

Philosophy of Technology in India: Reinventing *Cosmotechnical* Materialisms

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Abstract

The present paper takes a quantum leap into the question of how Indian philosophical thinking engaged with “technics” at large. Though ancient cultures of crafts and tool making in general have been the focus of materialist thinking, their focus on pre-modern technics per se has been eclipsed by their concern for scientific temper. As this concern gradually comes to mould the orientation in thinking in the postcolonial period, the methodological preoccupations of Indian idealism and materialism on the recovery of the past or ancient traditions become blurred and overlap each other’s respective distinctions. Therefore, instead of looking through the established lines of classification of philosophical traditions in the Indian historiography, this paper approaches the question via the lens of the methodological failures of materialism. Thus, the approach adopted in this essay brings into view a spectrum of materialist views on Indian technological thinking in order to illuminate the makeovers of materialist philosophies and their presuppositions on the concept of technics. Anchoring this point of view, the paper will present the materialist interlocution with the idealist tradition in India that pivots in the work of Debiprasad Chattopadhyaya, to delineate the contours of its positioning. Alongside this account, the paper will take a short survey of literature that emerged foraying into the historiographical mapping of science and technology in India, and will analyse their perspectival underpinnings. As a way forward, insights are drawn from Yuk Hui’s work on the philosophical history of technics in China, or more broadly in the non-Western and non-modern world. Though Heidegger’s call for thinking on technology marked a defining moment for the philosophical reflection upon the essence of *techne*, Hui’s departure from this mode of thinking marks an opening into a multiverse of conceptualizing technics.

Keywords: Philosophy of technics; Indian tantrism; *cosmotechnics*; proto-materialism; Indian idealism; Indian materialism.

1. Introduction

This paper attempts to outline some major conceptualizations prevalent in the historiography of science and technological thinking in India. Though under no parameters can this be regarded as a comprehensive account of literature in the field, it is certainly a critical philosophical reflection. In this paper, from the contemporary literature I will discuss mainly David Arnold and Dhruv Raina as representing two major interventions into the field in an attempt to outline two main conceptual frameworks available today. Significantly, these works are grounded in a materialist framework, and so were most of the early works which uncovered devices, tools, and artifacts from the material remains of ancient Indian civilizations. From those who may be regarded as the progenitors of materialist thinking in India, namely, Debiprasad Chattopadhyaya, D. D. Kosambi, Abdur Rahman, and Irfan Habib, who derived their inspiration from the modernists, such as P. C. Ray and B. N. Seal, we see contemporary works oriented toward ethnocentric epistemologies and models of circulation of knowledge. Hence, the probing question is: how do we dissect the differences that inform their respective approaches to perspectival thinking on philosophy and science, given their ostensive materialist orientations?

In a seminal essay written by A. K. Ramanujan titled, “Is there an Indian Way of Thinking?”,¹ he argues for “context-sensitivity” as the defining feature of Indian thinking. By way of unfolding this argument, he projects the question in four different ways with stress being laid selectively upon “Is”, “an”, “Indian”, and “thinking.” From among these, the fourth version of the question where the emphasis is upon “thinking” is of pertinence to this paper. His essay enunciates a framework of ethno-methodology by way of contributing to a volume on ethno-sociology pioneered by McKim Marriott. For Ramanujan, the fourth version of the question with emphasis being laid on “thinking” is evocative of a rumoured scepticism implied by the colonialists – “whether Indians think at all?” This question, as he reminds us, smacks of prejudice:

It is the West that is materialistic, rational; Indians have no philosophy, only religion, no positive sciences, not even psychology; in India, matter is subordinated to spirit, rational thought to feeling, intuition.²

In his own peculiar literary style, Ramanujan transposes the question on to the plane of scientific thinking. Citing eclectic examples from the biographical accounts of his father who sports a dual identity of an astronomer and an astrologer, alongside accounts of other oriental and occidental scholars, he establishes that Indian thinking dwells on a plane

1 A. K. Ramanujan, “Is There an Indian Way of Thinking?: An Informal Essay,” in *India Through Hindu Categories*, ed. McKim Marriott (New Delhi: Sage Publications, 1990), 41.

2 Ramanujan, “Is There an Indian Way of Thinking?” 42.

of “inconsistency”, refusing to distinguish between the interior and the exterior self.³ Moving deeper, he finds an explanation in Manu for this apparent inconsistency. When one resorts to Manu for an explanation, we know what to expect. Manu’s code of law called *Manusmriti* is the prototypical example of the end of thinking, wherein ascension to orthodoxy pivots.⁴ Manu, as we know, prescribes specific moral functions for individuals in conformation to one’s “svadharma” (rightness of one’s conduct determined by one’s position in the caste hierarchy).⁵ Ramanujan contrasts Manu’s code of law, whose existence in history is recorded as a “smriti” (*Manusmriti*), as in memorized accounts compiled later in time, with the enlightenment thinker Immanuel Kant’s categorical imperatives in search of a system—“[there is a] system to this [Manu’s] particularism”—and qualifies them as context-sensitive rules, denoting a culture of “nature-culture continuum.”⁶ The sources he calls out to substantiate his point about the context-sensitive nature of Indian culture has wider appeal today, though its supporting premises may portend varying degrees of agreement and disagreement. One of the major disagreements the thought process behind this paper has with his argument in favour of context-sensitivity arises from the essentialism that it harbours, bent on defining “Indianness” rather than “thinking”. By transposing the focus to thinking on technology, this paper prods Indianness into a placeholder for thinking alternative or contra-modernities which can also be conceived as non-Western or non-European modernities, indicating its displacement from the abstract forms of thinking prevalent across the globe, couched as the ethics of AI.

Why does a call for thinking become the crucial aspect of thinking on technics? Auguring the technological turn in philosophical thinking, Martin Heidegger termed the engulfment of technology in our everyday lives as the “essence of technology.”⁷ For Heidegger, the essence of technology thrusts itself upon us in a mode of effacement of choice. We are waking up to the realization that technical objects are *enframing* our lives. That is, the essence of technology reveals itself as something fundamental to the times in which we live. Heidegger’s question is whether this historical nature of technology can be reflected upon in a philosophical mode of thinking. In search of an answer, Heidegger turns to the past of Western philosophical modernity to resurrect from its own ancient philosophical relics an alternative route to thinking on “technics.”

3 Ramanujan, “Is There an Indian Way of Thinking?,” 44–45.

4 Roshni Babu, “Tending Immanence, Transcending Sectarianism: Plane of Mixed Castes and Religions,” *CASTE: A Global Journal on Social Exclusion* 2, no. 2 (2021): <https://doi.org/10.26812/caste.v2i2.230>.

5 Ramanujan, “Is There an Indian Way of Thinking?,” 46.

6 Ramanujan, “Is There an Indian Way of Thinking?,” 46–50.

7 Martin Heidegger, “The Question Concerning Technology,” in *Basic Writings*, ed. David Farrell Krell (London and New York: Routledge, 2012), 213.

