

Thinking Transdisciplinarily on a Country Path: Rooting Enquiry and **Pedagogy by Learning from** Heidegger and the Zhongyong(中庸)

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his is a study of how the notion of thinking the onto-cosmology of the harmony of all Being. especially Conversation on a Country Path about Thinking, can be read through a Confucian text to illuminate transdisciplinarity and how it might be taught. I briefly discuss the eurocentrism of continental philosophy, especially its lack of engagement with and respect for an Eastern philosophical perspective, then give the background of the chosen Chinese text. I next consider Heidegger's position on thinking and draw insights from how we can both teach and enable transdisciplinary relatedness in university students. Learning to think is taken as inherent in the essential nature of humans and is a discovery of our own nature, as well as the nature of Being. This discovery, in What is Metaphysics, and Conversation on a Country Path, offers a way to unconcealment in

that Heidegger developed in his writing, It is essential to Confucian thought and to the fundamental ontology of Heidegger and, I contend, to forms of transdisciplinary thinking and teaching.

> Keywords: Heidegger, thinking, Zhengyong, Transdisciplinarity.

1 Introduction

The fields of the sciences lie far apart. Their methodologies are fundamentally different. The disrupted multiplicity of disciplines is today only held together by the technical organisation of the University and its faculties, and maintained as a unit by the practical aims of those faculties. As against this, however, the root of the sciences in their essential ground has atrophied. (Heidegger,

¹I have used 'Being' where I intend to refer to the Being of everything-the being of Being-and 'being' when I refer specifically to being human.

¹ Supported through the generosity of Charles Lam

What is Metaphysics, [1], 1949)

The thrust of discussion concerns questions raised by Heidegger as to how we can think about and understand the being of Being–for metaphysics operates in a reality of the being of being human, not at the more essential understanding of Being as a precondition of being. Such an understanding seems more central to Eastern thought than traditional Western. The final section will sketch some ideas on what we might use to develop pedagogical ways for education.

2 Rooting a Chinese Onto-cosmology

The approach taken in this work is transverse and transdisciplinary, in the sense of redefining barriers and seeking an interpretation that is not only rooted epistemologically, but is ontological and ethical (Kupperman, [2], 2010), and commensurate with metaphoric rhizomatic form. It is in the Chinese philosophical tradition that I see a rooted coherence and worldliness that allow transdisciplinary approaches to flourish and to reveal insights that counteract any reliance on the supposed superiority of philosophical eurocentrism (Jung, [3], 2013). The eurocentric position is typified in Hegel's narratives, Lectures on the History of Philosophy ([4], 1892), showing scepticism and even ignorance of the importance of oriental philosophy. Regarding Chinese philosophy in world philosophy, Hegel summarised the Analects (Confucius' major work) as:

conversations between Confucius and his followers in which there is nothing definite further than a commonplace moral put in the form of good, sound doctrine, which may be found as well expressed and better, in every place and amongst every people. (1995: 121)

This suggests that the work itself 'would have been better had [it] never been translated' (ibid). Hel categorised Chinese philosophy in world history as 'elementary' (ibid: 125); the contribution of the Zhouyi (The Book of Changes) as 'superficial' (ibid: 123); and the Chinese composition of five elements of wu-xing (fire, water, wood, metal and earth) as 'all in confusion'. He was no more generous with Indian philosophy.

Hegel's discounting of Chinese thought still influences much of the writing on the relationship of East and West thought, where it is interpreted through a Western lens proclaiming the superiority of Western thought in its analysis and processes. In Chinese philosophy this lens of logical order is not poorly achieved; rather, according to Hall and Ames ([5], 1998), it attempts an aesthetic order by creating novel patterns. In this order, various the *yin* and *yang*, and the *wu xing* have to be synthesised in order to generate a harmonious whole.

Heidegger was no defender of Western thinking and recognised the role of the language of discourse. He noted that if a dialogue was conducted in a European language (German), the 'languages of the dialogue shifted everything into European' ([6], 1971a: 5) and threatened 'to become planetary' (2012: 137). Indeed, Heidegger is careful both to distinguish yet not impute value in Western and other philosophies, and to call guardedly on examples from Lao Tzu to illustrate his notion of thinking, in counterpoint to dialectic thinking (Heidegger, [7], 2012: 89). Ma ([8], 2008) has claimed that Heidegger cited Lao Tzu in six pieces of his writing and that, in the most extensive of these, suggested that his notion of the Way (weg) is synonymous with the Tao (see Heidegger, [9], 1971b: 92).

