
The tick, the gods and the contract

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ABSTRACT

The question that this paper will address is that of the human being's relationship to technology and nature. The main argument considers how the human being is "world-forming" as opposed to the animal being "poor in world" (Heidegger). The investigation into the question of the human being's symbiosis with nature and technology will be explored mainly through the work of Martin Heidegger, Giorgio Agamben and Bernard Stiegler. Heidegger and Agamben will assist in elucidating the difference between the animal's *open* and the human's *unconcealment* in order for the argument to be made that the animal and the human navigate their world by way of a succession of *marks*. The animal's marks are already given while the human constructs its marks. The myth of Prometheus and Epimetheus, as retold by Stiegler, will serve to show how the "human is technics". Stiegler's concept of epiphylogenesis offers a view of the human as *Weltbildend* that takes further Heidegger's assertion that "[*t*]echnē is a mode of *alētheuein* [revealing]" (Heidegger 2011: 222). Through seeing the human as technics, Stiegler offers a view of technology that does not fall into the traditional parameters of technological or cultural determinism on the one side, or technological substantivism and instrumentalism on the other. Stiegler's view of epiphylogenesis will lead to a discussion of what Michel Serres calls *The natural contract* (1995) in order to propose conceptualisation of the symbiotic connection of animal/human/*technē*. Current policies like carbon-emission taxes seek short-term alleviation of ecological problems, still considering the human as being in a relationship with nature. Serres' natural contract will be proposed as a way to think of nature as part of the social contract. Such a re-thinking of nature's position can only be thought of as a symbiosis.

By what unwritten right do we believe that animals, plants, and the world belong to us, in short that those feelings and living beings were and remain ours? Do we rob the world just as the manufacturer and state confiscate my car? Bringing violence and death, we become their masters and possessors. We live and eat like the worlds' parasites (Serres 2011).

The question that this paper will address is that of the human being's relationship to technology and nature¹. This formulation would suggest that the human is in a relationship of mastery over technology and nature. This is, however, exactly the presumption that the author would like to question. The questions being asked around the human being's relationship with nature are framed in a Romantic rhetoric: we are born into nature just to be soiled by society and its evils. Consequently, the human being is seen as having a natural relationship with the environment that is constantly jeopardised by technology and the built-environment: there is a universal yearning to return to nature; to re-establish this imagined original connection with nature. This paper will consider the human being's default relationship with its environment and the role technology fulfils in this relationship. The main argument of this paper considers how the human being is "world-forming" as opposed to the animal being "poor in world" (Heidegger 1995). The distinction between being *weltarm* and *weltbildend* is what sets the human being apart from nature. The human's ontological fallenness presupposes a being that is from nature but not in nature. Where the animal's world is always open (Agamben 2004: 57), always already given through a succession of marks, the human being must unconceal its world through the creation of relevant marks. The human being creates these marks, this paper will contend, by way of its anthropological interconnectedness with *technē*. The ability of the human to survive rests on its capability to use *technē* in order to construct an ecosystem in which it can function. The human being is in a co-dependent relationship with technology in a way that other non-immortals are not.

¹ Although my faults lie with myself and not with my stars, a *gesture* needs to be extended to Reingard Nethersole and Ulrike Kistner: thank you.

The question of the human being's relationship to nature and technology will be explored mainly through the work of Martin Heidegger, Giorgio Agamben and Bernard Stiegler. The argument will be made that animals and humans navigate their world by way of a succession of *marks*. The animal's marks are already given (*open*) while the human constructs its marks (*unconcealment*). The myth of Prometheus and Epimetheus, as retold by Stiegler, will serve to show how the "human is technics". Stiegler's concept of epiphylogenesis offers a view of the human as *weltbildend* that takes further Heidegger's assertion that "[t]echnē is a mode of *alētheuein* [revealing]" (Heidegger 2011: 222). Through seeing the human as technics, Stiegler offers a view of technology that does not fall into the traditional parameters of technological or cultural determinism on the one side, or technological substantivism and instrumentalism on the other. Stiegler's view of epiphylogenesis will lead to a discussion of what Michel Serres calls "The natural contract" (1995) in order to propose the symbiotic connection of animal/human/*technē*.