This alternative conceptualization of technics has a distinct trajectory traceable back to the Greek period of philosophy which Heidegger extrapolates, thereby making this alternative endearing to the German Romantics, and to Eastern thinking at large. However, the crucial question for the conceptualization of alternative *techne* is to ask whether Heidegger's thinking liberates our understanding of technics from its monolithic instrumental meaning, or is it because Heidegger gives a comforting return to the so-called "homecoming" that it becomes endearing? It is certainly couched in the intersectional tension between tradition and modernization, which if endorsed by the Eastern thinking, entraps them within this dualistic tension between tradition and modernity. Hui underscores this as follows:

Heidegger's analysis travelled far beyond Germany, it is also well endorsed in the East. The experience based on the opposition between *techne* and modern *technology* is identified as the conflict between tradition and the modern, and resonates in cultures that are experiencing great transformation due to modernization. If we follow Heidegger's analysis, however, we might want to ask, how can we situate technics in the East? It is definitely not modern technology, but is it Greek *techne*?⁸

Thus, on the one hand, what may be termed as the un-thought of Heidegger's call for thinking on technology is its "territoriality." The relation between world, earth, territories, and thinking is not problematized in Heidegger. Whether philosophical thought has an integral relation to a geo-political territory called Greece and the people who inhabited this locale at a particular time is a recurrent question that echoes in the background of European modernity. Gilles Deleuze and Félix Guattari (D&G) introduce the term "milieu" of thought to move away from natural geographies of a region to the cultural milieu of a "people" who make thought a "possibility."⁹ Evoking the territoriality of thinking in this sense is, unlike Heidegger's call, not a "homecoming", but instead points to an earth that nurtures a thought. However, what Yuk Hui's intervention brings into view is an inherent tension between what D&G conceive as "geophilosophy" and the infinity of the universe that they presuppose the "cosmos" to be.¹⁰ One could see that Hui is unravelling this tension via his concept of "cosmotechnics," where his effort can be appreciated as an attempt to turn this "infinite" into a pluriverse of technics by advancing what lies in a nutshell in D&G, as multiplication of universes.¹¹

8 Yuk Hui, "For a Technodiversity in the Anthropocene," in *Techne Logos and the (Neg)Anthropocene*, ed. Noel Fitzpatrick and Conor McGarrigle (Dublin: EUT Academic Press, 2021), 21.

9 Gilles Deleuze and Félix Guattari, *What is Philosophy?*, trans. Hugh Tomlinson and Graham Burchill (London and New York: Verso, 2003), 196.

10 Hui, "For a Technodiversity in the Anthropocene." 23.

11 Hui, "For a Technodiversity in the Anthropocene." 21.

What Heidegger's reflection upon modern technology achieves, however, is in the multiplication of the concept of technics, thus liberating it from being conceived as a cultural and epistemic universal. But it took so long before we could gear the question towards Eastern thinking, and wherein the first task lies in framing the question before finding an answer. By framing the question as *The Question Concerning Technology in China* (2016), Hui directs our attention to a possible relativisation of the concept of technics not only in the West, but also in the East, thereby multiplying the Western as well as Eastern conceptualizations of technics. In the rear-view mirror of Eastern thinking, the probing twirls into modalities in which their respective cultures encountered and confronted the question concerning technics—whether “unconcealment of Being” is the mode of inquiry for probing the essence of technics in the East. Hui highlights the intricacies that arise from the absent dynamics of presences by pointing towards Kitaro Nishida's dissident response in denial of the idea of Being as a central preoccupation of thinking in the East. As the founder of Kyoto School, Nishida underscores the forms of affirmations of *Nothing* as that which acquired central importance in the Japanese tradition. In contrast, for the Chinese, a legible definition of Dao became the central concern.¹² Nevertheless, as we observe in Heidegger's conceptualization of alternative *techne*, an unfolding of the essence or the truth of Being, is invariably enmeshed in an element of mystery which gets usually translated as the spiritual or the mystical element. It makes us wonder how does one unravel this mystery inherent to the articulation of alternative *techne*? If we must give voice to the alternative concepts of technics, there must be an openness to understand them “not only factually and chronologically but also spiritually.”¹³ Now this statement is the anti-thesis of the positivities presupposed by the modernity of technics.

It explains why the question concerning conceptualization of technics from Indian pasts and presents is also interlaced with the task of dealing with the equivocation between spiritual cosmoses and ethnocentrism. But whether ethnocentric reasoning unveils anything about the dynamics of thinking on technics is the crucial question. Ethnocentrism is an explanatory model moored in the particularities of the local milieu, giving out a causal explanation of the cultural differences determining the genesis of material conditions generative of technical facts (a term used by Leroi-Gourhan to designate the regional differences in the cultures of technics). That is, ethnocentric relativism entails a comparable dimension inherent to its method. While at the outset, a comparative method may also reveal certain contingent or accidental features intrinsic to the material conditions of different cultures, whether it also ponders on the “forms of thinking” inherent to these cultural differences is a question Hui hurls into the discussion.¹⁴ In other words, does ‘contingency’ as a category encompass the differential genesis of technicity

12 Hui, “For a Technodiversity in the Anthropocene,” 21.

13 Hui, “For a Technodiversity in the Anthropocene,” 21.

14 Hui, “For a Technodiversity in the Anthropocene,” 22.

(a term coined by Gilbert Simondon)? Thus, Hui's approach eschews an easy comparison of cultural variables that influence technological development in favour of underscoring the incomparable dimensions in which is embedded the differential forms of thinking. It is in order to articulate these differential forms of thinking that he coins the term "cosmotechics".

Incommensurability that characterizes the definition of technics in non-modern ways of thinking makes the task of defining non-modern technics all the more difficult. This is so because the universal is taken to be a binary opposite of the particular, which usually gets translated into the local, thereby getting entrapped in the binaries of the local versus the global. That is why a call for thinking on non-modern technics in India must explicate its differential dynamics from claims to context-sensitivity, as much as from frameworks of ethno-centric methodologies, namely, ethno-epistemology, ethno-sociology, and ethno-histories. Incidentally, ethno-centric claims to scientific thinking also resort to materialistic accounts of traditions, thus foregrounding the same binaries. Ramanujan's account gives out a glimpse into this format:

Thus, all things, even so-called non-material ones like space and time or caste, affect other things because all things are 'substantial' (*dhatu*). The only difference is that some are subtle (*sukma*), some gross (*sthula*). Contrary to the notion that Indians are 'spiritual', they are really 'material minded'. They are materialists, believers in substance (Marriott 1976, 1980): there is a continuity, a constant flow (the etymology of *samsara*!) of substance from context to object, from non-self to self (if you prefer) - in eating, breathing, sex, sensation, perception, thought, art, or religious experience.¹⁵

For an alternative, we must look into a scenario whereby non-modern ways of thinking reinvent themselves from within the complex mixtures of spiritual thinking—which is anyhow compulsorily attributed to non-Western modernities—and the materialist tradition, which claims to be in possession of the historical legacy of defending the scientific temperament. Thus, rethinking materialism becomes one of the primary tasks of conceptualizing non-modern technics. The following sections will take a short survey of contemporary approaches to materialist thinking on the historiography of science and technology in India. One of the hallmarks of this new historiography is the dislodgment of the method of "constructivism" which has been current in the philosophical and Indological thinking of the late-colonial period, but which, as we will see later, gets a facelift in the hands of Debiprasad Chattopadhyaya in the first ever philosophical account of ancient Indian materialism.

