 1983). According to Foucault, dialogue is a major *parrhesiastic* technique in opposition to a long rhetorical or sophistical speech. *Parrhesia* is essential to Athenian democracy. It is a form of criticism in which the speaker is in a position of inferiority with regard to his interlocutor. The *parrhesiastes* is the one who speaks the truth at his – and "he" is the right word in this context – own risk. To tell what one believes to be the truth can be dangerous in a specific situation, for instance when addressing a tyrant, in which case *parrhesia* becomes a moral quality. But also the democratic *parrhesia* can be dangerous for a citizen opposing his truth to that of the majority. The aim of such verbal truth-telling activity is to help other people (or himself) by choosing frankness instead of persuasion. As Foucault remarks, Athenian democracy was defined by the equal right of speech (*isegoria*), the equal participation of all citizens in the exercise of power (*isonomia*) and the personal attitude of the good citizen as truth-teller (*parrhesia*). This kind of public speech takes place in the Athenian *agora*.

Parrhesia is thus not just based on what one believes to be the truth but implies a personal as well as a public commitment to this belief. The knowledge of the believer is linked to his or her being. It concerns the truth about his own being. "To tell the truth" becomes a moral imperative under particular conditions. The subject of the utterance is aware of what should be as well as of the risks for her own being in case she publicly negates a state of affairs in the name of possible alternatives one of which she believes to be better. Her being must be of the kind to make possible such a *parrhesiastic* utterance. It must

be, in other words, a moral being which includes her capability to assume her existence in all its dimensions and challenges. To take care of one's self (*epimeleia heautou*) was at the core of Socrates *parrhesiastic* role, for instance with regard to Alcibiades, as well as at the core of Cynic and Stoic philosophies.

If we take into account the importance of harmony, respect, and courtesy or "indirect speech" in Eastern traditions of moral life and moral philosophy (Jullien 2005), we might expect a fruitful dialogue with regard to *parrhesia* within the field of what is now being called intercultural information ethics (Sudweeks and Ess 2004; Capurro 2006a, b). We are far away from a comprehensive view of this field. In fact we have just started to look at it as a phenomenon of its own. There is a long path of thinking ahead of us if we want to retrieve and interpret our written and oral traditions under this perspective through different epochs and societies and taking into consideration their mutual influences in practical moral life as well as in academic and literary reflection.

As I suggested elsewhere (Capurro 1995, pp. 97–114) the birth of philosophy in Greece is related to the problematization of the concept of *logos*, understood as a dialogue between autonomous peers in contrast to the heteronomous concept of *angelia* (message) as a process by which the communication of a message is sender-dependent, although the receiver can in principle mutate into a sender (Capurro 2003). I use the word "problematization" in the sense addressed by Foucault in his lectures on *parrhesia*, namely as a situation in which a behaviour or a phenomenon becomes a problem. According to Foucault truth-telling became a problem in a moment of crisis of Athenian democratic institutions in which the relations between democracy, *logos*, freedom, and truth were a matter of debate between the aristocracy and the *demos* or the ordinary people. Following Foucault we can say that information ethics arises when a given information morality, namely the one underlying the concept of *angelia*, becomes problematic. More generally speaking, ethics can be understood as *the* problematization of morality. From this perspective information ethics has to do with the problematization of behavioural rules about what is allowed or not to be communicated, by whom, and in which medium due to basic changes and challenges in the power structures of communication in a given society. Plato's criticisms of writing, for instance in the "Phaedrus," are, if we read them from this perspective, an answer to the question about what part of and how far a *logos* can be written down and communicated through this medium. This answer is different from the one given by Socrates who never wrote down his arguments but who nevertheless questioned the kind of hierarchic message distribution in feudal societies by replacing the concept of *angelia* by that of *logos* as portrayed in Plato's "Ion."

Today, after important changes in the media sphere in the 19th and 20th centuries, we are particularly aware of the role played by media technologies in dealing with the externalization of human knowledge and its impact on the constitution of what has been called "cultural memory." (Assmann 2000). The Western tradition of information ethics was characterized by two basic ideas, namely freedom of speech and freedom of printed works with special emphasis on freedom of the press. A third idea arises now, in the age of the networked world of electronic communication, namely freedom of access or the right to communicate within such a digital environment. With this third idea starts the short history of information ethics that began in the United States some 20 years ago under the label *computer ethics*. The confluence of these ethical concerns of computer professionals with the similar concerns in journalism, library and information science, management and business ethics, and *cyberethics* or ethics of the internet has given rise to information ethics in its present shape (Froehlich 2004).

