

Tradition and Modernity in Yuk Hui's Cosmotechanical Thinking: How Cultural Traditions Can Form a Path to Technodiversity

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Abstract

This article explores Yuk Hui's cosmotechanical thinking, focusing on how technological development is influenced by culture and the possibility of technodiversity. Yuk Hui introduces the concept of cosmotech, which links technology to specific cultural cosmologies, and argues for the necessity of technodiversity to counter the homogenizing effects of modern technology. However, it remains a question how exactly technodiversity is to be realized. This article claims this follows from Hui's classical interpretation of the relation between tradition and modernity and his noöcentric approach to cultural traditions. By criticizing this position, this article tries to bring Hui's thinking into contact with different ways of thinking, which can lead to a fruitful conversation and open a possible pathway to technodiversity.

Keywords: Yuk Hui, cosmotech, modernity, tradition, technodiversity

Introduction

We live in an era of technological rivalry. Technological developments, for example in the field of artificial intelligence (AI), have become the battlefield for geopolitical superpowers. Not only the United States (US), but also China are investing billions in developing AI to achieve technological leadership. Both nations attempt to appropriate the potential economic and political benefits of this new technology. Moreover, it demonstrates that globalisation is enabling new actors (e.g. China) to participate in this global process of technological development—and that they seek to steer its direction from their own perspectives. The interplay between globalization, technology and power is becoming increasingly complex. But do we understand what that means exactly?

Since the publication of his book *The Question Concerning Technology in China: An Essay in Cosmotechnics*,¹ the thinking of Yuk Hui has only gained in relevance. Following Heidegger, Hui sees technology not as merely 'technological' but also connects it to the specific 'thought history' of a culture.² And following the 'ontological turn' in anthropology propagated by thinkers such as Latour, pleading for ontological pluralism, Hui makes a case for plurality in the domain of technics.³ This makes his work urgent as Hui fulfils a bridging function between the West and the East: Hui immerses himself in both Eastern and Western thinking.⁴ In his work, Hui contrasts the history of China's technological thinking with that of the West, breaking the assumption that there is only one type of technics or technology⁵—that of the West. This raises the question of whether the West understands what is currently taking place in China when it comes to technological

1 Yuk Hui, *The Question Concerning Technology in China. An Essay in Cosmotechnics*. (Cambridge: Urbanomic, 2018).

2 Pieter Lemmens, "Other Turnings: Yuk Hui's Pluralist Cosmotechnics in between Heidegger's Ontological and Stiegler's Organological Understanding of Technology," in *Cosmotechnics*, ed. Yuk Hui (New York: Routledge, 2021), 9.

3 It must be noted here that Hui is critical of the 'ontological turn' as well, since it does not confront the question concerning technology in relation to the disappearance of ontological plurality. Whereas for Latour 'we have never been modern', we could say that for Hui, with the development with technologies such as AI, we have never been *more* modern. This has to do with Hui's epistemological understanding of modernity and the role of technology therein, which we will return to later.

4 With the terms 'Eastern' and 'Western' we do not simply refer to geographical locations, but to a history of thought that is related to a specific local origin. For the West, that is Greece as the place where Western philosophy originated, for the East—at least in the context of Hui's work—China. At the same time, that does not mean that there are no other sources to point to (such as India and Brazil, etc.).

5 By technics, Hui refers to a general category of all forms of making and practice, of which the Greek *technē* is a specific form. With technology, Hui refers to a radical turn that took place in modernity and has developed into far-reaching automation and leads to what Heidegger calls *Gestell*: the world as a standing reserve of raw materials, ready to be exploited. In the following we follow this distinction, although Hui later seems to enforce this distinction less sharply. Technics and technology are then used interchangeably. Cf. Yuk Hui, *The Question Concerning Technology in China*, 19, and Yuk Hui, *Recursivity and Contingency*, 265.

development. What does it mean that a nation like China, with its own history, is fully committed to developing a modern technology such as AI, which originates from the West?

Hui himself tries to answer that question and to think through possible alternatives. The term that Hui develops in his later work for the possibility of different forms of technology is 'technodiversity'.⁶ For Hui, this 'technodiversity' is necessary if we want to break out of the totalizing power of the prevailing cosmology, that of *Gestell*, in which the world is seen as a standing reserve of raw materials, ready to be exploited. Necessary, because "without an understanding of this question, we will all remain at loss, overwhelmed by the homogeneous becoming of modern technology."⁷ Hui's further work therefore focuses on developing a new way of thinking that can bring about that rupture, which would open the way to technodiversity.

This article seeks to reinterpret Hui's work, revealing an alternative path to technodiversity. Yuk Hui aims to achieve technodiversity with his thinking but ultimately ends up with a lack of it; according to Hui, we ultimately live in a monotecnological condition. The hypothesis in this article is that this is due to Hui's classical interpretation of traditional culture in modernity. The core argument of this paper is that there is a possible path to technodiversity, but that we must first question the relationship between tradition and modernity more deeply. Contrary to what Hui claims, this article argues that traditional culture is not destroyed and consequently disappears but that it remains as a source that helps shape and transform new, modern phenomena. It does so by creating a synthesis of two fields: that of modernity thinking and philosophy of technology. By ascribing not only traditions of thinking, but also political traditions and traditions of statecraft an ontological-constitutive power within modernity, traditional culture does not only remain as an aesthetic varnish for technological applications. Instead, it conditions technological development along different lines in which it is expressed and intertwined with technological development, such as technology regulation. In doing so, this article brings Hui's thinking into dialogue with related literatures, most notably that on multiple modernities, thereby opening new paths towards technodiversity in modernity.