15 Ramanujan, "Is There an Indian Way of Thinking?," 52.

2. Indian historiography on science and technological thinking

Acceptance of technology as a cultural universal adversely affected the thinking on technics in the non-Western part of the world. Unreflective adoption of the instrumental value attributed to technology became the blind spot of Asian thinking. Borrowing the British historian Arnold Toynbee's analysis, Hui makes a two-fold observation. First, Asians adopted the policy of appropriating foreign technology "incurring the notion of limited liability," as a practical solution which does not put oneself in "danger of ceasing to be able to call one's soul one's own."¹⁶ Secondly, this instrumental notion of technology undermines its value as a form of knowledge by engendering a dualistic "opposition between Asian thought and Western instrument" with moorings in the "belief that the former can master the latter."¹⁷ Methodologies prefixing "ethno" emerged countering this notion of technology construed as context-free, cultural, and anthropological universal, thus, promulgating context sensitive concept of "appropriate technologies". Appropriate technology has been the slogan of anti-colonial modernity in India, best represented by the figure of Gandhi who idealized the model of village-cottage industries. E.F Schumacher encapsulated it in his work *Small is Beautiful* (1973).

David Arnold brings in a variant to this ideal as "everyday technologies." His work looks at the history of technology in India through the lens of small-scale machines. In fact, he presents this concept as a counterargument to the thesis on technological globalization, beckoning to look at the particularities involved in this process. Such particularities, according to him, showcase the fact that the truly "global goods" are the small-scale machines of everyday use. Or, in other words, it is these small-scale machines which pioneered the globalization of technology. The fact that his work centres on technology, rather than the sciences, was a first of its kind in the historiographies on India, viewed through the lens of circulation of small machines, replacing the narrative anchored in human agency. In turn, Arnold's narrative about the history of everyday technology in India becomes a history of a specific cluster of Western made technologies, in their "local uses and vernacular meanings."¹⁸ The larger aim of his work is to decentralize the history of technology from its familiar ambit of Western societies. That is, to generate an understanding of the global technological transmission through its local uses. His attempt is to study the social life or cultural biography of identical technological objects with the intent of undermining the presumed cultural universality of technics.¹⁹ And the specific aim of his work is to enjoin the "subaltern historians" voice by uncovering

16 Hui, "For a Technodiversity in the Anthropocene," 24.

17 Hui, "For a Technodiversity in the Anthropocene," 24.

18 David Arnold, *Everyday Technology: Machines and the Making of India's Modernity* (Chicago: Chicago University Press, 2013), 4.

19 Arnold, *Everyday Technology*, 5.

a new class of subalternity from among the social groups who endorsed and embraced small scale machines as part of their livelihood—the artisans, labourers, and migrant workers.²⁰ The machines that came to aid his narrative were sewing machines, typewriters, bicycles, and rice-mills. In a way, his argument is pitched against “state machines and instruments of political aggrandizement.”²¹ For him, historiography modelled after big technologies such as railroads, telegraphs, irrigation projects, and electrification aptly fit the model of “technological transfer” from the modern West to the non-Western world, which according to him, is a diffusionist model whose focus is on “innovation and dispersal” rather than on its “adaptation and use.”²² He juxtaposes this model to what he calls a “constructionist approach,” which refers to the social constitution, creative appropriation, or cultural assimilation to which they were subjected to by the indigenous masses and native elites, thus imparting a sense of social ownership that enabled the co-existence of old and new—the oxcart and the spinning wheel alongside the bicycle and the sewing machine as emblematic of Indian modernity.²³ Though this ruralisation of modern technology, rendered as “subaltern experience” of technological modernity in India, has a high moral quotient, it hurls in moderation as an ideal in technological uses, which has implied meanings of essentialising subalternity, as users of small-scale machines.

Nonetheless, what is hurled into view in the everyday model of technological use is its transnational character, endorsing a model of technological transmission which is juxtaposed to nationalistic models anchored in anti-colonial modernity, and imperialist models of big technologies emblematic of modernization. Dhruv Raina’s intervention into the field also more or less toes this line of disavowal of nationalistic model in favour of a model rooted in cross-cultural transmissions. Raina and Irfan Habib press on with the question of non-emergence of modern science in India, a question provoked by Joseph Needham which triggered the imagination of historiographers of science in India, alongside other non-Western regions of the world. Their work pays particular attention to the problems involved in generating a Needhamian model of historiography on India. But their conceptualization of science remains trapped within the epistemological model of inquiry. However, their careful study of the Indian scenario brings out a comprehensive view of the field, focusing upon the sociological approaches to the history of science. In turn, they celebrate the emergence of social history of sciences in India, whose foundation was laid by Prafulla Chandra Ray,²⁴ with complementary accounts provided by B. N. Zeal. These works which came up in the early 1900s are credited with the inaugural moment

20 Arnold, *Everyday Technology*, 12.

21 Arnold, *Everyday Technology*, 11–12.

22 Arnold, *Everyday Technology*, 5.

23 Arnold, *Everyday Technology*, 6–9.

24 Dhruv Raina and S. Irfan Habib, “The Missing Picture: The Non-emergence of a Needhamian History of Sciences of India,” in *Situating the History of Science*, eds. S. Irfan Habib and Dhruv Raina (New Delhi: Oxford University Press, 2001), 281.

of critical thinking, unleashing “a response to the exaggerated depiction of India as a spiritual civilization, devoid of a modern scientific or industrial tradition.”²⁵ Raina and Habib’s work propelled, as such by the epistemological framework, by an inquiry based on explanatory models, which in the context of India becomes an enquiry into the non-emergence of scientific revolution in the non-West in a Needhamian manner, or at best an explanation of the missing picture in the historiography of science. While they depart from the methodology-based model of explanation that inspired the inception of the disciplinary field called philosophy of science into a social history of sciences, the demarcation between these two is very thin, as even the former was in search of better models of explanations of scientific discovery as exemplified by the work of the trio of Popper-Kuhn-Lakatos. Nonetheless, their insightful study of what Needham’s work enunciates in the non-Western historiography of science is path-breaking. Needham’s work displaces the ascription of science as a “cultural universal” in favour of other ways of conceptualizing the emergence and prevalence of scientific thinking in the study of history of science. In favour of a more “polycentric notion of science,” Needham decentralizes the historiography of modern science from its “founding impulse in the scientific revolution of the seventeenth century” whose conceptual origins are traced back to the Greek period.²⁶ Raina’s and Habib’s search for an alternative method of historiography and model of explanation lean toward Needham’s ecumenical vision of generating a cross-cultural history of transmission and exchange of scientific inventions and simultaneous histories of discoveries.²⁷ This vision is brought out more pronouncedly in a later work titled *Science between Europe and Asia* (2011). While this ecumenical axis of Needham’s vision is deemed adaptable to developing Indian historiography of science, there is an equivocal axis which Raina and Habib eschews—“marked by the polarities of the rational and the irrational, tradition and modernity,” which “provided progressivist historians of science in India with a frame to explore the non-emergence of modern science in India.”²⁸ They term this axis “the legend of suppression,” and explicate it as follows:

The legend of suppression is about two contending schools of thought, the one epistemically open, empirically oriented, and progressive, and the other bigoted, doctrinaire and obscurantist. The legend relates how the former is persecuted, almost eradicated by the forces of the latter... It may be suggested that out of the diversity of the Needham corpus, the legend of suppression provides one of the most powerful themes for Needham’s Marxist following in the history of science in India.²⁹

25 Habib and Raina, “The Missing Picture,” 281.

26 Raina and Habib, “The Missing Picture,” 284–85.

27 Raina and Habib, “The Missing Picture,” 286–87.

28 Raina and Habib, “The Missing Picture,” 287.

29 Raina and Habib, “The Missing Picture,” 290–91.

Thus, one can see from the above quote that the equivocal axis is of consequence for the understanding of the Marxist historiography of science, to which belongs the first ever philosophical undertaking in the history of materialist tradition carried forward by DPC. The subsequent turn in their analysis of DPC's orientation inspired by Needham's equivocal axis is as follows:

The legend of suppression...provided Chattopadhyaya one of many frames for exploring the origins of materialist thought in ancient India (Chattopadhyaya 1959, 1976), and the evolution of Ayurvedic medicine (Chattopadhyaya 1979). Chattopadhyaya's principle thesis appears to have been that materialist schools like the Lokayata and, later, the Ayurveda of the early period provide possibly the only instances that approximate to our present conception of science. The decline of these schools is imputed in part to their suppression by the religious orthodoxy...by the theocracy and those with a vested interest in the politics of irrationalism.³⁰

Therefore, in the final analysis, while their work effectively decentralizes the historiography of modern science anchored in a revolutionary model with its origins in the West by that of a counter model "commencing with the age of colonialism" in the non-West,³¹ their implied argument about the misfired indigenous materialist model harboured by the work of DPC needs further examination, which this paper undertakes.

3. Constructive method of Indian materialism

In his work, *Lokayata* (1959) joins hands with Krishnachandra Bhattacharyya (KCB) in defining his method as "constructive interpretation," which is contrasted with the method of exposition prevalent in his time in continuation with the classical traditions of Indian philosophy.³² In a way, appropriation of constructive method marks the period enjoining late-colonial and post-colonial Indian philosophical thinking dealing with the task of recovery of ancient mystical traditions. It amounted to the shared belief that interpretation of all ancient Indian systems required a constructive effort, that is, they are "problematic constructions" which "entail the risk of reading modern concepts where they do not actually exist."³³ However, in contrast to how KCB designed constructivism by appropriating the

30 Raina and Habib, "The Missing Picture," 291.

31 Raina and Habib, "The Missing Picture," 297.

32 Debiprasad Chattopadhyaya, *Lokayata: A Study in Ancient Indian Materialism* (New Delhi: People's Publishing House, 2012), vii.

33 Chattopadhyaya, *Lokayata*, vii.

transcendental framework of Immanuel Kant, DPC adopts the socio-economic model developed by Marx and Engels. This materialist method of constructivism then juxtaposes itself against the idealist interpretation, critiquing the latter's ideological masking of the fact that social relations and material means of subsistence play a determining role in the development of philosophy and religion. Thus, this materialist reading of ancient Indian philosophical heritage examines them from a Marxist point of view. The Marxist view, as represented in the works of Marx and Engels, is touted as the most advanced form of the materialist point of view.³⁴ Despite ramifications, a Marxist outlook surveys the material conditions of a particular society of which its philosophical outlook is deemed to be an offshoot. Lokayata being a distinct philosophical outlook in comparison to other heterodox systems of Buddhism and Jainism, the objective of DPC's constructive effort endeavours to build a proto-materialist account for these ancient texts. At the same time, DPC recognizes the fact that Indian material conditions present during the historical period that has been referred to by the views of Lokayata is a misfit to the prevailing Marxist accounts of materialism. Judging by the Marxist accounts of materialism, certain historical material conditions ought to be developed for the maturation of materialist outlook which seems to be inadequately present during the historical period being referred to by the Lokayata views. Lokayata, DPC observes, belongs to the pre-Buddhistic and even pre-Upanishadic period. This ancient period in history can only anachronistically be perceived to have occasioned the development of a materialist philosophy in the modern sense.³⁵ In view of this anachronism, he terms the Lokayata view "proto-materialistic."

Two chief characteristics of Lokayata philosophy identified by DPC are: views prevalent among the masses and a this-worldly outlook. A this-worldly outlook is encapsulated by the phrase "*deha-vada*," which holds the view that "the material human body (*deha*) is the microcosm of the universe, and its cosmogony attributes the origin of the universe to the union of male and female."³⁶ How does this mythological imagination become befitting to be called a materialistic outlook? DPC finds two features about this outlook endearing: 1) that it designates a "stage of consciousness": and 2) that this view is pre-spiritualistic. That is, their moorings are devoid of spiritualistic concepts like God, soul, and the other-World. Therefore, for him, it befits to be called "primitive proto-materialism". Yet, equally true was the fact that "it was far from acquiring the form of a philosophical outlook proper."³⁷ But in the course of time, DPC observes, Lokayata developed itself into a philosophical system representing the strongest opposition to the earliest form of Indian idealism, namely, the Vedanta. Prior to that, primitive proto-materialism formed the "subsoil" of both the Vedic

34 Chattopadhyaya, *Lokayata*, xiii–xv.

35 Chattopadhyaya, *Lokayata*, xvi.

36 Chattopadhyaya, *Lokayata*, xvii.

37 Chattopadhyaya, *Lokayata*, xvii.

and Lokayata outlook, characterized by a “stage of pre-spiritualistic consciousness.”³⁸ Now given the fact that the idealistic outlook emerged only in the Upanishadic phase of the Vedic period, obviously enough, for DPC, this idealism is an outgrowth on the ruins of proto-materialism, whose defining feature is the un-dissociation of manual labour from mental labour. The distinctive remark that he makes against mixing heterodox systems lies in his denial of a common past or a shared future between Lokayata, Buddhism, and Jainism, notwithstanding the repeated mentions of Lokayata views that we come across in the latter’s textual sources. He believes that a shared ancestry of ideas exists only between Lokayata and the original Samkhya.³⁹ The underlying agenda behind the identification of a stage of consciousness representing primitive pre-class society is similar to most other post-colonial projects in philosophy—to showcase the historically contingent nature of spiritualistic traditions to Indian philosophical history. That is, it implies the assertion that as a late arrival to the Indian philosophical outlook, it too will fade away in the course of time.