The recent history of information ethics arises as a process of problematization of behavioural norms of communication in societies shaped by mass media particularly since the second half of the last century. This situation took a dramatic twist with the rise of the internet as a horizontal or non-hierarchic, interactive and global medium for message production, storage, distribution, and exchange. Information ethics understood in a narrower sense deals with ethical questions related to the internet. It arises because this new medium created problems that could not be solved on the basis of traditional rules and roles of hierarchical generation, distribution, storage and exchange of messages under the premises of mass media in democratic societies. What do truth telling or *parrhesia* mean in this new situation? We ask this question when we debate for instance about privacy. What can I say to whom? In which medium? A book, a newspaper, the TV, the radio, a blog, a mailing list, a personal e-mail? But the question underlying information ethics is, I believe, of a broader nature than the problems generated by the internet. In this broader sense information ethics deals with questions of the digitalization, i.e., the reconstruction of all possible phenomena in the world as digital information and the problems caused by their exchange, combination and utilization (Hausmanninger and Capurro 2002, p. 10).

My objective in this paper is firstly to make a brief presentation of what I understand to be a possible foundation of such a broad conception of information ethics on the basis of what I call digital ontology. Following Heidegger's conception of the relation between ontology and metaphysics, I will argue that ontology has to do with Being itself and not just with the Being of beings which is the matter of metaphysics. Ontology is, in Foucault's terminology, the problematization of metaphysics. In a second step I will go into some key aspects of information ethics by putting the question of the ontological status of the human body in the centre of my reflections. I will argue that the reductionist view of the human body as digital data overlooks the limits of digital ontology and gives up a basis of ethical orientation. I will analyze some fundamental consequences of this view of information ethics for digital agents, the question of the digital divide and intercultural aspects of the global digital network. I will also analyze some of the differences between this conception of digital ontology and the one proposed by Luciano Floridi. Finally I will present a long term and a short-term agenda for information ethics and will point to the importance of intercultural dialogue in this field.

On digital ontology

Some of the following ideas on digital ontology were developed in 2001 in an e-mail exchange with the Australian philosopher Michael Eldred (Capurro 2001; Eldred 2001). As Heidegger points out in "Being and Time":

> "Being, as the basic theme of philosophy, is no class or genus of entities; yet it pertains to every entity. Its ‚universality' is to be sought higher up. Being and the structure of Being lie beyond every entity and every possible character which an entity may possess. *Being is the transcendens pure and simple*. And the transcendence of Dasein's Being is distinctive in that it implies the possibility and the necessity of the most radical individuation." (Heidegger 1987, p. 62).

The meaning of Being is beyond any kind of definite answer "if Being is to be conceived in terms of time, and if, indeed, its various modes and derivatives are to become intelligible in their respective modifications and derivations by taking time into consideration." (Heidegger 1987, p. 40) Heidegger's "destruction" of the history of ontology is based on the idea of the "historicality" of *Dasein* or human existence and correspondingly on the historicality of Being itself. The history of our self interpretations and the history of the interpretations of the meaning of Being are not identical but they are inseparable. Heidegger gives an example of how our understanding of Being has "changed over" (*umgeschlagen*) by explaining the genesis of the theoretical attitude with regard to tools and physical Nature. When a tool, say a hammer, that is "ready-to-hand" in an everyday manner is considered independently of its local use within a totality of relationships, that is, considered with a scientific attitude it becomes a corporeal entity "present-at-hand" subject to the law of gravity where the property of heaviness has no relationship to the everyday concern that the hammer is too heavy or too light. Its place becomes "a spatio-temporal position, a ‚world point,' which is in no way distinguished from any other." (Heidegger 1987, p. 413). If not only one being but the totality of entities is articulated in such a way we get the methodological perspective of modern science

> "in which Nature herself is mathematically projected. In this projection something constantly present-at-hand (matter) is uncovered beforehand, and the horizon is opened so that one may be guided by looking at those constitutive items in it which are quantitatively determinable (motion, force, location, and time). Only ‚in the light' of Nature which has been projected in this fashion can anything like a ‚fact' be found and set up for an experiment regulated and delimited in terms of this projection." (Heidegger 1987, pp. 413–414).

The "paradigmatic character of mathematical natural science" is thus not just the application of mathematics to natural processes or the like but the "prior projection" of the entities it discovers. In terms of what theory of science later on called "paradigmatic changes" (Kuhn 1962) Heidegger's conception of the ontological "change-over" articulates the process of world disclosure which presupposes the being-in-the-world itself of *Dasein* or human existence as transcending entities. In other words, in order to project or ‚cast' a world, *Dasein* must be concerned with Being itself otherwise no paradigmatic change at the ontological level would be possible. This means not only that empirical observation is always theory-laden as for instance Karl Popper stresses (Popper 1973). The point addressed by Heidegger is more radical and concerns what the British mathematician George Spencer Brown calls the "unmarked space" that makes possible the difference between "operation" and "observation" (Spencer Brown 1973).

