

A Philosophy for Education in the World of Technology

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Abstract

One of the most challenging questions of education in late modern society concerns technology. Development and use of technology is altering our views of world and humanity. In this paper I explore philosophical background for a new kind of critical education that would be up to date with the changed world. This paper introduces case philosophy that German philosopher Günther Anders demonstrates in his main works. The case philosophy is explored in relation to modern rationalism and phenomenology. For to show the intelligibility of case philosophy in the educational context, I first reject modern rationalism as an overly restricted approach to the world for it to be a feasible framework for case philosophy. Therefore, I examine phenomenology, as defined by Heidegger, as a reasonable background for case philosophy. Case philosophy requires the development and use of imagination, which entails exaggeration. In case philosophical thinking the contemporary phenomena are illuminated in their worldliness. Following the exploration of case philosophy, I discuss case philosophical understanding of education in the world of technology.

Keywords: case philosophy, Günther Anders, exaggeration, critical education, technology education

Philosophy's no more communicative than it's contemplative or reflective: it is by nature creative or even revolutionary, because it's always creating new concepts. The only constraint is that these should have a necessity, as well as an unfamiliarity, and they have both to the extent they're response to real problems. (Deleuze 1995, p. 136.)

The divide between theory and praxis is grounded on a view of science and philosophy as free from subjective and social influence. This division has been possible as long as the knowledge or the philosophy is seen apart from society and its praxis. It is, however, an untenable view of philosophical or scientific inquiry as independent enterprise inside societies. Max Horkheimer (1992, pp. 205-269) differentiates critical theory from traditional theory, in that he points exactly to that assumption of independence of theory. The traditional understanding about knowledge and scientific enterprise has been possible only because its foundations in the praxis of life in society have not been clarified (Honneth 1989, p. 225). The interests of knowledge, for instance, direct research questions and, thus, the results of research (Habermas 1969a, pp. 146-168). What questions can be asked? What are the remarkable results of scientific research? Social, or worldly, aspects of knowledge emphasized by several philosophers like Horkheimer, Habermas, Heidegger, Wittgenstein and Günther Anders, to name some of them, raises questions about the philosophy and the nature of philosophical investigation. Philosophical investigation should not only be seen as part of the society but its nature should be questioned in relation to the praxis of the society.

What makes the passage above from Gilles Deleuze interesting is that for him philosophy responds to the real problems by creating concepts. If we understand the “real problems” arising from living praxis, from the plane of immanence, we need to ask, what is philosophical thinking and what is nature of the conceptualization that responds to real problems.

Describing philosophy as an undertaking that investigates the world as an empirical and contingent phenomena is somewhat radical. Conventionally philosophy is seen as the study of the essences. Philosophers in their research divide the world into what is essence and what is merely appearance. It is, however, a peculiar assumption that the essence of the world includes the unessential. It is a metaphysical assumption, and in itself contradictory. As Günther Anders (2002b, pp. 415-416) argues, if one sees the world as contingent, it is not intelligible to maintain the division between knowledge of essences and knowledge of facts. If the world is seen as contingent, then all knowledge is founded on experience.

However, if all knowledge is, as Anders argues, based on experience, then it is possible to do philosophy about everything. Philosophy opens for the contingency of the world and the nature of philosophical inquiry changes. The subject of philosophical inquiry is, then, the becoming of the world, its contingency and its immanence. A further critique against conventional system building philosophy is that the contingent world is a world of change and systems can explain phenomena only if the world is spatial but unchanging. The world, however, has duration. As the world changes, this continuous becoming makes philosophical systems inaccurate and sometimes ridicule (Anders 2002b, p. 412). It is, then, singularities, particular entities, and their relations, which are possible subject of philosophy. Philosophy, thus, is the study of singularities, particular entities and their relations, as world. Philosophical study of singularities is, hence, referred to as inevitable case philosophy. The singularities are explored through philosophical thinking in general and imagination in particular. Singularities in their worldliness can be revealed through cases or exemplars, which are imagined and exaggerated in thought that contemplates what kind of world makes the case possible.