Nonetheless, the problematic arena identified by DPC, which in his analysis ailed this primitive form of proto-materialism from maturing itself into a philosophical system, lies in its constitutive set of bodily ritual practices indicating its obscurity and obscenity, which he reasons to be part and parcel of what may be called as the “Tantric cults”. Tantrism is believed to have emerged out of the social and material conditions prevalent during the initial stage of agricultural economy, which was centred on “mother-right”, emphasizing the “female principle” called Shakti or Prakriti.⁴⁰ By contrast, the Vedic period emerged out of a pastoral economy which hinged on a patriarchal society. Delineating these respective differences in their material means of subsistence allows DPC to trace the origin of Tantrism in the fertility magic of the early agriculturalists. In DPC’s analysis, the nodal point of this agricultural ritual rests on an assumption—that the productivity of nature can be enhanced by imitation of human reproduction. That is, it is “an instinctive groping at a theory according to which the human body and the earth are assumed to have the same nature.”⁴¹ Therefore, DPC views the *deha-vada* which postulates the material human body as the microcosm of the universe as an ignorant and premature view about the mystery of nature that is deficient in emancipating itself “from the world and proceed to the formation of the spiritualistic and idealistic world-outlook.”⁴² Thus, his view implies that the evolution of its mystical corpus into spiritualism or idealism inevitably marked the next stage in the advancement of human consciousness, although he would have appreciated this stage to be evolving into a form of synthesis.

38 Chattopadhyaya, *Lokayata*, xviii.

39 Chattopadhyaya, *Lokayata*, xxiii.

40 Chattopadhyaya, *Lokayata*, xviii–xix.

41 Chattopadhyaya, *Lokayata*, xx–xxi.

42 Chattopadhyaya, *Lokayata*, xxi.

The next step in his argument is constitutive of how he relates Tantrism with proto-materialism. In his analysis, the agricultural economy was rooted in a set of manual operations, and when brought in alliance with the ritual practices of magic, these alchemical Tantras became an aid to the manual operations of agricultural labour.⁴³ The cosmogony of this proto-materialism is centred on the female principle and mother-right. The female principle called Shakti or Prakriti is rooted in a concomitant view of “this-worldliness,” which translates itself into a concrete material view of *loka* or *iha-loka*, and *ayatah* meaning ‘the basis’; *ayatah* could also mean prevalent among the people, “loka-ayata.”⁴⁴

DPC’s argument amounts to saying that the most challenging aspect about the resurrection of Indian materialist tradition of Indian philosophy is convoluted by it being enmeshed in obscurity, heterogeneity, and ambiguity shrouding the materials and resources on which the Lokayata view is embedded. Surmounting the fragmentary nature of its source materials, DPC’s effort is to pitch his counterargument in juxtaposition to Madhavacharya’s account of Lokayata. Madhavacharya, in his work *Sarva Darsana Samgraha*, written in the 14th century A.D., presents a caricature of this view as “crude mob thinking.”⁴⁵ Historians of the idealist tradition have invariably considered Madhava’s text as the reliable starting point for reconstructing the lost Lokayata tradition. However, this obfuscates the three fundamental sources that DPC identifies as three fragmentary starting points for reconstruction: obscure cults of Tantrism, context of the origin of Samkhya philosophy, and the founding ideology of mother-right in ancient India.⁴⁶ DPC’s objections to Madhava’s depiction of the Lokayata view stems from the well-known predisposition the latter has toward the idealist Vedantic tradition. However, first he adopts the step of exposing the anachronism inherent to the implied authenticity claimed by Madhavacharya’s characterization of Lokayata given his location in the 14th century which is “separated from the original Lokayata at least by two thousand years.”⁴⁷ Madhavacharya’s idealistic inclinations are evident from his Vedantic style of presentation in a clear and coherent manner systematizing it as the principal source of our knowledge on the epistemology, metaphysics, and ethics of the Lokayatikas.⁴⁸ But what is more perturbing to DPC is how his account engendered a perceived sense of degeneration in later historiography, which is evident in their explanations of the cause of decline of heterodox systems of Indian philosophy, and Lokayata in particular.

43 Chattopadhyaya, *Lokayata*, xxvii.

44 Chattopadhyaya, *Lokayata*, 2-4.

45 Chattopadhyaya, *Lokayata*, 1-2.

46 Chattopadhyaya, *Lokayata*, 5.

47 Chattopadhyaya, *Lokayata*, 20.

48 Chattopadhyaya, *Lokayata*, 8-9.

The sources DPC amasses to counter Madhava's account spring from views that are inclined to revive rational and logical traditions inherent to the corpus of classical Indian philosophy, a view more pronouncedly marked today as the post-colonial voice of Indian philosophy. DPC cites Buddhaghosa, who describes the Lokayatatic view as *vitanda-vada-satta*, the science of *vitanda* (disputations) and *vada* (arguments)⁴⁹. Similarly, Sukra Niti Sara refers to Lokayatikas as *nastikas* (those who deny God and the authority of Vedas), and who hold very strong logical arguments in support of "natural laws"—*sarvam svabhavikam matam* (everything is governed by natural laws).⁵⁰ Additionally, Kautilya is quoted as referring to *anvikshiki* (science of logic) in his Arthashastra, as a common thread that binds the thought of Samkhya, Yoga, and Lokayata. In short, according to DPC, Lokayatikas had earned the reputation as exponents of *tarkavidya* or *hetusastra*, from the camp of *nastikas* or heretics as opposed to the Nyaya and the Mimamsa schools of *haitukas* or *tarkis* (logicians), who belonged to the camp of orthodoxy. Thus, DPC invents a new locus and habitus for these logicians of Lokayatikas, earmarking them as the first logicians of the country who articulate logic as a tool in defense of popular interest.⁵¹

On the other hand, he quite convincingly revivifies the Lokayata tradition of materialism in resonance with Ambedkarian reading of epics when we turn our attention to his account of Lokayata ethics. The pivotal reference here is to the epic of Mahabharata, which narrates an incident of a Carvaka being killed in the event of Yudhishtira's return after the Kurukshetra war, mentioned in the Santiparva of Mahabharata. This particular Carvaka despises Yudhishtira's triumph in the war:

This assembly of the Brahmanas is cursing you for you *have killed your kins...* What have you gained by *destroying your own people and murdering your own elders?* You should die.⁵²

This rage is indicative of his condemnation of 'killing the kin', rather than human lives in general, which for DPC, is representative of tribal standards of morals. Therefore, in his analysis, the composition of this epic is indeed representative of a transitional phase marking the displacement of tribal social mores, whereby Gita, encapsulating the new moral code, can be seen to be substituting old tribal value systems.⁵³ Consequently, in reference to Lokayata metaphysics, DPC makes some outstanding observations. Lokayatikas are generally compared to the Sophists and Skeptics of the Western metaphysical tradition. But as DPC catapults them into the fold of a cultic tradition of Tantrism, they become

49 Chattopadhyaya, *Lokayata*, 24.

50 Chattopadhyaya, *Lokayata*, 25.

51 Chattopadhyaya, *Lokayata*, 25–30.

52 Chattopadhyaya, *Lokayata*, 33–34.

53 Chattopadhyaya, *Lokayata*, 33–35.

representative of a popular cult practiced by the tribal masses. And as a consequence, the Carvakas, in this new guise as proto-materialists, would beg a further classification under the category of materialism in juxtaposition to the Western philosophical traditions of materialism.⁵⁴