Following a recent interpretation, Heidegger's concept of Being can be understood as equivalent to the unmarked space as conceived by the German sociologist Niklas Luhmann who follows Spencer Brown (Luhmann 1987; Jahraus 2004, pp. 236–240).

In the moment of observation, which is a *timely* condition, the observer necessarily "forgets" the origin of her difference. In the case of metaphysics which operates with the difference "essence" (what is) and "existence" (that is) this forgetfulness concerns Being itself. Heidegger's insight on Being as difference that allows any difference can also be also be interpreted within the framework of Fregean logic. As the German analytic philosopher Tobias Rosenfeldt remarks, Gottlob Frege's difference between "proper names" (*Eigennamen*) and "functions" (*Funktionsausdrücke*) can be used to understand Heidegger's difference between Being and beings as far as Being is not conceived as a property of beings (Rosenfeldt 2003). It allows us to build sentences that make not only a reference to objects but also distinguish between "sense" (*Sinn*) and "meaning" (*Bedeutung*). Living beings, excluding humans, operate with "meaning," i.e., with the reference of the signs, not with their "sense". But as Frege shows, we need utterances with an empty position in order to build a "proper name," i.e., to make a reference (true/false) to an object. Without this "undeterminate meaning of being" (*unbestimmte Bedeutung von Sein*), as Heidegger stresses (1976, p. 62), there would be no language and beings could not be understood as what they are. Human existence deals, according to Heidegger, with this undetermined meaning or "sense" of being as the "place" (*Da*) where determinations or distinctions are possible. The condition of possibility for such determinations includes also the conception of language as social practice, a view shared by Ludwig Wittgenstein in his "Philosophical Investigations" (Wittgenstein 1984). For both thinkers, human existence is conceived as rooted in a community, having to do practically with things in the world. Heidegger stresses the ethical dimension of the "self care" of human existence. From this perspective, ontology is not primarily a special discipline distinct from ethics but it is already ethics in the original sense of this word, i.e., a foundational view of our *ethos* or being-in-the-world with others. Heidegger's conception of ontology as a problematization of metaphysics can be thus understood as a "weak" conception of Being compared to a "strong" metaphysical view, as analyzed by the Italian philosopher Gianni Vattimo (Vattimo 1985). In ethical terms, this "weak" or aesthetical view of Being means a less violent perspective on human action and human society (Sützl 2004).

Digital ontology is, I believe, today's pervading casting of Being. But what does it mean? This casting or understanding of Being is rooted in Western metaphysics and particularly in the procedure of separation (*chorizein*) or abstracting of points and numbers from "natural beings" (*physei onta*) as analyzed by Aristotle in his "Physics" and largely discussed by Heidegger in his "Sophistes" lectures (Heidegger 1991). Aristotle characterizes points in view of their placelessness (*atopos*) although they are positioned (*thetos*) while numbers have neither a place nor a position (*athetos*) (Aristotle 1950, II, 2). Points and geometrical structures derived from them as well as numbers make beings present, as Heidegger remarks, in a different way, namely as geometrical structures and arithmetical entities. Geometric contemplation has a place in perception (*aesthesi*s) while arithmetic, by contrast, "abstracts from every sensuous dimension and orientation." (Heidegger 1991, p. 117) Geometric entities can be treated in their own autonomy as far as they are separated from physical beings. One of Heidegger's main discoveries with regard to the question of Being was that for metaphysics the sense of Being is presence. As presence – together with past and future – is a dimension of time it follows that time is the hidden horizon of the metaphysical interpretation of Being. According to Heidegger metaphysics "forgets" temporality in its full three dimensionality by holding only to the one-dimensional sense of presence or "standing presence-at-hand." If the digital casting of Being by holding only to the one-dimensional sense of presence forgets the question of Being in its full three dimensionality it "changes over" into digital metaphysics. The difference between digital ontology and digital metaphysics is therefore, following this theory, essential if we want to avoid a dogmatic theoretical position and its ethical consequences.

