

Cosmotechnics from an anthropotechnological perspective

1. Introduction

Yuk Hui's (2016) cosmotechnical approach represents a twofold attempt. On the one hand, it aims to acknowledge human constitutive technicity and hence understands technics as a universal anthropological category, insofar every culture adopts technical practices and is structured by them in its psychophysical as well as eco-symbolic organisation. On the other, it stresses the differences among the technical activities each culture develops as well as among the different understandings of technics each culture elaborates.

Reconciling the potential for tension between these two tendencies is one of the foremost concerns of Hui's inquiry. In this paper, I will first underline some of the key hermeneutical contributions of the concept of cosmotechnics, concerning our understanding of the discomforts related to modern technologies and the process of global modernisation, before further analysing the relationship between the way a culture develops technics and its cosmotechnical understanding of the latter. By doing so, I aim to stress how the unification of the moral and the cosmic provided by cosmotechnics is originary, that is, how it establishes our understanding of the world as well as the possible variations within this understanding.

This inquiry relies upon the assumption that technics is not only what structures the human ontological constitution as well as its spatially and temporally bounded inner differentiation, but also what enables and defines every possible discourse and practice revolving around humans. This recursion should make us aware that the question of technics is constitutively not free from the operations performed by technics itself, as it is always deeply influenced by the techniques of the culture within which it emerges.

The standard definition Hui provides for cosmotechnics is "the unification between the cosmic order and the moral order through technical activities" (19). It is worth analysing this definition, as it singles out three different elements: the cosmic order, the moral order and the technical activities, the last of these performing the unification of the first two. It would be inaccurate to claim that cosmotechnics represents how technics

enables humans to unify their cultural behaviours with their understanding of the outer, “natural” environment through the usage of tools. We may have a better comprehension of Hui’s view if we stress the constitutive and originary character of technical activity, which is not to conjoin elements that would otherwise have existed separately. The unification is inaugural: technical activity enables human cultures to have both a cosmic and a moral order, and to keep them in constant relation. Cosmotechnics provides inner coherence within a culture’s worldview, establishing its way of relating to beings. What is understood under the concept of cosmotechnics is that humans organise their experience through technical practices, the latter not only defining habits, rites and value systems, but also concretely installing them into the surrounding worldly conditions. Each culture has its cosmotechnics, which defines it as *that* culture, differentiating it from the others: “What kind of morality, which and whose cosmos, and how to unite them vary from one culture to another according to different dynamics” (2017a). In a sense, cosmotechnics is something all-encompassing for the determination of a culture: “Human activities, which are always accompanied by technical objects such as tools, are in this sense always cosmotechnical” (2017b, 4).

Cosmotechnics’s theoretical stance and contribution to philosophy of technology is thus twofold. On the one hand, it aims to overcome the metaphysical dichotomies which emerged with higher cultures and are especially widespread in the West. On the other, it strives to undermine the current conceptions of modern technology in relation to both its underestimation as mere instrumentality and its alleged universal significance.

2. Cosmotechnics as a way to overcome the nature-culture divide

Habitual, Western philosophical and theological thinking as well as contemporary, scientific-led common sense tend to conceive reality as structurally split into two fields: the sphere of the spiritual, that is the immaterial, intentional and spontaneous capacity of establishing concepts and norms, and the sphere of the material, namely passive, corruptible and dependent physicality, always in need to receive form and direction (Esposito 2015)¹.

¹ It may be of some interest to notice that, different from Hui’s approach, Esposito (2015, 99-147) identifies the body and not technics as what enables us to undermine this dichotomy and reconcile what has been illegitimately separated.

Indeed, a cosmotechnical approach enables us to get rid of this dichotomy, since cosmotechnics is what makes explicit the interconnection between the moral, that is the alleged interior, spiritual realm, and the cosmos, namely the so to speak outside world, understood as an ordered system of events and things. Thanks to its cosmotechnics, a culture is able to give sense to its way of living in a given space and time. Yet this sense-giving performance is not much a posterior explanation and justification of the given, it is rather a structuring schema of experience that lies at the bottom of collective life, providing it with—and performing in it—its specific direction and aim.

Furthermore, it is important to evidence that this operation of connection and unification is not to be understood as a reconciliation between two poles, theory and praxis, that would have used to be separated and distinguished. A culture's cosmotechnics is originary, in the sense that it opens up the possibility of existence and thinkability of that culture, representing the linguistic and symbolic as well as instrumental and institutional background, starting from which something like the cosmic and the moral order can be identified. This is to say that the latter are constructed through cosmotechnics, and do not exist prior to a cosmotechnics supposed to subsequently appear in order to put them together in a coherent frame. They are rather to be considered as a possible, determinate outcome of a given cosmotechnics, so to speak as two sides of one and the same event, and exist only in their reciprocal relationship, having sense insofar they are conceived as what is structured and informed by a cosmotechnics. Foucault's (1970) concept of *episteme* may be of some help here, since Hui also recalls it himself in order to better explain his understanding of cosmotechnics: "The different 'cosmotechnics' can be further analyzed according to their cultural specificities and understood in terms of different or alternative epistemologies, as well as *episteme* in the sense of Michel Foucault ... namely the relations between different scientific domains which define the regime of truth" (2017b, 17). According to Foucault, an *episteme* is what denotes the dominant system of knowledge in a given region and epoch:

[W]hat I am attempting to bring to light is the epistemological field, the *episteme* in which knowledge, envisaged apart from all criteria having reference to its rational value or to its objective forms, grounds its positivity and thereby manifests a history which is not that of its growing perfection, but rather that of its conditions of possibility; in this account, what should appear are those configurations within the

space of knowledge which have given rise to the diverse forms of empirical science.
(1970, xxiii-xxiv)

Hence, the *episteme* is not limited to structuring the modes of knowing and understanding belonging to scientific, philosophical and theological paradigms, and to the way people give sense to their world accordingly. It also defines a culture's practices and framing possibilities, directly influencing its institutions, habits and social structures. In this sense, the *episteme* represents a complex of discourses, i.e., a practical-cognitive schema structuring collective experience and understanding. It is indeed an apparatus (Agamben 2009), i.e., a set of technical procedures producing a discrimination within the continuum of embodied experience, enabling or disabling given performances of the ones undergoing it.

This unification of the moral and the cosmos performed by technical media becomes perhaps more evident if we look at the phenomenon of consumption of psychotropic substances some cultures perform in order to improve their social synthesis (Sloterdijk 1993). In these cases, a technical apparatus, that is drug assumption, is collectively endorsed to produce a sense of co-belonging through the communication with a transcendent sphere. Here the moral order, that is the complex of mutual duties and obligations a society is made up of, is connected to the cosmic order, that is the deities embodying "natural" forces and entities. However, the consumption of the substance is meaningful and profitable for the culture only if performed in a strictly ritualised environment, i.e., as long as it is established in its dosage, timing and context. Hence, such cultures' cosmotechnical apparatuses are in turn the core of their system of decisions concerning how to schematise and categorise their experience of a common life in a given *milieu*.

As we have seen concerning the theory-praxis combination, another way of manifestation of this old dichotomy is represented by the distinction, if not opposition, of nature and culture, in so far as the former is identified with what characterises humanity, and the latter with what humans share with the rest of beings. Western modernity largely relies upon this binary distinction (Sloterdijk 2016b), in order to promote a worldview set on two separate dimensions, the former based on the spiritual, that is the soul or the mind, the latter based on the material, that is the body or the physical. As argued by Descola

(2013, 172-200), the former is generally understood as what all human cultures share and belong to, whereas the latter represents what differentiates them one another.

Once again, with cosmotechnics we can state the only apparent character of this dichotomy. Cosmotechnics being originary, it represents the plan from which a culture's practical-cognitive schemas can develop, enabling it to adopt one classification of being rather than another. So, what is understood as the cosmos, namely the allegedly outer part of reality, is actually deeply cultural, since it is from bottom up framed and structured through symbolic grids and institutionalized habits. At the same time, what is conceived as the moral, that is the alleged cultural realm, is intrinsically natural, being structurally influenced and determined by biological, ecological and environmental conditions, in turn provoked by and structured through tools- and language-mediated practices enabling the emergence of its complex of obligations and prohibitions.

If we follow Latour's (1993, 91-129) insights on this point, as also suggested by Hui, some light can be shed on this matter. Cosmotechnics is indeed the technically mediated epistemological dimension, starting from which a culture is able to perform its schematisation of experience. It has a phenomenotechnical significance, in the sense in which Latour and Woolgar (1979) reinterpret Bachelard's (1953) insights on scientific laboratory activity:

It is not simply that phenomena depend on certain material instrumentation; rather, the phenomena are thoroughly constituted by the material setting of the laboratory. The artificial reality, which participants describe in terms of an objective entity, has in fact been constructed by the use of inscription devices. Such a reality, which Bachelard ... terms the 'phenomenotechnique', takes on the appearance of a phenomenon by virtue of its construction through material techniques. (Latour & Woolgar 1979, 64)

We can summarise by maintaining that the construction of scientific, philosophical and political performances is always framed by a determinable complex of tools and symbolic apparatuses and should therefore be understood without prescinding from it. Only starting from this epistemic position, can something be labelled as nature or culture. According to Latour, this distinction has a performative value for the culture's rules of living, but it is not to be forgotten that it emerges only subsequently and dependent on the cosmotechnical practices structuring it. Nature and culture are not only temporally and

spatially situated concepts; they also exist only within their reciprocal opposition and dependence.

3. Human originary technicity and cosmotechnical plurality

The concept of cosmotechnics also bears great explanatory potential concerning the contemporary understanding of technics. Following Stiegler's (1998) position, Hui claims that technics' pivotal importance has been neglected within Western thought, representing what unconsciously underlies its understanding of the human. Hence, technics has traditionally been conceived as mere instrumentality, i.e., as something that is just added to the ontological constitution of the human, without being a structuring part of it.