Before the development of an alternative route to technodiversity is possible, I will first have to outline Hui's own path. I do this by giving an analysis of Hui's thinking about technology and tradition in modernity. We will delve deeper into the line of thought he develops in *The Question Concerning Technology in China* and some of his later work. This enables us to analyse his concept of cosmotechnics and his concept of modernity more closely. This is followed by a brief description of Hui's concept of modernity after

6 See Yuk Hui, *Recursivity and Contingency* (London: Rowman & Littlefield, 2019).

7 Hui, *The Question Concerning Technology in China*, 12.

which—in combination with his understanding of cosmotechnics—the relationship between tradition and modernity in Hui's philosophy is clarified. I will juxtapose Hui's interpretation of tradition in modernity with that of Dutch philosopher Haroon Sheikh. Afterwards the connection with Hui's understanding of *technodiversity* is made, and I address how we can “overcome the fate of *Gestell*.”⁸

1. Cosmotechnics, modernity and technodiversity

1.1. Cosmotechnics

Hui asks the same question about technology as Heidegger did earlier in *die Frage nach der Technik*, but he asks this question regarding China. Hui follows Heidegger's analysis; technology as we know it today is not universal but has its origins in the rise of philosophy in ancient Greece, the birthplace of Western thought. This means that modern technology is also specific to Western culture and does not originally exist in China since philosophical thinking like that of the Greeks has never been developed there. But contrary to Heidegger, who argues that there is only one form of technics and technology, Hui argues that China, but also other non-European cultures, have their own history. China has its own question concerning technology, one that cannot be captured in terms of *technē*. Hui then reconstructs China's own history in relation to technology.

The central concept which Hui introduces to undertake that project is cosmotechnics. With cosmotechnics, Hui creates a concept of technology that connects cosmology and technology. Technics is universal in an anthropological sense; every culture knows technics, and, in that sense, there is a technological tendency that is universal. But the form this technic takes differs per culture because it is intertwined with a specific cosmological conception which is expressed in the technics that is specific to a culture. Each culture thus has its own technical facts.⁹ Therefore, technics is always a *cosmotechnics* for Hui.

Technology therefore arises on the one hand from a cosmological view, on the other hand it also forms that cosmology as a material basis. It is always a specific cosmology and a local cosmic reality that allows the process of technological development but limits it as well.¹⁰ Cosmology is therefore inherently also a *cosmotechnics* for Hui; cosmology can only be expressed through technology. Insofar as cosmotechnics constitutes a synthesis between the work of Heidegger and Stiegler and between the local (cosmology) and

8 Yuk Hui, *Art and Cosmotechnics* (Minneapolis: University of Minnesota Press, 2021), 58.

9 Hui, *The Question Concerning Technology in China*, 20.

10 Lemmens, “Other Turnings,” 14.

universal (technics), it is also able to grasp both the universal and local (culture-bound) aspect of technology:

in so far as technics is both driven by and constrained by cosmological thinking, it acquires different meanings, beyond its [universal, ed.] somatic functionalities alone. For example, different cultures may have similar calendars (e.g. with 365 days in year), yet this doesn't mean that they have the same concept or the same experience of time.¹¹

Different cosmotechnics can be understood based on Foucault's concept of 'episteme', which Hui interprets as "the sensible condition under which knowledge is produced."¹² The sensible is therefore a kind of attunement that is related to a certain type of thinking. *The Question Concerning Technology in China* can therefore also be seen as a history of technological thinking in China. In later work, Hui speaks of technodiversity as a condition for 'noödiversity', and the sensibleness mentioned here is ultimately also a condition for noödiversity.¹³ We will discuss the position of thought itself in Hui in more detail later. For now, it is important to note that cosmotechnics ultimately revolves around a reciprocal relationship between *episteme* and *technē*, in which a specific, culture-bound attunement to the whole of reality is expressed by means of technology. The question then is, of course, which cosmotechnics is currently prevalent. According to Hui, the current cosmotechnics can be understood as *Gestell*, in which the cosmos is seen as a standing reserve of raw materials, ready for exploitation.¹⁴ Hui therefore speaks of naturalism, as the separation between nature and culture, and of capitalism that "dominates the planet as contemporary cosmotechnics."¹⁵ This leaves the question of what happened to other cosmotechnics, such as those from China. To approach the answer to this question, we need to delve deeper into Hui's interpretation of modernity and the process of modernization.

1.2. Modernity and modernisation

Hui's analysis remains, as I will demonstrate, confined within a classical perspective on the relationship between tradition and modernity. This perspective forms the basis for how Hui understands the history of thought, and the history of technological development

11 Hui, *The Question Concerning Technology in China*, 217

12 Yuk Hui, "On the Persistence of the Non-modern," *Afterall: A Journal of Art, Context and Enquiry* 51, no. 1 (2021): 64.

13 Hui, *Recursivity and Contingency*, 264–268. Noö- is derived from the Greek word *noéō*, which we can understand as 'thinking'. Noödiversity then means diversity of thought.

