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Chapter

Perspective Chapter: A Critical Futures Studies Perspective on Embodiment and the Crisis in Sensemaking

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Abstract

The crisis in sensemaking is the increasing epistemological and civilizational confusion about how to understand the online and virtual worlds of the 21st century. This crisis now affects online media and social media spaces, and in turn our institutions and governance. The purpose of this chapter is to use the broad framework of Critical Futures Studies to explore the importance of embodiment in the rapidly changing digital society, with a focus on the crisis in sensemaking – how humans make sense of themselves and the world in the current age. The timeframe of the analysis will be the proceeding decade (till 2032), during which time the development of an all-immersive web 3.0 (including the “metaverse”) should be well underway. The prime argument of this chapter is that an improved sense of embodiment can help alleviate the crisis in sensemaking by establishing a more internal locus of control and enhancing somatic and intuitive awareness. This chapter will also apply the author’s dichotomous model of Deep Futures/Money and Machines Futures as a simple framework to help situate the discussion. The final part of the chapter will suggest an alternative scenario regarding a possible path in the future of the web, namely the Mindful Metaverse.

Keywords: metaverse, digital society, scenarios, crisis, sensemaking, embodiment, futures studies, mindfulness

1. Introduction

During the following decade (till 2032), the development of an all-immersive web 3.0 (including the “metaverse”) should be well underway.¹ It may be assumed that many of the problems that we now see in web 2.0 will continue in its expanded future and some problems may worsen. The crisis in sensemaking is certain to be one issue that will require much attention. In this chapter, the questions which represent the primary focus of the discussion are:

¹ The research contained within this chapter is taken from the Power and Presence project, and the upcoming book of the same name [1]. This research is entirely conducted and funded by the author.

- What are some potential and ideal futures of the body and its somatic intelligence as the crisis in sensemaking continues to develop in Web 3.0 and the metaverse?
- How can humans retain an experience of embodied presence in the metaverse, and access its wisdom as they attempt to make sense of their increasingly online lives?
- What are some alternative (less often discussed) solutions and scenarios to the crisis in sensemaking?

This chapter will begin with an introduction to the discipline of Critical Futures Studies, as well as one of its analytical methods: Inayatullah's [2] Causal Layered Analysis (CLA). CLA helps to deepen conceptions and dominant frames of the future, as well as generate alternative futures.

This will be followed by a brief outline of two contrasting ways of thinking about building human futures: Deep Futures, versus Money and Machines Futures [3, 4]. There then follows a brief discussion of several historical contexts to the problem at hand: the race for the Metaverse, human embodiment in the digital age, and the crisis in sensemaking. In the section follows that the argument expands upon the importance of embodiment, including an introduction to the concept of Integrated Intelligence [5], incorporating the extended and non-local conceptions of the human mind. Finally, a possible but preferred future scenario - the "Mindful Metaverse" - shall be posited.

1.1 Important definitions

The crisis in sensemaking is the growing epistemological and civilizational confusion about how twenty-first-century humans understand the increasingly online and virtual worlds of today. Related problems include misinformation; censorship; rising dissent; increasing distrust in media and governance; and the meaning crisis (including increasing conspiracy theory cultures and quasi-religious extremism) [6–8]. This crisis now affects multiple domains of institutional and government policy making.

The term "metaverse" is usually applied to mean an all-immersive, three-dimensional, virtual-reality web space. It can be thought of as a sub-component of web 3.0, which can be assumed will continue to feature many other components outside of virtual reality: including two-dimensional interactive experiences, and spaceless auditory experiences like conversation and music.

The Authentic Self is a wiser, more present, and grounded expression of self than is typically experienced by many people today. This kind of wisdom is represented in the writings of modern luminaries (far too many to name here). Those that have inspired this research include Mate [9], Jacobson [10], and Tolle [11]. These in turn draw from the long history of wisdom traditions found across the world's great introspective, philosophical and spiritual cultures, including Christianity, Islam, Hinduism, Daoism and indigenous cultures: what Aldous Huxley [12] called the Perennial Philosophy.

Finally, the term "embodiment" refers to the lived sense of connection to the body, its feelings, and wisdom.

1.2 Theoretical framework

It is crucial that humans ensure that future virtual environments permit healthy embodiment, or human intelligence and authenticity may be gravely damaged. More