To conceive technics as instrumentality means to underestimate the technical nature of the humans, amounting to an understanding of technical artefacts as things that are just used by them, without bearing any feedback on the way they frame their worldview and behaviour. Technics would thus be an accidental supplementation to an already complete living being able to dispose of it according to its will. Positing an originary independence between technics and the human elicits, only apparently paradoxically, the sense of impotence and submission people experience when their technical systems evolve to the extent of encompassing and reframing their whole life conditions (Moore 2017). After the industrial revolution and up to capitalism's contemporary stage, which actually represents "*the* contemporary cosmotechnics that dominates the planet" (Hui 2016, 299), humans, firstly in the Western world and then in most countries over the globe, undergo a passive submission to their own machines. Since the latter are considered as not influential for the framing of experience of the humans, now that they appear to be so dominant and pervasive, they are perceived as prevaricating and hegemonizing humans' possibilities of subjectivation. Hui refers here to the point made by Simondon (2016, 103-163), in which he claims that this false understanding of technology elicits contemporary technophobic behaviours and the related discomforts they both provoke and are triggered by, especially concerning the feeling of being overwhelmed and superseded by machinery.

Since technics and humans are originally co-belonging, in the sense that the former produces the latter to the same extent as the latter produce the former (Sloterdijk 2016a),

discomforts concerning the understanding of the contemporary technical system and the effects it provokes, i.e., its disruptive perturbation of the previous life conditions, have to be understood as modifications of this constitutive relationship being at least as old as the genus *Homo*, and handled accordingly. As stated already by Leroi-Gourhan (1993) and confirmed by Hui, humans are technical beings through and through. They trigger the evolution of their technical system together with its potentially disruptive becoming and therefore the solution to the problems this system may elicit are to be found in a different cosmotechnics, i.e., in a new constellation of the relationship between the humans, their moral orders and habits, and the cosmos, the complex of events and things within which humans exist, framed by their technical artefacts and procedures as well as by their symbolically mediated understandings.

Starting from what I outlined so far, we are now able to approach Hui's interpretation of Heidegger's famous essay *The Question Concerning Technology* (1977). Heidegger was one of the first explicitly posing the issue of technics and emphasising its relevance in order to grasp the specificity of our epoch. Nonetheless, according to Hui the centrality of the question of technics for the understanding of the humans has to be implemented within a cosmotechnical perspective, "[f]or it implies a tacit acceptance that there is only one kind of technics and technology, in the sense that the latter are deemed to be anthropologically universal, that they have the same functions across cultures, and hence must be explained in the same terms" (2016, 4). Interpreting Heidegger's stance and in so doing turning it upside down, his claim that technics "is a mode of revealing" (1977, 13) acquires a new meaning in Hui's theoretical frame, namely that humans shape their conception of the world and define the way they inhabit it according to the peculiarity of the technologies they adopt and invent, while for Heidegger it is the historical configuration of the originary human disclosure of Being that enables them to perform technics in one way or another.

According to Heidegger, this understanding of technics, and of modern technology as *Gestell*, i.e., as what exploits an allegedly endlessly available supply, despite coming from Western philosophical tradition, is also the only possible one, not only due to its capacity to indefinitely impose itself and expand, but also and above all because technics is considered as a matter uniquely pertaining to the West. Shifting the theoretical focus from technics in general to different cosmotechnics amounts to considering that the

understanding of technics is not something immediately universal, but rather a phenomenon strictly depending on a culture's specificity. Every culture, i.e., every temporally and spatially bounded human group provided with inner coherence concerning its habits and institutions, bears an original understanding of technics. This understanding, in turn, determines a culture's specificity and its possibility to cope with the becoming-global of the contemporary technical system: "Technics is not anthropologically universal; technologies in different cultures are affected by the cosmological understanding of these cultures, and have autonomy only within a certain cosmological setting—technics is always *cosmotechnics*" (Hui 2016, 19).

The necessity of inventing new cosmotechnics, preserving their plurality and partial autonomy, comes from the urge to face up against the general tendency of modernisation, amounting to the assimilation of every culture to the same, Western, i.e., capitalist cosmotechnics. Furthermore, this cosmotechnics, being not explicitly thematised as such to date, hides the constitutive relationship between humans and technics, acting as a mere imposition of contemporary capitalism's market with its disruptive operations, regardless of the specificity of each culture, while according to Hui "the central idea is that every non-European culture must systematize its own cosmotechnics and the history of such a cosmotechnics" (2017a).

4. Cosmotechnics and the ontological turn in anthropology

These assertions lead us to a very interesting aspect of the theory of cosmotechnics. On the one hand, Hui acknowledges the constitutive technicity of the human and states that technics is a universal phenomenon, since humans become humans and endure, produce and transmit their humanity only thanks to their relationship with technical artefacts, "if we understand the concept [of technics] to denote skills for making artificial products" (2016, 8). Hence, "*technics* refers to the general category of all forms of making and practice" (4, footnote) and must be distinguished from cosmotechnics, that is the understanding of technics provided by each culture, as well as from *téchne*, i.e., ancient Greek cosmotechnics, and technology, denoting the contemporary, Western technical system. As we have seen above, Hui here follows Stiegler and Leroi-Gourhan, claiming that the technical exteriorisation of knowledge and knowhow has to be conceived as a universal phenomenon defining human nature. Yet this assumption, left alone, would

leave unquestioned the reason why in different cultures there are different technical systems, that is to say different artefacts as well as evolutions of these artefacts and of the way they interrelate:

There is a general misconception that all technics are equal, that all skills and artificial products coming from all cultures can be reduced to one thing called ‘technology’. And indeed, it is almost impossible to deny that technics can be understood as the extension of the body or the exteriorisation of memory. Yet they may not be *perceived* or reflected upon in the same way in different cultures. (9)