14 Hui, *The Question Concerning Technology in China*, 21.

15 Hui, *The Question Concerning Technology in China*, 299.

in China. It forms the framework within which Hui formulates an answer to Heidegger's question about what it means that through communism, China has become 'free' for Western technology. In the following section I will briefly explain how Hui understands 'modernity' and 'modernization', followed by a brief outline of his historical analysis. I end with his concrete historical interpretation of what is currently happening in China, for which he uses the term 'sinofuturism'. I will also raise a few preliminary questions to conclude.

For Hui, 'modernity' in a narrow sense is the epistemological and methodological rupture that took place in Europe in the 16–17th century. 'Modernization' is the universalization of specific forms of epistemologies and methodologies.¹⁶ 'Modernity' can be more broadly understood as a specific *episteme*, as described earlier: as a specific sensible condition under which knowledge is produced. Modernization for Hui, then, is the process in which this particular epistemological and methodological rupture spreads around the world, through a process of colonization by the West, supported by modern navigational techniques and military technologies. This leads to a process of modernization in China or Japan, for example, but according to Hui we cannot yet speak of a Chinese or Japanese modernity. This would require continuity in the nature of the rupture: the rupture should take place in dialogue with the past. In nations such as China and Japan, we see a process of modernization without modernity; a situation in which the process of modernization intensifies without stabilizing, unlike it did in Europe. Even more so, according to Hui, "the process of modernisation can only accelerate when history and tradition lose their grip on the constantly changing technological environment."¹⁷

For example, in the *Question Concerning Technology in China*, Hui describes China's classical relationship to technology in terms of the relationship between *Qi* and *Dao*, which he defines as a technical way of relating that seeks "a harmony based on the organic exchange between the cosmos and the moral."¹⁸ This technical way of relating is therefore characterized as a different cosmotechnic. But after the opium wars, the relationship between *Qi* and *Dao* collapses. Hui also references the Chinese discourse in the 1930s, drawing on thinkers such as Hu Shi. According to Hui, this discourse affirms westernization yet at the same time anticipates a differentiation that comes from "the obstructive forces of its own culture and tradition."¹⁹ The common denominator is that the spirit of the old cosmotechnics is fading. That which turns out to be incompatible with the modern is attributed to the category of tradition, which is separate from the forces that drive development. In this situation, the question of whether westernization is good

16 Hui, "On the Persistence of the Non-modern," 64.

17 Hui, "On the Persistence of the Non-modern," 64.

18 Hui, *The Question Concerning Technology in China*, 100. *Qi* can be understood as tool or utensil, while *Dao* can be understood as the life force that surrounds all things, also referred to as 'the way'.

19 Hui, *The Question Concerning Technology in China*, 163.

or bad does not matter; the question is whether China has the capacity to absorb Western civilization at all—or whether it is completely taken over by it.²⁰

Hui's answer to this question is unambiguous. According to Hui, "China's holistic cosmology has been brutally dismantled by modernization."²¹ It proved unable to resist or transform the technical reality of European and American culture. The traditional cosmotechnics in China has been permanently transformed by the material-ideal structure of modern technology.²² As Hui states: "China ceases to be China, and becomes instead capitalism with Chinese characteristics, [...] where the residue of Chinese culture serves only to inflect an otherwise triumphant westernization."²³ According to Hui, these Chinese characteristics no longer have a meaningful role: Chinese culture degenerates into a purely functional aesthetic. It only serves to give an aesthetic dimension to the central forces of development, which from then on are Western: science and technology, democracy, and constitutionalism.²⁴

Hui therefore ultimately presents the contemporary situation as a homogenized monotecnological world. The universalizing tendency of technology prevails, causing a homogenizing effect: only the cosmotechnics of modern, Western technology remains. Economic growth and geopolitical competition are the driving forces behind technological development worldwide and the technology is only judged based on efficiency, speed and scope. What remains is the disappearance of tradition, and the superficial commodification of cultural heritage, whether by cultural industry or by tourism.²⁵ In the case of China, he characterizes the situation as 'sinofuturism': a radical embrace—and acceleration—of modernity in China, which is propagated even in China's partners in the developing world. In this sense, "*it is extending European modernity through modern technology.*"²⁶

Hui thus understands modernity as an epistemological rupture which brings afore a new episteme, and modernization as the global spread of this particular epistemology. Because it concerns the spread of a fundamental rupture, there is no connection between the past and this new epistemology in the places where this epistemology lands. Tradition is therefore incapable of exerting an inhibiting force on technological development, resulting in technological acceleration and totalization in which tradition remains as an aesthetic remnant. Modernization brings about a destruction for Hui that nullifies all other forms of cosmotechnics, leaving only one kind of technology and thinking which

20 Hui, *The Question Concerning Technology in China*, 162–165.

21 Hui, *The Question Concerning Technology in China*, 223.

22 Hui, *The Question Concerning Technology in China*, 223.

23 Hui, *The Question Concerning Technology in China*, 222.

24 Hui, *The Question Concerning Technology in China*, 163.

25 Hui, *The Question Concerning Technology in China*, 291–292.

26 Hui, *The Question Concerning Technology in China*, 298.

has become planetary—that of the West—and which is being accelerated in a radical form in other parts of the world—such as China. After all, there is no inhibiting force—which allows the process of modernization to continue unhindered.

