Environmental Philosophy

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Environmental Virtue: Motivation, Skill, and (In)formation Technology

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Environmental virtue ethics faces the problem of motivation: there is a gap between knowledge and action. This paper first analyzes the roots of this problem and discusses possible solutions that require the use of imagination and information technology. Then it reformulates the problem of motivation and the question concerning environmental virtue by using the notion of skill. It sketches the contours of a non-Romantic and non-Stoic virtue ethics that attempts to move beyond dualist assumptions concerning the relations between humans, nature, and technology. In this way, the paper shows how environmental philosophy can benefit from a dialogue with philosophy of technology.

Introduction: Environmental Virtue Ethics and the Problem of Motivation

The question how to shape our relation to nature is central to both environmental ethics and ethics of technology.[1] This paper is meant to contribute to ongoing efforts to connect both fields of inquiry. It starts with discussing a problem in environmental ethics and then moves into philosophy of technology in order to shed new light on that problem.

In the past decade the field of environmental ethics has been enriched by a virtue approach to environmental ethics, which focuses on the question of what character dispositions we ought to have regarding the environment (Sandler 2005, 2). Authors making a case for this approach (e.g., Sandler 2005, 2007; Sandler and Cafaro 2005; Cafaro 2004; Hursthouse 2007; van Wensveen 2000) usually focus on distinguishing the approach from theories that try to describe rules or principles of moral action—in particular its major rivals deontology

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1.   A previous version of this paper was delivered at the First Dutch-German Workshop on Challenges for Philosophy of Technology in the Twenty-first Century, University of Stuttgart/Berlin, 26–27 August 2010.

and consequentialism. Their point is that an adequate environmental ethics requires not only an ethic of action but also an ethic of character (Sandler 2005, 2). Virtue ethics asks the question about the good (life) rather than the right (action).

Proponents of environmental virtue ethics (EVE) face the problem of identifying and justifying the (environmental) virtues. What is a virtuous life and how can we *know* what is virtuous? Moreover, they are challenged to respond to the question if environmental virtues should also aim at the good of non-human entities *without* reference to human flourishing (see, for instance, Wenz 2007). What is the precise relation between human flourishing and nature's intrinsic value—if there is such a value at all?[2]

However, even if these problems can be solved, proponents of EVE need to deal with the problem of motivation: even if we know the virtues and know to whose flourishing they should be responsive, we may not feel *motivated* to exercise and practice them. I shall assume here that this is a major problem today: many educated people recognize the need for a different relation to nature and hence a different way of living (hence knowledge is not the main problem), but fail to *act* upon that knowledge when it comes to shaping their lives and the lives of others. In other words, there is a gap between knowledge and action. For example, many people know that their lifestyle contributes to climate change and has other undesired environmental consequences but fail to make significant changes to their lives.

In this essay, I first analyze the social and epistemic roots of this problem of motivation and discuss possible solutions to the problem in a way that highlights the role of imagination and information technology. My discussion of the role of information technology will then allow me to reformulate the problem of motivation and the question concerning the (environmentally) virtuous life. Using the notion of skill, I will explore a non-Romantic and non-Stoic approach to virtue ethics that questions virtue ethics' dualist assumption concerning the relations between humans, nature, and technology. I will use the examples of climate change and information technology (e.g., the internet) to illustrate the practical implications of my arguments.

The Problem of Motivation: Social and Epistemic Roots

EVE faces the problem of motivation for at least the following two reasons: (1) lack of social, communal support, and (2) limitations to knowledge and agency in a global context and the resulting feeling of fatalism. I will show that both problems disengage us and therefore de-motivate us to become environmentally virtuous.

2.   See, for example, Rolston's criticism (2005).

The social problem: Lack of communal support, local wisdom, and consensus
Historically, ideas about virtue were rooted in small homogenous communities that provided a lot of guidance about many aspects of life, including guidance about how to relate to nature. There was a high degree of communal agreement, and moral wisdom, based on common experience and activity, was readily available. Therefore, people who wanted to be virtuous were backed up by a tradition and a community. The paths and patterns were available to them. By contrast, in a modern, global, and pluralist context, it is not clear how those of us who wish to exercise environmental virtue can receive sufficient social and communal support. Modern society regulates, manages, and controls relations to nature in a different way than traditional, small communities: it is not in the hands of a relatively small group of people but has been centralized (modernity) and dispersed—some would say *globalized* (late modernity). It has been de-localized and de-communalized. In addition and related to this process, there is no consensus on how to shape our relations to nature and on how to shape our lives. Thus, there is a many-faced "social gap"; we are uprooted, and it seems that we are slowly but certainly becoming the atomistic individuals presupposed by liberal-contractarian philosophy. Why should we *care* about the environment, commit to environmental virtue, if we stand alone? We are motivated to become free-riders—an attitude that, as is well-known, leads to the so-called "tragedy of the commons," in this case the gradual deterioration of the shared natural environment.

For example, today many people are not motivated to do something about climate change, and one of the reasons is that there is lack of a global consensus on the urgency and scope of the problem and on who should do what to solve it. There is no ready solution provided by tradition, and many of us do not feel that "I" or "we" (e.g., our nation) caused the problem and therefore have the responsibility to solve it. This attitude is strengthened by the fact that technological action is often not experienced as individual or communal action but as a "system" that is beyond us. We feel that we are not engaged in technology, in what is done to nature. This takes me to the next problem.

The epistemic problem: We don't know what we're doing (experiential gap)
Related to this social gap we face an epistemic gap: a problem about knowledge. Given the global scope of technologically mediated action we are no longer in a position to fulfill one of Aristotle's epistemic conditions for responsibility: we no longer know what we are doing. And how can we possibly hold anyone responsible if she does not know what she is doing? Of course we often know the immediate consequences of our actions. But this is insufficient to accept full responsibility: while we are not *completely* ignorant about the consequences of our actions, there

are significant limitations to our knowledge since technological action involves many actors, our individual contribution is small, and its consequences are not often directly experienced. This is not only true in space, but also in time: we face uncertainty concerning the consequences of technological action. But if such an "experiential gap" (Briggle and Mitcham 2007) limits our moral imagination (Coeckelbergh 2010), how can we feel motivated to practice environmental virtue in our personal lives? It seems that we cannot do much "for nature" anyway. Fatalism reigns.

Consider again the problem of climate change: we do not directly experience the connection between our own behavior and climate change. I can smell the exhaust gasses of my car (at least if I am not *in* the car) but I do not experience what these gasses do to the earth's atmosphere. Of course someone may explain the problem to me and what we can do about it, but when it comes to *motivation*, such theoretical knowledge is not a good substitute for direct experience of technological action and its consequences. We lack an experiential, active connection. Even if someone explains to me that my driving contributes to climate change, I do not directly experience the consequences of what I do, and therefore I am less motivated to change my habit. Another example: we are told about our ecological "footprint," but this abstract statistical measure does not motivate us if and in so far as we do not really *see* or *feel* this "footprint."