THE TICK

In the introduction to his book *A foray into the world of animals and humans*, Jakob von Uexküll provides a description of the life-world of the tick. From its "crawling" out of the egg to its "lying in wait" for its prey and the way it senses this prey by way of the "odor (*sic*) of butyric acid" (Von Uexküll 2010: 44). Von Uexküll uses this description of the known life-world of the tick to highlight the difference between the biological and physiological view of the subject. Accordingly, for the physiologist "every living thing is an object located in his human world" while the biologist "takes into account that each and every living thing is a subject that lives in its own world, of which it is the centre" (Von Uexküll 2010: 45). The biologist thus realises that every being has its own constructed life-world, while the physiologist attempts to impose its life-world on that of other beings. The difference between these two approaches is also what underlies the difference between the *Umgebung* and the *Umwelt*. The *Umgebung* is the "objective space in which we see a living being moving" (Agamben 2004: 40) while the *Umwelt*

is a series of marks that is of significance only to the specific animal that inhabits that *Umwelt* (Von Uexküll 2010: 53, Agamben 2004: 40-41).

The *Umwelt* of the tick is one that is given to it, one that is always already there. The tick is a recipient of meaning while the carriers of meaning – other mammals and aspects of the environment – are given to it in the form of marks (Von Uexküll 2010: 178-179). The tick is what Martin Heidegger would call *weltarm* or “poor in world” (Heidegger 1995: 177). While the tick only has an *Umwelt*, the human has an *Umgebung* and an *Umwelt*. The *Umgebung* is the appropriation of an *Umwelt* by a subject whose world is not merely given. The human is “world forming” in that “[the hu]man is not merely a part of the world but is also master and servant of the world in the sense of ‘having’ world” (Heidegger 1995: 177). The difference that Heidegger and Von Uexküll find between the human and the animal lies in how the animal *receives* meaning through marks and the human being *creates* meaning through marks. The ontological world of the animal is *offen* (open) while that of the human is *offenbar* (disconcealed, openable): “[f]or the animal, beings are open but not accessible; that is to say, they are open in an inaccessibility and an opacity— that is, in some way, in a nonrelation. This *openness without disconcealment* distinguishes the animal’s poverty in the world from the world-forming which characterizes man” (Agamben 2004: 55).

In *The question concerning technology*, we also see Heidegger (2011) writing about a revealing or unconcealment of a world by the human. In this case it is the Greek word *technē* that presents us with the possibility for this unconcealment. According to Heidegger (2011: 222), the word *technē* stems from the Greek τεχνικῶν (*technikon*) which belongs to the stem word τέχνη (*technē*). The stem τέχνη, “is the name not only for the activities and skills of the craftsmen but also for the arts of the mind and the fine arts” (Heidegger 2011: 222). *Technē* is a skill, the ability to make or create something; in the sense of a physical craft and an intuition, something poetic. Τέχνη therefore also belongs to the Greek term ποίησις (*poiesis*). Ποίησις (*Poeisis*) stems from ποιεω which directly translates into “make, produce, and create”. Heidegger translates ποίησις as bringing-forth or revealing and it can consequently be argued that τέχνη is thus also a revealing or a bringing-forth: a revealing by way of a creation. Heidegger also observes that Τέχνη has been, since Plato’s time, associated with επιστημη

(episteme)². The significance of this last connection, between τέχνη and επιστημη, resides in the fact that both of them designate “terms for knowing in the widest sense.... to be entirely at home in something, to understand and be expert in it. Such knowing provides an opening up. As an opening up it is a revealing” (Heidegger 2011: 222).