Within the framework of today's digital technology, points and numbers are so to speak "in-formed" in the electromagnetic medium. This means not just the creation of digital beings but, more fundamentally, the interpretation of all beings as digital ones and their world-less representation as "standing presence-at-hand." George Berkeley's formulation concerning the nature of objects of knowledge, namely "Their *esse* is *percipi*" (Berkeley 1965, p. 62) must be reformulated into "to be is to be digital" or "their *esse* is *computari*." But this utterance does not mean that things are conceived now as made out of binary digits or just that bits are different from atoms (Negroponte 1995). Although it is true, as Luciano Floridi in the Preface to *The Blackwell Guide to the Philosophy of Computing and Information* remarks, that

> "the information revolution has also deeply affected what philosophers do, how they think about their problems, what problems they consider worth their attention, how they conceptualize their views, and even the vocabulary they use" (Floridi 2004, p. xii)

It is important to stress that taking into consideration the concept of ontology as already explained, the ''information revolution'' concerns not just the influence of computing and (digital) information on philosophy but the pervading view according to which today we believe that we *understand* things in their being as far as we are able to digitalize them. I am not claiming that all human beings or even a specific group, say, all computer scientists or all philosophers think or even live their everyday lives explicitly within this framework or that they theoretically agree with it. My conjecture concerns the perception that digital ontology under the shape of digital metaphysics pervades in a *prima facie* trivial sense our society as a whole including our scientific methods and our philosophical reflection. It is our ''*Zeitgeist*.'' The already mentioned ''Blackwell Guide'' as well as the complex phenomenon of digital networks and society addressed for instance by the Sociologist Manuel Castells in his influential book on the information age are, I believe, clear signs that this hypothesis is well founded (Castells 1996, 1997, 1998). I am arguing now in favour of an ontological instead of a metaphysical interpretation of the digital casting of Being that allows us to relativize it. Within a theory such as this that avoids the blind spot of metaphysics and takes care of Being as the ''unmarked space'' of human existence the digital casting of Being can be interpreted not as a kind of digital Pythagoreism but as a *possibility* of world casting.

Towards a foundation of information ethics

Why is this appraisal of the difference between ontology and metaphysics a necessary condition for the foundation of information ethics? I think that it is so within two perspectives. The one concerns the relativization of the digital casting of being as the metaphysics of our time excluding or subordinating other perspectives and dimensions of reality. The other one concerns the concept of human dignity and the question of anthropocentrism in ethics. The aim of an ontological foundation of information ethics under the hypothesis of today's pervading character of the digital casting of being is to locate it within a phenomenological interpretation of human existence as a de-centred and therefore only *prima facie* anthropocentric way of being as a sufficient condition. Its leading dimensions concern its temporal three-dimensionality as well as its social character or our being-with-others in a common world. It is not possible now to develop this analysis as I have done elsewhere following the paths opened by the Swiss psychiatrist Medard Boss (Boss 1975; Capurro 1986; Riedel et al. 2003). This phenomenology of human existence is still open in many regards to scientific analysis particularly in the field of brain research.

A basic premise of this phenomenology that takes into account our relation to Being as the unmarked space is indeed the de-centred nature of human existence. Being itself is groundless making possible all theoretical understanding and practical orientation. What Medard Boss following Heidegger calls ''world openness'' is this ''un-marked'' space of our existence as an open and finite context of given possibilities, past, present and future ones, in their partial and socially mediated disclosure. Human existence is characterized by its ''being-outside'' sharing implicitly or thematically with others the ''sense'' and ''meaning'' of things in changing contexts. The concept of communication addresses this original sharing together a common world. In a derivate sense we call communication the sharing of possible meanings within horizons of understanding that we achieve by ''drawing a distinction'' (Spencer Brown). Communication using artificial media presupposes both phenomena, namely our openness to Being as the ''unmarked space'' and the process of making differences. Our ''being outside'' or openness to the undeterminateness of Being is primarily of a pragmatic nature in the sense of the Greek concept of *pragmata*. We have to do with things under a preunderstanding of their being before we start a theoretical process of making explicit the question of whether they exist and what they are as well as further questions of methodological rules for causal explanations in the sciences. Our *bodily* being-in-the-world with others is the original medium of human existence on which the instrumental view of technology in general and of communication technology in particular is grounded (Capurro and Pingel 2002). I call the operation of taking care of our bodily existence within the unmarked space of Being the *ethical difference*. Human existence means, ethically speaking, taking care of ourselves by making a difference between two extreme forms, namely one by which we help each other by taking away the care of the other and putting ourselves in her/his position, ''leaping in'' (*einspringende*) for her/him as opposed to the possibility by which we ''leap ahead'' (*vorausspringende*) of him/her in order to give his/her care back so that he or she can take care of it (Heidegger 1987, pp. 158–159). Between these two kinds of bodily oriented solicitude, one which dominates and the other that liberates, there are numerous mixed forms. What do we primarily take care of? Human existence is originally bodily existence. The body is the primordial medium of our being-in-the-world. Within the digital

casting of Being we can take a distance from it and interpret it as digital data or, more precisely, as a digital message.