However, this homogeneous, monotecnological image of reality does raise questions when we look at certain contemporary phenomena. For example, should we not understand developments in technology regulation as an inhibiting force? Moreover, is this regulation not diversification, rather than homogenization? Anu Bradford, an expert in the field of international regulation, speaks of the rise of three *Digital Empires*: The US, China, and Europe.²⁷ In her work, Bradford focuses on the regulatory power of superpowers, while arguing that these three superpowers are each developing and propagating their own regulatory model for digital technologies such as AI. According to Bradford, this expresses different visions of the digital world, resulting from differences in ideological and political beliefs. For example, she mentions the techno-libertarian views in Silicon Valley, indicating a techno-political ideology that goes beyond classical neoliberal market thinking. According to Bradford, this contrasts with the Chinese model, which is based on a state-driven ideology that can be understood as techno-nationalism.²⁸

How would Hui understand these kinds of developments? In the case of technological regulation, Hui's answer would be that it does not create an epistemological rupture from the techno-economic logic of technological innovation with GDP growth as its goal. For Hui, these kinds of contemporary phenomena are therefore an expression of technological acceleration, because the monotecnological condition leads to economic competition and technological acceleration. Legislation based on its 'own' ideology is one of the remaining forms in which states can continue to exercise their power. The other alternative is a radical politicization by tech giants such as Elon Musk who take matters into their own hands, as we see happening in President Trump's United States. In both cases, the existing technological condition is preserved. There are no different cosmotechnics; this struggle can only occur precisely because Western cosmotechnics is planetary. Whether it is the state in China, the market in the US, or the citizen in the EU, the starting point remains technological development for the benefit of economic gain. Hui would therefore see Bradford's *Digital Empires* as symptomatic of the planetary status of modern technology: regulation as an expression of control over a monotecnological planetary dynamic—not as a source of diversity.

27 Anu Bradford, *Digital Empires: The Global Battle to Regulate Technology* (Oxford: Oxford University Press, 2023).

28 Bradford, *Digital Empires*, 69.

1.3. *Technodiversity*

The question for Hui therefore remains how to break out of the impasse of modernity. To address this, he introduces the term *technodiversity*. As I have indicated before, according to Hui, today's cosmotechnics should be seen as *Gestell*, which sees the world as a standing reserve of raw materials, ready to be exploited. We cannot therefore separate global crises such as climate change from the contemporary technological condition. The same applies for the intensification of technological acceleration along geopolitical lines discussed above, with possible apocalyptic consequences, according to Hui.²⁹ Hui contends that we must 'overcome' modernity. This does not mean that modernity will suddenly stop, but that it will have to confront its own limits and that it will be transformed in doing so. If we want to avoid an apocalyptic end, we will have to find a way to break the technological homogeneity that has been established in modernity and which is now planetary.

According to Hui, the impasse of modernity will not be solved by entering a superficial relationship with the spiritual, or by inscribing technology with a natural philosophy from an ancient tradition. There is no point in trying to fall back on authentic, indigenous traditions—these have now also been mediated by the process of modernisation. After all, the local is no longer isolated. We are connected by modern technology historically as well: modernization has made modern technology planetary and therefore a shared history.³⁰ We will not solve the problem by retreating into our own shells.

In addition, it would also be a mistake to lapse into cultural essentialism or nationalism. According to Hui, in doing so we would be turning away from the global condition which we are now in, whether we like it or not. What we need to look for is a locality that appropriates the global, rather than being produced by it. A locality that is able to resist the global axis of time, to confront it and transform it, instead of just giving it an aesthetic value. Hui advocates a program that ignores the opposition between the global and the local, and that takes this opposition as a starting point for adopting a cultural or political identity.³¹ Hui argues: "Technology and tradition should not be denied but should be open to a pluralism of different cosmotechnics that makes technological diversity possible."³² Hui therefore refers to this diversity with the term 'technodiversity'—explicitly an attempt to counteract the technological homogenization that characterizes our time. It is about creating a new framework for future technological development so that a new planetary politics can emerge that is not based on techno-economic competition and acceleration. According to Hui, we should therefore also see technodiversity as: "a

29 Yuk Hui, *Machine and Sovereignty: For a Planetary Thinking* (Minneapolis: University of Minnesota Press, 2024), 220.

30 Hui, *The Question Concerning Technology in China*, 301.

31 Hui, *Machine and Sovereignty*, 220.

32 Hui, *Recursivity and Contingency*, 227.

program that explores alternatives to the current impasse of innovation and development in the consumerist society and the geopolitical concurrence between nation-states.”³³

Since Hui understands technology ‘cosmotechically’, technodiversity is related to a cosmological diversity. Thus, Hui’s central concern is diversity in terms of cosmologies, customs, and values. Hui calls this diversity *noödiversity*. And because Hui understands technology as the material support of thought, technodiversity is a fundamental prerequisite for *noödiversity* for Hui.³⁴ If we want to stimulate biodiversity as an answer to the ecological crisis, then in Hui’s thinking this is always a crisis of thinking itself—and therefore also of technology. The emergence of crises such as climate change is based on a way of thinking that precedes it and is realized by a technology that materialises it. This crisis can therefore only be prevented by other ways of thinking that are supported by another technology—and so we will also have to achieve diversity in these domains. We cannot consider concepts such as ‘nature’ in isolation, because in thinking itself, assumptions about the relationship between humans, animals and planet are postulated, which are then realized by technology. With the concept of technodiversity, Hui seeks to create a space in which different technologies can coexist. For Hui, technodiversity is therefore a concept to make explicit the existence of different technics, with their own cosmological and epistemological paradigms. For Hui it is necessary to give the local a place from the universal. In other words: to acknowledge, precisely in our global interconnectedness, different epistemologies that are supported by their own technology. The goal is therefore not technological homogenization, but fragmentation.³⁵

