The Question Concerning Technology

A Japanese reply

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Abstract | This paper explores the common idea that Japanese Buddhism presents conceptual resources for an alternative understanding of the challenges of the Anthropocene. Using Heidegger's thought, I examine how Japanese Buddhism envisages the relationship between human beings and nature and its bearing on how technology is conceived. The idea that a whole culture's commendable or reprehensible environmental performance can be entirely inferred from its metaphysical background should be dismissed. Japan is a case in point given its ruinous environmental history. I nevertheless accept that comparative studies are relevant as the Japanese art of gardens is an example of a focal practice able to co-exist with technology while revealing nature as it is itself and not as a resource. In this way one may overcome the West's Frankenstein syndrome by which technology is seen as something beyond control, but also has implications on how man-made disasters can be taken as natural events.

Keywords | Japanese Buddhism; Heidegger; Technology; Gardens

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1 Introduction

The several dialectic opposites that in the West are usually employed to reason about human beings and nature appear in a different light if one takes the compass to be Japan. In an increasingly globalized world, scientific knowledge and technological innovation flow in and out of nations according to where they happen to find marginal profits and reduce cultural differences. As is well-known, Japan is a country in which tradition linked to festivities, rites, ceremonies and processions is still alive and flourishing, alongside a concomitant and practically ubiquitous presence of the most varied cutting-edge technological artifacts and infra-structures. This conciliation is all the more intriguing when it is known how the atomic age began with the bombings of Hiroshima and Nagasaki. I start by considering that Japan's current relation to nature and technology must be examined further upstream, mainly in art and religion. It is from them that the laws of motion that even today are still present in Japanese daily life constitute a relationship with things that is unlike ones found in the West.

In this paper I do not intend to surrender to easy caricatures that simply establish the image of a Far East as opposed to the West. It would be a little too easy, as Roland Barthes (1982) wrote in his *Empire of Signs*, to imagine a fictional country, an almost living laboratory, called Japan, whose mirror image would give back the background of Western uninspected assumptions that pervade the history of its philosophical thinking. An account of the relationship with nature and technology in Japan is first and foremost a recognition that globalization does not proceed only through the accelerated pace of a steamroller that levels everything in its path. Notwithstanding how global trade, transportation and information networks are profoundly bringing the planet together in a kind of *techno-utopia*, globalization is also unfolding by emphasizing other regional logics.[1] Like Gray points out, before the forced opening to the West, Japan was a unique experience in human history as a culture with forms of life that reversed technological evolution. The country also created its own version of Modernity and capitalism by combining knowledge and industrialization while maintaining its already existing social structure. Industrialization in Japan did not entail a break with the feudal social order nor did the "growth of knowledge and innovation in ideas" break apart old social structures (Gray 1998, 169). In other words, each culture today is invited to constantly update itself in the face of the challenges that the ongoing accelerated transformation of the planet poses. Whatever the West and the Far East may be and have been in their respective

1 Although the idea of paradise is transversal to all cultures and epochs, only the West has succeeded in transforming an internal, individual idea of paradise, associated with moral progress and practices of religious observance, into an external and historical possibility of establishing that paradise. Hereafter it can be constructed, produced and distributed in the course of historical time: techno-utopia. For the origin of the term, see Mattelart (2000).

geographical and cultural senses, they do not remain sheltered, but renew themselves by adapting to a changing geopolitical and technological environment. Japan will hence be approached mainly from a philosophical-cultural point of view while acknowledging that cultures are not static and are subjected to social and material changes and transformations across history.

At the root of every civilization there are religious and artistic forces that allow themselves to be glimpsed even when they acquire a secular expression. I intend to explore what such religious and artistic traditions can express about the Japanese experience of nature and technology in order to assess how the two are conceptually framed in the West. This will be accomplished by exploring how religious concepts trekked in Japan to artistic practices and perspectives about the essence of the relationship between human beings and nature. In this context, it is important to question the assumption that the "conceptual resources" of a somewhat alien religion and culture might be available to be scrutinized outside its cultural social and linguistic milieu. If the concepts of a religion alien to the West may be apparently capable of providing valuable insights to the environmental crisis or to the present predicament with managing and regulating technologies, it should not be necessarily inferred from this that they can be imported to Western culture given that its ontological presuppositions are radically different (Rolston III 1987, 176).

Cross-cultural comparative exercises seem, however, to be important given the local nature of global challenges. Since the ravaging environmental destruction, several humanities curricula have attempted to identify the underlying reasons for such phenomena across the West. Philosophy and environmental ethics, in particular, began to expose how Western basic philosophical and theological assumptions paved the way for an understanding, taming and exploitation of nature through science and technology. A parallel theme has been the contrast between how other civilizations and cultures, specifically in the East, had a different, more harmonious approach to nature that was not based on considering it as a well of resources like in the West. It was suggested that in such Eastern cultures, namely Japan, human beings were so much part of the environment that a "love of nature" was an intrinsic aspect of these cultures. Yuriko Saitō (1985) for instance, has argued that the traditional Japanese love of nature is based "upon the conceived identity between man and nature". The evanescent aspects of nature in Japan echo the transience of human life and are further transformed into an aesthetic pathos. These cultures would thus present valuable lessons for our environmental predicaments. Nonetheless, if Japan has been the scene of abundant environmental incidents, disasters and chronic pollution, that is generally indicted as due to the import of the scientific-technological credo foreign to a culture known as being in "harmony with nature" (White 1967; Callicot 1997), which, in turn, points to the import of the West's underlying concept of nature.

Indeed, since Japan does not share the religious historical development of Europe, it could provide a fertile ground for comparative studies aimed at detailing how science and technology are not neutral endeavors, but rather carry their own worldviews by which Being is interpreted as an objective representation (Heidegger 2010, 12). This is especially relevant given the late Japanese reception of science and technology in the 19th century and the ensuing process of paced industrialization that followed. One is prompted to explain how the Japanese syncretic and multifarious religious ethos coped with the massive and accelerated introduction of science and technology. Japanese Modernity, in this sense, exemplifies the distinctive role that technology acquires in every culture – one that clearly goes beyond the much-feared determinist and instrumental critiques about its alienating or liberating effects. Resorting to Heidegger's essays and Albert Borgmann's reading in such regard will prove fruitful.

Other scholars, however, have been critical of the idea of a pre-established harmony between nature and culture in Japan as either problematic or incomplete. The image of a Far East that was corrupted by Western science and technology does not hold on closer inspection, as it tends to crystalize a civilization and its relationships with nature and technology along invariant essences that are not subjected to social, material and class history and its competing discourses for transformation. Morris-Suzuki (1991, 1998) and more recently Regina Bichler (2023), for instance, present a more realistic and nuanced framework of Japanese history. They build a case that the start of industrialization in Meiji Japan could quickly adopt and absorb Western scientific, technological and economic ideas precisely because human beings, although a part of nature, were already, in Edo Japan (1605–1868), envisioned as ensuring nature's survival and growth. Discourse on the Japanese cultural identity being linked to nature is also tantamount. A key term is *kaibutsu*, the "opening of things" or as "developing or making use of the natural world". Art, or technology, is the means by which the perfection of nature can flourish. For Morris-Suzuki, *kaibutsu* "proved to be a concept which could offer a bridge between familiar Japanese notions of morality and the new ethos of Western science and technology" (1991, 94). Euro-American influence in the archipelago continued an already blooming trend of resource exploitation during the previous seclusion period. This would explain the utter indifference of the Meiji government to environmental destruction, as the only criterion used to judge the effects of the exploitation of nature were the outcomes of negative effects on human well-being and not the loss of unspoiled nature.