The *European Group on Ethics in Science and New Technologies* (EGE) of the European Commission has dedicated one of its recent *Opinions* to this question within the framework of the ethical implications of ICT (=information and communication technology) implants in the human body (EGE 2005). The *Opinion* recalls fundamental ethical principles, such as human dignity, non instrumentalisation, privacy, non-discrimination, informed consent, equity, as well as the precautionary principle that could be in conflict with the view of the human body as digital data as well as with the changes brought up by new digital technologies on human self awareness. I quote:

> ''Human beings are neither purely natural nor purely cultural beings. Indeed our very nature depends on the possibility of transforming ourselves. Information technologies have been considered under this anthropomorphic bias as extensions of man. However, the transformation of the human body has consequences also on the cultural human environment. Under these premises, human beings are seen as part of a complex system of natural and artificial messages that function on a digital basis. In this sense the human body can be seen as data. This view has large cultural effects particularly as it precludes higher level phenomena such as human psyche and human language or conceives them mainly under the perspective of its digitization, giving rise to reductionism that oversimplifies the complex relations between the human body, language and imagination.'' (EGE 2005, p. 27)

Our bodily existence differs, as Medard Boss remarks (1975, pp. 271–285) from the mere physical presence of things in that we exist as temporal and spatial three-dimensional beings exposed to the indeterminateness of Being. *The limits of my bodily existence are, paradoxically speaking, identical to the ones of my world-openness* (Boss 1975, p. 278; Capurro 1994a, b). This special existential statute of the human body is, I believe, a non-metaphysical interpretation of what we call in ethics, particularly since Immanuel Kant, human dignity. The moral imperative concerns basically the respect for our bodily existence in this particular existential sense which includes its finitude as the extension between natality and mortality as well as its groundless indeterminacy that questions all our theoretical and/or practical ambitions of filling it with any kind of representations or artifacts. A decentered existence in this full sense is indeed a tragic but not necessarily a hopeless or even an unhappy existence. The source of morality as the possibility of going beyond our self-interest can be found in this decentered nature that manifests itself also as being able to give only a finite response to the necessities of bodily life. This conception is thus neither anthropocentric nor ontocentric, as no being, neither natural nor artificial, is assigned a prerogative to be beyond the unmarked space which is itself no centre or ''no-thing.'' Our specific moral dignity is grounded in our capacity to exist facing and actively responding to this phenomenon that manifests itself in between us and particularly, as Emmanuel Lévinas rightly stresses, in the bodily face-to-face encounter with the Other (Lévinas 1968), and in our taking care of our bodily existence by ''leaping in'' or ''ahead.'' Bodily existence implies our relation to tangible things. According to Albert Borgman, community is created around ''focal things'' (Borgmann 1992). It is not necessarily eliminated but impoverished by digital communication (Feenberg and Barney 2004). The moral obligation is largely absent in virtual communities (Tabachnick and Koivukoski 2004). We could speak in this case of a thing-oriented ethics.

This existential or world-related concept of morality contradicts in some regards the Kantian view according to which to be human means on the one hand to be a part of the phenomenal world (*homo phaenomenon*) as a ''sensual being'' (*Sinnenwesen*), while we are on the other hand members of the ''kingdom of ends in themselves'' (*Reich der Zwecke*) and therefore of *noumenal* nature (*homo noumenon*) (Kant 1974, p. 69; Kant 1977, p. 550). If we follow Kant it is not possible to assign any kind of moral autonomy to artificial agents, digital or whatever because we cannot make them transcend natural conditions by giving them artificially autonomy and personality which are grounded in our *given* membership of the *noumenal* world. This foundation of morality is metaphysical although it is not based on theoretical knowledge but on the practical and ''factual'' experience of the moral imperative. There is a clear cut between moral human agents on the one hand and pure natural beings as well as artifacts on the other. Kant's ethics is *prima facie* human species oriented but not just to us as members of a natural species. According to Kant humans are not moral beings just because they are intelligent. Intelligence can be also a quality of a ''living corporeal being'' that Kant imagines as an ''intelligent natural being'' (*vernünftiges Naturwesen*) (Kant 1977, p. 550). We could correspondingly imagine an ''intelligent artificial being'' but without any kind of obligation towards himself, i.e., without the moral obligation of ''respecting humanity in his personality.'' (Kant 1977, p. 550) In other words, there is a metaphysical

difference between "intelligent natural beings" as worldly "sensual beings" (*Sinnenwesen*) and "intellectual beings" (*Vernunftwesen*) – Kant considers the possibility of "holy" ones as different to humans as "unholy beings" (Kant 1977, p. 508) – who belong to the *noumenal* world not because of their intelligence but because their freedom and personality are rooted in this "kingdom" and whose dignity is therefore absolute. If we follow Kant, we can create artificial intelligent agents but they would never be able to act as moral beings.

