香港教育大學
The Education University of Hong Kong

ICLT 2023

Proceedings of International Conference on Learning and Teaching for Future Readiness 2023

Learning and Teaching in the Eve of Metaverse

17 - 19 May 2023

Proceedings of
International Conference on Learning and Teaching for Future Readiness 2023

17-19 May 2023
Hong Kong

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Digital Wisdom and Embodied Presence as Enhancers of Pervasive Learning in the Metaverse and Beyond

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Abstract: *The crisis in sensemaking that has emerged as our information systems have gone increasingly online, and as traditional media systems have declined in relative size and in perceived trustworthiness. As means of addressing this crisis, Anthony makes a case for the retention of embodied presence in future metaverse/virtual reality learning environments, and how this might help facilitate digital wisdom. Technology, including virtual and metaverse-like spaces, can be employed to cultivate such wisdom, but we need to honour our authentic selves as means towards that end. Finally, an argument is made for the concept of pervasive learning, which incorporates multiple online and offline formal and informal learning contexts. The probable driver for that shift in education and learning will be rapid changes in societies, technologies, economies, work and education. Anthony's conceptual and philosophical arguments emerge from the discipline of Critical Futures Studies.*

Keywords: metaverse, mindfulness, embodiment, technology, futures

1. Introduction

A crisis in sensemaking has emerged as our information systems have gone increasingly online, and as traditional media systems have declined in relative size and our institutions have weakened in terms of perceived trustworthiness (Brenan 2019; US adults under, 2022). We are struggling to find a unified, coherent set of values and trusted narratives to help us establish stable, meaningful futures. Further, we have become less connected to the physical world, to our bodies and to our inner lives. Logically, the issue will become more pronounced as we enter the age of virtual reality and the metaverse. This relative shift from a more grounded interoception towards technology-mediated exteroception has likely exacerbated the crisis in sensemaking and made us more susceptible to misinformation and manipulation (Addressing the sensemaking crisis, 2021).

How might we begin to address this civilizational emergency? This paper suggests one possible approach, which is to move beyond simplistic regulation of technology and information media, and instead implement a deeper, multi-faceted approach: the cultivation of digital wisdom. This may assist us in the retention of embodied presence in both the physical world and in future metaverse/virtual reality living and learning environments. Technology itself, including virtual and metaverse-like spaces, can be employed to cultivate such wisdom. It shall be argued below that there is a need to honour our Authentic selves and to cultivate embodied presence. Finally, the likely development of pervasive learning within the next few decades may be utlised to help develop digital wisdom. Pervasive learning incorporates multiple online and offline formal and informal learning contexts, and the probable driver for that shift in education and learning will be rapid changes in societies, technologies, economies, work and education by the year 2050.

2. Critical Futures Studies

The theoretical approach used in this paper is inspired by the discipline of Critical Futures Studies. Beginning in the 1970's, Critical Futures Studies arose from critical theory and poststructuralist thought, with Michel Foucault and Jacques

Derrida being especially influential (Inayatullah, 2018). Critical Futures Studies moves beyond prediction and trends analysis and seeks to question deeply the way we think about the future, and to create preferred and alternative futures.

One very prominent futurist is UNESCO Chair in Futures Studies, Sohail Inayatullah (2018). Inayatullah has outlined "the six pillars of futures studies," which indicates the scope of the discipline: mapping, anticipating, timing, deepening, transforming and creating alternatives. This brief paper contains aspects of anticipation, deepening, creating alternatives and transforming the future.

A relevant and simple dichotomy developed by the author for futures discourse is that of Deep Futures, juxtaposed with Money and Machines Futures (Anthony 2010, 2023). Respectively, these are utopian and dystopian representations of future societies, and emerge from two different worldviews: the techno-utopian, and the green-progressive. The purpose of this two-tier model is to help frame discussions of preferred and undesirable futures. The idea of the crisis in sensemaking (below) can be viewed as emerging from the proliferation of Money and Machines Futures in recent times, and the diminishment of Deep Futures.

3. The Context: The Crisis in Sensemaking, the Metaverse and Embodiment

Since early 2021, we have seen an acceleration of the development of virtual and augmented reality spaces, including the metaverse. The most publicized competitor has been Meta; but rivals include Microsoft, Roblox and Epic Games. Central to Meta's vision are Horizons Workrooms and Horizons Worlds, which will eventually encompass relationships, work, business, education and training, and entertainment. Meta's plan is to engineer a virtual future where physical, augmented, and virtual realities blend into an enhanced reality, and where economy and media become unified (Zickraf, 2021). In 2021, Mark Zuckerberg promised to turn Meta into a full metaverse company within five years. He set the goal of users feeling "present… in an embodied internet, where instead of just viewing content - you are in it." His vision is of an all-immersive, all-inclusive, monetized 3D internet where future humans work, socialize, play and learn all on the one platform. The Meta CEO believes that it will become increasingly difficult to distinguish the real world from digital worlds, and that there will be no "logging off" (Zickraf, 2021).