Where the animal’s world is given as open, the human “opens up” its world through a bringing-forth that is achieved by way of *technē*. As the human is world-forming it unconceals its world, brings it forth, through its ability to use *technē*: “*Technē* is a mode of *alētheuein*. It reveals whatever does not bring itself forth and does not yet lie here before us.... Thus what is decisive in *technē* does not at all lie in making and manipulating, nor in the using of means, but rather in the revealing mentioned before” (Heidegger 2011: 223). The emphasis Heidegger places on *technē* shows that it cannot be conceived of as merely a tool or piece of hardware but rather something that is fundamental to the human being’s existence. The human being’s ability to use *technē* sets it apart from other organic beings. Other organic beings do not have to use *technē* to make, to unconceal, their world; their way of being presents itself to them in the form of marks that constitute an open. The animal does not have to unconceal its world, make its world, as its world is always open. If the animal responds to marks already given to it, the human constructs these marks through his or her ability to use *technē*. The human’s *Umwelt* is always an *Umgebung*; it is always a world in relation to something: “there exists a forest-for-the-park-ranger, a forest-for-the-hunter, a forest-for-the-botanist...” (Agamben 2004: 41). Since the human being is “world making”, it gives the *Umwelt* its own marks of significance, significance is not given through the *Umwelt*. Since the human being is “world making” and has the ability to use *technē*, it stands apart from the other mammals. For Bernard Stiegler, this standing apart from nature is due to the human being’s connection with the gods, through *technē*.

² From the Greek word *epistamai* (“to know”).

THE GODS

Bernard Stiegler, a contemporary French philosopher of technology, presents us with a re-reading of the Greek creation myth to show what he calls the human being's de-fault connection to *technē*. Stiegler does not regard *technē* as a "techno-scientific technology"; for Stiegler, *technē* is not so much a creation of the human than it is its accident (Roberts 2007: 27). *Technē* permeates our very being and is what makes us human. Stiegler illustrates his argument through a re-interpretation of the Greek myth of Prometheus and Epimetheus. The creation of the human being, according to the myth, was an accident, a *fault* on the part of Epimetheus. It is this fault of Epimetheus that ensures that the de-fault position of the human is one of *technē*.

When Zeus and the other gods decided to create non-immortals, they entrusted the task to Prometheus. Zeus bestowed on Prometheus a box full of traits – marks in the vocabulary of Von Uexküll – to be assigned to each non-immortal. Prometheus did, however, have a twin brother called Epimetheus. Prometheus was the god of foresight and temperance but Epimetheus was forgetful, impulsive and not well-known for his wisdom. Epimetheus, upon hearing about the task passed down to his brother, begged Prometheus to bestow the task on him (Epimetheus). As Epimetheus created the non-immortals and gave each of them a trait, he forgot to assign a trait to the human. Prometheus, realising the fault of his brother, decided to steal fire from the gods and give it to human as a trait in order to correct his brother's fault: "Prometheus...stole from Hephaestus and Athena the gift of skill in the arts {*ten entekne sophian*}, together with fire – for without fire there was no means for anyone to possess or use this skill – and bestowed it on man" (Plato in Stiegler 1998: 189) Prometheus thus ensured that the human being had a specific character trait: the ability to use tools and technology, the ability to use *technē*.

As all of the other non-immortals, from the tick to the lion, had a specific trait/mark given to them, their world was already open. The human, on the other hand, has as its trait, its mark, the ability to use *technē*. This ability to use *technē* is, according to Stiegler, the de-fault position of the human:

One must understand 'de-fault' here in relation to what is, that is, a flaw in being... Humanity is without qualities, without predestination: it must invent, realize, produce qualities, and nothing indicates that, once produced, these qualities will bring about humanity, that they will become its qualities; for they may rather become those of technics (Stiegler 1998: 194).