The need for examining how nature and technology is framed in Japan as well as its role in damaging nature and human beings is also justified by stressing how common background assumptions condition contemporary hopes and fears about the role of technology. Technology is regarded as a human designer's creation, so as soon as it starts revealing hazardous effects, one easily

concedes to the expectations about how technological development ought to be controlled, directed and nudged towards social and well-being goals. Today, this theme is even more relevant due to the unstoppable acceleration of technological progress, which is growing more and more palpable. The transversal digitalization of infrastructures and other household appliances, the possibility of the appearance of autonomous cars, the conversion of common appliances and machines into intelligent devices, the recent emergence of artificial intelligence through the use of *ChatGPT,* are all recent phenomena that promise new productivity gains, but also the transformation of the very structure of consciousness and social organization. The information age and the fourth industrial revolution are looming and apparently everything is happening as if it were an inevitable fatality (Martins 2011). All these issues combined with recent technological developments raise several questions of collective concern.

Finally, the general overview of how nature and technology are conceived in Japan vis-à-vis human beings allows one to question the legitimacy of modern Western assumptions. Showing their contingency, however, does not mean they can be changed or that one can choose another by a sheer act of will. An assumption is not something one can get rid of, since its transcendentality conditions the very trajectory of reflection, though it provides more self-awareness. The task of thought is, therefore, to go deeper and assess the reasons why Western culture has been wavering between a technophobic image, associated with the fear of being enslaved by machines, and a technophile approach that uncritically sees, in technological progress, a necessary step towards (or even a replacement) for moral progress. Thus, the purpose is also to provide a ground for a dialogue between cultures concerning the place of human beings and nature and the looming impacts of the rise of the scientific worldview.

Japan stands out from the West because it excels in an apparent harmonious fusion between tradition and state-of-the-art technology. The Japanese world already possesses some exceptionalism, as is not characterized by the anthropological *a priori* opposition between nature and culture that we previously thought was global (Berque 1995). In Japan, cities were not defined by the urbanity that was “inside” the walls and by the rusticity of the rural, villainous "outside". Japanese culture also privileged nature as a locus of educational and moral refinement. The syncretic Japanese spirituality lent itself to seeing in each natural being the very manifestation of the body of Buddha, or a *kami*, with each being having intrinsic value. Like an *avant-la-lettre* post-modern society, within Japan the human republic is thus fully linked and intersected with “a parliament of things”, an expression with which the late Bruno Latour (1991, 142) summarized his symmetrical actor-network theory, in which not only the natural, but also technologies inhabit the same level of reality. Inanimate material things are considered as though they are alive (Heikkerö 2005, 256). Things and robots, like humans, can “be born” or “die” and they can also compose the affective and

memorial atmosphere or the social heritage of a social group or family. The human does not seem to have a dominant position or centrality by which other inanimate beings are sidestepped to a marginal position. The hierarchy between creator and creature is more blurred in Japan so that the question of a dystopian "invasion", "enslavement" or the "surpassing" of the human condition does not arise.

In this context, robots and their use deserve special reference, because not only do they connect with all the above-mentioned aspects, but they are surfacing in areas previously considered alien to their introduction, such as public relations, commerce or domestic areas such as informal child and elderly care. Faced with such developments, one is immediately taken to consider robots as a replacement – a threat to one's own humanity. However, given its specific historical relationship to technology, in Japan, an understanding of the presence of artificial beings does not lend itself to be captured by the standard usual categories of an invasion or usurpation. Indeed, the increased presence of robots, humanoid or otherwise, and electronic devices is not hampered by traditional metaphysical assumptions about an inherent core that comes together to constitute what is essential about human beings, such as subjectivity, legal personality, or moral agency. Frankenstein's syndrome (Coeckelberg 2013, 56) is defined as the fear that technology will get out of control, that is, that "our" creatures will rebel against their creators, to whom, by definition, obedience is owed. The usual rhetoric about the dangers of "invasion" makes use of a "preservation" discourse about the sanctity of what is inside oneself and the evils of an ontic fusion. According to this common discourse, borders must be guarded because, if they are crossed, they would threaten human integrity. The moral agency of human beings is defined precisely by being beyond the determinations of nature and matter, and autonomy as something that manages, beyond those determinations, to give a law unto itself.

In the West, these assumptions of safeguarding human subjectivity are common and go back to its religious and philosophical heritage. This belief also shapes the grammars of creation (Steiner 2002) that run through its art, literature, nature and technology. A strict division between God and his creatures runs through the imagination of Western folklore. Since human beings still possess a divine spark through their rational faculties, other creatures do not partake in this connection with the godhead. Even in a secularized culture, the natural and material world are disenchanted and are mere facts alien to and removed from human subjectivity. In Japan, on the other hand, the idea that the inner is connected to the outer and commands it, the idea that every expression is preceded by an intentional impression, seems to be more tenuous. Similarly, another common assumption evaluates technological artifacts according to whether they fulfill the purposes for which they were made, although it has been carefully examined how that is a very hardwired design fallacy (Ihde 2008). In other

words, our technological creations should not stray from their intended function precisely because they do not have a soul, a spirit or agency that escapes the determination of the laws governing matter. However, Japanese culture suggests that such assumptions might be mere playful and helpful fictions around which Western culture established itself as a civilization. Such a comparative analysis would allow for a much-needed understanding of how the “intrusion" of technologies in the daily life of vast populations is usually accounted for by using a cost-benefit analysis or other methodologies that hinge on metaphysical assumptions about human nature and the tameable nature of technology. Perhaps in this way, one can begin to face the challenges presented by a swarming everyday presence of artificial beings with whom one will progressively interact with in the future.

Only recently have philosophers like Heidegger started a philosophical current that, notwithstanding all the dangers posed by technology, recognizes how it is leveling the separation between subject and object, between mind and matter and promoting the loss of old metaphysical masks (Heidegger 1991, 145) by which human beings realize that the very planetary threat to our planet exposes an interdependence between natural, social, and technological entities. Such a philosophical turn seems to be very appropriate to what is the case in Japan. In relation to technology, therefore, I suggest that one should not see or take it as something strange, something that is outside, but rather something that has always accompanied humanity, which does not necessarily make it something tameable.

It must also be added that "Overcoming Modernity" (*Kindai no chôkoku*) was already an expression used by the Japanese philosophical current of the Kyôto school (Stevenson 1997). Integrating the insights of Japanese Buddhism into a conceptual framework has also been a way of presenting Japan’s alternative to Western metaphysics – expressed in their poetry, painting, architecture and religion – according to which personhood and nature are in a continuous contextual field of experience, known as the logic of place (*basho no ronri*), as opposed to the logic of the subject of Aristotle that grounds all modern subjectivity and science.

A critique of Modernity by Kyôto School philosophers like Nishida and Watsuji thus draws heavily on both the Japanese ethos and Buddhist concepts and resonates with the critique made by Heidegger. Modernity is conceived as the late historical development of Western civilization whereby being is understood according to 1) the emphasis put on abstract categories of human reasoning and not through the concreteness of particular beings and 2) being is then reduced to an object, not only observable in its lawfulness but subjected to being manipulable. Modernity is thus a way of conceiving beings according to their possibility of being known and objectified based on the self-positing of the I (Stevens 1997, 18) whilst not allowing beings to manifest themselves in their proper

essences. The concepts underpinning the development of Western technology are then a result of a particular way of conceiving reality.