One example of technodiversity that Hui cites is Gerovitch’s work on how different cultural factors led to different approaches to AI in the early stages of cybernetics. Gerovitch argues that there is a difference in how American and Soviet scientists incorporated assumptions about intelligence into their cybernetic models:³⁶ “In search of general principles of thought and behavior, they actually implemented their own cultural stereotypes into their models.” For example, within the American context, ‘choice’ is placed central when it comes to intellectual activity, such as ‘freedom of choice’ in relation to existing possibilities. Within the Soviet context, ‘creativity’ was central; thinking itself must produce new alternatives. The first American AI models therefore quickly focused on problem-solving skills such as making the right choices to get from the problem space to the target space, as if one was trying to walk through a labyrinth. At each step, one of

33 Hui, *Machine and Sovereignty*, 220.

34 Hui, *Machine and Sovereignty*, 225.

35 Hui, *Machine and Sovereignty*, 220.

36 Slava Gerovitch, “Cybernetics Across Cultures: The Localization of the Universal,” in *Cybernetics for the 21st Century. Vol.1 Epistemological Reconstruction*, edited by Yuk Hui (Hong Kong: Hanart Press, 2024), 129.

several paths must be chosen.³⁷

In the Soviet Union, a model was developed based on the idea that everyone has different mental models of the same problem. The human problem space is therefore not structured as a labyrinth, but in the process of finding a solution, a new problem space is created. Thinking is therefore not conceptualized as a search, but as a reflection of and on the problem. And so there can also be a difference in the terms how a problem and goal are conceptualised: the problem situation in chess can be captured in positions on the board, but the purpose of checkmate needs a higher degree of description; namely the impossibility of moving the king. Instead of a search through a labyrinth, the idea is that new reflective models must be developed to get to the desired situation. Reflection or imagination is therefore the central concept here. This ensured that the models did not assume a fixed, predetermined structure of the problem, but instead focused on building an adequate model of the situation.³⁸ Different cultural traditions about how to conceptualize thinking were contained in scientific and technological models, leading to different cybernetic systems.

Although Gerovitch does indeed show that diversity in technological systems is possible, it does raise several questions in relation to Hui's cosmotechnical thinking. For instance, which cosmology is this diversity based upon? Is the Soviet Union not the prime example of a modern experiment, in which the connection with other traditions of thought has been explicitly and deliberately destroyed? If so, then what is the source of the diversity Gerovitch presents? It seems here that not only epistemological differences are relevant, but also social and political ones. In his work, Hui indeed explicitly makes this argument.³⁹ If social and political considerations play a direct role in creating diversity, it raises the question why the rise thereof *within* modernity is not possible. Raising these questions creates space in which we can connect Hui's thinking with the literature on *multiple modernities*, which advocates this kind of diversity in general.⁴⁰ We will dive deeper into this type of thinking in the next section.

In the foregoing, I have explained in detail why, according to Hui, the development of modern technology ultimately leads to a monotecnological world in which modern technology is planetary. The fundamental question is therefore: how can we recreate the diversity that Hui imagines? Hui uses terms such as 'reconstruct' and 'rediscover' in his work, which implies that cosmological, ontological, and epistemological traditions such as those discussed above need to be actualised again—Hui explicitly states that we cannot return to them. But since in Hui's thinking modern technology destroys such traditions,

37 Gerovitch, *Cybernetics Across Cultures*, 138–139.

38 Gerovitch, *Cybernetics Across Cultures*, 138–139.

39 Hui, *Machine and Sovereignty*, 253.

40 See Shmuel N. Eisenstadt, "Multiple Modernities," *Daedalus* 129, no. 1 (2000).

it remains a matter of conjecture how to achieve that. If we follow that line strictly, there are no more traditions to actualise in our modern technological condition. How can we break out of this technological impasse?

2. Cultural traditions as a potential pathway to technodiversity

2.1. *The role of tradition in modernity*

Earlier, I discussed Hui's argument that when we discuss technodiversity in relation to culture, there is a risk that we fall back into localism, which is defended based on a reductionist concept of culture. Culture is, in that case, understood as static and permanent. For Hui, the cultural dimension of technodiversity offers a source to reflect on the contingency of modern technology, and on ways to resituate it in a locality. The difference between localism and locality for Hui is that we can only speak of locality when there is transformation. For Hui, this transformation is not motivated by a search for identity (which is fixed and conservative) but for individuation.⁴¹ Individuation presupposes that the individuality of an entity must always be *produced*. Not from a predetermined state, but from a state of potentiality that can develop in different directions. In the case of noödiversity as a prerequisite for technodiversity, it means that thinking must evolve by reassessing concepts such as progress, growth, and freedom. In this way, space is being developed for "new models of individuation through technology."⁴² The relationship with technodiversity is that diversity and differentiation can only exist when there is differentiation and diversification as a creative activity: "Diversity is not only to be maintained, but it also has to be constantly created."⁴³ Only in this way can the fragmentation necessary for technodiversity be achieved. We can ask here on what level or scale a locality constitutes enough cultural diversity to reach fragmentation or technodiversity, and break with the homogenous becoming of modern technology. This is not only a question about (political) space, but also a question of who (a people, a community, or a group of individuals, etc.) fills that political space. It is beyond our current scope to further dive into that question. For now, our claim is that the level of institutions plays an important role in the interplay between tradition and modernity. We will return to this claim later.