Possible Solutions: Stoic and Romantic Imagination

In response to the problem of motivation, one might propose that people should be better informed about environmental issues. For example, scientists should explain the causes, nature, and consequences of climate change. But this is not a solution to the problem as I defined it: most people *know* that there is a problem but fail to *do* something about it. Apparently this kind of (theoretical) knowledge is not sufficiently motivating.[3] Thus, theoretical knowledge is perhaps necessary but certainly not sufficient. Let me therefore explore other possible solutions to these social and epistemic problems, solutions that try to bridge the social and epistemic gaps by means of imagination and feeling.

In response to the epistemic problem, one might consider ways to expand the scope of our moral consideration: "stretch" the imagination (Anders 1956) and expand our emotional scope. The idea is that if we cannot directly experience the consequences of our actions, we should try to imagine and feel them. For example, I may not be able to directly experience consequences of climate change for someone in a distant place, but I can try to *imagine* flooding or draught and its consequences for the lives of people over there. Perhaps imagination and feeling is normally limited to our local surroundings—in geographical but also in social terms (our family, our friends, our community, our country)—but we can try to stretch that imagination and expand those feelings to a more global and universal level. This argument can be formulated in terms of what the neo-Stoic and Romantic imagination can do for us. Let me explain this claim.

For the Stoics, we should try to understand the *logos* of the universe. In modern times this has usually been interpreted in terms of universal reason. But, as I suggested, this kind of reason seems to fail when it comes to motivation. Therefore, we must look for other solutions. Neo-Stoics like Nussbaum emphasize the role of emotions and imagination.[4] Nussbaum argues that we can train our imagination, in particular sympathy, in order to become world citizens (see, for example, Nussbaum 1997). Having local ties and commitments is not wrong at all, of course, but in addition one should be able to imagine the wider, global community of human beings. We are citizens of our city but also citizens of the world.

Similarly, one could argue, we should expand our imagination to sympathize with nature. "Nature" may be seen as the "outer" circle in a concentric worldview, and by using our moral imagination and feeling we can reach out to that outer circle (see Figure 1).

For example, based on this approach one could argue that when it comes to climate change, we should not rely on scientific reason (logos) alone. Motivation can genuinely grow if we (1) imagine the (potential) consequences of climate change for distant others by using our imagination and empathy, and if we (2) imagine the consequences for nature as a whole, including human and non-human living beings.

Furthermore, imagination can help us to relate to the natural non-human sphere (nature, animals, and plants). The Romantic imagination asks us to imagine ourselves as part of nature, living in harmony with nature. Again we are not motivated because we grasp the *logos* of the universe, but because we *feel* that there is this kind of harmony—perhaps we even experience a mystical union. Then climate change is not happening somewhere else but is happening here and now and *to ourselves*. Nature is not "out there"; we are nature.

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3.   Note that one may also propose to re-define the problem in terms of *akrasia* or weakness of will, but this does not solve the problem either but merely re-states it: it does not help us to understand how people can be motivated to act according to their judgment or how they can become stronger-willed when it comes to environmental issues.

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4.   Note that this view is also inspired by the moral sentiment tradition, for example Hume and Smith, since it is held that morality is a matter of feeling (e.g., fellow feeling) rather than reason (alone).
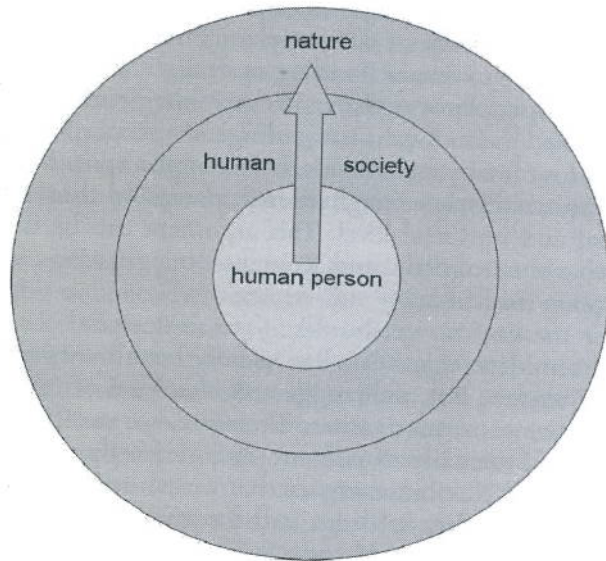
Fig. 1: The neo-Stoic imagination of nature

At first sight, this solution seems attractive: we could try to imagine not only that we are all citizens of the world, but also that we are part of a worldwide "biotic community" (Leopold 1949). If virtue can only flourish in a communal context, then why not enlarge "community" to encompass all people and perhaps all of nature—human and non-human? If the world is "too big" to experience, then one solution is to enlarge our sight. The world is not too big; our imagination is too small.

I sympathize with this view. However, I fear this approach is not sufficient to solve the problem of motivation. The mass media already provide plenty of images that can aid the development of global environmental imagination and feeling; yet this has not been sufficient to motivate many people to make significant changes in their lives and in their political choices. Moreover, perhaps the Romantic imagination is not only ineffective but even "dangerous": we might indulge in feelings of peace and wonder, celebrate union and harmony, but still not exercise environmental virtue if and to the extent that we become detached from the people and the "nature" close to us. We may come to "care" about "the world," "nature," "the universe," and so on, but at the same time have less strong ties to concrete human-human and human-nature relations. Thus, the danger is that there is no balance (1) between contemplation and action, and (2) between self-concern and concern for not-self. Both Stoicism and Romanticism are likely to

remain detached, disengaged ways of thinking, and if this is the case then the gap between knowledge and action remains. Then not only (universal) reason but also imagination and feeling (used in this way) risk detaching us, disengaging us from the world. This means that the social and epistemic problems remain unsolved. If the problem of motivation is rooted in forms of social and epistemic disengagement, then reason, imagination, or feeling are not solving the problem in so far as they promote disengagement.

Islands of virtue

To mitigate the dangers related to these expansions of moral imagination, one could propose that the imaginative practice of virtue should be rooted in, and perhaps even replaced by, more concrete social and communal structures that support exercises of virtue and help to reach a consensus (a response to the first problem) and to *localize* relations to nature (response to the second problem).

For example, in response to climate change, communities may try to generate their own renewable energy, build sustainable houses, organize their own transport (support use of bicycles, support car sharing, etc.). Moreover, empirical research on outdoor education shows that personal experiences in field trips, hiking, camps, adventure activities, and other outdoor activities promote better relations to nature and to others (see, for instance, Palmberg and Kuru 2000). If such activities become habitual and embedded in a community (or if they build and maintain that community), we may expect more motivation and hence more environmental virtue. I write "habitual" since, as Aristotle already knew, virtue is a matter of development and training. For example, I will never get into the habit of running if I do it only a few times. Similarly, sustainable and climate-friendly living requires training. And for those who lack the motivation to start, a group or community provides a good supporting, *motivating* structure.

The advantage of this solution is that there is communal support and that "relations to nature" do not remain an abstraction but are part of local, communal practices. This is why environmentalists sometimes say that we should think globally but act locally. Our imagination should expand to the larger world in order for us to achieve better understanding; however, one cannot *act* in *the* world but only in particular, local contexts. Nature remains abstract unless one engages in concrete (outdoor) activities.