In this essay I illuminate case philosophy and its implications for education. Surprisingly unknown¹, but one of the brilliant philosophers of the last century, Günther Anders (1902-1992) uses a method in his philosophy, which he calls *Gelegenheitsphilosophie* (case philosophy or occasional philosophy). Anders did, however, elucidate case philosophy only to some extent in his main works (see Anders 2002a, pp. 8-20; b, pp. 411-429). My intention is, then, to explore case philosophy and ponder from case philosophical perspective education in the world of technology. My motivation is to outline the framework for philosophical understanding of education in the world of technology. The understanding of something can be intelligible only through some framework of interpretation, in which the thing under research is seen in its inherent context. In what follows, I first present the critique of modern rationalism as defined by Charles Taylor and then discuss the ontology of case philosophy. The ontology of case philosophy as an alternative to modern rationalism makes case philosophy intelligible as a study of praxis. Before concluding remarks I consider case philosophy as an alternative education in the age of technology.

Modern rationalism as natural process of mind: A critique

Philosophy based on modern rationalism represents in its quintessence the view of the world that is divided between the real and mere appearance. As Charles Taylor argues, modern rationalism is characteristic of a disengaged agent, a computational view of the mental function and neutrality of the subject. Modern rationalism is not just characteristically philosophical theories of Descartes, Locke or Hobbes, even more; it is also embedded in the common sense of our civilization (Taylor 1995, pp. 61-64). According to this modern view, the self perceives the world as bits of information, disengages from it, puts it to service in mental functions that work according to means–ends calculus where information is divided into neutral facts and subjective values. This view makes it possible to register mere “facts” cut from values, culture, and the body.

The Cartesian procedure of reason, for instance, should produce, if correctly followed and conformed to, an accurate knowledge of the world. This process is, according to Taylor, ontologized into the constitution of the mind. The same can be said about “simple ideas” or primary properties as the “real” concretes of an objective view of the world. Furthermore, the mechanistic view, as in Hobbes, requires disengagement for us to understand our mechanistic origin and function. Consequently, the more we treat things rationalistically, based on an atomist-computational view of the world and ourselves, the more we are inclined to accept the same view as the true explanation of our own mental action (Taylor 1995, pp. 64-65; Anders 2002a, p. 123; Horkheimer & Adorno 1973, p. 14; Naess 1989, p. 48). For this reason, a common sense understanding shows that, for example, information processing as the model of human thought is somehow right; the model is already learned as the scientific explanation. This can be called scientism, a view that identifies knowledge and science. Science is not, according to scientism, a form of possible knowledge, but rather, knowledge is possible only as science (Habermas 1969b, p. 13). Philosophers have also represented scientism as they have imported the conclusions of some ruling science of the day directly into philosophy (Dewey 1971, pp. 31-32). Hence, justifying even more the rationalistic constitution of a mind that divides the world to objective facts and subjective factors. This simplified analysis illustrates why statistical analysis, for instance, seems to produce better explanations than a case study or why the

psychology of learning appears to be more plausible than the philosophy of education. Education, modern scientist as its ideal subject, should in the spirit of modern rationalism produce the cognitive skills that make possible the objectification of the world and the subject itself. Being of the children and laymen seem to have no distance to the objects they confront. The scientists, however, have trained reason that is disengaged from the world and its objects. The scientifically educated reason masters the objectified world through the experiment that reflects the power of the disengaged reason.