I approach the project in this article with this warning yet, in the writing of Heidegger and Zisi³, there appears a clear commonality of onto-epistemology that goes beyond binary oppositions of humanity and nature, femininity and masculinity, and East and West. At its core, this has compassion for our being as others within the blending of the realities of the existential and spiritual.

In any historical contextualisation, the codification of thought is found in seminal texts, and this holds true in Chinese philosophy. The *Zhouyi*, or *Book of Changes*, is the most important initial discussion of how the way of being in the world is realised, constituting one of the five classics of Chinese thought (with *Classics of Poetry, The Book of Rites, The Book of Document and the Spring and Autumn Annals*).

Confucius' development of the mystical *Zhouyi* through social interaction, rooted in the functionalities of social being based on familial ethics, offers

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³It is disputable whether Zisi actually wrote the Zhongyong, but there is sufficient evidence presented by Johnson and Ping (2012) to satisfy the author of its authenticity.

a practical way to be rather than a metaphysics of being. It appears in the Analects and, like the Great Learning, Mencius and the Using the Centre, is one the great works of Chinese philosophy and education. These are guides to living life through practical rituals in which relationships can be developed harmoniously with a relational way of being. The Zhongyong (Using the Centre)⁴ was originally written as part of the Book of Rites. From the twelfth century onward it occupied a place of prominence in neo-Confucianism as the last of the four texts comprising the foundations of the official government examinations held until 1905. Taken from the Rites, Zhongyong is a longer, more complex and philosophical book than the Daxue. Both deal with self-cultivation, but the *Daxue* is more practical, while the Zhongyong is considered the ontological grounding of self-cultivation and of the centrality of harmony in the Confucian Way.

What is constant in the development of Chinese thought is learning-to-be as virtuous learning; it is about humanity, love, compassion and benevolence (Ren,仁); about living correctly in line with respect for familial responsibility (Li, \mathbb{X}); and, from that core, developing a societal way of being. Correct behaviour, at least for traditional Confucians, is a set of rules governing imperatives with its ethical roots having resonance with rule utilitarianism. Wisdom (Zhi, 志) is relational rather than personal knowing, or knowledge. The relational aspects of Zhi are linked to Ren, the balanced way of being within a community that defines the role, the being, of the person in a specific position. As the Daxue evidences, this is rooted in familial relationships in a model for both community and self. This community, according to the *Daxue*, has 'illustrious virtue; to renovate the people; and to rest in the highest excellence'. The learned are wise and exemplary individuals (Junzi, 君子), people of similar intent and action to the Greek *Phronimos*. Their wisdom is evident in their practice and, in this practice, they become teachers.

3 Zhongyong (中庸)

The Zhongyong occupies an essential place in the canons of Confucianism. The book concerns itself with the notion of centrality-harmony through equilibrium. It is about allowing harmony to flourish by personal agency, which is neither necessarily extreme, nor timid, nor passive; it keeps harmony on the right course. It is about knowing when and how to act with long-term harmony of the cosmos as its ultimate goal. Li argued that harmony and Zhong ($\stackrel{\square}{+}$), or centrality, 'forms a hermeneutical circle in which the two mutually interpret and illuminate each other' ([10], 2014: 71). It is in this sense that the Zhongyong and the Country Path are used. In the following passage from the second chapter, the Zhonyong explicitly advocates such a balanced approach:

Zhongni (Confucius) said 'the noble man uses the centre. The lesser man does the opposite of using the centre ... Using the centre—this is, indeed, perfection! The people are seldom able [to practice it] for long.' (Johnston & Ping, [11], 2012: 223)

Yet, for ordinary people, the difficulty of achieving this is not removed even when there is intent, as the Way is only achieved by those who have perfection. This comes from learning and being taught, and concerns sincerity, authenticity, honesty, trustfulness and genuineness emergent in enlightened virtues (chapter 21).