As part of this fault of Epimetheus, the human's de-fault trait is that of *technē*. The ability of the human to use *technē* does contain within itself, as is symbolised by the figure of Prometheus and Epimetheus, an element of remembering and forgetting: it contains positive and negative aspects. Positive is the connection with the gods and the human's ability to make and create a world; negative is the separation from nature as the open. With the theft of fire from the gods, Zeus did not only punish Prometheus but also punished the human. Because the human being has the ability to use *technē*, Zeus decided to hide *bios* (βίος)³ from the human: "For, from now on, *bios* remains hidden in the belly of the earth, disappearing yet again and forever, like mortals themselves, while the obligation to work, to *handle instruments*, will reappear over and over again for these same mortals, until, grown old through *care*, they at last pass away" (Stiegler 1998: 192).

It is *technē*, as the human being's de-fault trait, which sets it apart from other non-immortals. The endowment of *technē* also has as its necessary condition the fact that the possibility of survival is hidden from the human: human life is thus something that needs to be unconcealed through *technē* by way of work. The human must make its world through a process of unconcealment. This unconcealment is done through a creation of marks, bearers of significance, which for the animal is always already given. The human being's interaction with its world is therefore radically different from the interaction of a tick or a lion with its world. The human and the animal do share the same world but the human has the ability to change this world where the animal can only live according to what is already given.

³ *bio*" (*bios*) is the Greek word for *life*. It is interesting to note that the human being needs to toil, *work*, in the land to un-earth the ability for survival.

The animal and the human share a world but they approach and perceive this world differently. They both live in the world and make their homes in the world. The term *ecology* derives from the Greek words οἶκος (*oikos*), home, and λόγος (*logos*), reason. Ecology thus translates directly from the Greek as “reason of the home/house”. The reason of the animal’s house is given to it through the open while the human must use its reason, signified by *technē*, to construct its house. The world-making (*weltbildend*) human is able to construct his or her own ecological space through the use of *technē*. The ecosystems in which living beings function are not separated from each other. We share a universal ecosystem with other non-immortals. The animal and the human have the same given ecosystem in that both have fallen into a certain space and time. It is not that the human’s ecosystem is separated from that of the animal; the animal just perceives and interacts with its world as the open while the human must create its world through *technē*. The animal is captivated by its *Umwelt* (Heidegger’s “disinhibiting ring”). His *oikos* is given as the open. For Heidegger the animal can only behave in an environment that is already given to it. It is the same world that the human lives in but the way in which the human and the animal relates to this world is different (Heidegger 1995: 263). The human can change its *oikos* through its ability to use *technē*. The human can construct its world. Stiegler sees in this ability what he calls *epiphylogenesis*. One of the ways in which the animal’s world is given to it, is by way of memory. Animals have phylogenetic and epigenetic memory that enables their survival through mediating their relationship with their environment. Humans also have phylogenetic and epigenetic memory; but what differentiates them from animals, and puts them into the realm of the gods, are their epiphylogenetic memory.

Technē reveals to the human its facticity, its de-fault position, as that of a historical being. Since *technē* is the quality of the human, that which enables him to construct his or her world, Stiegler argues that the human being evolves through a process of exteriorisation as epiphylogenesis: “the conservation, accumulation, and sedimentation of successive epigenesis, mutually articulated.... Epiphylogenesis bestows its identity upon the human individual: the accents of his speech, the style of his approach, the force of his gesture, the unity of his word” (Stiegler 1998: 140). Epiphylogenesis activates a past memory in the present through the mediation of a temporal object. The ability of the human to construct a cultural

memory, and by extension a world, is also what exteriorises its memory: *technē*. Where the animal's memory is given to it through hereditary genetic mutation only, the human being can pass on external memory in the form of culture (language, politics and art). Stiegler thus argues that *technē* and culture is one and the same thing: a way for the human to construct marks, to build its world.

THE CONTRACT

In positing epiphylogenesis as a third memory, Stiegler distances and distinguishes himself from philosophers of technology like Jacques Ellul and Bruno Latour. For Stiegler technology does not determine societal structures (technological determinism) and neither do societal structures determine the shape of technology (social/cultural determinism); Stiegler sees culture and *technē* as being the same thing (Stiegler in Lemmens 2011: 35). The way in which Stiegler sets himself apart from these strands of thinking is through his conceptualisation of the evolution of *technē* into technology and the inadequacy of viewing technology merely as a tool. Epiphylogenesis serves as a concept from which to consider the human being as *technē*. As the human is not conceivable without its world, so the human is also not conceivable without *technē*.