In case philosophical context, however, we have to take for granted that every action is already in the world. Education as praxis is possible only through its worldliness. Our being in the world, as well, cannot be excluded from ourselves as part of the world, for then we would already be outside the world, which would lead us to dualism. The human self cannot escape the facticity of the world where it lives. Two central philosophers of the 20th century, Heidegger and Wittgenstein, have set their philosophies against modern rationalism. Notwithstanding the differences between Heidegger and Wittgenstein, they both see human agency as engaged. Both of these thinkers have practiced a certain kind of “hermeneutics” of the everyday and “hermeneutics” of the language, given in the concepts of “being-in-the-world” in Heidegger and “language-game” based on “form of life” in Wittgenstein (Heidegger 1993; Wittgenstein 1953, 1969; see also Apel 1981, pp. 252-253; Taylor 1995, pp. 61-78).

Heidegger criticizes the Cartesian view of the world for its inability to give an ontologically meaningful explanation of the world and its inability to understand ontologically being of the self (*Dasein*). Descartes divides being (*Sein*) in substances, which are *res corporea* and *res cognitans* respectively. God has created *res corporea* and *res cognitans*, which are independent of each other. The beings as things belong to *res extensa*. The knowing I belong to the *res cognitans*. Human beings belong to both substances through soul (*res cognitans*) and body (*res corporea*). Heidegger rejects this kind of ontology based on substances because it is unable to ground our being in the world or *Dasein* as Heidegger names it. *Dasein* refers to our existentiality in the world. Heidegger strives to understand the existentiality of *Dasein* arguing that worldliness belongs essentially to *Dasein*. To be in the world is the fundament in the

being of *Dasein*. Thus, if we are trying to understand our *Dasein*, we need to take the world as phenomena into account. (Heidegger 1993, pp. 95-100.)

Wittgenstein's later theory of language emphasizes how words can be understood only as part of a language game that represents a form of life. The concepts, "language game" and "form of life", function as a critique of disengaged reason. The disengaged subject is impossible because it has language that is understandable only in relation to the form of life that the language reflects. Subjects are constantly embodied in their form of life. In his *Philosophische Untersuchungen (Philosophical Investigations)* Wittgenstein criticizes a theory of language and meaning which can be called the atomism of meaning. The atomism of meaning represents the view that a word is given meaning when it is linked to an object in process of "naming" or "signifying". This kind of ostensive definition is, however, intelligible only if the one who is learning the language, a child for instance, understands something about the language to which this particular word belongs (Wittgenstein 1953, pp. 31-33; Taylor 1995, pp. 74-75).

For Wittgenstein, the certainty of a method or the "obvious" proposition is intelligible only in relation to their world, which Wittgenstein terms "system" and which constitutes the background to intelligibility. "When we first begin to *believe* anything, what we believe is not a single proposition, it is a whole system of the propositions (Light dawns gradually over the whole)", as Wittgenstein (1969, §141) explains it. He continues (*ibid.*, §142). "It is not single axioms that strike me as obvious, it is a system in which consequences and premises give one another *mutual support*". For Wittgenstein "system" refers to the worldliness of the single propositions or single axioms. Intelligibility of the propositions is possible only in some language game and the language game in that form of life where it belongs.

Research based on modern rationalism produces knowledge which is meaningful in relation to modern rationalism itself. Difficulties arise, however, if we think it is the one and only way to attain knowledge. In addition to that, if the critical analysis of modern rationalism is correct, we are facing a more serious problem. If a method and its underlying assumptions are seen as natural or obviously certain and for that reason as the exclusively valid processes of the mind, then our understanding will be narrow-

minded, since it will exclude morality and subjective phenomena, such as emotions and motivations (Taylor 1995, p. 64; Dewey 1971, pp. 20-21). This kind of narrow-mindedness can be seen in views which emphasize a “scientific” attitude and make sharp distinction between facts and values. Günther Anders (2002a, p. 123) sees in that, common understanding turns to a neutralized attitude, an attitude of consuming. Neutrality is the principle of praxis in consumerism, where products and their consumption require putting aside questions of morality as subjective illusion. However, cutting morality off from cognitive processes is, in fact, itself moral prejudice, for it asserts norms according to which one has to think and behave. It also enforces a theory of morals where morality is in some special way a distinct area in the world, which according to modern rationalism is principally a world of neutral facts. This view, however, is untenable, if we understand ourselves as beings that are inherently in the world. As Arne Naess (1989, p. 49) puts it, “we arrive, not as the things themselves, but networks or fields of relations in which things participate and from which they cannot be isolated”.