Yet the past two financial years have been disastrous for Meta, and in 2022 it lost $3.7 billion dollars, then fired 11 000 staff (Ferrier, 2022). Other tech giants like Amazon and Twitter have also downsized. It is generally agreed that the Covid-era tech boom is over and that the industry now faces a period of austerity. Further, the development of metaverse technologies has been far slower than predicted by Zuckerberg. Meta's metaverse problems include:

- Clunky usage, limited haptics and tactile engagement;
- The system requires expensive VR glasses, while some software is also expensive;
- Virtual eye contact is basic, while hand and finger gestures lack pixel depth;
- Users often experience disorientation, motion sickness and poor depth perception (Mark Zuckerberg, 2022).
- Criticisms that the metaverse's all-pervasive nature will make it highly addictive, and compound the current problems found in today's web (Zickraf, 2021).

Yet given the massive financial incentives involved, it is probable that there will be continued expansion of virtual and augmented reality in the foreseeable future. It is expected that by 2028 the metaverse will be valued at more than 800 million dollars, while Meta has already invested 10 billion dollars (Bogart, 2022).

The race for meta-space can be viewed as occurring within a broader context. In the current era, humans are becoming more disembodied as more and more time is spent online (Garcia, et al., 2021; Gomez, 2010; Kang, 2007), and our gaze is increasingly screen-mediated and exteroceptive. Humans are losing connection with the somatic body, which includes both strong emotions and more subtle intuitions (Paul, 2021a). This disconnection from the body may be depleting our emotional and intuitive wisdom. For example, there is a strong correlation between social media use and increased rates of depression, anxiety and suicide in the young (Haidt, 2022).

A further context is that this is happening amidst the crisis in sensemaking. It is becoming more difficult to make sense of the world and what it means to be human, as information, perception and reality itself become increasingly virtual (Addressing the sensemaking crisis, 2021; Rebel Wisdom, 2019;). There is much uncertainty regarding what is real or true. This has coincided with a rise in conspiracy theory culture (Rocha, et al., 2021) and declining trust in traditional media and institutions (Brenan, 2019; Haidt, 2022), while governments and institutions are struggling to influence and control populations (Schwab, 2020).

One possible way to approach this context is to go "deeper", to examine the problem at the worldview level, as well as shift our consciousness structures via practicing alternative ways of knowing. The focus taken here speculates upon the potential value of establishing a more authentic self via the cultivation of embodied presence (Anthony, 2023). This approach is not mutually exclusive from other hypothetical interventions, such as the technological, legal, educational and so on.

The wisdom of embodied presence is expressed via the somatic body and "integrated intelligence," which is an enhanced intuitive acuity (Anthony, 2023).[i] Modern cultures have already damaged the relationship between mind and body (Anthony, 2008, 2015, 2021; Kang, 2007). To further diminish that relationship in a metaverse-centred, Money and Machines Future may represent the perpetuation and deepening of a major civilisational error, one that arguably underpins the crisis in sensemaking (Anthony 2008, 2021).

As humanity approaches the possible dawning of a more democratic web 3.0 and the metaverse, our burgeoning IT systems, cultures and dominant ways of knowing are increasingly emphasising exteroception at the expense of interoception (Paul, 2021). Most notably, in an era of surveillance capitalism (Zuboff, 2019), exteroceptive stimuli are now typically mediated by invisible third parties and artificial intelligence, where the drive for profit and power is typically obfuscated. The values of the system optimise Big Tech profits by maximising clickability of content (Consilience Project, 2022; Haidt, 2022; Zuboff, 2019). The system does not encourage the development of the interoceptive gaze required for human beings to develop the mindful wisdom which could help them establish their authentic selves and to lead potentially more meaningful lives.

4. Pervasive Learning

The increasing proportion of our time spent online, combined with the rapidly changing nature of our virtual worlds may eventually require an expanded perspective on learning and education. Lifelong learning is learning extended across time. However, pervasive learning as defined by the author is learning that expands not only across time but also across multiple online and offline spaces. Thus it is likely that in future expressions of the internet, and especially if metaverse-type technologies evolve, "learning" will continue to expand beyond formal education and training, encompassing all of professional life, relationships, health and well-being, finances and entertainment. And in the context of teaching for digital wisdom (below), that may include expanded ways of knowing, incorporating interceptive acuity and embodied presence. Yet for that to occur a worldview shift is required and a re-valuing of our interoceptive experiences.

A shift towards pervasive learning could be rapid because online spaces are far more changeable and malleable than offline spaces. Secondly, even the concept of offline spaces may become increasingly redundant as mobile technologies improve, alongside augmented reality and the internet of things.