For Stiegler there is a fundamental difference between *technē* and technology. *Technē* enables the “transformation of material, of ‘raw material,’ into ‘secondary matter’ or products” (Stiegler 1998: 93). *Technē* is thus a skill that corresponds to that of the craftsmen in that it is a *bringing-forth* (ποίησις) of something that is hidden in raw material. It is a creation of marks of significance with which the human builds its world. Technology (*technologique*), on the other hand, is the term used by Stiegler to refer to the amalgamation of *technics* and modern science while a *techno-logy* is a “discourse describing and explaining ... either the discourse of certain type of procedures and techniques, or that of the totality of techniques inasmuch they form a system: technology is in this case the discourse of the evolution of that system” (Stiegler 1998: 94). The aforementioned amalgamation of *technē* and science is also called *technoscience* by Stiegler to distinguish it from *techno-logy*. Stiegler thus distances himself

from debates on the sociology of science and technology because he does not conceive of *technē* as merely a “techno-scientific object”.

Considering Stiegler’s argument that the human exteriorises itself through *technē* – the third memory – and that the human being “is technics”, there is no substantive “human” that is not already in a relation with its world through *technē*. Because *technē* is what enables the human being to “make its world” (*weltbildend*), *technē* cannot be seen as merely a tool. *Technē* is an exteriorisation of the self and the forming of a world that ensures the negentropic becoming of the human being. It is through his insistence that the “human is technics” and is not merely in a relation with technics that he also detaches himself from the debates on technological substantivism – technological change has a logic of its own – of Heidegger and Jacques Ellul. For Stiegler there is no distinction between Western and traditional *technē*: *technē* is the way in which the human – European, Asian or African – exteriorises itself and thus creates its own marks of meaning in the world.

The discourse on the evolution of technics, following the concept of epiphylogenesis, will thus also be a discourse on the evolution of the human. The advancements in *technē* from its use by the Neanderthal to its incarnation as *technoscience* with the Baby-Boomers illustrate this evolution:

From the Zinjantropian to the Neanderthal, cortex and tools are differentiated together, in one and the same movement. It is a question of a singular process of structural coupling in ‘exteriorization,’ an instrumental maieutics, a ‘mirror proto-stage’ in which the differentiation of the cortex is determined by the tool as much as that of the tool by the cortex, a mirror effect in which one, informing itself of the other, is both seen and deformed in the process, and is thus transformed (Stiegler 1998: 176).

The invention of the tool, and new tools, therefore has a direct effect on the human being’s relation to its environment. The human being, according to Stiegler, evolves through an interior and exterior process co-determined by technical apparatuses. The type of technical apparatus

is what changes and, consequently, also the human who uses it. This exteriorisation of the self through *technē* is what enables the negentropic becoming of the human.

Stiegler states that “[h]uman time is negentropic in an extreme sense. It is not only the biological structure of humankind that, as is the case for all living beings, is negentropic, Cultural structures are too, in principle” (Stiegler 2009: 43). In systems theory, negentropy indicates the *negative entropy* of a particular system. Negative entropy designates a given system’s, usually a living system’s, ability to export and save excess energy produced by the system. The ability to export and save this energy is what ensures the continuing survival of the system. Negative entropy is a reversal of the thermodynamic principle – most clearly discernible in the second law of thermodynamics – of entropy⁴. Entropy signals a direction for time – the arrow of time – in that as time moves forward, the entropy of a closed system either stays the same or increases. The example that relates this idea most clearly is one of ice-cubes melting in a glass filled with liquid. The ice in the glass can only melt or not melt; it cannot reverse this process and turn back into gas. The energy that is produced by an entropic system is thus not stored and results in irreversible changes in that system. A negentropic system, in turn, imports this excess energy (negative entropy) and stores it for future use. Living systems are thus negentropic systems because they can store excess energy for later use rather than, like entropic systems, dispense of this energy if it is not immediately useful.