The method of modern mathematical physics as the ideal model for educational inquiry, which produces facts and objectifies the life-world, removes the research phenomenon from the relations that it essentially has. Nevertheless, the objectifying research has to assume being-in-the-world for both the researcher and the object as a necessary condition for all things and entities including science itself. Thus, science or scientific methods are not views from nowhere, but rather science asserts its own praxis in the world (see Heidegger 1993, pp. 362-366).

That educational phenomena are already in the world is for case philosophy the framework for inquiries exploring how a phenomenon relates to other phenomena. The relational aspect of phenomena is the rationale for case philosophy.

The ontology of case philosophy

Even though case philosophy radicalizes or even contradicts Heideggerian philosophyⁱⁱ, I will explore Heidegger’s analysis of phenomenology as an intelligible ontology for case philosophy. Heidegger defines phenomenology as the study of phenomena, which means that which shows itself in itself, *Sich-an-ihm-selbst-zeigende*. The concept ‘phenomenology’ implies an imperative “to the thing itself!”

What this *to the thing itself* implies becomes understandable through analysis of the very concept of 'phenomenology'. The word has its origin in the Greek language and that is where Heidegger in his *Sein und Zeit* grounds his analysis of the concept. Etymologically '*phainomenon*' comes from the verb '*phaino*', which has its root in '*pha-*', '*phos-*', meaning light and brightness. Thus, with the term 'phenomena', Heidegger hints at something that shows itself as it is, as something that can be revealed (can be brought into daylight). Beings can, however, show themselves in different ways depending on the modes of approaching them. A being can even show itself as something that it is not, as *Schein*, semblance. However, semblance is possible only if there is something which is behind the semblance, that is, a phenomenon (Heidegger 1993, pp. 28-29).

Heidegger refers to Aristotle, who argues that '*apophainesthai*', which can be translated as unconcealing or revealing, takes place in discussion. *Logos* (reason and speech) lets those who speak to each other see something, that is, in discussion something is unconcealed for reason. According to this interpretation of *logos*, truth does not imply correspondence between propositions and reality. Furthermore, *logos* unconceals the beings discussed in their togetherness. (Ibid., pp. 32-33.) In immediate perception things or events appear in their singularities, but through *logos* they can be comprehended in their togetherness. Therefore the subject and the object are not projections of two different substances but belong inherently to the same reality that can be called a world. (Heidegger 1993, p. 52 ff.)

Thus, phenomenology is the use of *logos*, which unconceals the phenomena in the discussion about the phenomena. Phenomenology studies what is concealed and reveals the concealed as it is. Revealing, the phenomenological study, makes the being under discussion understandable and explicates its foundations. Phenomenology is thus ontology and ontology is possible only as phenomenology (Heidegger 1993, p. 35). Heidegger presumes that for *Dasein* (for humans) the beings, *die Seiende*, are concealed.

Heidegger omits, however, one central problem in phenomenology. Why is the world or *Dasein* in a situation where other beings (including *Dasein* itself) are concealed from *Dasein*? Günther Anders (2002b, pp. 420-421), who points out this problem,

sees concealment as a necessary condition for individuality or self. If the self, as *individuum*, were completely open, then it would not be this or that particular self. Thus, phenomenology, as understood here, presumes a somewhat paradoxical view of the nature of the self and the world. Phenomenology is a way for the self to understand the world and itself. One cannot, however, succeed in it completely because the self would, as a result of complete unconcealment, vanish into generality. This paradoxical nature of the self is the necessary condition for the intelligibility of phenomenology, that is, for unconcealing. Full concealment would, however, mean inability to perceive, feel and think about the world and itself. On the other hand, if individuals do not have the will or ability to continually unconceal the world where they live, they remain in the being of anybody, *das Man*, as Heidegger (1993, pp. 113-130) calls it.