2 Heidegger and Borgmann on Going beyond Technology

Although published in 1954 in the dawn of the new atomic era, the questions raised in *Die Frage nach der Technik* are still our own. *In The Question concerning Technology,* Heidegger (1977) attempts to go beyond the instrumental and anthropological understanding of technology by stressing both the continuity with techniques of old and the alliance between science and modern-day technology. For Heidegger, the essence of technology aims at bending and making reality more and more transparent and available. Constraints like space, time and all sorts of traditions that assign limits to communities are being progressively obliterated. To stress how such a process is directed at surpassing the very body and flesh with all its limitations and vulnerabilities, Martins (2011) uses the term "technological Gnosticism".[2] Technology enframing (*Ge-stell*) imposes an objectification that allegedly aims at denying death itself. Contemporary culture thrives on waging several battles against aging, disease and sickness through medical and genetic technologies. As boundaries are pushed, such attempts further call into question what defines humanity. Already in this essay Heidegger attempts a new understanding in order to assert the possibility of establishing a relationship with technology that is neither one of contrived obedience nor one that leads to resistance.

Heidegger's stance is both original and resonates with how technology is broadly considered in Japan. Unfortunately, it has frequently been pushed out of a middle path and bent towards either a call for a conservative appraisal of things past or as providing reasons for the political regulation and taming of technology. For instance, Hans Jonas's call for the imperative of responsibility and the preservation of the traditional image of man vis-á-vis the viability of life on Earth is tantamount to such an effort of finding a third order power over the second out-of-control power of technology that has pushed civilization into a new fragility (Jonas 1979, 253). Heidegger however was clear from the outset:

> ... no individual, no group of men, no committee, even of statesmen, researchers and technicians, however important, no conference of leading figures of economy and industry can halt or direct the historical course of the atomic age. No merely human organization is in a position to achieve the mastery of the age. (Heidegger 2000, 22)

2 "... to signify the marriage of technological achievements, projects and aspirations with the characteristically Gnostic dreams of radically transcending the human condition ... Overcoming the basic parameters of the human condition - its finitude, contingency, mortality, corporality, animality, existential limitation - appears as a motive and even as one of the legitimations of contemporary technoscience, at least in some areas" (Martins 2011, 18, my translation).

As technology is acknowledged as posing a problem for other beings and even for the viability of the planet itself, human beings can lose grasp on how their thoughts and plans are already framed by technological thinking and how every solution appears itself as framed by such an imposition. For Heidegger every attempt to tame technology "with spirit" nevertheless reinforces its grip on the taking of reality. Heidegger turns contemporary awareness on itself and shows how the will to power that is made manifest in the technological enframing is still present when one expects that it ought to be controlled as a means of serving the noble ends of preserving wildlife, community, education or, more generally, of safekeeping the future of the planet for generations to come. By considering technology as an instrument (Heidegger 2010, 12) that should obey intentionally designed goals and solve specific problems, the capacity to acknowledge that there are issues that are not amenable to a technological solution is lost (Martins 2011, 308). One of the usual approaches and the most obvious is the very assumption that in the contemporary world technological development itself can be controlled and mastered through several methodologies linked to Technology Assessment and Responsible Research and Innovation (Lente and Swierstra 2017). Yet, technological development and innovation has been more recently acknowledged by various authors, organizations and institutions as being causally unpredictable for its nefarious effects on labor, the environment and in altering the very nature of user perceptions and expectations (Marchant 2011).

According to Heidegger, such an instrumental approach is doomed to fail. As one of his most prominent students has stated, using the notion of the Promethean gap, the gap between the power of technology to unleash forces and the agent's faculties to imagine and predict its consequences unavoidably widens (Anders 1962). There is no appropriate action whatsoever to bring it back into one's control. Technology is humanity's self-extension unleashed in the course of history fueled by exploring and expanding the boundaries of knowledge. Anders paradoxically states that "man is smaller than himself". Being a featherless, harmless and defenseless creature, artifice is continuously developed as the only way of taming the environment (Gehlen 1973). Technology is thus a hallmark of human beings, but it brings them under its yoke by its so-called solutions.

What can an approach that is neither a call for salvaging what still has not been lost and that is radically critical of the alienating effects of technological consumption add to the contemporary world? And can such an approach speak to, or draw resources from, the status of nature in Japan? Today both human beings and nature seem to be in jeopardy by way of the very same process that, albeit originally growing out of their mutual separation, has gradually been responsible for a totalizing understanding of human beings and society according to the terminology of science (MacIntyre 1981, 82).

More than death or loss, such a process of technological enframing is dangerous because it reveals human beings as solely dependable on their purposefulness and objectifying representations as paving the way not only to a more bearable condition, but to happiness itself. Such enframing, however, is outside of one's choosing, even if it seems to be built on the sum of individual wills. According to Heidegger, this is an age that Being was destined for and that cannot be surpassed but understood and accepted. Heidegger seems to expand the Aristotelian admonition that one's action starts by recognizing those things that are in one's power from those things that are not. Although technology, and history as well, are a collective human creation, contingency has a bearing on many levels. There is no way to direct them or push them both into a desired outcome. This goes against the usual way of approaching the future as an abstract, empty place prone to be filled with projects fueled by the prowess of humanity's calculating powers (Adam and Groves 2011, 17). In Ivan Illich's parlance, there are issues that can only be coped with as a condition and not as a problem to be surpassed. Accepting one's powerlessness to bring about the redemption of oneself and planetary life in such troubling times is paradoxically the only way to circumvent technological behavior (Cayley 1992, 270-276.).

This is the core of the true danger for Heidegger. More than the plundering of the Earth's resources or the arms race towards new heights of destruction, the real threat is the "technological understanding of being" (Dreyfus 1997, 54), that is, the idea that calculative thinking, the way of rational understanding brought about by the natural sciences and excelled by technology, is the only way of thinking and relating available to human beings. The real danger lies in the fact that by consummating itself, by taking the imaginary of what is desirable, calculative thinking exhausts the possibilities of meditative thought, that is, it extinguishes the hypothesis of another understanding of Being in which the human condition is not taken as something that lends itself to maximal optimization. Meditative thought is, however, of one's choosing and nurturing.

Accordingly, while Heidegger stresses that the tide for the technological ordering of reality has been forming since the dawn of Western civilization towards its acme, it nevertheless does not determine all one's relations and worldviews. As Dreyfus states (1997, 57), Western culture today provides a *cultural clearing* that, despite its regional variants, has been spreading in the last centuries and is becoming more and more global. Within such a clearing, an understanding of beings as driven by the search for optimal efficiency has become the standard. But there are other marginal clearings, even inside Western culture, but perhaps especially outside it. More importantly, if it were not for the dominant technological revealing of beings, other cultural clearings would not be valued. Although one cannot choose the cultural clearing within which one is born, one can, potentially, begin to understand its limits and step outside it towards others.

For this task I now turn to one of the interpreters of Heidegger's work in general and meditative thinking in particular, Albert Borgmann. His specific approach will be of assistance in understanding the role of technology in Japan and help us to grasp how a contemporary technological society can still live side by side with tradition. Through his "device paradigm", Borgmann (1984) agrees that, irrespective of its origin, technology is usually cast as an alienating force that deviates human beings from their proper flourishing while eroding social bonds. By making everything easily available, one's life becomes dull as skills are not developed and lasting commitments are not sought. Accordingly, lifestyles in advanced industrial societies everywhere are more prone to being disburdened through devices (1984, 44): work becomes more monotonous and duller while leisure is equated with various forms of consumption.