There are three critical chapters on learning and thinking in the *Zhongyong*: Chapters 1 and 15, and the resolution in chapter 28. The opening chapter, the most important positioning statement of the book, concerns how one might cultivate oneself, specifically referring to teaching. The first sentence sets the cosmological tone:

What Heaven decrees is called 'nature'. Complying with nature is called the 'Way'. Properly practising the Way is called 'teaching' ... Harmony is the all-pervading Way of the world. Reach the 'centre' and 'harmony' and Heaven and Earth are in their proper positions and ten thousand things will be born and grow. (Johnston & Ping, [11], 2012: 215)

Nature is dynamic, in constant change, due to the interaction of its five elements of nature and their spirits in human beings. These spirits are: wood,

⁴His book title is translated in a number of ways. Traditionally translated as the Doctrine of the Men, the version used here is attributed to Zisi (a grandson of Kongzi), with notes by Zheng Xuan and a commentary by Kong Yingda.

which is Ren (compassion); metal, which is Υi (intentionality); fire, which is Li (filial responsibility); water, which is Xin (trustworthiness, fidelity); and earth, which is Zhi (Wisdom). How these spirits intermingle in humans is a function of individual human natural endowment. Nature is thus joined to virtue 'like waves are joined to the water'. To act in compliance with nature is called the Way, responding in harmony to the wholeness of one's being in the Being of nature and the natural endowment we are born with and, as Heidegger would argue, are 'thrown' into this world. Confucian harmony is understood not only as a state of affairs but as a cosmic and moral order. As Li suggested, as a state of affairs, 'harmony is a continuous process of adjusting differences and reconciling conflicts ... as a cosmic order harmony evolves out of the interaction of various forces and emerges as a guideline for things to operate' (2014: 9/10). Harmony is not sameness, but a creative construction of tensions of being in the world, and cosmic order is cosmic patterning emerging from the Being in the world.

This was at the core of Heidegger's meditative and poetic thinking⁵ as it is not susceptible to a direct revelation of nature. This is because we live outside nature as constituted as a whole dynamic system, and inauthentically use it as a resource in our anthropologic way of thinking, in our epoch of technology and its systems manifestation: consumerism. Heidegger did, however, suggest that the essence of Being and beings can be found in *Ereignis*, the appropriating event. This, for Heidegger, was the primordial 'understanding' as the projection of Dasein, which is always ahead of thematic cognition. It is knowing ourselves within the otherness of a presenting world, which is outside the language of the rational. This complex but central theme, to Heidegger's thinking, is quite different from conceptual and epistemological cognition.⁶ It is rather a process of getting rid of representational modes of knowing. Heidegger explained:

The event of appropriation [Ereignis] is that realm, vibrating within itself, through

which man and Being reach each other in their nature, achieve their active nature by losing those qualities with which metaphysics has endowed them. ([12], 2002: 37)

This manner of being may be seen in the embracing of the technological way of being, as recognised by Heidegger, and represents a departure from the Confucian Way although it is returned to through the teachings of those who achieve the Way: sages or thinkers. The exemplars are teachers and, as we have noted, Heidegger took on this guise in *Conversation*.

Turning to chapter 15 of *Zhongyong*, it opens as follows:

The Master said 'To love learning comes close to zhi志; to practice with diligent effort come close to ren; to know shame comes close to yong 勇 (courage, bravery). To know these three things is, then, to know how to cultivate the self.' (Johnston & Ping, [11], 2012: 301)

Chapter 15 discusses how these three attributes of being can be used to cultivate self and to 'bring good order' to others. The nine canons offer direction and stability to society. Admittedly, these might be interpreted as inauthentic yet, if taken as fundamental ontology as Heidegger proposed, meditatively they provide routes into the social structure into which Heidegger suggested we are thrown. They provide a framework for reflection as well as a structuring of the world. His hierarchical structure follows the process discussed in the Daxue. Heidegger has little to say directly about political philosophy, yet in a lecture series ('On the Essence and Concept of Nature, History and State', [13], 2015) in which he developed an ontological understanding of the State and its people, he proposed a relationship much in line with the pragmatism of Confucian thought and suffering the same risk of abuse.

Both passages illustrate an inherent way of realising potentiality, based on capacity to change other entities and ourselves by actions, where the capability can be taught. This has resonance with the Aristotelian notion of $\delta v \nu \alpha \mu \iota \varsigma$, as both the power and the potential to change. For instance, we need both to want and have the disposition to change the state in which we currently exist, but this is not sufficient. We also need the means to do this, and the two need to be synchronised. To want to be actually

⁵For a discussion of sameness in Heidegger, see Identity and Difference (2002).