Phenomenology as a personal attitude to the world and as research is a way to create sensible views about phenomena, even though phenomenology assumes that the unconcealment is rather a process than the permanent outcome of unconcealing. This is also the rationale for understanding education as a continuing process of unconcealment. Education itself unconceals and conceals different possibilities for our being in the world. It is therefore vital to reconsider how education is understood and practiced. What kind of thinking does education enhance?

The main assumption sketched here about phenomenological methodology is that our being is already in the world, not primarily as a subject–object relation, which presumes that the subject is, in some peculiar way, transcendent to the world from which the subject attempts to apprehend objective knowledge. Thus, it is pivotal that the phenomena that are to be unconcealed are thought as part of the world where they are. Phenomena are embedded in their world. The world and our being in the world become comprehensible as an unconcealment process of singular cases. Case and philosophy do not exclude each other but are linked by means of the exaggerative powers of imagination.

Case, philosophy and exaggeration

Human action can be classified into different forms of praxis, which are interrelated but to some degree autonomous areas of social life, for one form of praxis cannot be reduced to another. There is a praxis of religion, economy, politics, ethics and education, for instance (Benner 2001, pp. 29-44). The form of life through which practical action is intelligible determines praxis in a given society. Educational philosophy has to follow the questions and problems that arise from the praxis of education. The educational praxis is itself activity that demands an understanding of situations or persons as individual cases which are comprehensible in relation to their world. In other words various phenomena in praxis remain concealed if its form of life is not critically explored against the facticity of its current nature. This requires a philosophy that aims to explore individual cases in relation to their world.

Günther Anders characterizes case philosophy (or occasional philosophy (see van Dijk 2000)) as a hybrid of journalism and metaphysics, which includes *exaggeration* towards truth (*Übertreibung richtung Wahrheit*). From the individual cases Anders exaggerates to philosophical questions concerning the human condition in the world dominated by technology. According to Anders, this is a way to make hidden themes visible in technocracy. These hidden themes, which are not discussed, include for example how humans learn to see and feel themselves in relation to technological products. Anders calls his method *moral epistemology*, which means a shift from the epistemological question – how is knowledge of the objects possible? – to moral epistemology: how are the objects produced and what are their effects on humans? (See Althaus 1989, p. 67, p. 123; Liessmann 2002, pp. 31-33.) Anders himself calls Georg Simmel the first case philosopher (2002b, p. 417).

In case philosophy, one conceptualizes the phenomenon under study through exaggeration (Anders 2002a, pp. 14-15). This exaggeration is inevitable, for some relations of the phenomenon have to be overstated at the cost of other relations, if we are to attain some generality from the singular phenomenon. Exaggeration is not, however, deception. “Deception comes only when the presence and operation of choice is concealed, disguised, denied”, as Dewey (1971, p. 279) puts it. Without utilizing exaggeration, we are restricted to the singular level. If a philosopher denies

exaggeration as a way of grasping the reality of concepts, of understanding, he or she behaves like a virologist who refuses to use a microscope. The microscope exaggerates by magnifying the viruses, enabling the virologist to see and study them. The case philosopher striving to comprehend the case, he or she is pondering, exaggerates in a similar way (Anders 2002c, pp. 64-65).