Leroi-Gourhan (1993, 299-311) tries to give an account of this differentiation, but only succeeds partially, insofar he attributes this diversity to strictly environmental, that is to say “natural”, nonhuman conditions. Each culture would develop its own technologies because they would fit in the pre-given life conditions this culture is confronted with. Hui implements this assumption, claiming that it is not merely environmental factors that contribute to the differentiation of a culture’s technical *milieu*, but also its cultural environment, that is to say its worldview, social order and institutions:

Yet even if we agree with Leroi-Gourhan in seeing the exteriorisation of memory as a general technical tendency, this does not yet allow us to explain why and how each culture exteriorises at a different pace and with a different direction; that is, it does not explain how exteriorisation is determined by certain conditions—not only biological and geographical, but also social, cultural and metaphysical. (2016, 217-218)

It is not a strict ecological determinism that is solely responsible for the variations within human technical environments, as Leroi-Gourhan assumes. Technics in general, i.e., the human tendency to exteriorisation in the inorganic, and cosmotechnics, in the sense of different, culturally-related understandings of this exteriorisation, should be more precisely distinguished:

[T]he experience of technics is related to and partially conditioned by cosmology—and it is precisely in this sense that we insist on the importance of a *cosmotechnics*. Technical apparatuses function somatically as extensions of organs—and, as prostheses, are *somatically and functionally* universal, and yet they are not necessarily *cosmologically* universal. That is to say, in so far as technics is both driven by and constrained by cosmological thinking, it acquires different meanings, beyond its somatic functionalities alone. (217)

If the general, functional meaning of technics is universal, the account a culture gives to this phenomenon is quite variable and not limited to mere theoretical reflection. It is rather essentially cosmotechnical, i.e., it frames the culture's worldview, giving sense and coherence to its worldly condition and structuring its possibilities of experience. In order to better comprehend this, it may be of help to recall some assumptions from what has been characterised as the ontological turn in anthropology (Holbraad & Pedersen 2017), i.e., a theoretical stance assumed by some prominent contemporary anthropologists such as Latour (1993), Descola (2013), Ingold (2013) and Viveiros de Castro (2014).

The general aim of the ontological turn can be considered as analogous if not complementary to the cosmotechnical approach. Indeed, these anthropologists and social scientists defend the need to “take seriously” (Holbraad & Pedersen 2017, 155) the worldviews proposed by the cultures that form the objects of their ethnographic research. In this sense, their conceptions of the different beings and of the relationships subsisting among them are defined as ontologies, in order to stress the constitutive intention underlying these approaches (Descola 1996). The Western overarching, ethnocentric mode of thinking, which tends to understand these worldviews as naïve, if not distorted variations of an allegedly true conception of nature, has to be overcome, as it is argued that these accounts possess an equal pretension to truth and effectiveness as the one promulgated by the modern West.

Usually, modern ethnographic accounts consider cultures to represent different perspectives on a common nature proper to all humans and the criteria determining what this nature should consist of are developed from the Western *episteme*. This implies that each worldview is understood in a comparative way starting from the anthropologist's practical-cognitive schemas of experience, basically pretending to teach the other cultures what the nature they conceive differently should be in reality. Furthermore, the more these worldviews differ from the Western one, the more they are considered as eccentric, outdated or superstitious. They are submitted to this dominant, globalising *episteme* and considered as its distorted variants. On the contrary, the ontological turn claims that there is not a nature common to all cultures as well as there is no common culture. There are only different couplings of nature and culture, if we want to keep for a moment the traditional Western dichotomy (Descola 1992). Each coupling, that is each ontology, is

equally legitimate and has to be understood, as much as possible, through the epistemic paradigms proper to the culture endorsing it. As stated by Descola,

it is not so much linguistic limits, the perimeter of a commercial network, or even the homogeneity of modes of life that mark out the contours of a collective. Rather, it is a way of schematizing the experience shared by a more or less vast collection of individuals, a group that may well present internal variations—of languages, institutions, and practices—that are sufficiently marked for one to consider it, on a different scale, as a transformational group composed of separate units ... If ... one recognizes that the limits of any collective are coextensive with the area of influence of this or that schema of practices, then its definition will depend above all on the manner in which the humans in it organize their experience, in particular in their relations with nonhumans. (2013, 176)

The same can be stated about cosmotechnics: as there is no common understanding of the organised outer world, there is neither a common understanding of technics, although the latter is something shared by all humans, exactly as it is fair to claim that all humans frame their respective environments according to specific, determinable modes of classification. Although acknowledging the heuristic potential of this stance and recalling its value for his analysis, Hui reproaches the ontological turn for neglecting technics, i.e., for exclusively focusing on how cultures understand their relationship with nonhumans, without taking sufficiently into account how their ontologies are always structured through technical activities:

[T]his tendency also suggests that the question of technics is not sufficiently addressed in the ontological-turn movement. For example, Descola talks often of practice, which may indicate his (laudable) desire to avoid an opposition between nature and technics; but by doing so, he also obscures the question of technology. (2017a)

From Hui's viewpoint, Descola's ontologies should be understood as cosmotechnics: not only it is the case that each culture structures its own worldly experience with the same ontological dignity as the Western one does, but this experience is also framed through and allowed by the culture's particular understanding of technics, given that technical practices shape the human constitution and differentiate cultures from each other.