Moreover, alienation from technological action can be decreased by re-localizing technology: by bringing it "down" from a global to a local level. Then technology is not an alien force, something "out there," but something *we* do. Such a re-integration of technological practices and communal practices (as a response to modern disintegration) does

not only help to solve the problem of the social gap and motivates us; it also seems to solve the problem of the experiential gap: at a communal level, we experience the consequences of our technological action in a more direct way and can take responsibility for it.

To create "islands of virtue" that may inspire others to also live in an environmentally virtuous way seems a good idea. They may not only "spread the word" (logos), but they may actually spread their way of living and doing (praxis) by trying to be *exemplary*—a way of motivating people that has always been promoted by virtue ethics. However, to the extent that the implementation of this idea takes on a "sectarian" form, this solution has its own problems, which make the idea of "islands of virtue" less attractive.

First, if they remain isolated from the rest of (modern) society, environmentally virtuous social groups and communities may create a "we" against "them" feeling (well-known in social psychology), as can be observed in religious groups as well as football supporters. Moreover, this solution may generate many groups that do not necessarily share the same ideas and—once again—this pluralism may lead to intolerance and even violence vis-à-vis groups who do not share the same (environmental) ideas. Thus, one should add at least the virtue of tolerance and non-violence to the list of "environmental" virtues.

Second, even if tolerant "islands of virtue" are formed, then as long as the overall modern structure of society is sustained, these groups and communities remain subject to larger, more centralized structures that try to control them, exercise power over them, normalize and discipline them. This can happen at national and transnational levels and may involve governmental as well as non-governmental organizations. In the case of climate change, for instance, actions are taken—or actions are *not* taken—by national and international political institutions which do not necessarily support local environmentalist communities. Moreover, such groups are forced to operate within existing institutional frameworks (e.g., legal frameworks) that may even hinder their activities.

Could the internet perhaps help to circumvent or reform traditional power structures? Could it foster more tolerance? Could information technology in general aid the development and flourishing of environmental virtue?

Information Technology and Communities of Virtue

I shall not answer all these questions here, but let me offer a discussion of how information technologies might help to create the right kind of moral imagination, foster the right kind of communities of virtue, and partly close the social gap and the experiential gap. This will then enable me to adjust and revise my position on environmental virtue ethics and the problem of motivation.

Can information technology promote environmental virtue? To ask the question in this way is to assume that technology has an instrumental role: there are bad uses (e.g., when information technology is used to destroy nature) or good uses. Staying within this paradigm for now, I see at least three potential *good* roles for information technology with regard to creating "islands" or communities of virtue.

First, information technologies can help us to experience what goes on in different parts of the world, what happens with different people in different societies and communities. It can help us to establish an epistemic connection between, on the one hand, individual attitudes and behavior and, on the other hand, larger global changes to the natural environment. For example, the internet acts as a (relatively) new "mass medium" that, like TV, provides us with images and information about the causes and consequences of climate change. Thus, in order to know what to do (locally) one needs to know more about the larger world, expand one's imagination, and information technologies like the internet seem to provide this in so far as they inform us about "facts." However, do they also help us to see what is important and *significant*? For example, there is plenty of information on the internet about causal relations between human activity and climate change. But which developments are significant, and how helpful is this information for knowing what we can do here and now in this community?

Second, information technologies can assist community building. Indeed, the answer to de-communalization may be re-communalization. However, this need not involve blind copying of historical structures ("back to the village"). For example, we should take into account that many people today live in urban environments, and we can make use of contemporary information technologies in order to re-communalize environmental action. For example, an organic farming community or a bird-watching society may use the internet to attract more participants, to organize themselves, to communicate, etc. And internet-based communities can assemble people with similar values and ideals, for example, a group that aims to promote climate friendly actions by means of all kinds of electronic communications. However, even such communities will need some localization and roots if they are to motivate people (themselves and others) with regard to the relation to nature. Just assembling people and talking about it via the internet is not enough. Just as Romantic proximity to nature may actually detach us from nature, it seems at first sight that the internet and other information technologies could also lead to detachment. It seems that if environmental virtue is to motivate, it requires us to have relations to nature that are material and earthly rather than (only) digital: we should *do* something and do things in a different way. If this is true, environmental virtue should be developed and exercised on the basis

of "dirty," hands-on experiences of our relation to nature. Moreover, it appears that bonds between people require more than the kind of virtual "communities" offered in the on-line world. In particular, they require mutual bodily and emotional vulnerability. We do not need communities of minds but communities of people. This seems to be undermined by "virtual" communities, which seem to be unconnected to vulnerable bodies and to the "dirty" world.

Third, some people are more environmentally virtuous than others. As indicated before, examples may also motivate. Virtue ethics has always relied on ethical "saints" to motivate people. Contemporary (environmental) sainthood, then, may be mediated by information technology. However, it appears that we also need direct contact with people who live lives we think of as exemplary. This seems to raise a similar problem: if we have no direct contact with these people, is their example helpful at all?

In order to further discuss these problems, I propose that we criticize the instrumental view of the relation between technology and virtue. The claim that information technology can be used in the service of community building (a community of virtue) makes sense, but put in this form it is too superficial and potentially misleading since it assumes that technology is a mere instrument to human purposes. But as I will argue technology is not a "neutral" means to realize pre-set ends (the virtues); it also shapes these ends. Moreover, I will also question the view that the internet *necessarily* disengages us, detaches us from nature.

The Internet, Bodies, and Roots: Technology as Skill

Philosophy of technology has criticized the instrumental view of technology in various ways. Information technology, as any other technology, is not a "neutral" means but also changes our ends. In McLuhan's words, the medium is the message: it changes the way we think, perceive, experience the world, and act in the world (McLuhan 1964). Thus, this approach draws our attention to unintended consequences of technology that are not to be described in terms of cause and effect; they have to do with understanding (hermeneutics) rather than explaining (science) what technology does.

For example, as I suggested, the internet may be said to uproot, disembody, disengage, and disconnect people from their local ties.[5] In *On the Internet* (2001) Dreyfus has famously argued that, whereas in order to act responsibly we need to be able to engage ourselves, commit to projects and to others, and put ourselves at risk as embodied beings, the internet undermines this in various ways. It is worth discussing his criticisms in order to arrive at a more balanced view of the role of information technology in relation to the project of environmental virtue ethics.

Does the internet undermine engagement in rooted communities of (environmental) virtue?

Dreyfus uses Kierkegaard's view about the press (today: the media) and the public as articulated in *The Present Age* (Kierkegaard 1846) to make explicit what he sees as the dangers of the internet. According to Dreyfus, the tyranny of public opinion on the internet destroys concrete bonds between people: the public is not a community; people only voice opinions without commitment and engagement. They remain in what Kierkegaard called the "aesthetic" sphere as opposed to the ethical and religious sphere, where people choose an aim and (choose to) commit to it (ethical sphere) or are *given* an aim and accept unconditional obligation (religious sphere). In the aesthetic sphere people just enjoy the medium's possibilities without having to put themselves at risk; there are no serious obligations. Life becomes a game; reality has been changed into a theatre. This does not promote ethical commitment.

Although Dreyfus admits that people can also make good use of internet (in an *ethical* way: choose your ethical aim and then find information, connect to people, and so on, as means to realize that aim) and that we could employ human mediators, who are embodied and therefore could help us in finding relevant information, we can conclude that according to Dreyfus the internet undermines rather than supports the project of building earth-based, rooted communities.