I would like to propose an alternative view on the potential moral status of artifacts and digital agents based on existential ontology. In his Marburg lectures on the concept of time Heidegger compares the representation of a capsule-like subjectivity with a snail that comes out of its shell to have contact with the world. This coming out does not produce its relation to the world. Quite the contrary. It is just a modification of a former relation. The snail, respectively the way of being Heidegger calls *Dasein*, is already in the world also when she is in her shell. If this would be also the case for the relation of water in a glass to the world we would say that water has the way of being of *Dasein* (Heidegger 1979, p. 224). This comparison is not meant in the sense that Heidegger equalizes the way of being of *Dasein* with the one of snails or of other living beings, which are neither "world-less," like life-less matter, nor "world-shaping" but "world-poor" (Heidegger 1983, §42). "World-poor" does not mean, as Heidegger remarks, that this kind of being would be of "lower level" than the way of being called *Dasein*. Heidegger writes: "Rather is life a field with an own richness of openness that probably the human world does not know about." (Heidegger 1983, pp. 371–372). This phenomenological analysis has large consequences not only for instance with regard to the highly controversial question of artificially producing and patenting organic life (Capurro 2005a) but also with regard to the question of whether artificial (digital) agents as we know them today on the internet but also in the field of robotics might be considered as being in an at least potential moral relation to human beings whose moral being is characterized by sharing a common world within the horizon of Being as an unmarked space and taking care of their bodily existence. It is, one could speculate, in principle possible to produce what we could call *existential artificiality* (Capurro 1995a) in which case artifacts should have a bodily and three-dimensional temporal finite existence. I do not believe that the creation of such agents can be done on the basis of algorithms. It would be a contradiction to program an unmarked space which is the condition of possibility for creating such programs that today just simulate cognitive systems (Diebner 2003). In order for a being to will it must be open to the "unmarked space" as to will means to be related to what is not. Our present digital agents are merely artifacts of *our* marked desires. If we trust software agents this does not mean that they are capable of making a moral decision. It is even not necessary to believe that they have a disposition to act morally, autonomy being a necessary but not a sufficient condition for morality (Weckert 2005, p. 411).

In other words, if we consider as the ground of morality not, as Kant does, our belonging to a metaphysical world, but the very fact of living in the world with others exposed to the indeterminateness of Being and responsible for each other as well as for what appears in the world-openness including our artificial products, then we would say that an artificial bodily agent sharing these characteristics could be considered as a moral agent (Floridi and Sanders 2004). Let the question remain open as to how far artificial existence necessarily implies, as Massimo Negrotti in his theory of artificiality remarks (Negrotti 1999, 2002), a difference to human existence. Although I see no impossibility in principle to creating it, I do believe that the kind of digital agents and robots we produce at the moment are far away from this target. The question is then if we should strive for it considering for instance the simple but challenging fact that the majority of human beings to which we are morally committed to take care of live in extreme poverty and lack any kind of active help on the side of the ones who could "leap in" or "leap ahead" into their existence. To invest research time and money in order to create "humanoids" towards whom we would be morally committed seems to me particularly in view of this situation not a question of an anthropocentric morality but of cynicism.

The "infosphere," as Luciano Floridi calls it, is characterized by the "in-formation" of points and numbers in the electromagnetic medium. This means an abstraction from bodily as well as from space-time conditions. As the Canadian information scientist Bernd Frohmann stresses, "ethics concerns the body" (Frohmann 2000, p. 428). He criticizes the one-sided view of the digital casting of Being particularly with regard to the human body by taking as an outstanding example Pierre Lévy's anthropology (Lévy 1971) that he characterizes as a "disembodied ethics of angels" (Frohmann, 2000, p. 428). According to Frohmann, to become a "moral agent" means "to acquire the virtues required to help create and sustain the networks of dependence, those of giving and receiving." (Frohmann, 2000, p. 427) Following MacIntyre's Thomistic reading of Aristotle's ethics

(MacIntyre 1999), Frohmann stresses that rational judgment must join moral faculties in order to constitute a human being. A society of *pure* rational agents whose will is not rooted, to put it in Kantian terms, in a *noumenal* world, is basically a-moral. This is the reason why I believe that it is a basic goal of an ontological foundation of information ethics to deconstruct the idea of the infosphere as an autonomous sphere, independent of the phenomenal world of embodied human agents taking care of each other, and built as a society of *pure* rational digital agents, a kind of parody of the angelic world. The digital network we call the internet allows us indeed to develop new forms of relating to each other in space and time because our being is already opened to the unmarked space of existence. The internet opens new possibilities of acting in and through it into the bodily existential space but it creates at the same time a sphere of permanent virtual digital presence that is characteristic of the metaphysical casting of Being. By giving this sphere the priority in our individual and social lives, i.e., by giving it a metaphysical instead of an ontological character, we might be deprived in various degrees not only of the dimensions of past and future but also of the realm of bodily and thing-related existence.