With respect to the sources of recovery of the Lokayatika view, DPC notes that due to the hostile nature of Tantric cults to the prevalent Brahminical framework, they are classified under the Asura view, which thus constitutes the primary source for the reconstitution of Lokayata materialism. Hence, what DPC accomplishes here in one stroke is a reinvention of Indian materialism in a ritualistic context, whereupon ritualism also gets to be redefined in its turn. In the general parlance, rituals beckon a religious milieu, which in the case of Lokayatikas seem to be lacking as they adhere to a materialistic idea of this-worldliness (*deha-vada*). The sources DPC draws upon to establish his views are Manusmriti, the Buddhist texts *Saddharma Pundarika* and *Divyavadana*, and Kumarila's work *Slokavartika*. Although these works refer to Lokayata disparagingly as "low arts" (especially the Buddhist ones), meaning divination, spells, omens, etc.—*tiracchana vigga*, one among the list of seven low arts mentioned in Maha Sila in the passage of Cullavagga—they undeniably associate Lokayata with some kind of rituals of spell.⁵⁵ The abstruseness surrounding the identity of Lokayatikas arises from them being referred to as Asuras, Demons, Raksasas, Daityas, monsters etc. by various Upanishads (scriptures of Vedic corpus). DPC's work of reconstruction of the Asura-view as the view of Lokayatikas associates them with an obscure set of practices characterized by its distinctive set of spells and associated rituals that attribute to them a cultic status by belonging to a belief system of Tantrism, which is conjectured to be older than the Vedas.⁵⁶

However, the question is, how do we situate their worldview within the larger framework of a cosmogony? At this stage of decipherment of the cosmogony of Lokayatikas, DPC's argument falters. Though DPC effectively defies the antagonistic sources of the kind some historians furnish to ascribe moral depravity to their practices, he loses sight of their heterogeneous functions. The usual obnoxious reference is to a yearly ritual gathering on a particular day to practice the five-fold ritual of the Tantrikas called "*panca makara*" or five "*ma*'s"—*madya* (wine), *mamsa* (meat), *maithuna* (sexual intercourse), *mudra* (fried cereals), and *matsya* (fish).⁵⁷ While the other historical references despising this ritual lack an overarching philosophical telos to their argument, they nonetheless end up unmasking the heterogeneity entailed by the canopy of Lokayata, implying that they share a heterogeneous mix of ritual practices under variegated names such as Tantrikas (as has

54 Chattopadhyaya, *Lokayata*, 35–36.

55 Chattopadhyaya, *Lokayata*, 39.

56 Chattopadhyaya, *Lokayata*, 49.

57 Chattopadhyaya, *Lokayata*, 52.

already been referred to), as Kapalikas who smear their bodies with ashes, as Yogins who recognize a fifth element called “akasa” (empty space), as Carvakas who like to chew (*carv*), eat without discrimination, and as Barhaspatyas who regard Brihaspati as the founder of their propounded ideas.⁵⁸ On the other hand, DPC’s effort to save Lokayatikas from their alleged moral depravity gets into muddled thinking in an effort to squeeze their heterogeneity under a homogeneous view:

...there is obviously no need to imagine any philosophy other than the materialistic one to form the basis of the *kama sadhana* of the Kapalikas... the so-called science of erotics of the Kapalikas was vitally related to the ideal of *artha sadhana* or the enhancement of material wealth...for the Tantrika cults like the Kapalika had their source in the archaic belief according to which natural production could be enhanced by the imitation or contagion of human reproduction, that is the *kama sadhana* and *artha sadhana* were not so unrelated after all.⁵⁹

That is, DPC’s recovery of ancient Indian materialism is narrowly focused upon the ejection of spiritualistic elements that got ascribed to it later in time. This narrow focus blindfolds his efforts on other possibilities of recovery. In his analysis, spiritualisation of Tantrism led to the superimposition of theistic ideas on its treatises, resulting in the creation of schools, namely, Buddhist Tantrism and Hindu Tantrism—widely known under its subdivisions as Vaishnava Tantrism or Shaiva Tantrism. In contrast, he postulates a case where Tantrism represents a “phase of human thought which was yet to be acquainted with spiritualistic values.”⁶⁰

In summary, his premises and conclusions are as follows:

1. Ancient Indian materialism can be encapsulated by its proto-materialistic view of “this-worldliness”.
2. Two specimens of “this-worldliness,” decipherable from the oppositional accounts of Lokayatika outlook are: a) *deha-vada* (identification of the self with the body); and b) Tantric cosmogony consisting of peculiar set of practices of rituals and spells.
3. Demographic identity of these practitioners of Tantric rituals is traceable back to the Indus valley period of Harappan civilization, and in particular to the world-view of Asuras.

58 Chattopadhyaya, *Lokayata*, 52–53.

59 Chattopadhyaya, *Lokayata*, 54–55.

60 Chattopadhyaya, *Lokayata*, 53–54.

4. Asuras were the followers of Tantric cults who adhered to “this-worldly” sacrificial rites.
5. To conclude, therefore, the Lokayatas were the progenitors of Indian proto-materialism, also known as ancient Tantrism.

The most enterprising move that DPC makes in the above-mentioned steps constitutive of his argument is with regard to the third one, which unambiguously traces the views of Lokayatikas to the period of Indus valley civilization, and to the demography of Harappa. This move is in defiance of a predominant view tracing the origin of Asuras to ancient Sumeria.

Prima facie, this argument might appear to be concurring to an ethnic view concerning the origins of Asuras, but a closer examination would reveal that DPC’s argument is anchored not in a question concerning the origins of Asuras as an ethnic community; rather it pertains to the origin of their cosmogony traceable to a certain demography, an argument very similar to Deleuze’s and Guattari’s articulation of the Greek milieu of origin of (Western) philosophy, though needless to say, DPC’s claim is a diffident one, devoid of a philosophical perspective tying it up with the Lokayata metaphysics or cosmogony. Nevertheless, his investigation is propelled by a quest to garner evidence of proto-materialism inherent to the view attributed to the Asuras, from the “traces of Tantrism in the material remains of the Indus valley civilization.”⁶¹ And the endeavour is to reconstruct a lost tradition of ancient Indian materialism. However, the question of whether it opens up thinking on techniques, and technical milieus that co-constitute these Tantric cult formations, remains out of focus; notwithstanding the affirmative account it furnishes on Tantric materialism:

...it really represented a naturalistic trend in the philosophical heritage of India. It was, moreover, characterized by a distinctly democratic attitude. As a matter of fact, its affiliation to the crafts and professions traditionally despised was greatly responsible for its being continually misunderstood.⁶²

4. Conclusion: Cosmotechanical Materialism

Is there technological thought in India? Or China? Or Africa? This mode of questioning can appear very trivial as well as very profound. The profundity of this question reveals itself once we realize the scope of its answer to a similar question—is there technological