5. The problem of cosmotechnical comparativism

Under this viewpoint, we may notice that Hui seems somehow to waver between the perspective defended by the ontological turn and its opposite. As stated by Descola, it is the ontology belonging to a given collective that determines its possibility to adopt a specific technology, framing the becoming of its technical system in a particular direction and not in another: “It is not technical progress in itself that transforms the relations that humans maintain between themselves and the world but rather the sometimes tiny modifications made to those relations” (2013, 187).²

According to Hui, this stance is determined by the aforementioned neglecting of technics: “In speaking of a tension between ontology and technics I mean that these ontologies are only possible when they are already complicit with the technical life ... As a result, any transformation of the latter will directly alter the former” (2017b, 7-8). It is the technical becoming that a culture undergoes which determines the development of its ontology, that is to say its cosmology. The aim of a cosmotechnical perspective is to take into account how the transformations of the technical system influence the “unity of the cosmic order with the moral order”, namely to consider how these transformations enable the culture to acquire a worldview and prevent it from assuming another. However, elsewhere Hui may seem to lean toward the opposite conception. Taking the example of China, which serves as case study for its inquiry in cosmotechnical pluralism, he claims that “[t]he fact that Chinese culture does not elaborate on time and geometry, then, may have served as a cultural and cosmological condition of its technological development, producing, in Leroi-Gourhan’s terms, different technical facts within the universal technical tendency” (2016, 221).

Here the causal relationship between technological becoming and cosmology seems inverted, resulting into something quite similar to Descola’s stance: it is the scarce consideration devoted in ancient China to the concepts of time and geometry that elicited the ontological presuppositions underpinning a determinate development of its technical system. A culture’s understanding of technics, insofar it frames its symbolic and institutional categories, would determine how and why a culture adopts certain technical artefacts, practices and instrumental systems.

² It is worth noticing that, incidentally, Descola (2013, 189-196) also admits that a collective’s technical system can, in turn, sometimes modify its ontology and modes of categorisation.

From my viewpoint, both readings of Hui's theory would be excessively one-sided, either attributing only to a culture's technical becoming the explication of its worldview, or requiring from the latter alone to give account of its whole technical becoming. This apparent contradiction can easily be solved if we consider the existence of a circular recurrence between the two stances. This perspective is encouraged and implied by the concept of cosmotechnics itself, insofar it fosters a "unification" between two orders, that as we have seen above are to be understood as co-belonging and interrelated from the very start. Thus, a culture's technical becoming frames its worldview, since different technologies enable different ways to structure experience, configuring the culture and its understanding of the world in a certain way. At the same time, a culture's cosmology also determines its conception of how the latter understands technics, channelling its technical becoming in a specific direction and preventing it to adopt other technological systems.

Considering the way different cosmotechnics may possibly interrelate, we may better appreciate how the same technology can be perceived in completely different ways by different cultures if we consider the aforementioned example of the ritualised consumption of psychotropic substances (Sloterdijk 1993). If in some cultures the use of drugs is at the core of the production of the social synthesis and is therefore performed as what properly constitutes their sense of co-belonging, in Western societies drug consumption mostly represents an escapist phenomenon that is symptomatic of people existing at the borders of the community, not being able or willing to effectively integrate. We have here basically the same technical practice, that is the assumption of drugs, but with two radically differing functions. What determines this divergence is its mode of consumption, performing unity within the culture if experienced as what enables its components to have access to a common, transcendent sphere of meaning, or eliciting and worsening isolation and interpersonal disruption if perceived as a possibility to avoid a social environment with which it seems impossible to cope. Once again, the unification of the moral and the cosmic can be performed only via technical media, whose meaning may in turn sensibly differ from one culture to another, given that it is a culture's cosmotechnics that properly gives account of the function of the technical practices it develops.

For instance, within Australian Aboriginal communities the use of psychoactive substances, prescribed and managed within structured rituals, has been for a long time a

common, shared means to achieve social cohesion and intergenerational bounding (Dobkin de Rios & Stachalek 1999). Yet with the advent of colonisation by the West the cultural background of these populations has been extensively disintegrated and their totemic cosmotechnics have fallen into pieces. This has elicited a shift in the use of some of their technologies, namely drugs, this time mostly in the shape of Western imported alcohol, which is now consumed for a completely opposite goal, i.e., for the sake of a desperate retreat into a state of semi-perpetual hallucination as a response to the collapse of the former life conditions (Kahn, Hunter, Heather & Tebbutt 1991). Thus, while the technical practice remains quite the same, its use changes completely, because the native cosmotechnics supporting its adoption have been replaced with the disruptive agency of the Western cosmotechnical apparatus, suffered by the native populations as an unbearable lack of meaning in life.

Thus, without disregarding the constitutive technicity of the humans and therefore the fact that every human culture performs feedback-bearing technical activities, a cosmotechnical thinking focuses our attention on the understandings these cultures may have of their own technical practices and hence of technics. Connecting cosmologies with their respective technical apparatuses enables us to conceptualise not only the strict relationship between worldviews and technical media, but also the different possibilities of understanding this relationship and therefore giving account of the world, attributing a meaning to it and enabling specific developmental possibilities.