Negentropy is what ensures the continual survival of any living system. Where the negentropy of all living systems is, however, based on their biological constitution and their already given marks of significance, the human has the ability to construct its marks of significance and thus ensure the continuation of its negentropy. As *technē* is culture, the complexity that is the human cultural system is also the complexity of *technē*. The negentropy that is needed for any living system to survive emerges out of the complex interaction between different living systems in the larger ecological sphere that is the ecosystem. The animal’s given-world (*weltarm*), the open, and the human’s constructed world (*weltbildend*) share the same space. The ability to construct marks of significance is what ensures the human being’s

⁴ Entropy has its roots in the Greek word *ἐντροπία* (*entropia*) which translates as ‘a turning toward.’

negentropy. The creation of this negentropy can, however, be at the expense of the negentropy of the overall natural ecosystem. The human being shares its ecosystem, its environment, with that of other non-immortals. This relation is of utmost importance for the continued existence of both. If the human being constructs its world at the expense of the tick and the rhino, it will inevitably lead to the entropy of both the human and the animal system. The human being runs the risk of entering into a relationship of terror and appropriation with nature. This relationship most often comes to the fore when the human being is thought of as separated from nature, where nature is thought of as an entity to be used and exploited by the human.

For the interaction between the human and nature not to regress to one of master and servant, it is necessary to acknowledge the human's symbiosis with nature. If the construction of space for the human to survive takes away space from other organic beings inhabiting the same area, the human enters into parasitical relation with nature. "The parasite", Michel Serres writes, "takes all and gives nothing; the host gives all and takes nothing" (Serres 1995: 38). If the human appropriates space for its survival, it becomes a parasite that only consumes and does not create: "[i]t, this world, is the world of the appropriation of the proper: a world of nongenerality, a world offered not to 'humanity' but to its singular bodies" (Nancy 2008: 41). Michel Serres proposes that the human being must enter into a contract with nature in order to combat this urge to become parasitical on nature. This "natural contract" is one that emphasises the human's symbiosis with nature. Nature should be given rights and privileges like any other legal subject that is part of the Leviathan: "[H]owever much nature gives man, man must give that much back to nature, now a legal subject" (Serres 1995: 38).

THE MARK OF ECOLOGY

For Michel Serres (1995, 2011), the human being runs the risk of entering into a parasitic relationship with nature. If we continue to use nature as merely a resource we appropriate nature for our own ends without emphasising the relationship: "[b]ringing violence and death, we become their [nature's and animals'] masters and possessors. We live and eat like the

worlds' parasites". We live in an era where we see an absolute proliferation of rhetoric on climate change and sustainable development. There is, however, still a lack of understanding as to how exactly to articulate the human's relation with nature that is not destructive and not based on a principle of appropriation. Instead of seeing nature as an object for exploitation and mastery, we should rather enter into a contract with nature that conceives of nature as a legal entity. As Paul Cilliers (1998: 122) writes, "[n]ature is no longer the passive object of human exploitation, but is part of the set of relations that make humans what they are".

If we as humans are to continue to have a space in which we can form our world through the creation of marks of significance, we need to radically re-analyse our understanding of nature. Although current policy initiatives like low-carbon emission tax attempt to encourage sustainability, it still only succeeds – if it at all succeeds – when it comes to short-term goals and profits. Carbon-emission tax by no means attempts to reverse or repatriate the damage already done to the environment. The best possible outcome it can achieve is slowing down an already existing problem instead of addressing it head on. The first obvious issue in taxing for carbon emission is determining to whom the tax is payable: who gets the money? Does one pay to a third party or does one pay it to the entity that you harmed? Who is nature's banker? When Sebastian Rausch and John M. Reilly (2012) from MIT Global Change Institute put forward a carbon tax programme, their economic models did not quite have the prediction one would expect. Accordingly, emissions do decrease but not substantially enough to make a sufficiently significant difference necessary to alter our exploitation of the environment. The report shows that without incentives that can persuade industry on the whole to change their overall approach to the environment, emission tax will be just another example of "greenwashing" (Plumer 2012, Hern 2012). Carbon-tax is a neoliberal policy that, in effect, still allows those who can afford to pollute the opportunity to pollute. It emphasises the relation the human has with nature, not the symbiosis of human/nature/*technē*.