For Borgmann, focal things and practices can nevertheless refocus one's life amidst technological forces and provide them a much-needed center, as they are "matters of ultimate concern that are other and greater than ourselves" (1984, 169). The commanding presence of things balances the fragmentation induced by technological devices by creating a practical focus where attention, exertion and self-development can make individual lives more meaningful and give them depth and unity. Practices like running, a home meal prepared for family and friends or taking care of one's garden all have the gift of holding and caring about something precious through the development of skills and discipline. It would be a mistake, says Borgmann, to see such practices as an endeavour aimed at realizing more efficient outcomes. Instead, they heal the split between means and ends (ibid, 208).

Just like Heidegger, Borgmann is thus not making an appraisal of focal things and practices as a political program aimed at an upheaval of the liberal democratic society where technological innovation thrives, but attempting at a reform that pushes the technological understanding of Being as a marginal clearing that coexists with a more central one, provided by focal things and practices. According to Borgmann, it's a matter not of overthrowing the technological order, but of setting it aside for the things that matter the most.[3] For example, in Japan, several arts and practices co-exist with the pervading technological environment without any contradiction. The goal is not to fight calculative thinking, but to bypass it by allowing such arts, crafts and practices to acquire a prominence unknown in pre-technological environments. Such coexisting is grounded on pragmatic reasons:

3 "Borgmann … claims that focal things and practices, however 'pretechnological' they might prove to be, have force and depth within a technological context, which for this reason should not be dismantled. In fact, it cannot be dismantled, not so much because it is already so well entrenched as because it affords the opportunities, the affluence and free time, to engage with and in these things and practices" (Brittan 2000, 11).

> ... the device paradigm requires neither intrinsic reform nor global replacement. Only local replacements of devices ... are desirable and possible. The general infrastructure, e.g., of communication, transportation and health should provide the instantaneity, ubiquity, safety and ease that only advanced technological devices can provide. We cannot responsibly ... risk human health or life in order to save a medical skill from obsolescence. (Borgmann 2000, 365)

Only in this way can one be free to engage with devices and put them aside without being ensnared by them, even if they are recognized as designed for and directed at efficiency. According to Heidegger's reading of Rilke's poetry, there are things that touch a human being's essence and set it in motion. Those things that, by belonging to a wider circle, can move oneself. Additionally, and this is remarkable, by way of the technological enframing, they acquire a special fragility and radiance. For example, death shines as something that resists such enframing, as it cannot be made an object. The close connection between life and death is underscored by looking at death as the other side of life. Only then can death itself cast a radiance to the wider circle where the future, one's ancestors, and one's infancy acquire their meaning as that what really matters.

Once one understands that one is bound to this technological clearing but not forced into it, one can engage in other ways of self-cultivation, potentially opening reality beyond the paradigm of efficiency. This ability to shift and refocus one's life even in a technological world while being nevertheless constrained by it, is what Heidegger calls *Gelassenheit* or serenity towards technology. This is how one can loosen the spell that technology has by making reality flat, vaporous and ever available. For Heidegger, this consists in a serenity towards devices and apparatuses, in establishing a daily relationship with them that is short-lived: one can use them and discard them from one's existence because they do not command one's life, but are made subordinate to something that is superior to them and submits to them. It is only through serenity that reality and individuals are seen from a different perspective by which calculative thinking is put at the outskirts of one's life and acquires its proper domain. This is accomplished not only mentally, but, as Borgmann points out, by embodying such understanding in a way of life, in practices in which neither others nor things are taken as resources, in which the presence of others, things or nature speaks eloquently and invokes a watchfulness. In sum, technology can be reframed if only one learns to keep it at bay according to what mostly matters in one's life.

Regarding the particular point of focal things and practices developed by Borgmann out of Heidegger's work and its affinities with Japanese culture, it could also be argued, with Sharr (2006) that Heidegger understood too well the urgency of allowing himself to be in contact with another alternative setting in the background of urban Modernity through the experience provided by a regular retreat to his rustic hut in Todtnauberg. Its daily activities, rituals and the

bluntness of mountain life provided a focus against the more aloof concepts in which philosophy wordplay abounds. A hut, its setting and the everyday life it promotes, frame both one's thinking and one's being. By abstaining from urban home comforts through a voluntary and focused withdrawal can one notice how philosophy itself, as an embodied and lived process, is subject to the surrounding assumptions and arrangement of a place and its landscape. The appeal of the hut for Heidegger grounds the relationship not only between his philosophy but of every form of thought and place and the importance of the materiality of common things.

Sharr also notes how Heidegger's retreat belongs to a three thousand year "canonical 'tradition' of huts as situations for poetic or philosophical reflection" (Sharr 2006, 76). Heidegger was apparently also aware of how the haiku poet Matsuo Basho involved the hut as a theme. The symbolism of the hut is moreover recurrent in Buddhist literature, especially Chinese and Japanese. Its frugality and rustic appearance point to the austerity of the hermit who, avoiding connections with civilization, seeks to contrive a shelter to protect himself from the weather and which testifies to a solitude that is still entirely human. It is through the hut that the hermit intends to begin an authentic recreation of his connection to the world. Heidegger too "felt that its basic comforts put him in unusually exacting contact with the weather and the forest's flora and fauna, with whose perceived motions he sought to demarcate existence. Heidegger attributed philosophical authority to the order he found in these things and phenomena" (2006, 103). This is where arts and crafts can play a definite role and where we can start uncovering its role in Japan. In the next section, albeit only briefly, some concepts around the syncretic Japanese religion will be presented in order that this task can be furthered.

3 The Roots of Japanese Buddhism

To each historical era belongs different sensibilities, which combine the standpoints of physics, morality and religion, about the current representation of nature (Lenoble 1990, 203). In this way, the idea of nature can receive its definition from man's idea of himself (atomism was primarily a consequence of the awareness of individual independence in the *polis*) or man's idea of himself can be defined through the idea of nature (materialism took hold in nature before being today applied to man). Today nature is mechanized and stripped of an internal creative principle, *and to effectively handle and manipulate nature is to know it*,

an analogy inherited from the action of the divine watchmaker.[4] This scheme of nature as a mechanical system, however, does not need the belief in God to be maintained, and is still present today despite the relevance of contemporary scientific updates.[5]

With this commonsense materialistic view in mind, I now turn firstly to the *Dao de Jing* in order to understand how Japanese approaches frame technology in its relationship with nature and human beings. The role of *de* in the *Daodejing* has often been overlooked in its relevance to aesthetics and an art of living. Ames points out that it describes the power that something has to act naturally (1989, 125). The order of the *Dao* is therefore not a predetermined pattern obeyed by all things but an order that emerges due to each one expressing its *de* as a particularization of the *Dao*. The relation *Dao-de* can be seen as the thing enclosing the whole while expressing itself in openness to other *de*. As nature works according to the relation between *Dao* and *de*, human beings can also act according to their respective *de* if they allow themselves a self-cultivation in the way that, although using their reasoning faculties to depict reality, they do not confuse it with what they intend to describe. This would then be a return to their true nature. To act like the *Dao* individuates itself in a *de* is then to go back to the root of what *deliberately acts by not acting* (*wu-wei*). The term *wu-wei* is composed of the negative particle *wu*, and *wei*, meaning "to act", "to build", "to make", "effort", "strain" or "task". It can be understood as non-assertive action (Hall 1989, 109), as an action that combines one's own individuality with the one in which one acts through the appreciation of the respective *de*.