Dass es Erscheinungen gibt, bei denen Überpointierung und Vergrößerung sich nicht vermeiden lassen; und zwar deshalb nicht, weil sie ohne diese Entstellung unidentifizierbar oder unsichtbar bleiben würden; Erscheinungen, die uns, da sie sich dem nackten Auge versagen, vor *die Alternative* [...] Mikro- oder Teleskopie sind die nächstliegenden Beispiele, da sie mittels übertreibenden Verbildlichung Wahrheit zu gewinnen suchen. (Anders 2002a, p. 15)

In case philosophy, however, there is no given methodology that is used to analyze cases. Case philosophy brings the researcher and reader to the front line of the empirical and takes them back to the darkness of the philosophical, and vice versa (Anders 2002a, p. 14). “The darkness of the philosophical” refers to the conceptualization process that strives to unconceal the phenomenon. The unconcealment of the phenomenon creates concepts that reveal the worldliness of the phenomenon. The created concepts are intelligible only in relation to the praxis where the phenomenon in question belongs. Hence, case philosophy utilizes the powers of thought in relation to the singular cases.

Case philosophy implies that reason, the faculty of thought, is materially connected with phenomena, which it can make intelligible through conceptualization. The concrete phenomenon is, on the other hand, meaningless if it is not conceptualized. The faculty of thought is connected with the phenomena through imagination. As Aristotle claims, the faculty of thought is imaginative, that is, phantasm is the content of thought. An image is a particular mental occurrence. Thought occurs first when the mind discerns identity between two or more images. Aristotle considers thought, which concentrates on practical action, to be keen on the particular and this particular to be a possible object to thought through imagination (Aristotle 1966; Aquinas 1994, p. 230; Ross 1995, p. 152). Accordingly, Anders maintains that one should practice imagination to gain new perspectives of the world. It is, rather, the mechanized view of understanding (see Horkheimer 1997, p. 32) that does not see the role of imagination as an a priori condition of understanding itself. The new perspectives of

the world originate in relation to the praxis and practical action. Thought arises from practical action as Marx (2007) emphasizes: “All social life is essentially practical. All mysteries which lead theory to mysticism find their rational solution in human practice and in the comprehension of this practice.” In the case philosophical sense, comprehension is possible through philosophical thinking in general and imagination in particular. A form of life can be revealed through cases or exemplars, which are imagined and exaggerated in thought that strives to see the general in the particular.

The philosophical works of Anders are full of examples that he uses in the case philosophical process. For instance (Anders 2002a, pp. 59-64), during the Korean crisis in 1950, when General MacArthur threatened to use a nuclear bomb against China he was dismissed by U.S. President Truman. Furthermore, the decision about military tactics (and the use of the atomic bomb) was given to an “electric brain”. It was not given to a commission or some other human who would be more rational or morally responsible. It was thus not only MacArthur who was declared incompetent to make judgments but every human being, for the decision was given to a machine. Anders shows that from this phenomenon follow philosophical issues relating to educational, psychological and sociological questions.

If we accept modern rationalism as the correct model of mental phenomena it seems obviously rational that machines should make the decisions, since the machines calculate more efficiently than humans. In that case, Anders concludes, where a machine calculates (*rechnen*) the decisions from its input, which implies that we have, in the sense of logical empiricism, excluded those questions that are incalculable from decision process. Consequently, ontologically and epistemologically moral issues are inappropriate to be taken into account. We, as humans, have become unable to reckon (*unzurechnungsfähig*) in two different meanings: our own competences to resolve problems are inferior to a machine (electric brain) and those problems, which are incalculable, are not to be reckon with. The analysis of Anders shows how modern rationalism affirms itself. As humans cannot escape their subjectivity with its emotional and moral distractions it is reasonable to shift the process of reasoning to those who do it better, that is, to machines. The machine represents objective and disengaged reason. The reason of machines as an ideal model of reasoning devalues those forms of reason that cannot be distinguished from emotion and morality. It is

then the task of education to produce subjects who have learned to objectify the world and themselves.