But is this an adequate interpretation of what the internet does? Let me consider some possible objections, which can be seen as attempts to argue "against Dreyfus with Dreyfus."

First, talking about "the internet" is too general. We have to add lower—or at least different—levels of analysis and study particular (internet-based) technologies, practices, and skills. We must ask: What are we doing? Are we searching for information on the extinction of animals, are we playing an environmental game, are we twittering about an environmental policy decision, or are we watching webcam images of a distant "nature" place? And are these *activities* and *practices* (not "technologies") conducive for the development of virtue?

Second, the ethical option (use the internet to reach your ethical goal) is not only problematic given what Dreyfus (with Kierkegaard) says about choice—this choice risks becoming arbitrary if it is merely conditional—but also assumes a strict means-end distinction. But this distinction has been questioned by Dreyfus and others: technology is more to us than a "mere tool"; it discloses the world in particular ways and promotes us to engage with the world in particular ways.

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5.   Compare similar claims about Enlightenment Reason.

Third, Dreyfus supposes that the internet is all-pervasive and completely disembodying, but surely if we use electronic equipment we remain embodied (as Dreyfus, with Merleau-Ponty and Heidegger, would have to admit), and we remain connected to many networks—real and virtual. If we are on-line our body and our (other) networks do not disappear. We might get in a "flow" and forget our bodies for some time, but this can also happen with other, "offline" activities that require a certain amount of concentration and skill and may be beneficial.[6] It is true, as Dreyfus argues, that the body plays a crucial role in an ethics of obligations, but *this is also the case when we use the internet*. Our belief that we are disembodied when we are on-line or when we are in the on-line or virtual world is a *fiction*—albeit a powerful fiction that may cause us to feel alienated from our body and from our environment. Moreover, when we use the internet there is no strict body/environment distinction to the extent that the internet *is* our environment, or at least part of our environment. We are *already* the mediators Dreyfus wants to have: embodied people who learn to select, who learn skills in the sense Dreyfus understands "skill": it involves the body. We actively relate to our environment as embodied beings. Searching for information is also a skill, for example—perhaps one of the most important skills there is. Internet-mediated activities involve various skills. For example, we may learn the skill of connecting with others via e-mail or social network sites. Information technology does not involve "quasi-skills" as opposed to "real" skills. When it comes to virtue, there is no sharp distinction between on-line and off-line activity: we are still the same embodied people that stand in relation to our environment (on-line or off-line), and a particular skill-plus-information technology encourages us to engage with the world in a particular way—a way that may be more or less virtuous.

Note also that internet or information technology is not just "in" the computer. Mobile technology allows us to be on-line everywhere, for example while walking, and electronic devices can be embedded in all kinds of things (consider radio-frequency identification [RFID] technology). Consider also so-called "augmented reality," which adds elements to the experience of our "real," "off-line" environment (for instance with the assistance of a smartphone). Whether or not such developments are to be welcomed, we cannot simply dismiss them as disengaging by employing the real/virtual distinction. Instead, these technologies require careful evaluation in terms of virtue, that is, in terms of the activities they involve, the skills they require, and the habits and practices they promote (see also the next sections).

Fourth, Dreyfus assumes an opposition between "system" (*Gestell*, enframing) and "lifeworld" (*Lebenswelt*), as Heidegger, Habermas, and other twentieth-century critics of technology do. The internet appears as part of the "system," which seems opposed to our "lifeworld." But according to a different interpretation of Heidegger (see, for example, Ingold's work[7]), we should rather suppose *one* relational world, which cuts through the real/virtual distinction and in which obligations *arise* (come into being) as activities and practices emerge. What we call "technology" and what we call "the internet" is not something "material" or "virtual," if that means something that stands on its own, but is itself connected to, and depends on, the relational world in which we live. Again, surfing, using a search engine, or twittering are skilled activities in Dreyfus's sense. In *On the Internet* and elsewhere the notion of skill allows Dreyfus to draw our attention to the bodily and relational aspects of knowing and being. This approach can aid evaluation of information technologies, but does not justify an a priori condemnation of them as disengaging.

Viewed as such, internet-use-as-skill involves as much risk as any other embodied activity. The other can hurt me—perhaps not physically but otherwise, for example by disclosing particular information about me. In addition, information technologies create their own risks or transform existing risks. The *kind* of vulnerability may change, but vulnerability does not disappear. For example, today we are vulnerable to computer viruses, which adds a risk to environmentally friendly and other actions in so far as they are mediated by computer technology.

Moreover, "what catches me" and "appeals" to me (for example something in the natural environment) should not be situated entirely outside of "technology," if technology is part of the relational world and part of our existential condition. "Even" religion is not such an autonomous sphere; our experience is always mediated and includes material and technological aspects.

Furthermore, reality—in particular social reality—is and has always been a theater, full of simulation; this is how we learn, develop, live together, grow as moral beings. This does not mean that we can no longer ask questions about which activities are better than others. For example, it may well be that "flesh and blood" interaction is better than only playing computer games or that learning about animals in one's local environment is better than having only abstract knowledge about "climate change" or "deforestation in the Amazon." And some games are better than others in terms of promoting (environmental) virtue.

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6.   On the psychology of flow see Csikszentmihalyi 1990.

7.   My interpretation of Heidegger and my use of the notion of skill in this paper are not only influenced by Dreyfus but also by Ingold, in particular *The Perception of the Environment* (2000).

However, the reasons we may offer to justify these claims should not be based on a technological/non-technological or real/unreal distinction. For example, the evaluative criterion I propose with regard to games is: which skills do these children develop and do these skills make them into better moral people (the virtue ethics criterion)? My guess in these cases is that in "flesh and blood" play and in local environmental education children do more to acquire skills that improve their relation to others and to the environment. But both children's games and education involve play and theater and may involve all kinds of technologies, including information technologies. Moreover, which skills children should have cannot be known a priori, that is, apart from experience, from trying out what works and what is possible. Generally speaking, Dreyfus's distinction between the ethical, the aesthetical, and the religious (based on Kierkegaard) is too strict and itself depends on the unity of lived experience, the communion of life. The ethics we need, then, *is* partly exploratory and improvisational: we need to try out things in order to discover new possibilities. It is not "merely" a game or something marginal to our efforts to cope with our condition; life itself is a game, albeit a serious game.

Finally, I fully agree with Dreyfus's (and Kierkegaard's) objections against the tyranny of opinion; something like this is indeed going on today (see, for example, twittering). The internet floods us with opinions. Opinion should not have the last word; it should not replace judgment. However, for moral philosophers it is often the first word, something to start with. And then: enter Socrates.

If these objections are valid, then we can conclude that virtue can be exercised "in" virtual worlds and on-line environments, since even then we remain embodied. An additional argument that supports this position is that we should postulate that it is *possible* for us to practice virtue in such worlds *as virtual-and-real* bodies, since otherwise the virtue ethics objection to virtual violence (see, for example, Coeckelbergh 2007) would lose its justification: if we say that a "virtual" practice can be harmful, then we recognize that there is a link between the virtual and the real. For example, if we say that a particular computer game is harmful to the person's character, then this presupposes that there is a link between the real and the virtual and that there might be other games that can cross this line and make us better people. Another example: some computer-mediated practices and on-line activities can cut us off from local landscapes, but others may draw our attention to them and encourage us to start hiking or engage in other offline activities that strengthen our relation to the environment—not necessarily because they take place offline and are not computer-mediated, but because they encourage direct engagement with our surroundings. The point is not that anything goes, but that in order to find out what is better, we need to look at the whole: at technologically mediated activity, skills, and practice rather than at "content" alone.