The most notable difference with Confucianism is that in Daoism this capacity expands beyond the moral sphere and ranges across other fields of application. Many of the examples Zhuangzi employs use artisans, animals, newborn babies and vagabonds, in the sense that the latter, having released themselves from social ties, are more free. Therein the loss of self-consciousness means a total harmonization of activity. The discriminating, representative mind withdraws, while the mind, still being present, does not henceforth interfere with activity. It is in this sense that the *Dao* can be expressed, through a particular *de*. Unfettered by a mind which insists on projecting its own schemas on reality and sensibility, the human being Daoism wants to develop is the man who can express his primordial nature through his *de*, just as the natural elements perform

4 "*I can only understand what I can build* .... Among the philosophical principles ... that have implicitly or explicitly legitimized and certainly even defined the modern technological adventure, there is the principle or axiom of Vico, the famous *verum ipsum factum, verum factum converturtur* (the interconvertibility between the true, on the one hand, and the made or produced, on the other) ..." (Martins 2011, 83).

5 "The environmental crisis may at least in part be diagnosed as a symptom and a measure of the mismatch between the atomistic-mechanistic image of nature inherited from the Greeks, institutionalized in modern classical science and expressed in modern technology, on the one hand, and the holistic-organic reality disclosed by contemporary ecology (and in a sense by the environmental crisis itself), on the other" (Callicott 1987, 116).

without calculation or obeying a lawful plan. To recover it, Zhuangzi alludes to the "fasting of the mind".

Daoism thus proposes that the intimate knowledge of nature and the sense of self are interconnected and their harmonization does not lie in the articulate knowledge of representational facts given by abstraction into conceptual systems. The way towards gaining such intimate knowledge is a suspension of all the unnecessary mental projections that one tends to "read" and impose onto reality. Or, as Heidegger would say, one's representations have an unnecessary authority in objectifying reality. In the case of human beings, the experience of harmonization may be a skill or an aesthetic experience, in the sense that one can expand the details of each singular being through the attention to how its particulars connect with other *de*. The case of the potter who molds the shapeless clay following its inherent and concrete particularity results in a piece that expresses both the nature of the clay and the potter's manual skills.

It was perhaps this character of Daoism and, later, of Neo-Confucianism, which, while still integrating influences from Buddhism, ended up limiting the genesis of the modern theoretical sciences in the prosperous Chinese civilization.[6] There was no statable principle according to which forms are constituted or reducible to one or several substances, but only that they perform in a similar way and are grounded by the same unfathomable source. The *Dao* is not only an unnamable genesis, but the way by which nature transforms itself and how the human being, expressing his *de*, may harmonize with it. Perhaps by way of something that inconspicuously tied human beings and nature, the way to conceptually distance man and nature through dualism was blocked. The knowing subject had no possibilities to conceive an object as something abstract that stands to be measured and apprehended in the language of mathematics as the real language of nature.

Fast forward to the migration of Mahāyāna Buddhism to Japan and there we find several theoretical aspects that need to be highlighted. One pertains to the Huayan school of Buddhism and its own unique doctrine of the infinitely repeated mutual identity and intercausality of all phenomena. At the same time, this school was subject to the natural influence of Chinese sensibility, particularly Daoism, with the Buddhist aim of awakening equated as a return to naturalness and it has thoroughly influenced Buddhist schools in Japan (Lusthaus 1998a).

In the Huayan view, the cosmos acquires a both comprehensive and organic sense. The form of each experience of this reality, in turn, is called a *dharmadhatu*. In the fourth and final form of *dharmadhatu*, the experience is of mutual interpenetration between all events: *shi shi wu wai*. It is the realization of the free intercausality of all things and the conclusion of the impossibility of there being anything that is not a reflection of something else (Cook 1977, 36). Each

6 Cf. Joseph Needham's *opus magnum*, *Science and Civilization in China.*

thing in the universe acts spontaneously because it does not act divorced from its conditions. It is not a monism, but a non-dual perspective, since by *shi shi wu wai* what is meant is not a perspective that does not distinguish between various particulars, as if subsumed in a whole, but rather an experience in which the interconnectedness between all things is the guarantee of their distinction. Identity and difference are only two aspects of a common reality. There is no universal or absolute without its manifestation in relative and concrete particulars. This is an outcome of Nāgārjuna's view, in that absolute truth does not exceed or transcend conventional truth, because it needs it to be expressed.[7] The understanding of absolute truth is derived from and maintained through realizing the experience of emptiness (Borges 2010, 52). In Mahāyāna Buddhism, emptiness is not something that is observed in phenomena but a new vision, a way of knowing reality as it is and which subsists after the elimination of all perspectives that aspire to describe it correctly by resorting to conceptual thought. The refutation of all conceptual perspectives is not in turn replaced by belief in another perspective, but rather by the pragmatic assumption that reality is ineffable (Burton 2000, 57).

Taking on these developments, Japanese Buddhist thought extended the idea of a universal Buddhahood, namely the idea of an inherent enlightenment of all non-sentient beings that is often referred to in medieval Japanese literature (Maraldo 1998). Only humans had to realize their own Buddha-nature. A variety of ways became available for reaching Buddhahood through a synergy between aesthetic expressivity and a religious path. A *dō* gradually embodies in the practitioner both the understanding of an artistic demand and the experience of a spiritual path:

> The dō in the field of art is a way of leading to spiritual enlightenment through art; the dō consists here in making an art a means by which to achieve enlightenment as its ultimate goal. In the artistic dō … particular emphasis is laid on the process, the way, by which one goes forward the goal. To every stage the artist tries to get into commitment with the quintessence of art through the corresponding spiritual state and make himself bloom in the art. (Pilgrim 1977, 286)

That is why some of the artistic expressions of Japanese Buddhism exempt themselves from the *representational* function of revealing something beyond their own appearance (Pilgrim 1998, 23). It is not the case that they cannot be

7 "All Buddhas rely on two types of truth/ In order to teach the Dharma to living beings/ One is conventional wordly truth/ The other is the truth of ultimate meaning. If a person is unable to perceive the distinction between these two truths/ Then he will not know the real meaning/ Of the profound buddha-dharma. Unless you rely on the conventional truth/ You will not attain the ultimate meaning/ Unless you attain the ultimate meaning/ You will not attain nirvāna" (Bocking 1995, 342-343: 24 – The Four Noble Truths, 8-10).

conceptually included within a frame of reference that explains their structure. It is rather that the hermeneutic exercise that unveils the meaning is not necessary for the religious function of the art. The Buddhist view of reality, at this level, becomes similar to what d'Angelo (2009, 153), writing about Schelling, means by a culling of the difference between the signifier and the signified. Pilgrim speaks of these art forms of Japanese Buddhism as *presentational*, in the sense that they manifest the transformative power upon their encounter with the practitioner.[8] This is why the dissemination of many arts associated with Japanese aesthetics such as calligraphy, poetry, painting, gardening, and tea ceremonies reveal the variety of aesthetic and spiritual paths that bracket intellectual understanding in favor of sudden truthful intuitions and technical expertise in a given artistic field. All these cultivation methods indicated that Buddhahood was no longer a goal attainable after innumerable efforts and reincarnations, but something achievable in a single lifetime and in the practitioner's own mind and body. There is therefore a metaphysical collapse which singularizes the absolute with the mundane.[9] It is particularly the mark of Zen that the full affirmation of worldly life and of the complete concreteness that each small action or event contains.