Information ethics is therefore concerned not only with the question of an ''ethics in the infosphere'' (Floridi 2001) but basically with an ethics *of* the infosphere. An ontological foundation of information ethics aims at questioning the metaphysical realm of the digital casting of Being particularly in view of what Luciano Floridi calls a ''plurality of ontologies'' according to the different classes of ''information entities'' (Floridi 1999). The theory I am proposing now is, to use Floridi's terminology, neither ''biocentric'' nor ''anthropocentric,'' or ''onto-centric.'' It aims at de-centering metaphysics, of whatever kind, by considering the ''unmarked space'' as a difference that allows us not only theoretically but also pragmatically to relativise our ''egocentric'' ambitions – particularly at the moment as we think we would enlarge them by creating new autonomous agents in the infosphere – as well as the moral ambitions of the infosphere altogether whose ''properties'' and ''regions'' are described by Floridi (1999). Indeed *agere sequitur esse* as Floridi remarks (1999pdf, p. 41) but Thomas Aquinas distinguishes between *actiones hominis* and *actiones humanae*, (Thomas Aquinas 1923, 1–2, q. 1, a.1, c), i.e., between actions done by humans and actions having their origin in deliberate will and rationality. In other words, I think that we should be careful in considering ''information objects'' and their actions as having an intrinsic value or even a dignity particularly in the moral sense of the word (Floridi 2003). According to Floridi ''the minimal level of agency is the mere presence of an implemented information entity (in Heideggerian terms, the *Dasein* – the therebeinghood – of an information entity implemented in the infosphere.'' (Floridi 1999pdf, p. 15). Well, this is exactly what Heidegger's *Dasein* is not, namely mere presence! Neither Heidegger's nor Kant's ethics are ''anthropocentric'' (Floridi 1999pdf). Kant's ethics is centred on reason (*Vernunft*) which means that there might be other ''intellectual beings'' (*Vernunftwesen*) as we have already seen. Heidegger's *Dasein* is by no means equal to ''human'' although it characterizes our way of being. Moreover, *Dasein* itself is decentred by Being.

The ethical question asked by information ethics is not just, as Floridi and Sanders state: ''What is good for an information entity and the infosphere in general?'' (Floridi and Sanders 2002, p. 8) but: ''What is good for our bodily being-in-the-world with others in particular?'' The infosphere is there, but *cui bono*? This is, *prima facie*, an anthropocentric view if we forget the ''unmarked space.'' I am by in no way diminishing the importance of the digital casting of Being in our individual and social lives. But we should not identify the grasping of, say, our bodies as data, with the phenomenon of the body itself and its existential dimensions. Although in an increasing number of cases and situations the damage or even destruction of the digital can have a direct impact on the bodily life of people and institutions, the protection of these data is founded not on the dignity of the digital but on the human dimensions they refer to. We are not morally obliged to respect the digital being of SPAM mails as we consider them a morally evil or negentropic action against the infosphere. As Floridi himself remarks:

> ''Things have various degrees of intrinsic value and hence demand various levels of moral respect, from the low level represented by an overridable, disinterested, appreciative and careful attention for the properties of an information object like a customer profile to the high-level, absolute respect for human dignity.'' (Floridi 2003pdf, p. 37)

Floridi's thesis, ''that anything that is, *insofar* as it is, deserves some respect *qua* entity'' (Floridi 2003pdf, p. 41) is a classical metaphysical utterance: *ens et bonum convertuntur* (''being and good correlate''). His concept of ''messages'' as actions that may be (morally) ''unworthy'' as far as they ''affect other information objects either positively or negatively'' (Floridi 2003pdf, p. 40) could become part of a future message theory without restricting the concept of messages to electronic ones (Capurro 2003).

Luhmann's theory of social systems offers a theoretical framework for such a theory in which the concept of message (*Mitteilung*) plays a key role coupled with information and understanding as building the phenomenon of communication (Luhmann 1987). A message is the action of offering something (potentially) meaningful (*Sinnangebot*) to another social system. Today's *message society* is characterized by its interactive and non-hierarchical structure in contrast to the mass media society of the 20th Century in which the one-to-many structure was prevalent. This does not mean that possible conflicts on what kind of messages can be considered as, say, worthless or unworthy is less difficult to analyze from an ethical perspective than it was in former times. Equating evil with digital entropy restricts this problem to the infosphere.