If my objections to Dreyfus's view of the internet are valid, then information technologies—in particular the internet and internet-based technologies—play a much more ambiguous and perhaps larger role than first presumed. Information technologies are not just a means that can assist real and virtual communities of virtue, but are themselves directly relevant for the exercise of (environmental) virtue. Depending on the activities, skills, and practices they foster, they can be an obstacle, but they can also help us to become more virtuous.

In the previous argument I have progressed from an instrumental view of technology to a view in which technology and human experience/practice are unified. Consider the diagrams in Figure 2.
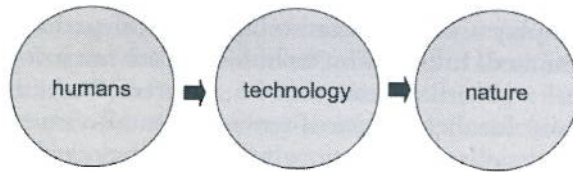
These diagrams represent different models of the role of technology and its relations to human practice and to nature. The view I argued for holds that technology is neither a mere means to reach human ends (e.g., virtue) or a means to do something to nature (instrumentalization and control) nor a "system" that invades us, a danger that we must fence off. Rather, technology shapes how we see the world (mediation). And in contrast to what the mediation model and previous models suggest, it is not something that exists separately from us, as a thing. Instead, in lived experience and practice, nature, human subjectivity, and technology are unified.

This model of human-technology-nature relations is in line with Dreyfus's use of the concept of skill and with other views that emphasize the importance of skill (see in particular Ingold 2000). However, as I have shown, this view can also be used for objecting to Dreyfus's evaluation of the internet. My point is that Dreyfus's objections to the internet are misguided in so far as they are held against the internet in general. Of course his approach and criticisms can be used to criticize particular internet-mediated activities, skills, and practices: those skilled activities and practices that create the illusion that we are disembodied beings that are disconnected from our environment. Such activities, skills, and practices might lead to environmental vice. However, I have argued that this criticism need not and should not be based on problematic technological/non-technological or real/virtual distinctions.
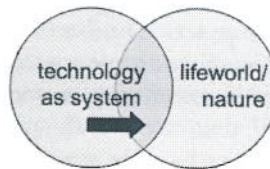
Virtue and (In)formation Technologies

For environmental virtue ethics, this view of the relation between humans, technology, and nature implies much more than merely a footnote to my previous claim that the internet can aid building communities of virtue. It strikes at the heart of standard environmental philosophy.
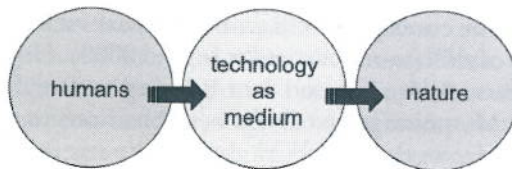
instrumentalization / control

humans → technology → nature

colonization

technology as system | lifeworld/nature

mediation

humans → technology as medium → nature

lived experience & practice

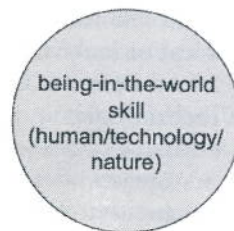being-in-the-world skill (human/technology/nature)

Fig. 2: Models of human-technology-nature relations

First, it suggests that we should be careful when we use the term "nature" in our arguments for environmental virtue—perhaps drop it altogether—since it suggests a strict distinction between the natural and the human-technological, which has normative implications. Environmental virtue does not consist in "protecting nature" from "evil" technology, from the System. Of course technology can harm the environment in the sense that some "technological" activities and practices are harmful. But it is never "technology" as such that is bad, as if it were an autonomous sphere separated from us and from nature. And just as there is no technology without humans, there is no such thing as "wild" nature that can be considered apart from our human efforts to manage "wilderness" or to recreate "wilderness" (rewilding), with technology. Instead of an ethics of conservation, we need an ethics that recognizes that "nature" and "technology" are not "outside" us. "Nature" and "technology" are part of our active and practical relation to the world. The internet, then, should not be seen as something that alienates us from "nature" or from ourselves, but as a term that refers to several related practices that are part of our activities and practices as beings-in-the-world. We are always already "in" an environment, and both are inseparable. Not the internet as such alienates (if this phrase still makes sense at all); particular internet-mediated practices that give us the experience that information technology is body-less and nature-less do. But criticism of these practices cannot and should not be phrased in terms of "System" versus "Lifeworld" or "technology" versus "nature." Saying that we should "protect" the environment is similar to saying that we should protect ourselves from ourselves. We are already in-environment. To see technology and the environment as two separate autonomous entities, which are also separate from the human, is itself a cause of alienation.

Of course we must acknowledge the reality of feelings and experiences of alienation, experiences that may be created by some computer-mediated activities. But these feelings are misguided if they are connected to the view that there can be a "nature" untouched by us. The question is not "how to leave nature alone" but how to shape our relation to the environment, without pre-constructing this environment as "nature" or "wilderness." For example, restricting the computer time of one's children may be a good idea if that promotes their environmental virtue defined as a better relation to the environment, but that environment should not be constructed as a purely non-human sphere in the first place.

Second, if such an ethics must take the form of a virtue ethics at all, we should change our virtue hierarchy: instead of seeing play and exploration as marginal, less important virtues—if virtues at all (see Dreyfus and Kierkegaard on the "aesthetic"), we should place them

much higher in the hierarchy. As Swanton has argued, "all virtue involves creative aspects of practical wisdom" (Swanton 2003, 99), and play and exploration are indispensible for developing new skills.

We might also want to carry out other revisions to the hierarchy of virtue. For example, based on what I have said about the relations between humans, nature, and technology, we must question the place of the virtue of control (or mastery) and the related military metaphors that feed some environmental discussions. Traditional virtues rooted in the Greek tradition of thought are aristocratic virtues and warrior virtues. They fit the colonization model, which requires green "warriors" with courage and self-control to fight off the System that tries to invade the lifeworld. But we are neither at war with nature (a view related to the Greek stress on self-control, control of the nature in us, and the modern idea that we should control nature) nor with technology (the System as the Enemy). Rather, we *are* nature and we *are* technology in what we do as living, situated, developing, skill-learning beings. Moreover, this warrior model does not aid dialogue with scientists and engineers. The result of the warrior model is backward-looking environmental action when bad things have already happened or are happening, rather than forward-looking, pro-active discussions that may prevent environmental "evil" and the resulting environmental "wars." Instead we may want to base the theory of virtue on a metaphorical scheme that draws more on artistic than on military activity and skill: improvisation, play, creativity, and so on.