⁶In his note, Zheng Xuan takes this to be a reference to what heaven decrees for mortals through the spirits of the Wu Xing; the forces of wood, metal, fire, water and earth; their manifestations in being as benevolence, righteousness, rites, trustworthiness and wisdom.

better at something is not sufficient to warrant the end one wants. By mentioning nature and Heaven decrees⁶ in chapter 1, there is an implicit reference to a range of realities. In chapter 28, the noble man:

Honours a virtuous nature, and follows the path of enquiry and study. He reaches to the broad and great, and exhausts the subtle and the minute. He advances to the farthest point of the high and bright, and fully understands using the centre. He revives the old and understands the new; he is honest and genuine through respecting li. (Johnston & Ping, [11], 2012: 353)

This section makes it clear that to study requires diligence, sincerity and authenticity. Further, as will be discussed later, it seems to offer a description of *Homo sui transcendentalis*, to borrow from Nicolescu.

The distinctiveness of the Confucian text, I believe, lies in the centrality of the given Way, a teleology that does not sidestep the notion of being but locates it in the intertwining of force and spirit in an ever changing cosmos. This centrality is the basis of the cultivated person that is adjusted to fit specific time and situation, so 'he is in harmony with the rest of the world through equilibrium. Or better yet, he contributes to, participates in, and co-generates the grand harmony of the cosmos' (Li, 2014: 80). Such an intertwining embraces mystery and, seemingly the Zhongyong sets Being in an onto-cosmological sense. It does this in a form of thinking more akin to the thinking of the meditative and the poetic. It shifts the nature of human being from the individual to the community of others, not in an ontic fashion but as a fundamental way of being, as a fundamental ontology.

4 Heidegger on Thinking and Releasement

Heidegger focused not on the being of being human, but an exploration of what is the Being ,of everything. This is clear in *Being and Time*, where he suggested that only an investigation into the fundamental ontology from which all other ontologies must spring, an inquiry into the foundational sense of being, yields an existential analysis of *Dasein*. He stated that the 'analytic of Dasein remains wholly oriented toward the guiding task of working out the

question of Being' ([14], 1962: 38). He thus conferred a special status on humans to review the nature of Being. This theme continued, and in *Letter on Humanity* he wrote that a 'human being is the shepherd of being' ([15], 1998: 252).

From the quote from What is Metaphysics opening this article, it is evident that Heidegger's view was that formalised and structured scientific⁷ investigation does not illuminate but adds opacity to the essence of Being. This is because failure to concern the world in its totality for disciplines can, at best, provide only limited revelations, constrained and shaped by the rituals and truth claims of their collective world views. Heidegger argued that it is not through science but an ontological understanding, revealed through mood, that the totality of Being is unconcealed. He began to offer us a distinction between disciplines: inter- and multi-disciplines and transdisciplinarity, which will be developed later. From a Heideggerian perspective, knowledge organised by discipline leads to a refusal of the totality implicit in the calculative and sanctioned thinking of these disciplines.

It is in Heidegger's works after Being and Time that I will focus this discussion, specifically his extensive explorations into thinking and willing/nonwilling in Conversation on a Country Path. In this text, Heidegger offers a process on how we train ourselves to think other than metaphysically ([16], 1966a). This work is an imaginary triadic⁸ conversation between a Scientist (disposed to calculative thinking), a Scholar (a metaphysical thinker) and a teacher⁹ (the voice of Heidegger as a thinker of thoughts). The focus becomes the understanding revealed in the act of the dialogue rather than what is actually said, not in a linear manner but through hermeneutic circles. This work has seemingly direct metaphorical links between the 'way' of Confucianism and the path. 10 Consider the following extract from the Conversations:

⁷Science' in the German academic sense includes all natural and humanistic sciences.

⁸ Also a translation of Chinese San Ho Hui, literally 'three unite society', i.e. 'triple union society', said to mean 'the union of Heaven, Earth, and Man'.

⁹It is interesting that, in Conversation on a Country Path about Thinking, Heidegger takes the role of the teacher. The thinker is able to converse not from the grounds of science of philosophy, but from a position I would suggest is occupied and recognised by the great Chinese ancient thinkers by the designation zi.