Conclusion and prospects

The consequences of the ontological foundation of information ethics I am suggesting here are large. They concern such basic issues as the so-called *digital divide* that should not be understood primarily as a question of how people can get access to the internet but on how the digital casting of Beings affects, for better or for worse, our everyday lives and cultures (Scheule et al. 2004). Instead of viewing human existence as part of the global digital network, we should twist this perspective. ''Localizing the Internet. Ethical Issues in Intercultural Perspective'' was the title of an international symposium organized by the *International Center for Information Ethics* (ICIE) and sponsored by *Volkswagen Stiftung* (Capurro et al. 2006). Information ethics addresses questions of the intersection of the infosphere with the ecological, political, economic, and cultural spheres such as:

- How far is the internet changing local cultural values and traditional ways of life?
- How far do these changes affect the life and culture of future societies in a global and local sense?
- How far do traditional cultures and their moral values communicate and transform themselves under the impact of the digital infosphere in general and of the internet in particular?

Intercultural information ethics is a field of research where moral questions of the infosphere are reflected in a comparative manner on the basis of different cultural traditions. Michael Walzer distinguishes between ''thick'' and ''thin'' morality, i.e., between moral arguments as rooted or located in a culture as opposed to disembodied ones (Walzer 1994). It is a misunderstanding to envisage the intercultural ''thick'' ethical dialogue for instance in relation to the validity of human rights as a kind of moral relativism. Universality is, in Kantian terms, a regulative idea that can only be perceived and partially achieved within the plural conditions of human reason, i.e., through a patient intercultural dialogue on the maxims that may guide our actions. The concept of humanity and consequently the concept of human rights need permanent interpretation on the basis of an intercultural ethical dialogue.

At the practical-political level, i.e., as a short-term agenda, we need indeed a ''*Declaration of Principles*'' and an ''*Action Plan*'' such as the ones issued by the *World Summit on the Information Society* (WSIS). The basic moral principle of the infosphere is the one already proclaimed by the philosophers of the Enlightenment, namely to share knowledge with others or, to put it in the present digital context, the right to communicate in a digital environment which includes the right to preserve what we communicate for future generations. The question of intellectual ownership on the basis of copyright and patenting has been criticized by such initiatives as *Open Source* and *Free Software* and has lead in the scientific arena to projects such as the *Public Library of Science* or to the *Berlin Declaration on Open Access to Knowledge in the Sciences and the Humanities* (2003). It is indeed a good approach to reflect on this complex area with the metaphor ''information ecology'' that has been used for instance in Germany since the late eighties (Capurro 1990). The question of media and the question of institutions that preserve media and messages are at the core of what the French sociologist Régis Debray calls ''mediology.'' (Debray 2000). Thus communication and tradition become the core of information ethics in the digital age. A short-term agenda includes also for instance the question of how information is not only shared but also searched. Search engines have become a core social technology with large ethical implications (Nagenborg 2005). Pervasive computing and nanotechnology and its confluence with brain research and biotechnology are the challenges ahead. But we need, I think, also a long-term agenda for information ethics whose aim is a patient and broad intercultural dialogue that includes also other epochs as well as other information and communication media as the digital ones. We should not restrict information ethics to questions of the infosphere.

The German philosopher Peter Sloterdijk describes three major spherological projects in the history of Western culture (Sloterdijk 1998, 1999, 2004). The first one is the globalization of reason in Greek philosophy which bursts with the rise of modern science. The second one is the earthly globalization that begins in Europe in the 15th Century and bursts in the 20th Century as the imperial ambitions of modern Western subjectivity are questioned by other centres of power.

The third one being the digital globalization that bursts economically very soon after its emergence. In fact the burst of the infosphere means that we become aware of the difference between the digital and the physical not just with regard to the physical world but also to the cultural dimensions of human existence. The question of how the information and communication technologies affect human cultures is a key ethical issue (Sudweeks and Ess 2004; Capurro et al. 2006). The appropriation of modern information technology is not just a technical but a cultural endeavour. Our present debates on privacy – a rebirth in some regard of the classical question of *parrhesia* – show clearly how deeply the use of this technology can affect our moral lives and how different its interpretation can be according to cultural backgrounds and traditions. A recent dialogue that started as an e-mail exchange on privacy between two Japanese colleagues, Makoto Nakada and Takanori Tamura, and myself showed us how deeply cultural biased our conceptions are (Capurro 2005; Nakada and Tamura 2005).

Also this ontological foundation of information ethics is deeply rooted in Western philosophy. This concerns not only its questions and terminology but also its very aim of making conceptually explicit basic rules and presuppositions of human behaviour and human nature and by trying to give them a rational foundation even if it is eventually a groundless one. Perhaps an intercultural dialogue will bring about productive criticisms and new perspectives about this endeavour or even a completely different view of what I mean by an ontological foundation of information ethics. Information ethics can be considered then as the open space where an intercultural dialogue about these issues can and should take place. It is up to us to practice *parrhesia* when giving reasons for our theories.

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