Third, although this view might lead us to consider different virtues, we do not know (the precise shape or meaning of) these virtues a priori. Information technology is not just an instrument that the environmentally virtuous can use to exercise their pre-fixed set of virtues but shapes what we are and what we understand by the virtuous, flourishing life.

Even if there are no "new" virtues, technology influences what we understand by them. But to establish the precise relations between technology and conceptions of the good life is difficult. For example, does contemporary information technology promote connectivity rather than friendship in human relations, and is the former necessarily a vice? Do fast means of transportation such as airplanes make us less aware of our environment or do they help us to see the earth as a whole? Is the latter a virtue if it disconnects us from our local environment? My claim is not so much that there are causal relations here, but rather, taking the perspective of Heideggerian hermeneutics, that specific technologies make us see the world in a specific way: the world appears in specific way, is "uncovered" or "revealed" to us in a specific way. As said, my aim is (philosophical) understanding rather than (scientific) explanation.

Thus, what we mean by a particular virtue may change again in the future, and if it does it will be partly as a result of new technologies. This dynamic conception of ethics is bad news for those of us who prefer a stable, given ethical basis for their actions; it is good news for those of us who view the idea of such an ethics as a fiction and see ethics as an ongoing experiment in virtue.

In response to this view, one might call for ethical standards to judge the results of these experiments. But this objection misunderstands the view of ethics articulated here. The point is not to try something and then find out if it is virtuous by means of pre-fixed standards. Rather, sometimes we do not know what is virtuous, and then we must revise our standards. (This view of ethics is in line with a Deweyan view of ethics in which moral standards are not banned but are given a different status: they are not objective, fixed standards that belong to a non-human, eternal realm of morality or that are rooted in a fixed, stable human nature. They are crystallized cumulative societal wisdom, and as such they are subject to revision and change: sometimes they fail to guide us.)[8]

Fourth, for the problem of motivation this means that information technology (usually seen as something "external" and material) as much as imagination (usually seen as something "internal" and mental) can *move* us into the direction of the virtuous life: not as a mere instrument to realize pre-set goals (e.g., by giving us information) but as something that is an integral part of the continuous exploration of what is good-for-us. In this sense, this view of motivation escapes the limitations of internal/external dualism or material/mental dualism.

Of course not everything must be open to exploration and play all the time. For example, it is clear that computer game addiction is a serious problem; here the ethical-societal norm is not in question, and there is agreement about what is virtuous. But information technology as skill and practice also has the *potential* to open up ethical possibilities that we did not see before, forms of life that were not disclosed by other techno-human activities. In this sense, information technologies are not merely about *information* but also about *formation*—the core business of virtue ethics. Using them provides not only information but may potentially create moral and other know-how, wisdom.

My point is not only that technology can make particular persons wiser, but also that it plays a role in societal processes of moral growth. With contemporary technologies, this is difficult for us to see, since we are in middle of it all. However, an historical perspective is helpful here. Consider the information technology of (book) printing. Today we consider literacy as a virtue, or at least we can sum up various virtuous

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8.   See Fesmire's interpretation of Dewey (Fesmire 2004).

associated with literacy. But without printing technology, these virtues and indeed the very universalist ethical humanism many of us defend today would have at least a different form, if they would have emerged at all. For example, it is a virtue to empathize with people in distant parts of the world, to recognize similarities between the existential conditions of our lives, etc. This allows us to develop into liberal, cosmopolitan citizens of the world (see again Nussbaum on empathy and world citizenship). But without the mass medium of print (for example novels, but we may also think about earlier genres such as found in the bible), such a *Bildung*—understood as moral development at individual and societal level—would have been very difficult.

It remains to be seen what the internet will do to our ethical ideals and to what we consider virtuous, but the possibility that it may allow us to discover new ideals and contribute to individual and societal moral development must not be excluded a priori. (Just two suggestions: professional philosophy itself, as the systematic and disciplined search and love for wisdom, is today inconceivable without contemporary information technology, which already has transformed core activities of reading, writing, and teaching—and, most probably, thinking. And as far as concern for the environment goes: consider the important role of nature documentaries on TV and other media for environmental education.)

This gives us a developmental view of ethics and a view that emphasizes, like Dewey, skills and know-how as opposed to rules and propositional knowledge (know-that). But does this mean that we no longer need know-that? One way to answer this question is to take seriously the developmental dimension of virtue. In his work Dreyfus has made a distinction between different stages of moral knowledge, ranging from "novice" to "expert" (Dreyfus and Dreyfus 1991). Applying this model, it can be said that formalization and propositional knowledge about the environment may be a useful aid for novices, but that moral maturity requires the development of a kind of *skill*, a moral expertise that grows in practice. For environmental virtue education, this implies that the training of environmental virtue might start at the individual and societal level with rules and laws (e.g., rules that prohibit dumping waste or pollution) but then moves on to a growing moral expertise understood as know-how: the development of new individual and societal skills that shape a better relation to the environment. For example, in response to the problem of climate change we might try to create rules (e.g., protocols), but a mature view of environmental virtue and a better understanding of the problem of motivation requires in addition the development of new skills and practices, for example, developing ecological driving skills, know-how about generating renewable energy, different transportation practices, etc. Let me now

further develop this view of environmental virtue ethics and discuss its implications for the problem of motivation.

Implications for Environmental Virtue Ethics and the Problem of Motivation

Let me first summarize what I have done so far. In response to EVE's problem of motivation, I argued that propositional knowledge and detached reason are not sufficient to motivate people to be "environmentally virtuous." I then asked if imagination and feeling are better solutions to the problem. I showed that this is an attractive solution, but that there is the danger of disengagement. I argued that in order to mitigate this danger, we should root the Stoic and Romantic imagination in the development of concrete and local experience, activity, skills, and practices if it is to motivate environmental practice and virtue. Then I asked if and how information technology can contribute to such communities of (environmental) virtue, which should take a tolerant and non-sectarian form. I argued that although information technologies are also used to "destroy nature" and are said to uproot us from the bodily and the natural, their role is much more ambiguous. First, as instruments they can help us to connect to people and build communities (a solution to the social-motivational problem) and to experience what we do to nature, for example, by showing images of distant places and people affected by our actions (solution to the epistemic-motivational problem)—thus opening up possibilities for creating "islands of virtue" that explore and promote other kinds of relations to nature. Second, information technologies and other technologies are more than instruments (e.g., for realizing virtue); as skills and practices of beings-in-the-world they can change our goals: in relation to what we do they co-shape what we consider to be the virtuous, flourishing life. In this sense, they are informative as well as formative. They are not a mere tool for, but an integral part of, environmental *Bildung* and growth.

This view of information technologies as *formation* technologies re-launches the project of environmental virtue ethics as being intrinsically dependent on technology—with technologies understood not as something external or instrumental to virtue (which we need to contain or which we need to use as a tool to reach our goals) but as activities, practices, and skills with an ethical dimension. Virtue, then, is not something "out there" that we have to adopt, but has to grow in what we *do. (Environmental) virtue itself is a skill.*

Using the term "skill" as opposed to "traits," "capacities," "abilities," and so on stresses the active relation to the environment. Virtue is not attached to the person but is a quality of the relation between the person

and her environment: it is not about what the person "has" but what the person can *do*.