Each culture has its own cosmotechnics or is forced to adopt the contemporary dominant, Western cosmotechnics of capitalism. Yet, as Hui asserts, a culture may or may not be conscious of its own cosmotechnical system. This means that it may have only an implicit understanding of technics and thus the way this understanding relates to its cosmic and moral order may not be thematised as such. Indeed, Hui's attempt strives toward the explication of these sometimes implicit cosmotechnical systems, as he broadly shows concerning China. Starting from this viewpoint, a question arises, concerning the epistemological position of the one performing the inquiry in cosmotechnics. Which cosmotechnics enables us not only to trace its own genealogy, bringing it to consciousness, but also to admit and understand the existence of a plurality of cosmotechnics, realising that there are other cosmotechnics not belonging to the culture to whom the one tracing this genealogy belongs? The same question could be asked in

relation to the ontological turn in anthropology: if every culture frames its worldly experience and conceives the relationships existing among beings in its own way and if this way of categorising has its own reality and truth pretension, as we have seen, thanks to the technical media shaping its discourses and practices, then which ontology, which way of framing the experience enables us to thematise the existence of a plurality of ontologies and to acknowledge their ontological dignity?

However, this question is somehow ill-posed from the beginning: the problem is not which cosmotechnics or ontology allows this operation, since this abstractive and relativizing performance is, at least potentially, proper to every culture, as we will see below, thanks to cultural techniques. The question would rather be: how and to what extent the cosmotechnics of the culture to whom the one performing the inquiry belongs influences and determines the result of the inquiry itself? A remark from Viveiros de Castro to Descola's approach seems to go in the same direction: "[i]n effect, its design makes it impossible for Descola's system to not predominantly express one of the four ontologies he identifies" (2014, 83).

Detecting its own cosmotechnics is a goal each culture can attain, at least in theory, and the result of this investigation would depend only on that culture's understanding of technics and use of technologies. However, the attempt to detect another culture's cosmotechnics would give different results according to the culture to whom the one performing this operation belongs, and this means according to its cosmotechnics. What I aim to show here is that each cosmotechnics constitutively influences the process of detection of other cosmotechnics. This is because a cosmotechnics represents the complex of technical practices shaping a culture's worldview and structuring its worldly experience. Furthermore, it also frames its way of categorising knowledge and understanding itself and other cultures. For instance, Chinese cosmotechnics would not be understood in the same way if inquired starting from the implicit cosmotechnical apparatus of the Chinese only, or from the cosmotechnical standpoint of Western civilisation, or from some other cosmotechnical viewpoint. I would tend to claim that a culture's technical apparatuses not only influence its mode of structuring knowledge, but also condition the results of this knowledge, and this becomes relevant when the object of such knowledge is assumed to be something not belonging to the same *episteme*, that is to the same cosmotechnics.

If we inquiry into another culture's understanding of technics, paying attention to neither assimilate it with our understanding nor consider it as its primitive or deteriorated form, we should also be aware that the result of our inquiry would in any case be influenced by our own cognitive schemas of analysis. And these schemas are in turn determined by our cosmotechnics, that is to say by how our understanding of technics influences our symbolic framing of experience and worldview. We should consider that what matters here is to be properly aware of the operative influence our cognitive schemas bear on the result of the analysis, especially when, as it is the case, the object of inquiry corresponds to what determines a culture's cognitive structures, at the same time being recursively influenced by it.

6. Cultural techniques as the organon of cosmotechnics

In this spirit, I propose cosmotechnical inquiry to be always a comparative one, as Hui already seems to adhere to, although for the most part implicitly. Being comparative means to be always aware of the cosmotechnical conditions of the culture to whom the one performing the inquiry belongs, and to relate these to the cosmotechnics proper to the inquired culture. This would lead our attention to the technical activities shaping these cultures' worldviews and to a comparison between their cognitive apparatuses. To a certain extent, I believe this awareness may enable us to avoid the risk of an implicit form of ethnocentrism, that inadvertently projects its own epistemic schemas on its object, claiming at the same time to do the exact opposite, i.e., freeing its object from the cognitive presuppositions of the cosmotechnical *episteme* not belonging to it. A cosmotechnical pluralism is an inquiry in the understandings of technics in different cultures and an analysis of the ways these understandings shape the experience as well as the becoming of the technical systems of these cultures. This attempt becomes really effective only if we admit that to free these understandings from the Western universalising and therefore all-assimilating rationality, allowing them to autonomously develop and reach cosmotechnical self-consciousness, also means to consider the constitutive partiality of perspective of our method of inquiry and the peculiar shape it will give to its results. What characterises this perspective are, once again, the cognitive technologies proper to the culture from which the inquiry is carried out.