61 Chattopadhyaya, *Lokayata*, 60.

62 Chattopadhyaya, *Lokayata*, 65.

thought in Europe? Or in the West? The fact that Heidegger did not embark upon the latter question to begin his reflections on an alternative conceptualization of *techné* earmarks the banality of this question to the Western context. At the same time, there is a dimension that makes this question trivial, “For what culture doesn’t have technics?”⁶³ As an anthropological universal, every human civilization has produced technics. The French anthropologist Andre Leroi-Gourhan calls this “technical tendency,” which in the history of human evolution appeared in the manner of “exteriorisation of organs and memory and the interiorisation of prostheses.”⁶⁴ Every human culture has showcased their skills for making technical artifacts in their quest for survival. Now, what marks the differential evolution of technics in different cultures is what Leroi-Gourhan calls “technical facts,” which are specific to each culture, as “they result from the encounter of the tendency and thousands of coincidences of the milieu.”⁶⁵ Hui’s intervention illuminates those aspects left out by Leroi-Gourhan’s explanatory model of diversification of technologies based on the conception of technology as a universal. These are the dimensions of cosmology and metaphysics. Leroi-Gourhan’s explanatory model of diversification cannot account for “the different pace at which invention proceeds in different cultures,”⁶⁶ which according to Hui, is embedded in their respective metaphysical understandings of cosmology. In other words, technics are not reflected upon in the same manner across different cultures. That is, technics, in the sense in which Europe and the West understood it, never existed in the non-West in a cosmological sense. As Hui lays emphasis on the cosmo-metaphysical sense of technics, he underlines instead that it is the philosophical concept of technics. Therefore, technics in the cosmological sense is another term for the philosophical understanding of technics. Technology as a universal concept cannot capture the cosmologically embedded metaphysics underlined by this concept and specific to each culture. This displacement of metaphysics from a logocentric, epistemological understanding is what may be called the ontological turn in the conceptualization of alternative technics. Hui traces the roots of philosophical probing into technics to the period of Hellenic philosophy.⁶⁷ This tradition reinvents philosophy as that which allows the logos and mythos to co-exist and dwell alongside each other, thus dialectically constitutive of onto-logos, or mytho-logos. In effect, what Hui brings to the table for discussion is a philosophical mode of challenging the “homogeneous becoming of modern technology,” illuminating how it poses “a huge obstacle to understanding non-European cultures.”⁶⁸ Thus, in summary, cosmotechnics is conceived as an alternative to the pro-capitalist accelerationist model,

63 Yuk Hui, *The Question Concerning Technology in China: An Essay in Cosmotechnics* (Falmouth, United Kingdom: Urbanomic, 2016), 7.

64 Hui, *The Question Concerning Technology in China*, 8.

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

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

67 Hui, *The Question Concerning Technology in China*, 10.

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

called “Prometheanism”, which harbours faith in the power of technology to liberate us⁶⁹.

One of Hui’s objectives in articulating this alternative model of technics as ‘cosmotechnics’ is to reinvent the nexus of mytho-logos in concomitantly with the origin of technics from non-modern cultures. In his work, *The Question Concerning Technology in China* (2016), he follows this insight in uncovering an alternative figure to Prometheus from the ancient Chinese work: *Huainanzi*.⁷⁰ The point made here is not merely about relativisation of the origin of technics, “gesturing towards different mythologies on technics in China, Japan, India, or elsewhere.”⁷¹ Emphasis rather is upon their ontological contexts, the nexus between technics and the constitutive mythological cosmos. Therefore, a philosophical account of the genesis of technicity (a concept used by Simondon underscoring its constant bifurcation from magic), or relativization of technics, does not rest upon a comparison of technical objects or technical systems, in the way in which the French historian of technology Bertrand Gille conceived it.⁷² Leroi-Gourhan’s explanatory model, based on an ethnographic study of the development of tools, also falls short due to the same analytic rooting in milieus that influence the transition of technics as mere indicators of survival mechanisms. These explanatory models, according to Hui, are deficient of cosmologies. Therefore, a preliminary step towards a definition of cosmotechnics would undertake the task of qualifying the accidental cultural facts that impact inflections upon the universal technical tendency under the nomenclature of “cosmological setting.”⁷³ By thus bringing the accidental features of a cultural setting under cosmologies, is Hui implying an erasure of its accidental nature? Traditional ontological explanations imply an element of essentialism, but what Hui accomplishes here is a reinvention of ontology in tune with the anthropological turn towards plural ontologies of the nature-culture continuum, or what Pieter Lemmens terms as “multi-naturalism.”⁷⁴ Lemmens dispels the possible misinterpretations lurking behind the concept of “return” to native ontologies. Since the current global technological condition of the Anthropocene is part an outcome of the “colonization and imposed modernization,” this condition has become the destiny of even non-Western cultures.⁷⁵ Therefore, there are no pristinely preserved nature-culture ontologies to return to even in the East. This technological condition has been undermined in the works of anthropologists of “multi-naturalism,” and is a corrective that Hui’s work focuses upon. Hence, the overall objective of the ontological turn initiated under the rubric of cosmotechnics does not imply a “return,” evoking an oriental

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

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

71 Hui, *The Question Concerning Technology in China*, 17.

72 Hui, *The Question Concerning Technology in China*, 17.

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

74 Pieter Lemmens, “Cosmotechnics and the Ontological Turn in the Age of the Anthropocene,” *Angelaki* 25, no. 4 (2020): 4.

75 Lemmens, “Cosmotechnics and the Ontological Turn,” 4.

nostalgia, as Lemmens highlights, but instead endeavours to “overcome modernity’s opposition between nature and technology.”⁷⁶ For the same reason, Hui’s emphasis on multiple cosmotechnics is not the same as multi-culturalism, which is instead a term denoting multiple identitarianisms of cultures.⁷⁷ What Lemmens underlines here is that cosmotechnics is not another identitarianism making ontological claims on cosmologies. Rather, it urges an elicitation of multiple epistemologies, or epistemes on the genesis of technicity from culture-specific cosmologies, leading “toward a plurality of heterogeneous technological trajectories.”⁷⁸ In relation to the contexts of non-modern materialisms, the idea of cosmotechnics provides an impetus to think afresh about the presupposed disjunction or bifurcation between magic and technological genesis.

In Hui’s attempt, we see an effort to define technics in conjunction with magic, as a step towards defining cosmotechnics in relation to Eastern cultural ontologies. This is in a tangential direction to how Gilbert Simondon conceived of the “technicity of the magical phase.”⁷⁹ The latter conceived this phase as “a field of forces” converging into intensities at “key points,” which he translates as “high points such as mountains, giant rocks, or old trees.”⁸⁰ For Hui, this inseparable unity between magic and the genesis of technics is what may be termed as “cosmotechnics.” The significant departure Hui makes from Simondon’s analysis is in regard to the faith impinging on a possibility of reinventing cosmotechnics in tune with our times. It is in denial of the statement: “there is no cosmotechnics in our time.”⁸¹ While Simondon could not advance his study on this subject, Hui finds certain cues lying unexplored in his work. For instance, taking the case of the TV antenna, Simondon makes the observation that:

...it seems to represent a gesture of sorts, an almost magical power of intentionality, a contemporary form of magic. In this encounter between the highest place and the nodal point of transmission of hyper frequencies, there is a sort of ‘co-naturality’ between the human network and the natural geography of the region.⁸²

What Hui finds remarkable about Simondon’s observation is his divergence from the predominant perception, as may be evident in Levi-Strauss, regarding the incommensurability between the magical phase and the evolution of science. Levi-Strauss, in *The Savage Mind*, defined “magic as the science of the concrete, event-driven and sign-