4 Gardens as a Focal Practice and the Overcoming of Modernity

Gardens are models by which a culture illustrates its metaphysical attitude towards nature and place, but also towards what it understands to be a human act of creation in line with the very creative principles of nature or the divine will. The garden allows itself to be apprehended according to a hermeneutics of place (Nys 1997, 135) where the attitudes of a culture concerning space, places and the management of territories are manifested. Any reflection on the garden will have to recognize its dual nature, as it works on the limit of what art amounts to be. Given the organic and pulsating nature of its matter, a garden nevertheless possesses a remarkable difference in relation to other arts. The intervention and systematic refining of its forms is essential to its appearance throughout the changing and recurring seasons. A garden is thus seldomly finished as the gardener joins in its elaboration alongside nature. It hence reveals a

8 "The vehicular power of Buddhist Art lies not only in its ability to reveal or representationally point to Buddhist meanings, but also in its ability to presentationally embody the very sacrality that forms the *religious* nature of Buddhism itself ... we can think of its presentational function ... as a function whereby sacrality is manifested in the experiential power of the moment. This function features the artwork as religious-aesthetic Presence, an immediate manifestation of Buddhist Truth, rather than as a symbol "pointing" beyond itself" (Pilgrim 1998, 23-25).

9 "The idea of becoming a Buddha in this very body or life involved a temporal and a metaphysical reduction. First, it collapsed the various stages of the path to enlightenment that were so important in various Buddhist traditions, and reduced the 'three immeasurable eons' to one lifetime. Second, it collapsed any remnant of a difference between the physical reality of life on earth and a transcendent realm, between the transient human body and the transcendent dharma-body" (Kasulis 1998c).

visible and normative connection between two central themes that run through the history of thought: first, human being's nature and second how nature is conceived. It declares human beings' position as an active agent in the natural environment that surrounds him, enacting the conceivable image of both man and nature through the form of their relationship. Conceiving a garden is at the same time a refusal of nature as a realm unscathed by humanization and its design according to an idea (Nitschke 1999, 9-11). The garden is thus already a detailed affirmation of human beings' inevitable technical action on nature, either of an intimate proximity or one of instrumental separation.

We have seen how both Heidegger and Borgmann point to how a work of art may provide another clearing, i.e., a focus around which technological enframing is put aside. By observing more closely the art of Japanese gardening, one can see how it both reveals a focal thing and practice that can co-exist with a highly technological background. I thus wish to examine what the uninterrupted presence of gardens also says about how nature in Japan is unveiled vis-à-vis the relationship with man and technology. For that I will briefly examine the principles that have guided and oriented the design of Japanese gardens. Notwithstanding the usual and already mentioned comparative approaches to Japan as a culture where another, harmonious relation with nature and technology is conceivable, such readings fail, on a closer and critical inspection, to have a relevant bearing on environmental behavior. This is not a rejection of the Japanese vision of nature and technology per se, but a call for not reading it as having a determinist influence on personal behaviors that are foremostly enmeshed with social and work practices. There is, however, still valuable room for cross-cultural comparisons. My take is that Japanese culture already manages to accommodate tradition with state-of-the-art technology by granting opportunities to focal things and practices like arts and crafts to flourish and reveal another way of disclosing nature. Heikkerö (2005, 255) has already outlined resemblances between this proximity of Japanese culture with focal things and practices, while highlighting that Zen allows also for accruing self-knowledge and self-development.

Nevertheless, there is no doubt that several Japanese cultural traditions attest to how nature was sometimes either a friend and companion – a place of refuge from worldly turbulence – or a demonstration of the impermanence of human life with soteriological power, or even, as in Zen's vision, a locus of harmony (Saitō 1997). Where Zen stands out is in the way that this unity was not an abstract, learned concept or an object of knowledge, but often experienced through an aesthetic appreciation of simple, mundane things through the mastering of a skill. The noumenal is not hidden behind appearances, but consists in the manifestation of things themselves, in their thusness or suchness (*Tathātā*) and which a perception, analogous to direct aesthetic appreciation, can intuit through experience without any systematization, classification or dependence of concepts. We have chosen the garden as an example of a focal practice, but

many arts, such as *ikebana*, painting or poetry with an affinity to Zen thinking hint at this prior contact of the artist with the ultimate reality of things.

And yet, as Saitō points out, it is striking that Zen does not constitute itself as a cultural force to hold the exploitation of nature in Japan. By becoming an element of Japanese aesthetics and culture, Zen may have had insidious effects precisely because of its emphasis on non-conceptual and qualitative access to reality. For if everything can be the very manifestation of Buddha nature due to its impermanence, "strip-mined mountains, and polluted rivers must be considered as manifesting Buddha nature as much as uncultivated mountains and unspoiled rivers … the notion of a responsive rapport theoretically makes it impossible for any intervention in nature to be disharmonious with it" (Saitō 1992). This helps explain why Japanese culture has both a history of environmental destruction and exploitation while preserving traditions where a cultural nexus of the "love of nature" is expressed, such as in gardening, landscape painting or the cherry blossom festivals. Nature is undoubtedly connected to Japanese identity, but that does not necessarily result in a care for the environment or an awareness of the ecological footprint.

This section will also feature some of the observations of Hisamatsu, a Japanese philosopher and monk who met Heidegger (2017) in 1958. This can benefit the grounding of the posthumous dialog between a German philosopher and a whole culture by stating how Eastern cultures were not as foreign and exotic to Heidegger as previously believed. During their brief conversation, Heidegger's acquaintance with Japanese culture is all the more noted. In particular, mention is made of Klee's paintings and one short poem that show affinities with Japanese culture (May 2005, 99) along with a hopeful statement that East and West can meet in a "deeper place" than politics and economics. This points to how familiar Heidegger was with both civilizational roots.

Gardening as a focal thing and practice undoubtedly resembles Heidegger's releasement towards technology (*Gelassenheit*) of letting things be. Additionally, as May (2005) has argued, this notion may have been directly influenced by Eastern thinking. According to this author, textual comparison affords the view that Heidegger's suggestion of a new beginning for the path of thinking beyond Western metaphysics can be traced from non-Western sources, namely Chinese Daoist and Japanese Zen traditions. Hence, I may add, it’s no coincidence that the new beginning towards the background of technology as the most prominent offspring of Western metaphysics resembles Eastern ideas. In his book *Zen Action, Zen Person* (1981, 48-51), T.P. Kasulis notices the affinities between meditative thinking and the Taoist “fasting of the mind” going beyond reifying *vorstellen* (to re-present). Releasement or “letting things be” has blatant affini-

ties with *wu-shin,* no-mind[10] by which one deals with forms encountered in daily life by not clinging or taking them as the only reality. Suzuki adds (1959, 94):

> In Japan, perhaps as in other countries too, mere technical knowledge of an art is not enough to make a man really its master; he ought to have delved deeply into the inner spirit of it. The spirit is grasped only when his mind is in complete harmony with the principle of life itself, that is, when he attains to a certain state of mind known as wu-shin no mind. This is where all arts merge into Zen.

And yet, as Kasulis (1981, 50) remarks, the dominance of calculative thinking for Japanese Buddhism is not due to recent technological endeavors. An intellectualized mode of consciousness "is a fundamental characteristic of human experience in any time or place".

It should be noted however that Japanese gardens are not only a univocal expression of Zen or any other Buddhist school. The fondness for the natural world was already omnipresent since ancient times. The Japanese word for garden, *shima*, appeared with Shintoism to designate the notion of a sacred, purified space of land, with a view to communion with the *kami* imbued in the natural elements.[11] Over the centuries, Japanese gardens continued to be linked to religious expression, both through their association with Buddhist temples or the secularized enjoyment of their aesthetic qualities by patrons, feudal lords and scholars. The tea ceremony, taking place in a rustic cottage in several gardens – the *roji* –, constitutes a precise case of the contemplative and refined exercises and rituals that worship the mundane. In a nearby humble hut of the tearoom, subjected to the subtle events outside, guests were free to observe, comment or share the bubbling silence of impressions that came from the garden. Spring and Autumn were especially abundant in meanings attributed to natural phenomena. Hisamatsu (1971, 26) has noted that

> Thus, the Way of Tea includes religion, philosophy, ethics, art, manners, clothing, food and architecture; and, what is more, all of these are chosen according to a Zen standard. In other words, Tea is an expression of laymen's Zen. This cultural expression in its genesis is quite natural, and in its result can be said, without overstatement, to be the creative completion of the totality of Zen culture into a systematic and integrated whole.