[...] da man auf seine erhabene Allergie gegen Subjektivität Rücksicht nahm; da man, nach dem bekannten Muster des "Logischen Empirismus", nur diejenige Fragen, die von dem eindeutigen Apparat eindeutig würden beantwortet werden können, als "sinnvoll" anerkannte, alle anderen aber als sinnlos abtat, verzichtete man [...] von vornherein auf moralische Fragen. (Anders 2002a, pp. 61-62.)

In late modern society, which is thoroughly technological, it is necessary not to ignore actual cases, for in them are concealed the nature and effect of technology. In case philosophy, a phenomenon is seen as being already in the world, and the case philosopher constructs it, taking its context (the world of a being) into account, to philosophical issues by creating new concepts as new openings to praxis. The philosophical issues, when taken back to a singular phenomenon, form a view of the phenomenon and the world where it is, which I, following Anders, will call the epochal view. This epochal view is part of prognostic hermeneutics in that it develops the ability to fantasize impressions of tomorrow (Anders 2002a, p. 10; b, pp. 424-426).

According to Anders, philosophy which restricts itself from the empiricism of the everyday turns out to be a blind conversation with presuppositions that have long ago ceased to exist (see also Adorno 1975, pp. 141-142). In a technology-driven world, Anders argues (2002a, pp. 271-276), it is more essential than ever to educate the imagination (especially moral imagination) to reveal the exaggerations according to which the world is developed. Direct sensual information does not reveal the imperatives and ways of life that are concealed in the high-tech products. Without the ability to imagine the effects of technology and its development we become consumers of fabricated fantasy, who live the lives of conformists. It is the central issue of critical education that education should enhance thinking that leads out of conformist settings. In what follows, I will explore the implications of case philosophy for education in the age of technology.

Case philosophy as critical education in the world of technology

There is no doubt that we live today in a world that is increasingly technological by its nature. The surroundings where we grow up and live consist more and more of interfaces through which we communicate. Technological innovations are materialized into parts of the world. The use of new technology, however, demands more know-how from the users. The development of new technologies has stressed the learning aspects of education. People, whether in the role of consumers or of workers in a society, have to learn to cope and use the new technological applications and devices to succeed in the technological society. Education understood as learning has itself become a technique. Learning allows us to conform to the constantly changing requirements of the world where we live. The changes are fueled by the technological progress. Our relation to the technology raises questions about the status of human action in the technologically driven world. In this context it is critical to examine how education can be understood in the world of technology.

Scientific understanding has made it possible to develop technology and, almost complementarily, the use and development of technology is critical for scientific research (Jonas 2004, pp. 22-23). Hence, it is tempting to conclude that education in late modern society should generate scientific understanding based on modern rationalism. To put it bluntly: technology is then defined as applied science. The applied sciences produce tools that can be used for a variety of human ends. Technology in itself is neutral with respect to ends. In the sense of modern rationalism, the role of education is to produce subjects who can use technological products properly according to the technical norms. Subjects should learn to see themselves as technically good users, who can with the aid of suitable instruments realize their arbitrary ends. The main weakness of this instrumentalist interpretation of technology is that it fails to see how modern technology is the *sine qua non* of the current world where we are living. The world with its constituents can never be just an instrument (Anders 2002a, 2).

The ontology of modern rationalism is, thus, an implausible framework for education in the age of technology. This follows from the fact that modern rationalism does not take into account the facticity of our being in the world. As technology is our world,

we do not have access outside of it. We live within the world, though; it is a world that can be unconcealed differently.

The ontology of case philosophy bases our being in the world. It is the facticity of the world that constitutes our living and understanding of that world. However, the human ability to fantasize makes conceptualization and reconceptualization of our being in the world possible. The continuous reconceptualization unconceals different aspects to the praxis. As a result, the current facticity of the world, which is constructed in technological arrangements, is understood as one way among others to be in the world. As Heidegger (1962, 22-36) argues, technology is one option to reveal the being. That revealing, however, endangers other ways to unconceal phenomena.