If we then return to our example of technology regulation discussed earlier, the question arises why there is no diversification in this case. I have argued that Hui would see the various emerging digital realms as a symptom of the totalizing dynamics of modern technology, not as a source of diversity. But even if that were the case, the question still

41 Hui, *Machine and Sovereignty*, 247–248.

42 Yuk Hui, *Post-Europe* (New York: Urbanomic, 2024), 62.

43 Hui, *Machine and Sovereignty*, 226.

arises what form these different empires are based on. If technological acceleration with economic gain as the goal is the only option, what has produced the different value paradigms Bradford mentions as the foundation for the various regulatory frameworks? Is it right to simply portray this as a political-ideological motivation, because there can be no question of tradition apart from aestheticization of technological artefacts in modernity? Or is a truly different interpretation of concepts such as progress and freedom possible? The argument that I will make in this section is that the former interpretation does not do justice to the place that tradition has in modernity. I will discuss this based on the work of authors such as Jean Dong and Haroon Sheikh, who can be placed in the field concerning the thesis of *multiple modernities*. In short, the thesis *multiple modernities* holds, is that tradition does have a meaningful place in modernity and actively shapes it, creating different forms of modernity. While this field claims variety in modernity, it does only so within the context of political organisation and economics. For instance, variety is claimed in terms of multiple capitalist systems (cooperative versus liberal). Technology as such is not considered, and Hui is right when he states that in our time it is necessary to take the question of technology as a starting point, because it is the fundamental question of this era. The synthesis that I propose therefore is to question the relationship between tradition and modernity within the development of modern technology. In doing so, a possible path toward technodiversity might open.

2.2. *The two poles of modernity*

Earlier, I discussed Hui's classical interpretation of tradition in modernity. In the process of modernization, the modern and the traditional become strangers to each other.⁴⁴ Modernity is an episteme, realised through an epistemological rupture, after which tradition loses its meaningful power, and remains as an aesthetic remnant in a world in which the cosmotechnics of *Gestell* has become planetary. Following Heidegger, it is an image that depicts a relatively linear process from tradition to modernity, in which Hui, in contrast to Heidegger, argues that there is not one line (that of the West), but several (such as China). Sheikh, a Dutch Philosopher, also assumes the split between tradition and modernity that occurs around the 16th century, but unlike Hui, he does not see this as a linear process.

Sheikh argues that in modernity our lives are shaped by two poles: that of 'technopolis' and the world as 'dwelling'. Technopolis is the technical world that is characterized by a neutral, calculative, and detached relationship to reality. Dwelling is the world of traditional culture, in which man is embedded. According to Sheikh, the world of dwelling

44 Yuk Hui, "On Cosmotechnics: For a Renewed Relation between Technology and Nature in the Anthropocene," *Techne: Research in Philosophy & Technology*, 21 (2017): 331–332.

precedes technopolis, and functions as the rich cultural soil on which technopolis stands and through which it can function. Being-embedded is our origin and determines our view of the world. There are meaningful structures that determine our relationship with our environment and give it direction.⁴⁵ Cosmotechnics, however, states that one (dwelling) does not necessarily precede the other (technopolis), but that both are intertwined in the sense that they presuppose each other.

In modernity, the two poles Sheikh describes are constantly at odds with each other—including on a metaphysical level. This is also reflected in Hui's analysis: the opium wars crushed China's self-confidence in its civilization, leading to a storm of confusion and doubt, after which China opened itself up to Western thinking and its technology.⁴⁶ Sheikh argues that societies can deal with the tension between technopolis and dwelling in different ways. To understand what happens to tradition in modernity, we need to look at how these two poles relate to each other in specific societies. The role of tradition is essential here: Hui foresees that it is necessary to imagine a future in which non-modern knowledge has a meaningful role.⁴⁷ By non-modern, Hui refers to that which is not modern and will not be appropriated by modernity. Within the framework of our argument, we understand these as pre-modern traditions, as we will see that it is precisely in modernity that these take on a form that is meaningful. In the same spirit, Sheikh distinguishes transformation as a form in which traditions help shape modernity. In the following, we will explain how tradition can have meaningful role in transforming modernity and then contrast this with Hui's understanding of transformation.