Other drivers of pervasive learning will likely include disruptions to work, society and information technology. We are living longer lives, and populations are aging (Aging and health, 2022). There has also recently been staggering innovation in cheap and user-friendly AI systems such as ChatGPT and Bing AI; and with the mobility revolution and the future development of the metaverse, older and less agile citizens will be able (and perhaps needed) to perform non-labour intensive work well into old age, and from home. Yet this will require greater adaptability and creativity as societies age.

Thus far this paper has outlined three related and emerging trends: our increasingly online, disembodied lives; the crisis in sensemaking; and the likely need for pervasive learning. Yet how might we address these?

5. The Need for Digital Wisdom

Digital wisdom (Anthony, 2022, 2023) may help us develop preferred Deep Futures of the web and metaverse. Digital wisdom indicates the degree to which a person is in conscious relationship with digital environments and technologies. Digital wisdom thus comprises three parts.

5.1. Know thyself

This domain relates to being aware of how one's mind functions. It involves being conscious of our trigger points and personal psychological issues, and possibly our trauma. Ideally, this includes being able to bring ourselves to mindful attention at will, which is the foundation which establishes an internal locus of control.

5.2. Know the humans

Know the humans is understanding how human beings function biologically and culturally, including our tendencies toward tribalism, projection and various forms of bias (negativity bias, fundamental attribution error, cognitive dissonance etc.). Another important principle includes knowing what a bad faith actor is (Anthony, 2023). Armed with this kind of knowledge, we can be better prepared when we encounter misinformation/disinformation, and various forms of manipulation and bullying on the internet.

5.3. Know the machines

This domain incorporates an essential awareness of how the internet and communications technologies function. This includes concepts like echo chambers, algorithmic behavior and information feeds, the limitations of large language models like ChatGPT, tech giant profit models, the pitfalls of long periods spent online and in front of computers, and so on.

Digital wisdom may be achievable via changes in our technological systems (hardware and software), and in nurturing our own offline experience, including self-awareness. Ideally, we may foster awareness of the relationship between mind/body and technologies. The internet can become an inculcator of personal, social and civilizational development via a Mindful Metaverse (Anthony, 2022, 2023). However this will necessitate addressing current antithetical cultures and technologies that have led to the collapse of sensemaking, and development of effective policies and strategies that create preferable futures.

6. Embodied Presence

Cultivating greater embodied presence is part of the first domain of digital wisdom (know thyself). When cultivated across populations it may help address the problems outlined above. Embodied presence is the state of having one's attention focused in the present moment, while retaining a strong sense of felt connection to the body and its somatic wisdom (Anthony 2021, 2022, 2023).

A recent body of literature discussing somatic awareness and its relationship to neural synchronization suggests that human intelligence cannot be thought to occur only at an individual level, and that humans possess an "extended mind." (Paul, 2021). Our brains are constantly synchronising with the people and environments we engage. Further, by learning to notice bodily intuitions, we can enhance somatic wisdom (Paul, 2021).

A related but more marginalized concept is that of the non-local mind, which can be found in many indigenous, spiritual and awakening traditions. The scientific study of the non-local mind occurs predominantly in parapsychology (Sheldrake, 2013), while the concept is also referenced in several modern alternative and philosophical discourses (Anthony, 2023).

Though the extended mind and non-local mind discourses have notable distinctions and typically draw from disparate bodies of literature, they have much overlap in theory and practice. They suggest that human consciousness is more expansive than has traditionally been represented in mainstream science, and that there is greater knowledge and wisdom accessible to human beings when they are more deeply grounded in embodied presence and where non-ordinary ways of knowing are incorporated into our sensemaking (Paul, 2021; Sheldrake, 2013). Notably, the cultivation of embodied presence can be fostered even within digital and online cultures.

7. Technology as an Enhancer of Embodied Presence

Online environments and digital technology are not necessarily antithetical to embodied presence merely because online engagement typically encourages imbalanced exteroception. Though online cultures tend to undervalue interception, engagement in metaverse-like environments can be experienced in states of embodied presence. In particular, improvements in haptic technologies in the future may help render a more embodied online experience - as is the stated objective of Meta (Mark Zuckerberg, 2022). With the probable arrival of a vastly more "natural" metaverse and a more democratized Web 3.0, online environments may feature greater embodied presence and cognitive responsibility (witnessing the mind and assuming responsibility for behavior and choices - Anthony 2021, 2022, 2023). Towards this end, Anthony (2022, 2023) has developed the Mindful Metaverse scenario, which describes a preferred future society and internet where online experience strongly mirrors the mindful self-awareness found in traditional wisdom traditions. Such a society might develop where interoceptive wisdom is seen as a value worth preserving right across society, including online.

8. Conclusion

In this short paper it has been argued that pervasive learning will likely be a requirement of human futures into the mid-twenty-first century. Within this context, developing digital wisdom and embodied presence may be part of the solution to the collapse of sensemaking in the digital society, and in turn may help create a Deep Future of the metaverse and web 3.0.

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