¹⁰And, of course, Socratic dialogues.

Scholar:

From this it suddenly becomes clearer to me how movement on a way [Be-wegung] comes from rest and remains engaged in rest.

Teacher:

The releasement would not just be the way [Weg], but rather the movement (on the way) [Bewegung]

Scholar:

Where does this strange way go, and where does the movement befitting it rest?

Its feel and structure have the appeal of an ancient Chinese philosopher seeking understanding from a discussion with a Teacher, that is, Confucius in the *Analects*.

The dialogues in the Conversation have two central themes. The first is the 'open-region', which is both the place of being and where beings can be with one another in a 'topology of being';¹¹ the second is a critique of the wilfulness of representational thinking and 'a search for a way of releasement from its grip and into authentic, non-willing manner of thoughtfully dwelling within the open-space of being' (Davies, [17], 2010: xiii). This concept, especially the discussion of awaiting rather than awakening thinking, creates a transformative way of thinking that opens a way to understanding transdisciplinary thinking.

Indeed, there is a certain spiritual feel to Heidegger's work that might lead one to consider an onto-theological stance, a requirement for a cosmological entity from whom all is understandable. Heidegger foresaw danger in humanity's reliance on calculative thinking (and its manifestation in machination) that prompted his comment in his 1966 *Der Spiegel* interview, 'only God can save us' (Wolin, [18], 1993: 91).

Heidegger's conversations try to break from the metaphysical and physical to reveal a way of thinking unlike formal metaphysical questioning, but as onto-epistemological enquiry. For Heidegger, metaphysics' failure is that it enquires into the being of human beings, not into the notion of Being—on which being is contingent. For him, this 'Being' is the fundamental ontology representing a thread running through much of his early work and leading to his more poetic, even mystical, later contributions (Young, [19],

2002). His struggle is hampered by the use of forms of thinking designed for the understanding of being in its enframement of a technological way of being, especially the calculative thinking that encourages nature, including humans, to be seen as resources in the gift of those in power. His insistence on thinking on Being, at the core of our understanding of human being, began to resolve itself in language that is more poetical and mystical to understand Being.

Allowing understanding to emerge, unshackled, from forms of logical, rational investigation opens up new realities and new truths. Moreover, it allows letting the nature of Being of things come into the context of the present as a totality of Being. Heidegger commented that '(M) an is obviously a being. As such he belongs to the totality of Being-just like the stone, the tree, or the eagle' (2002: 31). This thinking is essentially meditative and can be considered metaphorically as 'the activity of walking along a path which leads to Being' ([20], 1966b: 25). Further, it requires a releasement (Gelassenheit) of that which enframes and defines the characteristic of man's nature. Releasement seeks the equanimity¹² to allow technology into our lives yet also resist it. It creates the context of meditative or 'inceptual' thinking (Heidegger, [22], 1999), as an alternative to calculative thinking that defines and measures reality.

Releasement is a central theme for the later Heidegger, and is first discussed in his *Memorial Address* for Kreuter (1996a). Its reliance is on the notion of meditative thinking, which Heidegger counterpoints against calculative thinking. He argued that meditative thinking is as difficult as any other and concerns us in 'what is closest; upon that which concerns us, each one of us, here and now; here, on this patch of home ground; now, in the present hour of history' (ibid: 47). It is about contemplating what this might mean to self and humanity. It is not willed thinking (and it links to the essence of being, as he discussed regarding the work of Nietzsche, 2012), and allows an openness to things; it is open-systems thinking across barriers and between ideas.

This might be reframed as transdisciplinary thinking, as it engenders a comportment, a way of being, that allows the meaning of change to be. As Heidegger reported, 'profound change is taking place in a man's relationship to nature and to the world.

 $^{^{11}\}mathrm{Heidegger}$ refers to this in his work, Four Seminars.

 $^{^{12}\}mathrm{See}$ Shun (Reference [21], 2014) for a discussion of equanimity in ancient Chinese literature.