2.3. Transformation in modernity

For Sheikh, transformation means transposing the traditional form of being-embedded to modernity. Both poles are then transformed and exist symbiotically. A new way of life is created in which tradition and modernity are mixed. There is no longer any tension—technopolis turns into a home.⁴⁸ It is an attitude in which one must let this power come in, to create a meaningful world in coming together. The spirit of traditional activities must be disconnected from their original context and projected onto the 'plain of modernity'. This is how different forms arise in modernity: the economy has a different form on continental Europe than in the United States—this is the difference between cooperative

45 Haroon Sheikh, *Embedding Technopolis. Turning Modernity into a Home* (Boom: 2017), 290–291.

46 Hui, *The Question Concerning Technology in China*, 152.

47 Hui, "On the Persistence of the Non-Modern," 69.

48 Sheikh explicitly claims that this is not an easy task. He distinguishes four different psycho-political forms of the tension between Technopolis and Dwelling, three of which are deformative and can lead to technological accelerationism or a technopolitical return to tradition, leading to conquest and imperialism. See Sheikh, *Embedding Technopolis*, 239–288.

capitalism versus the radical liberal capitalism in the U.S. The task at hand is to accept modernity and its present technicality to form together along with it. The primary focus is therefore on entering into a new relationship, which can lead to transformation. Sheikh argues that modernity and its technics rest on something that precedes it: a traditional soil. This means that modernity with its technology should not be seen as a metaphysical endpoint. It is this underlaying soil that, according to Sheikh, helps shape and direct modernity. In this way, tradition animates modernity.⁴⁹

Sheikh's thesis about the relationship between tradition and modernity rests on a few characteristics that he attributes to tradition. The traditional substratum, as Sheikh portrays it, is 'tacit', yet structures reality in a meaningful way. This is important, because for Sheikh metaphysical (or cosmological) concepts concerning the order of the world are not simply the result of theoretical considerations. Metaphysical traditions are made possible for Sheikh in practice, are believed in and give depth to life.⁵⁰ In a way, this is in line with Hui's concept of cosmotechnics since specific cosmologies are realized through technology.

One important difference, however, is that technology remains an onto-cosmological category in Hui's thinking. This gives it an overarching, all-determining tendency and risks removing the question of how technology (and its development) itself is mediated in practice by phenomena such as laws, regulations, and institutions. Hui would of course not deny their existence but claim that they have no power in shaping technological developments on a cosmotechnical level. Using Sheikh's thinking, we must question this position. Here, I would propose a counter position, which is more immanent-ontological and in which phenomena such as institutions, innovation systems, and regulation are ascribed equal ontologically productive power. All stand on a traditional soil that ensures that these phenomena take different forms in modernity, and gives the development of technology regulation, for example, different directions.

One reason why Hui does not consider the influence of practical phenomena such as regulation may be related to his noöcentric approach. Although his concept of cosmotechnics attempts to connect (cosmological) thought and technics, he nevertheless emphasizes the noëtic dimension. The technical history that Hui describes in *The Question Concerning Technology in China* can ultimately be read as an intellectual history. Hui focuses on traditions of thought concerning technology, rather than on practical traditions. However, although there may be a break in the sphere of intellectual traditions in modernity, there is continuity in the sphere of practical traditions.

49 Sheikh, *Embedding Technopolis*, 290–292.

50 Sheikh, *Embedding Technopolis*, 233.

To give a concrete example of how traditions shape modernity, we can turn to the work of Dong. Based off Dong's analysis of China's modern political history, this political history can be understood in terms of a tension between traditional Chinese political thought and modern thought in the form of Marxism.⁵¹ Mao Zedong's cultural revolution can be interpreted as the complete destruction of the old Chinese (thought) tradition. In response, Deng Xiaoping introduced 'socialism with Chinese characteristics' to reduce ideological conformity and prioritize economic development. Under the leadership of Hun Jintao, the Confucian heritage was revitalised, in the form of concepts such as harmony and virtuous leadership. The economic success that characterized this period increased social and intellectual diversity. In response, Xi Jinping revitalised Marxism as 'Xi Jinping Thought on Socialism with Chinese Characteristics'. Marxism functions as a unifying tool to rally the Chinese population behind a shared national ideology.

According to Dong, in the case of China, no fully developed modern social theory has emerged from the complex and multi-dimensional realm of traditional Chinese culture. This leads to Marxism being used as a guiding framework to interpret traditional Chinese culture. Contemporary China is thus—in political and administrative terms—a hybrid model, where Marxism operates as the guiding state ideology, and traditional Chinese political philosophies form the fundamental logic of governance. China's logic of governance is primarily based on its geographical and historical roots. The system prioritises stability, centralised power, and a vital role for good governance.⁵² We can still see the influence of this practical tradition of statecraft today, for instance in the way they regulate digital technologies.

Dong's point about China not having developed its own social theory based on Chinese thought is interesting. It bears a resemblance with a point Hui makes; that modernization in China does not take place in connection with the past, unlike in the West. At the same time, we can also criticize this from Dong's perspective, since Dong argues that this does not mean that Chinese tradition has no role in modernity. However, because there is no direct connection, Chinese tradition is understood (and thus revitalized) from a Marxist framework. This creates the same '*Gestell*-like' problem as in the West. In the West, the problem is that tradition takes a specific form in modernity—that of capitalism and liberalism, or what Fukuyama calls the end of history—leading to all kinds of crises such as climate change and technological disruption. In China, the same dynamics are at play, but from a capitalist and Marxist perspective. However, traditional differences do ensure that this dynamic takes a different form. Indeed, there may be many commonalities and interests in terms of capitalist systems, but their technological ideologies diverge

51 Jean Dong, "A Fusion of Worlds: Interplay of Chinese Tradition and Marxism," in *Chinese Statecraft in a Changing World: Demystifying Enduring Traditions and Dynamic Constraints* (Singapore: Springer Nature Singapore, 2023), 65–66.

52 Dong, "A Fusion of Worlds," 65–67.

significantly in terms of assumptions about the role of the state, free markets, or individualism.⁵³ Consequently, different forms of modernity—‘multiple modernities’—emerge with their own variations of modern phenomena such as state and economy.