Yet which are those technologies and what defines them? As a conclusion for this essay, I will attempt to outline the basic insights of these kinds of techniques, recalling the debate around cultural techniques (Krämer & Bredekamp 2013) and especially what one of its most representative exponents, Macho (2013), claims on this point. If we agree on the fact that every culture is constitutively shaped by its technical media, it should also be fair to admit that not every medium performs a symbolic structuring of the experience. This is precisely what cultural techniques do, insofar they entail the possibility of their self-representation, which is to say that they enable the one performing them to represent through them the very operation carried out by that technique. As Macho points out,

[t]he term does not encompass all the techniques a culture has at its disposal, but strictly those techniques that make symbolic work possible. Every culture is grounded in numerous techniques that guarantee its survival ... Human cultures, however, are not simply composites of these multiple techniques, but evolve out of their symbolic concentration. This symbolic work endows all other activities with their specific meaning; it gives order to the world and enables cultures to develop self-reflexive concepts. Symbolic work requires specific cultural techniques ... Cultural techniques differ from all other techniques through their potential self-referentiality, a pragmatics of recursion. ... As second-order techniques, cultural techniques have from their very beginning been operating as techniques of self-reflection, identity formation and identification. (30-31)

Thus, there are scriptural, figurative and computing techniques, participating in every culture, significantly differing from one another, but sharing the same recursive potential. The self-representation they enable is the key to access a symbolic dimension, where sense is detached from the empirical schema of experience already subsisting in every technical practice (Di Martino 2019). By doing so, they allow the members of the culture performing them to practice abstraction and classification and therefore to conceptualise their own technical specificity and possibly the one of other cultures. It is important to notice that although these techniques open up the symbolic and hence linguistic dimension of the human way of life, they are not themselves necessarily symbolic. Their self-representation is just an implied possibility that may, or may not occur intentionally.³

³ It may be of some interest here to briefly compare Macho's cultural techniques with what Stiegler (2010) calls *hypomnesic* techniques. The latter are those kinds of techniques that actually frame explicitly determinable knowledge, always working as *pharmaka*, that is in both curative and poisoning way (Stiegler

To summarise, as clearly stated by Krämer (2003), four features can be outlined in order to qualify the specificity of cultural techniques. They perform the unification of the symbolic dimension with the technical, bodily and material components of a culture; as symbolic machines, they enable the exteriorisation of cognitive processes on technical media; in doing so, they allow the one performing them to abstract from the empirical referents of these processes, opening up a symbolic, yet technically embodied, domain; they build up an *episteme*, since their performance always falls in the background, constituting the implicit common frame which renders possible single intentional cognitive operations. As we can see, the reflection on cultural techniques appears to be very close to the field of cosmotechnics, insofar it tackles the possibility of an embodied, techno-symbolic dimension underlying the manifest cognitive processes endorsed by a culture.

Thus, a cosmotechnical pluralism, aiming to inquire the differences between the conceptions of technics that cultures develop, without falling prey to Western universalising ethnocentrism, but rather letting these conceptions be conceived starting from the ecological, social and technological background of these cultures, should take into account in the first place the analysis of the cultural techniques adopted by each culture, so that “[t]his is precisely the reason that we have to conceive a cosmotechnical thinking from the standpoint of these ontologies without falling prey to an ethnocentrism” (Hui 2017b, 8). In the same spirit, the ontological turn in anthropology should be supplemented with a comparative cosmotechnical approach, with special reference to cultural techniques.

This is of the highest importance, because it is only through these special kinds of techniques that it is possible to conceptualise the specificity of our own technical environment and therefore to understand its structural recursion. Indeed, as we have showed above following Hui’s insights, humans are characterised by their technical constitution. Yet, the techniques through which they perform this technicity may substantially differ according to each culture. What gives account of this differentiation is the culture’s cosmotechnics, i.e., its way to frame experience through technical

2013). Although the performance provided by cultural and *hypomnesic* techniques may seem very similar, what distinguishes the former from other, generic technical activities is their self-representative potential, while what differentiates the latter is rather their being susceptible to articulate linguistic knowledge according to a shared criterium of *grammatisation*, that is both inscription in a medium and agreed understanding of this inscription.

activities. The latter, in turn, recursively enable the culture to develop one specific cosmotechnics and not another. However, cultural techniques and not technics in general are primarily responsible of the definition of the range of possibilities within which a cosmotechnics can be developed. Furthermore, these particular kinds of techniques are also the ones enabling a culture to explicitly develop its cosmotechnics, that is to say: to conceptualise its own understanding of technics in relation to its environmental as well as institutional conditions, paving the way to the comparative conceptualisation of other kinds of cosmotechnics. A cosmotechnical pluralism, then, should not leave without consideration a comparison between the cultural techniques that each culture develops and performs.

References

- Agamben, Giorgio. "What is an Apparatus?". *What is an Apparatus?, and Other Essays*, Stanford University Press, 2009, pp. 1-24.
- Bachelard, Gaston. *Le matérialisme rationnel*. Presses Universitaires de France, 1953.
- Descola, Philippe. *Beyond Nature and Culture*. University of Chicago Press, 2013.
- . "Constructing Natures: Symbolic Ecology and Social Practice." *Nature and Society. Anthropological Perspectives*, edited by Philippe Descola and Gísli Pálsson, Routledge, 1996, pp. 82-102.
- . "Societies of Nature and the Nature of Society." *Conceptualizing Society*, edited by Adam Kuper, Routledge, 1992, pp. 107-126.
- Di Martino, Carmine. "Il simbolismo e i suoi antecedenti." *Sistemi intelligenti*, vol. 31, no. 1, 2019, pp. 87-118.
- Dobkin de Rios, Marlene, and Stachalek, Ronni. "The *Duboisia* Genus, Australian Aborigines and Suggestibility." *Journal of Psychoactive Drugs*, vol. 31, no. 2, 1999, pp. 155-161.
- Esposito, Roberto. *Persons and Things: From the Body's Point of View*. Polity Books, 2015.
- Foucault, Michel. *The Order of Things: An Archaeology of the Human Sciences*. Pantheon Books, 1970.
- Heidegger, Martin. "The Question Concerning Technology." *The Question Concerning Technology, and Other Essays*, Harper & Row, 1977, pp. 3-35.