If it is not mental, is it objective? Virtue is neither a property of the person nor something that stands apart from the person. Virtue is not an "object" of knowledge but has to be practiced. The traditional distinction between know-how (practice) and know wherefore (value) collapses. Value is created in practice; it should not be reified: it is not a separate thing.[9] Vice, then, is a kind of ethical disability: a failure to act, engage, grow, and move on.

This implies that, in a sense, if we become more virtuous understood as more skilled, there *is* no problem of motivation, since that problem was formulated in terms of a gap between knowledge and action. If we know how to live, we do not experience a gap between theory and practice. In the light of the ethics I suggest here, moral knowledge should not be understood as a *logos* independent from us which then is to be applied, executed—as if there is "first" logos, the "laws," the "text," the "Book" of virtue which then needs to be turned into practice, as a pre-given design that needs to be (re)produced, inscribed or built into matter. Being virtuous is not about having moral knowledge *of* the virtues. It is about ethical know-how, about learning and *practicing* virtue. Like any other skill, virtue has to be learned and practiced.

If we experience a gap between knowing and doing, then we may have all the information of the world but fail to act since we do not *really* know: we lack ethical know-how. We are not really "learned" since we lack moral skill. We do not know *how* to live good lives if we separate ethics as theory from practice. We do not know how to cope with our environment in a good way. If we think of ethics only in terms of theoretical knowledge, we confuse the concept of virtue with virtue itself. As Bendik-Keymer has recently argued, this is not only a category mistake but is also unethical.[10] Virtue is something that needs to be learned, exercised, practiced, and done. Information technology as practice and skill *can* be part of moral learning if it does not only provide information but also aids us in our ethical formation by allowing us to

explore and practice different good-life possibilities, different forms of the good life.

Thus, I do not deny that many people experience a gap between knowing and acting. I also acknowledge that there is a problem of motivation. I just argue that we should not define the latter in terms of the former, since motivation is not about a gap between knowing-that and action but about a lack of skill. Following this view, we can account for the many people who have knowledge and do nothing about it: they are not motivated since they lack know-how. Often they *want* to do something about it (in which case there is no problem of "weak will"), but they fail to take action since they do not have the skill or they have the wrong kind of skill, connected to a bad habit and practice. Compare environmental vice with smoking: smokers who do not feel motivated to quit smoking know that it is bad for them, but lack motivation because they developed a certain way of doing, the skill of smoking in particular contexts and situations, and they do not really know-how to change that. They are ethically-practically dis-abled in that sense. Motivating them is not a matter of informing them about the risks of smoking but comes by having them do *different* things, enabling them to develop different ways of doing in particular contexts. Similarly, the way forward for environmental change is to provide to people different ways of doing rather than only giving them propositional knowledge about environmental problems. The statistics do not motivate; we tried that approach for decades. But seeing and *experiencing* alternative ways of doing make a difference. Otherwise we remain stuck with bad habits, bad practices, and bad skills—with vice.

This is not to say that in our society we already have the know-how and that we just need to get it out to people. As individuals and as a society we are in a learning process. We have to try out solutions. If we adopt this exploratory ethics, we must be critical of approaches that dismiss play, creativity, simulation, and imagination as things that do not contribute to the development of virtue. We cannot maintain a strict distinction between the ethical and the aesthetical, as Kierkegaard and Dreyfus do. It is only *in* the theater—the real-world social-technological environment—that we can open up new possibilities by *playing*. There is no "outside" this theatre of the social-technological; we cannot really take the position of what Adam Smith called the "impartial spectator." There are no outsiders, we are necessarily insiders; and as insiders, as beings-in-the-world, we have to try out what flourishes and thrives.

Again one may ask for standards to judge what counts as flourishing and what does not. But this is the wrong question. Of course for practical purposes we might need to agree to some extent on what constitutes flourishing, but this can only be done on the basis of experience. Thus, we must reverse the contractarian approach: there is

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9. See also Dewey's argument on reification as interpreted in Fesmire 2004. In this paper I pay more attention to Heideggerian phenomenology, but Dewey's pragmatism is also one of my sources of inspiration.
10. Bendik-Keymer has drawn attention to Aristotle's claim that the aim of ethics is "not to know what virtue is, but to become good" (1103b28–9). Indeed, the point about becoming virtuous is not to know virtue but to "*become* virtuous" (Bendik-Keymer 2010). He argues that "to approach virtue merely theoretically is to make a category error" and an ethical "mistake" (65); instead we need a practice of virtue, know-how rather than knowledge that (79). Philosophers tend to forget that speaking about virtue differs from the pursuit of virtue (81).

not "first" (rational) agreement on principles and "then" application of these principles. Instead, experience is prior to practical deliberation and to a consensus—which may or may not emerge. The very idea of providing a "standard" presupposes that we need criteria first and then can start living differently. Instead I recommend: let us first start to (try to) live differently, and this will give us "standards," which reflect what works for us now and *what makes us virtuous.*

Kierkegaard complained in *The Present Age* (1846) that there is knowledge and deliberation but no action and passion (he says that people commit suicide not *after* deliberation but *because* of deliberation). This is the familiar problem of motivation: a gap between knowledge and action. We know what to do but we fail to do it. But Kierkegaard was wrong on this point: when it comes to environmental ethics, if we are not motivated, we don't *really* know *because* we have not done it (yet). In ethics, as in all other dimensions of human inquiry, there is only one way forward: a leap—not a leap to faith (if understood as theo-logos) but a leap in the living, messy world where we form ourselves as much as we *are* formed by the material, virtual, and other environments in which we dwell. Environmental ethics is not only about making choices *about* technology; it *is* also technology, understood as skilled and meaning-giving activity. If we understand technology in this sense, and not in a merely instrumental sense implied in so many discussions about "technological solutions" today, then we can give a fresh interpretation to Heidegger's suggestion that technology is the danger but that it can also save us (Heidegger 1977).[11] Technology, like virtue, is not decided for, made, or produced, but is a skill that *grows* as we grow and change—ethically and otherwise.

Implications for Environmental Virtue Ethics and Imagination
Exit imagination then? Yes and no: this conclusion does not imply that we should reject the use of imagination, but rather that we should refrain from indulging in *one particular kind of imagination.* The neo-Stoic and the Romantic imagination are *re-creative* uses of imagination. They involve imagination as representation (e.g., of the logos of the universe) or imagination as projection of subjective feeling, of an "inner" mental sphere. Both kinds of imagination detach us from the world as observers of our outer and inner "nature." Environmental virtue as skill, by contrast, requires the development and exercise of the *creative* imagination. This imagination does not detach us from the world but is part of coping with that world, is fully engaged in that world and embedded in practices. It is what Fesmire has called "moral imagination" in his interpretations of Dewey (Fesmire 2003)

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11. Heidegger said with Hölderlin: *Wo die Gefahr ist, wächst das Rettende auch.*

or "ecological imagination" (Fesmire 2010). A capacity for dramatic rehearsal and a tool for moral improvisation in problematic situations, it does not reproduce images but intervenes deeply in experience: it is "engaged rather than self-absorbed" (Fesmire 2010, 188).

Environmental virtue, then, can only be virtue if it *lives* in the experiences and practices in which we are engaged. In this kind of ethics, motivation is not something that we can attain "first" by means of cognitive, detached reasoning, which *then* allows us to practice virtue. If we need the term at all, it is the outgrowth of human and environmental flourishing itself: the experience of good.