But the meaning that reigns in this change remains obscure' (ibid: 55). Moreover, Heidegger referred to this comportment as 'openness to the mystery' (ibid), and that the releasement and the mystery belong together to offer ways to take an autochthonous stand in the contemporary world. This is to think poetically, this is a way that overcomes the representational horizon-bound¹³ thinking of the philosophy of our revealed world. Meditative and poetic thinking allows us to grasp the ungraspable (Young, [19], 2002: 19).

For Heidegger, education is ontological, to cultivate the student as a learner and human being; yet he was unable to unshackle himself sufficiently from his metaphysical thinking tradition to explore this fully, notwithstanding his valorisation of poetry. It is in this context that I think the *Zhongyong* can shed light on Heidegger's concerns for Being, equanimity and releasement—and learning as an ontological self-cultivation.

5 Can A Conversation along the Path Change Our Stance on Thinking?

The premise being offered here is that there is sufficient ontological similarity between Confucianism and Heideggerian thinking to warrant meaningful comparison and insight. At first sight this thesis seems problematic. Confucianism is based on a moral praxis that defines human behaviour; that is, a human being is a moral being and, at the same time, axiological and ontological. Heidegger had no place for morality in his ontological thinking and attributed such thinking to the ontic, however both agree on interpreting the subject as a nonautonomous, culturally bound (or thrown) way of being, that can yet change the field of possibilities in which it acts, further, that it is through human beings that Being can be revealed. Moreover, both reject the notion of rationality as the defining attribute of human essence, insisting on the inseparability between Being and essence (Chan, [23], 1984: 194); rather, they stress the primacy of praxis, although in different ways.

Certainly in Heidegger's early work it is difficult to see how the basic premise of Confucianism can contribute to its reading yet, especially in his discussion of being as releasement, in his later work there seems room for the development of a teleological process for revelation to the spirit of the mystical. There are further similarities in the notion of and to the nonwilling of open spaces that Heidegger referred to in the Conversation but struggled to make clear. There are two ways of cultivating Being: the first is that human beings are the entity for the revelation of Being, rather than any other being (see Conversation, 2010: 91); secondly, human beings are central to the cosmos, and the dynamic nature of Being is in the being of change, both inherent and cultivated in humans. Perhaps unexpectedly in Heidegger, humans take the central role in noble mindedness and gratitude. For instance, in response to the comment from the Teacher, the Scholar replied, 'Noble-mindedness would be the essence of thinking and thus of thank ing^{14} (2010: 97).

Both Heidegger's notion of Being and Confucian Dao have a unity in the harmony of our being of Being at their core, with Heidegger suggesting that Dao 'could be the way that gives all ways, the very source of our power to think' (1971b: 92). However, unity is fractured when thinking is revealed through methods aligned to different disciplines, themselves 'punched out in the die presses of technical-scientific calculation' (1971b: 91); it cannot be conceived only in terms of knowledge as separates entities, as in disciplines. Disciplines structure a world into parts, developing barriers to understanding the whole. Nicolescu refers to this as the epoch of 'technoscience' ([24], 2014), which has resonance with Heidegger's technological way of being where we have lost spirituality in favour of economic powers. Such a way of being is evident in the practices and technologies to which I refer and include the Research Assessment Exercise⁹ generally, also annual reviews, league tables and rankings, impact narratives, CVs, performance-related pay, the granting of degree-awarding powers to commercial providers, off-shore campuses, student fees, expanding overseas recruitment, and Public Private Partnerships.

Unlike Gadamer's suspension of assumptions in order to reveal new understanding of an assumed anthropomorphic world view, Heidegger sought har-

¹³By this, Heidegger is pointing us towards that which makes sense of our understanding of the world; a shared background and unquestioned reality of our world that allows communication and shared living.

¹⁴This idea was taken up in by Heidegger in Part II, chapter 3 of What Is Called Thinking?

monic approaches through a hermeneutical understanding of the being of Being as revealed in the notion of Being itself. Certainly, such an approach accepts notions of contextualisation, historicity and disclosure through dialogue, but it also offers different modes of thinking through which this disclosure can occur. In this sense it offers a thinking for different realities, with that of the present through poetic and meditative thinking rather than the dominant academic discourse of critical evaluation. This embracing of thinking as being, not thinking as the basis of disciplines, opens the debate as to what transdisciplinarity is from a different reality; the reality of the non-rational. As Rancière suggested, the poetics of knowledges does not claim 'that the disciplines are false knowledges. A poetics of knowledge is first a discourse which re-inscribes the force of descriptions and arguments in the equality of common language and the common capacity to invent objects, stories and arguments' (Rancière, [25], 2006: 12).