The case philosophical works of Günther Anders lead one to see the current world as a product-world, in which the products, their production and consumption govern the life-world of human beings. Case philosophical thinking of technology is interested in what kind of world and being-in-the-world (subjectivity) the use of the current products demonstrates now and in the future. It is, then, worthwhile to explore the possibility of education to promote imagination as understanding, which opens subjects to seeing the worldliness of the products and to reflecting on their own thinking in relation to the product-world. Certainly, this requires that education should give instruments to unconceal the facticity of the world and our being in it.

Metaphorically speaking, the products, as our world, should be tortured by the imagination so that they reveal their imperatives. What kind of world is created with the use of products? The products are not just tools to be used but their use creates new forms of life, imperatives and ways to conceal and unconceal the world. (Anders 2002b, 428; 171-178.) And it is the urgent task of education that we learn to see what kind of world we are creating with the products or what kind of world products create with us.

Therefore, education should be seen as a practice that requires case philosophical understanding. In case philosophical thinking, education is, above all, the creation of imaginary spaces through prognostic hermeneutics. Education, as prognostic hermeneutics, takes into account the multitude of potentialities that can come into

being. In other words, education is the practice of possibilities to understand the dominant unconcealment as concealment that forecloses our being in the future. Education in the world of technology is learning to imagine other possible worlds. This would be the education of critical thinking if “to be critical means first and foremost to be imaginative of alternative realities and thoughtful about their value or non-value” (Papastephanou & Angeli 2007, 612). Thus understood, education would lead out of the current state that tends to preserve itself as the only possible world. Education that relies on *logos* which in discussion and in the use of imagination unconceals our being in the world is case philosophy.

Conclusions

The core dilemmas of education are philosophical by their nature. The technological world brings to focus different aspects of education than the ones that were debated at the dawn of the modern age. Traditionally education has been interpreted as the way to enhance human nature. Education is needed to lead humans out of their presumed defective qualities. Humanity is seen as something between natural and divine.

In the technological world humanity is defined anew in relation to technology itself. This calls for new philosophical understanding of the technological world. In this paper I have presented case philosophy as a plausible option for critical education that is required in the constantly changing technological environment. I have argued that philosophy should be grounded in contingent praxis. Philosophy that can grasp our technological world through its exemplars practices the capacities of imagination. What is seen as a purely subjective phenomenon turns out to be the capacity for prognostic knowledge, which is needed in the current technological environment. Critical educationalists that are concerned with the ability to see differently should consider what possibilities lie in case philosophical thinking.

Comprehending the worldliness of phenomena entails that every singular case as a phenomenon has to be thought through its relations that constitute the world of the case. Thinking which is grounded in modern rationalism is unable to illuminate what the worldliness of a phenomenon is, because modern rationalism postulates a thinking

subject that disengages from the objects (world). Nevertheless, understanding education as praxis is not conceivable without illuminating its worldliness.

Case philosophy as presented by Günther Anders uses exaggeration as a way to understand the worldliness of phenomena. Understanding of a singular case is possible when imagination creates a view of the case in its world. The world of technology, which is driven by technological progress, sets a double challenge for education. On the one hand conformists see education as learning that should integrate the subjects to the product-world according to the constantly changing demands of technology. On the other hand, however, technology as unconcealment that forecloses other ways for unconcealment invites us to ponder educational thinking as an alternative to technological reason. Case philosophical thinking in education strives to reveal forms of life created by the use of technological products. Furthermore, education as case philosophy develops the imagination through which technology is conceived as just one optional way we are in the world. In other words critical education fosters imaginative thinking that reveals alternatives in the being.

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ⁱ See <http://www.history.ucsb.edu/faculty/marcuse/anders.htm>

See also <http://www.guenther-anders.net/>

ⁱⁱ Günther Anders wrote many critiques of Heidegger (see e.g. Anders 2001). He, however, affirmed some sides of Heidegger's thinking, including, with some revisions, his analysis of phenomenology (Anders 2002b, 420).