Any policy that sees the environment as merely a corollary to human existence will also inevitably end up treating this environment like a commodity to be used. Michel Serres asks, "[h]ow are we to succeed in a long-term enterprise with short-term means?" (1995: 31). To

think of the environment in such a way is to see the human as being in the centre of the universe, the environment only there for its appropriation and exploitation. The human being creates marks of significance to build its world while the animal receives these marks, through nature, as the open. The human being and the animal share the same environment: everyone needs a space in order to survive. The animal's space is given; the human constructs its space by way of *technē*. The construction of a liveable space is one way in which the human must work to unconceal the *bios* that Zeus hid from the human: "Those who have a place *have*. Those who have no place have nothing, strictly speaking. Do they still exist?" (Serres 2011: 12). In order to construct a space without de-constructing the open, the symbiosis of nature/human/*technē* needs to be brought to the fore. As the social contract is an unspoken bond the human enters into with other humans, so the natural contract must add to this social contract a contract of "symbiosis and reciprocity" (Serres 1995: 38). The way in which to establish this natural contract is through a "metaphysical recognition, by each collectivity, that it lives and works in the same global world as all the others" (Serres 1995: 46).

CONCLUSION

This paper was aimed at putting in question the traditional view of the human being's relationship with nature and technology in order to propose a radical re-thinking of this relationship in the way of a symbiosis. Nature is not merely a commodity to be exploited by the human through his or her use of technology. To conceive of nature as a commodity is to consider it as consumable and usable. The human does not merely use nature for its (the human's) continued existence but is rather in a symbiosis with nature/*technē*. This paper attempted to show this symbiosis through the tripartite imagery of the tick, the gods and the contract. A discussion of Jakob von Uexküll and Martin Heidegger's writings on the worlds of the animal and human brought to the fore the use of marks of significance that both the animal and the human use to navigate their world. While the animal's world is always already open, the human must unconceal its world. For the human to unconceal its world it has to construct its marks of significance through the use of *technē*. Bernard Stiegler's re-counting of the Greek

creation myth shows how it is possible to think of this ability to construct marks as due to the human's natural ability to use *technē*. For Stiegler, the human being's default trait is that of *technē*; the human uses *technē* to construct its world. Stiegler, through this assertion that the "human is *technics*" also offers an understanding of the human's relationship with technology that is not merely instrumentalist or determinist. Considering the human as a non-immortal that creates marks of significance through its ability to use *technē*, requires a re-thinking of the human's relationship with its environment.

The need to re-think our relationship with the natural environment should therefore take into account not only the human's position within nature, but also the human's interconnectedness to *technē*. This paper proposes a consideration of Michel Serres' *The natural contract* as alternative to contemporary policies on climate change (as briefly illustrated by the example of carbon-emission taxes). At the time of writing this paper, the 18th Conference of the Parties (COP18) to the United Nations Framework Convention on Climate Change (UNFCCC) in Doha was drawing to a close. One of the main points of contention was a carbon tax (Green Climate Fund) that would see developed countries funnel money to developing countries to address and mitigate issues of climate change. Mechanisms like these are based on the presumption that the human being is in a relationship with nature, not a nature/human/*technē* symbiosis. The Green Climate Fund adopts a short-term approach to issues concerning the environment: capital will prevail. There is no attempt to re-analyse and re-think the human's ontological position as non-immortal within a universal ecosystem. To recognise the nature/human/*technē* symbiosis is then also to recognise the human being's place in the universal ecosystem: not as master and possessor but merely as another element in the ecological system.

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