In sum, what I arrive at here is a non-Stoic, non-Romantic, and post-Heideggerian view. First, it is non-Stoic not only since it rejects the idea that we should expand our moral consideration to nature by means of detached reason alone, but also since it rejects the Stoic cultivation of *apatheia* (apathy). As Cafaro has argued, apathy is a key environmental vice: "doing better takes work" (Cafaro 2005, 151). However, Cafaro rightly suggests that it is not very helpful to say that people *should* engage. Apathy harms us because it "feels bad" (151). What "motivates" us to engage, therefore, is the joy in the activity itself. It feels good. As Cafaro writes: "The idea that you should engage in particular political activities will almost certainly fail to motivate sustained action. Instead, find out what you are good at and what you find enjoyable" (Cafaro 2005, 153). Thus again the idea emerges that the motivation for environmental virtue lies in the practice of virtue itself: in the way it allows us to grow and in the joy it gives us. This is why Cafaro concludes: "In the end, action is the only answer to apathy" (153).

Second, this is a non-Romantic view. I already argued against the Romantic imagination as a tool to motivate us to exercise environmental virtue. But it is also non-Romantic since it does not offer an a priori view of the good life as "natural" living. One way to clarify this is to emphasize the difference between my view and Borgmann's "device paradigm" (Borgmann 1984). Borgmann argued that if contemporary technology is hidden in the background, we are unable to see that it is bad for us. Instead, he recommends technology that requires more skill. For example, he thinks we should use a wood-burning stove rather than central heating. Things like a wood-burning stove are what he calls "focal things": they require a practice and skill. Borgmann agrees with Heidegger's idea of technology as *Bestand* (standing-reserve) (Heidegger 1977): it is readily available, it is a device, but what gets lost is a (focal) practice that gives meaning to our lives. This suggests that some technological practices (focal practices) are more "natural" and involve more skill, whereas other—modern—technological practices necessarily involve less skill and lack meaning.

In contrast to this view, I have argued here that current information technologies and other contemporary technologies also require skill and can establish meaningful practices. They are not necessarily "readily available" comfort technologies that remain in the background and do not require skill; they *can* allow for skilled engagement with the world. We should not separate a limited amount of "natural" (and therefore good) practices from "bad" technology. Technology is not a "thing," not a "device" but always also practice. Moreover, information is not just *Bestand* (enframing) which we can fully control. The (on-line and off-line) world created by information technology escapes our full control and mastery and is therefore not to be understood in terms of a standing-reserve but rather something more fluid and linked with what we *do* and what we *are*.

Therefore, Borgmann should be re-interpreted as requiring an analysis of the *particular* skill and practice rather than only the amount or *degree* of skill. Central heating requires less skill, Borgmann is right about that, but what matters for motivation, virtue, and meaning is not just the amount of skill but if the skill and the practice put us in a better relation to our environment. Central heating, for example, encourages us to live indoors, which means it shapes us (and we shape ourselves) as beings who live in environments in which we do not directly experience our natural environment, and this has all kinds of consequences for our skills, our practices, and what we consider a flourishing life. (Note that the problem here is not so much that it is an *artificial* environment but that it is a different environment, with different *features* and giving rise to different *experiences* and a different way of being-in-the-world than the natural environment.)

Third, the view that there is one relational world out of which practices grow is deeply influenced by Heidegger's transcendental approach: technology is a condition of possibility for our ways of being. However, as Verbeek has argued (Verbeek 2005), it would be wise if we rejected the technophobia and the tendency to over-generalize technology that can be found in the work of Heidegger and many of his followers. There are different kinds of technology and different kinds of (related) practices. Technology, then, is only as "bad" as our practices are, as our way of life is. Virtue and vice should not be externalized and reified, but should be understood as qualities of our own development—as individuals and as societies—as beings that stand-in-relation.

This approach implies that more work needs to be done on more specific environmental virtue questions: *what kind of information* we need to get us started with the practice of environmental virtue (if action is indeed what we need to overcome apathy), at what *times* or *stage* in moral development do we need what kind of aid to virtue (as individuals and as societies), and *what kind of information technologies* do we need for the practice of environmental virtue (not as an instrument but as a way of life)?

Indeed, we must keep a normative stance and presuppose that some technologies and ways of life are *better* than others. The recognition that this question cannot (always) be answered a priori does not relieve us from the task of normative ethics. For example, it seems to me that if technophiles play around with whatever is offered on the market of electronic devices but are not interested in the environment, then they "play around" in the wrong way: they play with the wrong kinds of (combinations of) devices and programs, things and software that disengage them from the world—or at least let them live in that fiction—and this has ethical consequences. We could say that they should learn different skills and engage in different practices, but these need not be non-technological or exclude any involvement with information technology. If virtue ethics is the best approach to environmental ethics we have, the aim should not be to achieve non-technological purity (the modern-Romantic imperative: "be natural") or the purity of rule-following morality or autonomy ("give the law to yourself"), but ethical purity, which means in the virtue ethics tradition not naturalness or rule-following but the purity of character and praxis (the ancient imperative: "be virtuous").

Thus, the idea that practice and skill are crucial for environmental virtue does not imply the view that "anything goes." If we need a criterion at all (that is, if we need theory at all), then let me suggest that perhaps the main criterion for an evaluation of information technologies in relation to environmental virtue should be: to what extent does it allow us to overcome the fiction of disengagement, that stubborn vice of modern thinking-practice? To what extent does it enable us to live and improve our lives and those of others as the relational beings we already are, as beings who are already deeply involved in a relation with our natural-social environment? Which skills and practices should we develop to become better persons in this sense?

Although there is no a priori, detached way of finding out the answer to these questions, and new ways of living need to be tried out in practice (it is not enough to *represent* ourselves as relational beings in order to motivate us to live according to that self-image), thinking can aid virtuous action by providing ideas at a higher level of generalization and abstraction (1) at particular times when that is needed (i.e., when a particular technology raises an ethical problem), (2) to those who need it most at a particular stage of ethical-technological development (and perhaps we are *all* novices to some degree when it comes to global environmental problems and new information technologies), and (3) in relation to particular technological practices such as information search on the internet, virtual worlds, games, and so on. Nevertheless,

general recommendations will not *motivate* unless they are accompanied by concrete personal development and use of skill. In contrast to the received view, motivation is not what gets action started (what causes or initiates activity in the sense of initiating the motion) but is the fruit of virtuous skilled activity. It manifests itself as a feeling that grows out of doing good, that is, doing things in the right way. Moving in the right direction creates motivation. The problem is not weak will but weak skill: lack of ethical-practical know-how and therefore lack of experiencing good.

Approached in this way, environmental virtue ethics is not some moralist externality that "others" try to "impose" on us (or which we are supposed to impose on ourselves), a "theory" that "invades" our "lifeworld." It is not a word violently inscribed on the virgin surface of our neutral reality or an attempt to discipline our "wild" nature and to restrict our actions. Instead, it is a way of thinking that can only exist and flourish as a way of *doing*: as a good, virtuous, and (therefore) enjoyable and successful form of life.[12]

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