- Holbraad, Martin, and Pedersen, Morten A. *The Ontological Turn: An Anthropological Exposition*. Cambridge University Press, 2017.
- Hui, Yuk. "Cosmotechnics as Cosmopolitics." *E-flux*, vol. 86, 2017a, www.e-flux.com/journal/86/161887/cosmotechnics-as-cosmopolitics/.
- . "On Cosmotechnics: For a Renewed Relation between Technology and Nature in the Anthropocene." *Techné*, vol. 21, no. 1-2, 2017b, pp. 1-23.
- . *The Question Concerning Technology in China. An Essay in Cosmotechnics*. Urbanomic, 2016.
- Ingold, Tim. *Making. Anthropology, Archaeology, Art and Architecture*. Routledge, 2013.
- Kahn, Marvin W., Hunter, Ernest, Heather, Nick, and Tebbutt, Jennifer. "Australian Aborigines and Alcohol: A Review." *Drug and Alcohol Review*, vol. 10, no. 4, 1991, pp. 351-366.
- Krämer, Sybille. "Technik als Kulturtechnik. Kleines Plädoyer für eine kulturanthropologische Erweiterung des Technikkonzeptes." *Technik – System – Verantwortung*, edited by Klaus Kornwachs, Litt, 2003, pp. 157-164.
- Krämer, Sybille, and Bredekamp, Horst. "Culture, Technology, Cultural Techniques – Moving beyond Text." *Theory, Culture & Society*, vol. 30, no. 6, 2013, pp. 20-29.
- Latour, Bruno. *We Have Never Been Modern*. Harvard University Press, 1993.
- Latour, Bruno, and Woolgar, Steve. *Laboratory Life: The Social Construction of Scientific Facts*. Sage Publications, 1979.
- Leroi-Gourhan, André. *Gesture and Speech*. MIT Press, 1993.
- Macho, Thomas. "Second-Order Animals: Cultural Techniques of Identity and Identification." *Theory, Culture & Society*, vol. 30, no. 6, 2013, pp. 30-47.
- Moore, Gerald. "Dopamining and Disadjustment: Addiction and Digital Capitalism." *Are We All Addicts Now? Digital Dependence*, edited by Vanessa Bartlett and Henrietta Bowden-Jones, Liverpool University Press, 2017, pp. 68-75.
- Simondon, Gilbert. *On the Mode of Existence of Technical Objects*. Univocal Publishing, 2016.
- Sloterdijk, Peter. "The Domestication of Being: The Clarification of the Clearing." *Not Saved. Essays after Heidegger*, Polity Press, 2016a, pp. 89-148.

- . "The Time of the Crime of the Monstrous. On the Philosophical Justification of the Artificial." *Not Saved. Essays after Heidegger*, Polity Press, 2016b, pp. 281-295.
- . "Wozu Drogen? Zur Dialektik von Weltflucht und Weltsucht." *Weltfremdheit*, Suhrkamp, 1993, pp. 118-160.
- Stiegler, Bernard. *Technics and Time 1. The Fault of Epimetheus*. Stanford University Press, 1998.
- . *Technics and Time 3. Cinematic Time and the Question of Malaise*. Stanford University Press, 2010.
- . *What Makes Life Worth Living: On Pharmacology*. Polity Press, 2013.
- Viveiros de Castro, Eduardo. *Cannibal Metaphysics*. Univocal Publishing, 2014.

Keywords

Cosmotecnics, anthropotechnics, cultural techniques, ontological turn, technology.

Bio

Marco Pavanini is a PhD student at Durham University, UK, alongside with the Centre for Culture and Ecology. His research interests concern the relationship between technics and human existence, with a particular focus, on the one hand, to the role played by technics within anthropogenesis; on the other, to the effect contemporary technologies have on the processes of formation of collectives and of a sense of belonging. More broadly, he is interested in contemporary philosophy, with special reference to its relation with the sciences and the thought of Bernard Stiegler and Peter Sloterdijk, about which he has written several articles and book chapters. He is a member of the transdisciplinary scientific collective *Internation* and part of the editorial board of the journal *Kaiak. A Philosophical Journey*.

Abstract

Yuk Hui's concept of cosmotecnics provides us with an excellent theoretical device to investigate the role of technology in relation to a culture's self-understanding. This paper, in the first place, aims to contextualise Hui's reflexion on cosmotecnics within the broader field of contemporary philosophy of technology, outlining its discerning potential in undermining the outworn, Western dichotomy between nature and culture. In this

spirit, it is stressed how cosmotechnics nicely fits in an anthropotechnological perspective, i.e., an understanding of the relation between technics and humans as originary and constitutive. In the second place, the goal of this paper is to evaluate the explanatory significance of the concept of cosmotechnics regarding the possibility of a comparative investigation of the modes according to which different cultures conceive technics and their relation to it. In this spirit, the concept of cultural techniques, i.e., scriptural, figurative and computing techniques embedded with a self-representative potential, is brought about in order to show which kind of technologies are most likely to determine and influence a culture's self-understanding and should therefore be privileged by the focus of a comparative cosmotechnical inquiry.