This is might be explored through a dynamic cybernetic-semiotic system. The cybernetic aspect of modelling amounts to envisaging learner-teacher communication as a whole feedback loop, where the source of information becomes a destination when it is fed back, and where the destination of information becomes a source as it feeds back information to the original source. The systemic aspect of this model is that 'control' of information in such kind of system is distributed and resides in the whole system, rather than just one element of it. The semiotic aspect amounts to not reducing the 'information' exchanged to discrete elements whose value is governed by a fixed code, along the lines of computing information, but as signs whose meaning is subject to several intermingling constraints (ecological, physiological, emotional, observational constraints) and types of contexts. Specifically, the interrelatedness of the contexts means that emotion arises from the collective results of a relatively large number of processes.

Doing so does not evade the importance of pragmatic things or the notion of complexity in problems, but does decentralise the powerful hegemonies of disciplinary logics to open up problems to investigation by those who are involved. Moreover, this opening up to seek harmony is not an opening up to passivity but to seeking cosmic patterns emerging from the myriad things interacting within the universe. In seeking harmony within the cosmo-ontological nature of our being, we erect a platform for the discussion

of problems and the realisation of forms of understanding, enquiry and resolution, which are different in form from the fragmentary issues of disciplinary and calculative thinking.

The relationship between calculative and knowledge produced in the disciplines is not clear; for example, does this mean that all work produced in each and every discipline is in some way flawed. With regards to the next stage, interdisciplinarity, there is a massive problem with the notion of combining qualia from different disciplines in a harmonious way. With the highest level of all, transdisciplinarity, has to be framed in foundational terms and not in some sense as an extension, completion or perfection of framings at lower levels, though one may have to go through the lower levels to get to the higher levels.

Heidegger argued that it is not through science but an ontological understanding, revealed through mood, that the totality of Being is unconcealed. In the first instance then there is a need to develop a theory of interdisciplinarity, with the understanding that it is inevitably incomplete. This requires a move from manifest phenomena to underlying generative mechanisms and structures. The argument from disciplinarity to interdisciplinarity and thence to transdisciplinarity involves a series of ratchets or steps. However to get from multi-mechanisms to interdisciplinarity and thence to transdisciplinarity, we have to add considerations of *emergence* to those of complexity. Briefly an *emergent* level of reality is:

- i) unilaterally dependent on a more basic one;
- ii) taxonomically irreducible to the more basic one; and additionally,
- iii) causally irreducible in the domain in which the basic one operates.

If such emergence is involved, then the characteristic multi-mechanisms of open systems will have to be studied in a multi-disciplinary way, i.e. by (or from the perspectives of) a multiplicity of disciplines. If in addition to an emergent level, a qualitatively new or emergent outcome is involved in the causal nexus at work, then the knowledge required can no longer be generated by the additive pooling of the knowledges of the various disciplines concerned, but requires a synthetic integration, or genuine transdisciplinarity. This last then is not reducible to disciplinarity or interdisciplinarity, though it is emergent from them. There is a radical incommensurability

between disciplinarity and interdisciplinarity, and interdisciplinarity and transdisciplinarity.

In so doing, one's expectation of oneself and of others might change, defined in terms of their calculative thinking of having, desiring and taking. Problems are not different in terms of the current absolutists' presence, but are conceived in their historical context and in terms of others' contingencies and their world view, whether animate or inanimate, occidental or oriental. Such an approach does not look to hegemonies of knowledge to redefine problems away from their context, but to locate them within both a local and global context and use the learning from them to inform a wider engagement of dialogue; one of emotional, spiritual, tacit, contextual, traditional, tribal, imaginative, patterning, reflective praxis rather than one based on transcendentalist thinking.

So, to poeticise graduate thinking, our pedagogy needs to respect the onto-cosmology of our being developed through different modes of thinking. Our pedagogical practice would be transformative, transdisciplinary and realised as a dynamic semiotic system.