76 Lemmens, “Cosmotechnics and the Ontological Turn,” 4.

77 Lemmens, “Cosmotechnics and the Ontological Turn,” 5.

78 Lemmens, “Cosmotechnics and the Ontological Turn,” 6.

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

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

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

82 Hui, *The Question Concerning Technology in China*, 21–22.

oriented, and science as structure-driven and concept-oriented,”⁸³ which explains their discontinuity. Simondon, by contrast, admits a continuity between the magical phase and the genesis of technicity, though about which he did not elaborate any further. We see a similar difference of opinion sparring between two of the prominent voices of Indian materialism on the subject of the relation shared between magic and science. K. Damodaran’s critique of DPC arises from former’s perception of an unbridgeable discontinuity between the phase of magic and evolution of science:

Sir James Frazer maintains that magic and religion are entirely different and even contradictory concepts. According to him, the fundamental conception of magic is identical with that of modern science, for magic, too, like science is based on the operation of immutable laws of nature... Debiprasad Chattopadhyaya follows Frazer uncritically and asserts that magic is opposed to spiritualism and religion...But this is not so...Belief in the supernatural is the essential characteristic of all religions...Belief in the supernatural properties of a material object transforms it into an object of religious worship.⁸⁴

Suturing this apparent incommensurability, in a recent essay Hui elaborates on Simondon’s concept of “technophany,” which is envisioned as a mediative force that reintegrates technical objects into culture.⁸⁵ Hui unearths this concept from a course Simondon gave in Lyon between 1960 and 1961 with the title “Psychosociology of Technicity.”⁸⁶ What is remarkable about this concept is an “isomorphism and intimacy” presupposed between technicity and sacrality by Simondon.⁸⁷ For him, this intimacy indicates a “subtle competition” between technicity and sacrality for “access to the interiority of the real,” which, however, evolves into a “hiatus” between sacrality and technicity with the evolution of technology as a cultural universal.⁸⁸ However, Simondon observes that in the early phases of evolution, technical objects “re-enter[s] the fortress of culture through a ritualization, rich in images and symbols.”⁸⁹ This observation is indicative of the amenability of technical objects to rituals of magic. In reference to the isomorphism shared between the two realms, Simondon observes that “technicity is maintained by a network of reticular structure,”⁹⁰ which may seem to imply that this structure weaves a network of heterogeneous agents, including ritual practices of magic. However, as

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

84 K. Damodaran, *Indian Thought: A Critical Survey* (New Delhi: People’s Publishing, 2011), 25–26.

85 Yuk Hui, “Apropos Technophany,” *Technophany* 1, no. 2 (2023): 3.

86 Hui, “Apropos Technophany,” 1.

87 Hui, “Apropos Technophany,” 7.

88 Hui, “Apropos Technophany,” 7–8.

89 Hui, “Apropos Technophany,” 3.

90 Hui, “Apropos Technophany,” 6.

Hui reminds us, the idea implied here is not a “return” to the magical phase, but which nonetheless augurs the possibility that “technological thought can be resituated within a genesis together with religious, aesthetic, and philosophical thought.”⁹¹

In an effort to advance the thinking on cosmotechnics, and reinventing the magical dynamics inherent to pre-modern magical genesis of technicity from the “Tantric phase” of Indian philosophical traditions, it is significant follow the evidences Hui takes from the Chinese philosophical context of technics, in particular the concept of *Qi*. He highlights the fact that *Qi* can be translated as “tools,” implying a mediating “cosmological consciousness.”⁹² He demonstrates the importance played by a ritual cosmos in the Confucian classic *Li Ji* (the Book of Rituals) that “documents the importance of technical objects in the fulfilment of the *Li* (rituals)” thus qualifying *Qi* as *Li Qi*.⁹³

If in line with this analysis, had DPC admitted of Tantric rituals outlined in relation to the cultivation of soil as a set of mediatory technics developed to mobilize and to effectively enhance the fertility of agricultural processes, he would have identified and isolated those technics that emerged out of fertility-magic, related to seasons, type of soil, kinds of seeds, etc. Even when unaware of this relation between technicity and Tantric cosmological imagination, DPC quotes GB Frazer who terms these techniques as a mode of “bringing forth”—“to make the seed which they sow bring forth.”⁹⁴ The agricultural magic that is meant to enhance the fecundity of the earth assumes several forms of technics infused with fertile energies of the well, tree, and rains involving rain-making techniques, in alignment with the seasons of fertility and drought.⁹⁵ However, what goes unattended in this account is the exploration of technics involved, and the inherent conceptualization of cosmotechnics. Notwithstanding these shortfalls, tracing the trajectories of cosmotechnical thinking in India cannot discount the seminal contribution made by DPC for the sheer fact that cosmotechnical potential inherent to the cosmological imagination of Tantric materialism comes to the fore in his work, though he discards them eventually under the prejudiced binary between spirit/mind and body/matter that underlines the division between idealism and materialism in Indian philosophical thinking, especially during the modern period when historiographical retrospective analysis on Indian philosophical pasts were undertaken. In the Tantric sources, we see a suspension of the sharp division between mind and matter, and in turn, between idealism and materialism, given its orientation towards everyday practices aimed at bringing out solutions via the medium of the nexus of technical creative genesis of mystic beliefs, whereby the onus

91 Hui, “Apropos Technophany,” 6.

92 Hui, *The Question Concerning Technology in China*, 29.

93 Hui, *The Question Concerning Technology in China*, 29.

94 Chattopadhyaya, *Lokayata*, 286.

95 Chattopadhyaya, *Lokayata*, 286–92.

of creation is divested of an exclusive focus on its mystical prowess. A proto-materialist account of Tantric realm of rituals thus gives us ample scope to compare it with Hui's demonstration of "relational thinking" as founded on "resonances."⁹⁶ Agricultural rituals of magic are founded on "resonances" rather than "imitational" thinking, as is often explained mistakenly by DPC and other scholars on "magic." These relational dynamics ought to be expanded upon for the proto-materialistic, Tantric cosmotechnics to take philosophical contours.

Hui's methodological cautions come handily from his inquiries into articulation of a genealogy of cosmotechnics in China in this undertaking. As he carefully culls out for analysis a genealogy of the relation between *Qi* and *Dao* (terms which cannot be reduced to product and soul), avoiding more commonly used translations of *techne* as *Gong* (I, work) or *Ji* (skill), which, as he explains, would have turned this "inquiry into mere empirical examples" of *techne*,⁹⁷ Indian philosophical thinking has to identify terms denoting cosmotechnics from Tantric proto-materialism. Therefore, what is required of us from a non-modern perspective is, as Hui's work enunciates, "to trace different technicities, opening up the plurality of relations between technics, mythology, and cosmology."⁹⁸ In the Indian tradition, as eminently demonstrated by DPC, though later disapprovingly discarded, Tantric cosmologies from proto-materialist traditions of philosophy are certainly a starting point that is awaiting further exploration.

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96 Hui, *The Question Concerning Technology in China*, 55.

97 Hui, *The Question Concerning Technology in China*, 54.

98 Hui, *The Question Concerning Technology in China*, 29.

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