The question is, of course, whether this also applies to the development of technology. For Hui, it is the systemic component of modern technology that makes it increasingly difficult to break out of the spell of modern technology. Hui therefore explicitly wonders whether naming a multitude of different modernities is not a pretence to cultural diversity.⁵⁴ For Hui, diversity in the free market ultimately remains based on a homogeneous technologism: *Gestell*.⁵⁵ If we look at technology regulation, or attempt to do so, it is indeed true that political-economic ideology plays a role. Several programs in the US such as the Stargate Project are contributing to the acceleration of AI development based on an epistemology that should be seen as *Gestell*. The question is, however, whether that is the only force at play, or whether other forces are also present.

If we follow the line of argument we have spelled out in the foregoing, the latter is the case and there is a continuous tension between the forces of modernity and the traditional, but simultaneously there is also a possibility of transformation. Should we not understand Europe’s attempts to regulate AI as trying to create a space in which such a relationship can emerge—as a possibility for epistemic transformation based on a traditional soil richer than just *Gestell*’s calculable thinking? Hui searches for a future for non-modern forms of knowledge, but the question ultimately remains how this can be given concrete form. Hui continues to think from a scheme in which modernity and tradition are mutually exclusive—in which they have become strangers to each other. The thinking concerning multiple modernities, on the other hand, shows a possible path in which tradition can play a formative force. One might claim that with the introduction of Sheikh’s dual polarity of modernity, another modern distinction is introduced, similar to the nature/culture or culture/technology divide. An answer to this claim would be to follow the framework of multiple ontological productive domains such as statecraft or regulation, through which traditions and modern phenomena form connections and can be transformed. We can then understand *multiple modernities* as different configurations of interdependent onto-epistemological domains. These exist not within one framework of modernity but form a plurality. We incorporate the question concerning technology into this ontological plurality, by showing the interdependence of domains such as technology, statecraft, and regulation, each of which participates in the co-production of the modern condition. According to Sloterdijk, it is in this technical-cultural habitus, that man, world, and

53 Francesca Bray and Barbara Hahn, “‘The Goddess Technology Is a Polyglot’: A Critical Review of Eric Schatzberg, *Technology: Critical History of a Concept*,” *History and Technology* 38, no. 4 (2022): 285, <https://doi.org/10.1080/07341512.2023.2196795>.

54 Hui, “On the Persistence of the Non-Modern,” 63.

55 Hui, *Art and Cosmotechnics*, 248.

technology interact and possibly lead to diversity of technical phenomena in modernity.⁵⁶ The question then becomes: how can we cultivate the traditional soil in such a way that there is a symbiotic relationship between the two poles of modernity?

We can answer this question if we look at technology regulation as Bradford describes it. There are indeed differences in the concept of freedom that is anchored in legislation. Where the emphasis in the U.S. lies on freedom in the sense of freedom of expression as a fundamental right, in the EU this is weighed against other fundamental freedoms such as human dignity and non-discrimination. This also applies to thinking surrounding the fostering of democracy. The U.S. refrains from government intervention on platforms of protecting freedom of expression, while the same consideration in Europe leads to restrictions on digital platforms. Rather than a techno-libertarian conception of the digital economy, in Europe the digital economy is shaped by the idea that a vision should be put down in laws enforced by democratic institutions.⁵⁷ In that sense, there is diversity: in the field of relations between market and state, and citizen and community. And so, there seems to be an opening to technodiversity. When Hui wonders whether a different notion of intelligence in Chinese philosophy can contribute to the development of AI,⁵⁸ the synthesis we propose would concretely ask the question of whether it is possible to cultivate this through modern institutions which form a connection in practice to a meaningful traditional soil. In this way, traditions may offer a path to technodiversity in modernity. In addition to a Rhineland model for the economy, is there also a Rhineland (or Chinese, for that matter) model for the development of modern technology, for instance? Our claim is these models not only have an accelerating or inhibiting effect on technological development but can lead to epistemological, social, and political differences as well. We might also ask what role of moral differences is in this case. It is these topics that follow-up research will need to focus on.

Conclusion

We have outlined Hui's analysis of the planetary nature of modern technology. We achieved this by discussing his understanding of cosmotechnics and his pursuit of technodiversity. We highlighted his classic interpretation of the relationship between tradition and modernity. This interpretation leads to an impossibility to break out of the totalitarian tendency of modern technology. What remains is a monotecnological condition, in which there is no technodiversity. Juxtaposing this with an understanding of tradition and its transformation in modernity, we have shown that traditions play a meaningful role

56 Peter Sloterdijk, *Prometheus's Remorse: From the Gift of Fire to Global Arson* (MIT Press, 2024), 72–74.

57 Bradford, *Digital Empires*, 106–107.

58 Hui, *Art and Cosmotechnics*, 253.

within modernity and help shape it. In this technical cultural habit, various technological practices may arise, which are realized in institutions such as technology regulation. This makes a path to technodiversity possible. That is not to say that there is no threat from the technological condition we are in, which indeed shows a totalitarian tendency in which exploitation stands central. Hui is right that a way out of this can therefore only start with questioning technology itself. At the same time, a way out is only possible if we reflect on the meaningful structure in which it is embedded. A cultivation of that subsoil can give us direction to a technological condition that is characterized by technodiversity.

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