10 "Without-thinking is, therefore, a not-yet-conceptualized immediacy" (Kasulis 1998). *Shin* is *kokoro*, mind and heart, intellect and affect simultaneously.
11 "*Shima* literally means a 'bound artefact', which in turn signifies occupation. The word *shima*, derived from *shime*, means land, or, more specifically, land which has been taken possession of. It later acquired the meaning of garden" (Nitschke 1999, 18). Other common words for garden are *niwa* as the master-gardener is known as *niwa-shi*.

Although many of the most popular Japanese gardens are attached to Zen Buddhism temples and Zen master gardeners have been appointed to design many others, their influence is perhaps more in structuring, not motivating.[12] Buddhist concepts help in explaining but do not exhaust or justify what is primarily a fact of Japanese civilization and which draws on other historical and religious influences. All these influences coexist, making the visitor's experience both richer and more varied. In a similar matter, Hisamatsu has suggested that the way of tea, for example, which is typically Japanese, is not something that belongs solely to Zen monasteries or Zen monks, but can be practiced by lay, or common people. It provides "fundamental, universal suggestions concerning the ideals of culture" (1971, 27).

In Japanese gardens in general, the constitutive arrangement of their elements, the specific combination of tree species and the sense of space that they instill in the viewer show the details of an inconspicuous care, an imposition or a respectful collaboration.[13] Gardens and landscapes in Japan are related with literary, geographical references and collective meanings of natural heritage through metaphorical elements. The past lingers in them. Their elements are possessed by the charge of successive cultural representations and historical facts, some underlined and others hidden by the process that in China and Japan over the centuries has attributed a specific, soteriological or aesthetic-religious value to nature (Berque 1995, 46). This is not surprising, given that the domain of the experiential presentation of nature, the domain of its phenomenology, as it has surfaced for several artists and monks, was subsequently acculturated and elevated into a virtuous practice, religious fact or historical or artistic reference for the elites.

It is however the perceptual dimension that gives rise to the principles of design and projection of the Japanese gardens.[14] Though any garden reveals a relationship to nature, Japanese gardens feature a meticulous manipulation of natural constituents that is not, however, rooted in a concept of nature detached from the way its empirical manifestation is coupled with human sensibility. In other words, Japanese gardening remains rooted in the relationship of sensuous qualities that nature affords, in the way it appears naked to human experience, eschewing the imposition of a prior ideation based on concepts or categories that frame it as a resource, either it is energetic, commodity or aesthetic. Nature

12 "Japanese garden design is firmly rooted in the observation of empirical reality. This gives rise to the design principle of following the request. However, by far the most important philosophical basis which sustained and further developed this principle of 'following the request' was Zen Buddhism ..." (Saitō 1996, 56).

13 "... both Japanese gardens and Western formal gardens give expression to idealized nature by distilling nature's essential features. The difference between them lies in the fact that the idealized form of nature in the Western formal garden is conceived in the intellect irrespective of nature's empirical manifestation, while the idealized form of nature in the Japanese gardens derived from the perceived features of empirical nature" (Saitō 1996, 59).

14 "The central message at the heart of Japanese garden aesthetics is that the designer should not copy existing gardens, but rather gardens should reflect selected qualities of the natural environment" (Slawson 1987, 16).

should be experienced directly. Japanese gardens allow one to say that their design principles are based on a non-conceptual experiential concept of nature.[15] Like many other Japanese arts, the art of gardening is based on a process of embodied skill in which the conceptual principles of design and projection are intimated until they become an automatic expression of the disciple. This involves a purely sensorial receptivity, *bon'yari shite* supported by excursions to the various landscapes of the Japanese archipelago, such as the plains, the coastline or the mountains.[16] A kind of sensitive, kinesthetic memory becomes embodied through the impressions and responses that nature incites in the master gardener. Such principles can be learned by the West.

Nature is then also an author of the garden, in the sense that the gardener does not copy it, but carefully learns how to exhibit those traits that condense the most beautiful, atmospheric or soothing stretches found in these excursions. In other words, the working methodology is selective, not creative, in the sense that the gardener does not compose gardens by attaching something that is foreign to nature. Rather, it stimulates its maximum expressiveness, creating a space in which the presence of art is so subtle that one would think it almost absent. This notion is already familiar to us: the artistic *wu-wei*, spontaneous and non-imposing creativity, is revealed by an absence of contrived forms, signaling a mastery so comprehensive that the work appears almost as necessary, appearing to have arisen from the absence of any conscious effort and conscious striving, just like natural forms proceed without intention. Hisamatsu (1971, 28) recalls this feature of *naturalness* as one of the seven characteristics of Zen aesthetics:

> The fourth characteristic—being natural—obviously means not being artificial. While this permits of many interpretations, what is meant here is not simply naivete or instinct. The Naturalness referred to here is equivalent to such terms as unstrained," having "no mind" or "no intent.

Two of the best-known gardening manuals, the *Sakuteiki* of the aristocrat Tachibana no Toshitsuna (1028-1094) and the fifteenth-century manuscript of the monk Zōen might be considered treatises about the science of composing spaces in accordance with human perception, even if both had arisen in the absence of nowadays natural sciences.[17] In the *Sakuteiki* one can find the following admonition:

15 "… Japanese gardens were never intended to be literal and indiscriminate copies or miniaturizations of nature … the representational function of a Japanese garden … is meant to be neither literal or conceptual, but rather emotive and atmospheric" (Saitō 1996, 46-47).
16 "Abstract painting and other 'non-representational' art forms are useful because their impact is often purely sensory, and so by observing them we learn to see *bon'yari shite*, without the usual impulse to identify or conceptualize what we are looking at" (Slawson 1987, 193).
17 *Sakuteiki* literally means *Notes on Garden Making*. The other manuscript is *Senzui narabi yagyō no zu*, or *Illustrations for Designing Mountain, Water and Hillside Field Landscapes*.

> You should design each part of the garden tastefully, recalling your memories of how nature presented itself for each feature … Think over, the famous places of scenic beauty throughout the land, and … design your garden with the mood of harmony, modeling after the general air of such places. (Saitō 1996, 52)

This approach is translated into various methods that reveal a careful sensitivity of "following the request", i.e., what are the materials asking for in respect to their inherent qualities and the dynamics that they imprint to the space in accordance with the place where they naturally arise. Shrubs, trees and rocks are used as they were found and combined in a specific manner, so as to suggest, for instance, a coastal environment of a windy cliff, in which case the trees would be twisted, or the calm of the spring surrounded by the reeds of a river.[18] Hisamatsu observes (1971, 84):

> Not any tree will do; they must be well chosen: this tree is not interesting here, that tree is just right, and so on. Some varieties of trees are chosen especially for particular uses. And among similar varieties of trees, specific ones are chosen for their particular shape or height and planted in an asymmetrical manner.