References

- [1] Heidegger, M. (1949). What is Metaphysics. In Existence and Being (R. F. C. Hull & A. Crick, Trans.), pp. 353-393. Chicago, IL: Henry Regnery.
- [2] Kupperman, J. J. (2010). Why Ethical Philosophy Needs to be Comparative. *Philosophy*, 85(2), 185-200.
- [3] Jung, H. Y. (2013). Wang Yangming and the Way of World Philosophy. *Dao*, 12(4), 461-486.
- [4] Hegel, G. W. F. (1892). Hegel's Lectures on the History of Philosophy. Vol. 1 (E. S. Haldane, Trans.) Lincoln, NE: University of Nebraska Press.
- [5] Hall, D. L. & Ames, R. T. (1998). Chinese Philosophy. In E. Craig (Ed.), Encyclopedia of Philosophy. London: Routledge. DOI: 10.4324/9780415249126-G001-1
- [6] Heidegger, M. (1971a). A dialogue on language between a Japanese and an inquirer. In On the way to language. (P. D. Hertz, Trans.). New York, NY: HarperOne.
- [7] Heidegger, M. (2012). Bremen and Freiburg Lectures, In- Sight into that which is and the Basic Principles of Thinking. (A.J. Mitchell, Trans.). Bloomington, IN: Indiana Press.

- [8] Ma, L. (2008). Heidegger on East-West Dialogue: Anticipating the Event. London: Routledge, New York, NY 10016.
- [9] Heidegger, M. (1971b). The Nature of Language. In on the way to Language (P. D. Hertz, Trans.). New York, NY: Harper Row.
- [10] Li, C. (2014). The Confucian Philosophy of Harmony. Routledge, Taylor & Francis Group.
- [11] Johnston, I. & Ping, W. (translator) (2012). Daxue and Zhonhyong. Hong Kong: Chinese University Press.
- [12] Heidegger, M. (2002). *Identity and Difference* (J. Stambaugh, Trans.). Chicago, IL: University of Chicago Press.
- [13] Heidegger, M. (2015). Nature, History, State, 1933-1934 (G. Fried & R. Polt, Trans.). London: Bloomsbury.
- [14] Heidegger, M. (1962). Being and Time, (J. Macquarrie & E. Robinson, Trans.). Oxford: Blackwell
- [15] Heidegger, M. (1998). Letter on Humanism. In W. Mc- Neill (Ed.) (Frank A. Capuzzi, Trans.). Pathmarks (pp. 239276). New York, NY: Cambridge University Press.
- [16] Heidegger, M. (1996a). Memorial address, in Conversation on a Country Path. In Martin Heidegger
 (B. W. Davis, Trans.). Bloomington, IN: Indiana University Press.
- [17] Davies, B. W. (2010). Translator's foreword to M. Heideg- ger, Conversation on a Country Path. In Martin Heidegger (B. W. Davis, Trans.). Bloomington, IN: Indiana University Press.
- [18] Wolin, R. (1993). Only a God can Save Us: Der Spiegel's interview with Martin Heidegger, 1966. In R. Wolin, The Heidegger Controversy: A Critical Reader (pp. 91-116). Boston, MA: MIT Press.
- [19] Young, J. (2002). *Heidegger's later Philosophy*. Cambridge: Cambridge University Press.
- [20] Heidegger, M. (1966b). Discourse on Thinking, (J. M. Anderson & E. H. Freund, Trans.). New York, NY: Harper and Row.
- [21] Shun, K.-L. (2014). On Reflective Equanimity A Confucian Perspective. In Li Chenyang & Ni Peimin (Eds), Moral cultivation and Confucian character: Engaging Joel J. Kupperman. New York, NY: State University of New York Press.
- [22] Heidegger, M. (1999). Contributions to Philosophy. In Enowning (P. Emad & K. Maly, Trans.). Bloomington, IN: Indiana Press.

Transdisciplinary Journal of Engineering & Science ISSN: 1949-0569 online

- [23] Chan W.-C. (1984). Confucian Moral Metaphysics and Heidegger's Fundamental Ontology. *Analecta Husserliana*, 17, 187-202.
- [24] Nicolescu, B. (2014). From Modernity to Cosmodernity, Science, Culture and Spirituality. New York, NY: SUNY.
- [25] Ranciere, J. (2006). Thinking between Disciplines: An Aesthetics of Knowledge. (trans. J. Roffe). *Parrhesia*, 1,1-12.

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