This principle of *natural habitat* prevents garden arrangements that would challenge its credibility: an orchard natural to certain agricultural landscapes cannot belong to an environment emulating the air of a mountain foothill, where the respective trees would invoke a more charged, collected and solitary atmosphere.[19] Concerning rocks, both manuals discuss in detail how their different combinations entice different experiential effects. Their functions are also different depending on whether the garden demands a tour or promotes a more down-to-earth approach, like in the *kare-sansui* sand-gardens. Lithic sensitivity is sometimes greatly exaggerated, but it is through the example of such attention to detail that the specific character of Japanese gardens can be shown. It also exemplifies an import of what each rock calls for as well as an intimate understanding of the arrangements of those various demands.[20]

The master gardeners, knowing that the arrangement of space shapes human experience, have developed successful methodologies aimed at promoting the different dimensions of space and time that immovable objects afford. The relevance of the garden parts as they unfold to the viewer is the standard. For instance, one can hint at a wider space that does not exist. This is achieved through a tacit knowledge of human perception, using techniques also present in painting. A sense of distance may be experienced through acoustic effects,

18 One can compare this method of intervention with the topiary, a feature of many European gardens.
19 This is what we call the principle of *natural habitat*. It corresponds to what *Sakuteiki* calls *yō*, meaning a "type" or "style" of landscape (Slawson 1987, 62).
20 "Such manipulations meant that the designer had to devote as much attention to the geological formation of the landscape … and their respective habitats" (Slawson 1987, 67).

such as the sound of a not visible waterfall. Such tacit knowledge of the master gardeners understood that spatial perception is not given by the simple measure of the actual, objective distances between things, but operates through the relationships that vision establishes between the elements. The atmospheric effect of a given site is created through the relationships between different components, their differences in hue, color or size. A zigzagging stream, for instance, will seem to extend indefinitely, all the way to the sea, as if the garden were in fact built on its bed, if its course is presented to the visitor in a few stretches at various levels and at different flows, leading the imagination to suppose a continuity beyond the enclosure of the vegetation or the horizon. This is a demonstration of what Hisamatsu calls natural asymmetry (1971, 83). This effect would be impossible if the stream were presented in an open section, visible throughout its length, and not embedded in the orography of the land, that is to say, receded in some places and appearing in others.[21]

Even in the *kare sansui* dry gardens, not so rich from the point of view of multi-sensoriality, this perceptual effect is present. Its minimalist composition reveals its association with the austerity of Zen Buddhism. Its frugality and the parsimony of materials were also a result of warring battles and the unavailability of resources to maintain more vegetation and water elements. Nitschkhe (1999, 233) says that the carved rock garden is typical of the industrialization and parallel destruction of nature that took place in Japan. On the other hand, it is difficult not to establish a linkage of both the famous Ryōan-ji garden or the Daisen-in and their monochrome aspect to the minimalism of the landscape painting in the Muromachi period. The placement of their stones allows a representational reading like in the Japanese gardens of the past and their mythological associations with figures from Daoism and Buddhism. In either of them, however, the master-gardener's attunement to the materials is profound and has enabled them to foster the imaginations of visitors. It is then feasible to find an explanation for these arrangements along these representative lines: water is present through its absence, invoked by the thousands of white pebbles, carefully crimped by a ploughshare and recalling the seabed and its sediments slowly polished by the tides. Some of the more massive rocks may resemble islands or boats as the concentric configurations of the pebbles around them indicate a focal point of the swell or its putative roar. At the Daisen-in, some of the upright rocks may be abrupt crags overlooking a small lake from which light threads of water run down.

One is thus finally drawn to a speculative exercise about the meaning of each garden. It seems that such meaning is prevented from being fully realized in a final interpretation. It seems that there will always be something left out, something unattainable that prevents a complete translation. Indeed, the spec-

21 One can compare the presence of the water element in Japanese gardens, in ponds, small lakes or with the presence of water in some European gardens, where it is expelled in jets, as if trying to trying to overcome gravity through sudden bursts (Saitō 1996, 49).

tator is encouraged to dwell in the courageous refusal of a stable classification: at times she is led to the attribution of meanings, sometimes reassessing them as inadequate. Through their own language, gardens end up suggesting what they cannot reveal. Regarding the *Daisen-in* but with scope for the other gardens, Slawson comments:

> What is the meaning of this garden? Of course, the way it is asked already begs the question. It almost sounds like the work of art was a traffic sign, for which there is a specific meaning beyond the symbol which is of greater importance than the sign itself. And yet, as we have been seeing, the finest gardens don't resort to indexes to express its desired meaning. Its meaning is translated in a totally experiential sensory form ... The meaning of a garden thus conceived is its sensory effect, its beauty. The meaning is what comes, as the fragrance of a flower, in the intersection of the garden and the viewer. (Slawson 1987, 140)

5 Conclusion

The environmental crisis seems to involve a possibility of manipulation of nature that is based on the reduction of the natural world to an elaborate system of symbolic mathematical representation. Everything that surrounds man is amenable to being codified and human experience is eminently the capture of such representational contents. The deep-rooted equivalence between concrete nature and nature as a system, a set of postulates and formulations that can be algorithmically encoded, prevents the rediscovery of nature prior to its mathematical representation and technological enframing. It is at this point that Japanese culture seems to meet Heidegger and Borgmann in criticism of this metaphysical and cultural stand on Being and offer an alternative.

To go beyond meaning regarding nature or technology may also mean avoiding a strictly representational, calculative form of thought[22] by establishing a new clearing, where focal things and practices can reveal beings in another way beyond the technological enframing. This implies establishing a relationship with technology through meditative thinking and around focal things and practices that circumvents the idea that one can "escape" from it or that one can even control it, preserving only its "advantages" and eliminating its "disadvantages". Only by accepting that the present age is highly conditioned by technology can one learn to deal with it beyond the dualism of reverential acceptance or reckless condemnation. Heidegger and Borgmann thus seem to provide an *outside* view on how Japan succeeded in combining tradition and Modernity,

22 "The West moistens everything with meaning" (Barthes 1982, 70).

while a brief overview over the religious and artistic roots of Japanese worldview provided an *inside* view on how technology, nature and human beings cannot really be separated.

This paper also aimed to take a stand against ideas of deterministic pre-established harmonies by which individual and institutional behavior of a given culture towards the surrounding environment can be presumed from a generic metaphysical and moral schema about how nature is framed in such a culture. In particular, it questions if we can derive the relation between environment and human beings from the relation of separation or union between human beings and nature that is implicit in the philosophical and religious matrix of a culture and expand it to the behavior of all members of a complex social whole.

To conclude, I would like to finish with some critical remarks about the Japanese reply to the question concerning technology. Otherwise, it could be easily claimed that such a view has some troubling issues. For instance, it is commonly taken for granted that human subjectivity and rationality is the ground for a separation from both other life forms and artifacts. This grants the enshrinement of human rights and dignity and boils down to not making human beings the means to any end. In a "parliament of things" akin to the Jewelled Net of Indra of the Huayan school, human beings, nature and artifacts are part of a complexity continuum. If the exceptionality of human beings is suppressed and is extended to other beings, what will prevent one from considering humans themselves as objects subject to potential improvements that makes them more efficient or productive? And what can one say about a technological catastrophe like Minamata disease or the Fukushima nuclear disaster in which a natural disaster has combined with human error to multiply the deleterious effects of both? There is then one aspect that is often overlooked. The fact that human beings and nature have been historically separated in the West since Modernity allowed the development of the scientific and technological revolution through a previous subject-object and fact-value division. Notwithstanding, such epochal shift has also later allowed that nature can be assigned an intrinsic value by a valuing subject that recognizes its status. It does not seem true to hold that a culture that is grounded by a non-dual or monist ontology is better placed to curb environmental destruction that emerges with the onset of industrialization. If the background assumption of any given culture is a holist one where human beings are an integral part of nature, the rationalization of the means of production and interventions in nature that ensue will not find any conceptual barrier that prevents exploitation of any sort. In fact, in such an environment technology likely becomes itself a natural way of perfecting nature.

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