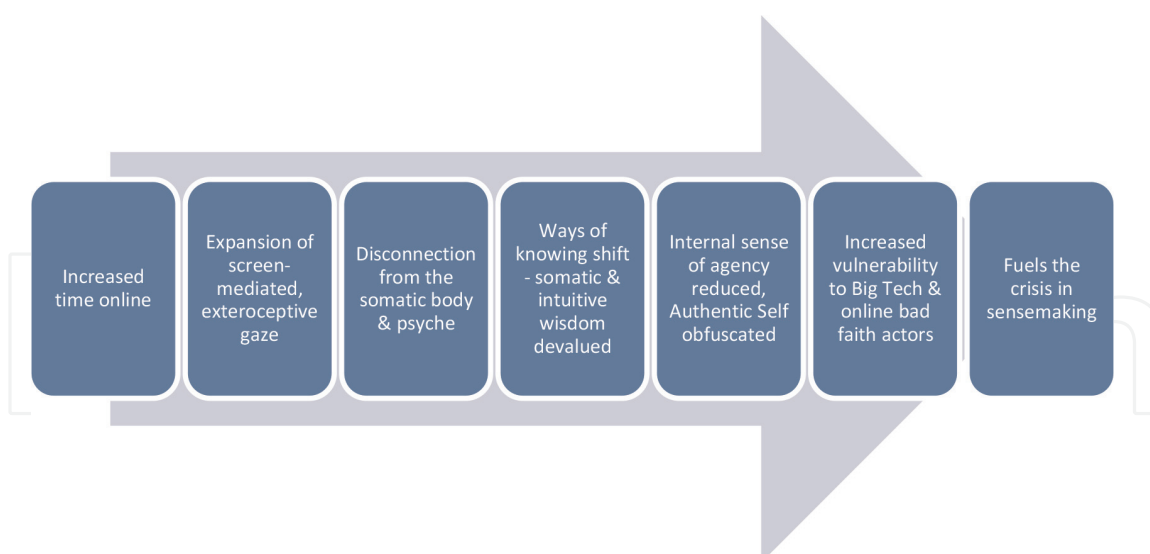


Figure 1.
How disembodiment may be fuelling the crisis in sensemaking.

specifically, this perspectival paper shall put forth the proposition that there may be a causal link between the escalation in the crisis in sensemaking and the way people experience themselves online. This can be summarised in **Figure 1**, below.

The perspective put forward in **Figure 1** is that the increased amount of time spent online and experiencing the “world” through narrow screens leads to an expansion of the exteroceptive gaze (external perceptual focus) and a consequent reduction in the interoceptive gaze (internal perceptual focus). That lessening of introspection means that people spend less time with a felt sense of the body, including its somatic wisdom [13, 14]; and less time acknowledging the psyche and intuitive knowledge [15]. There may also be a reduction in the sense of personal agency. This is because in the digital age the exteroceptive gaze is eternally outward and focused upon the often-chaotic online world, which is in turn controlled and manipulated by Big Tech and bad faith online actors; and where disinformation and misinformation are common [8]. If that causal chain holds, then interventions at any link in the chain might represent partial solutions to the crisis in sensemaking.²

Nonetheless, a valid query is whether an increased sense of embodiment and a change in online cultures and values can help to alleviate the crisis in sensemaking. A definitive answer will require further discussion and research, and the link that is suggested between disembodiment, the exteroceptive gaze, and an impoverished sense of internal agency remains suggestive at this point. The purpose of this paper is thus not to posit definitive answers, but to deepen the range of questions and the scope of the framework surrounding the crisis in sensemaking.

2. Critical future studies and causal layered analysis

Critical Future Studies emerged in the 1970s and were originally heavily influenced by critical theory and poststructuralism; in particular, the work of

² Even if specific links in the chain are shown to be delimited or simply wrong, parts of the chain involving two or more related phenomena may still represent fruitful points of investigation – for example the possible link between increased time spent online and a reduced sense of embodiment.

Michel Foucault and Jacques Derrida [2]. This branch of Futures Studies is not merely concerned with trying to predict the future but also analysing the way people think about the future, as well as trying to change it. In recent decades, the movement's most prominent thinker has arguably been UNESCO Chair in Futures Studies, Sohail Inayatullah. Inayatullah [2] has outlined six pillars of the discipline.

1. *Mapping the future*. Examining the past and its lineage to the present, and how that impacts our conceptions about the future.
2. *Anticipating the future*. Identification of weak and strong trends and making predictions based on them.
3. *Timing*. This involves specifying the timeframe that one is working within.
4. *Deepening*. This involves challenging our assumptions and biases, including identifying how our worldviews and paradigms may be delimiting our thinking and visions. Causal Layered Analysis is particularly useful here, as shall be outlined below.
5. *Creating Alternatives*. Again, this includes challenging our assumptions about how humans believe the future will unfold, and positing novel alternatives. Scenario work [16] is often employed to this end.
6. *Transforming the future*. This is the realm of strategy and policy. Once stakeholders have decided upon their preferred future – which may entail the avoidance of undesirable futures – they can then set about mapping the way forward.

In the chapter to follow, the argument touches mostly upon the fourth pillar, deepening; while there is some anticipation (2) and the suggestion of a Mindful Metaverse can be seen as creating an ideal alternative (5).

2.1 Causal layered analysis

Because the process of “deepening” underpins the argument found in this chapter, a specific Critical Futures Studies method shall be referenced: Sohail Inayatullah's [2] Causal Layered Analysis (CLA). Inayatullah describes CLA as “poststructuralism as method.” CLA, as shown in **Figure 2**, below, helps to deepen the view of the past, present and future by unpacking the discourse via the identification of four layers of analysis.

The four levels of Causal Layered Analysis consist of the following elements.

The litany. Here stakeholders identify the surface level of the problem at hand. This is the realm of delimited description, the reduction of problems to simplified representations. This may be deliberate, driven by overt agendas of individuals and institutions. Or it may be unconscious, driven by bias, prejudice, and projection. Typically, it is a combination of both. Any suggested or applied intervention in the crisis in sensemaking (including those in the three levels below) can be said to also be at the litany level if there is inadequate analysis, and if the identified ‘cause’ is not contextualised amongst other drivers.

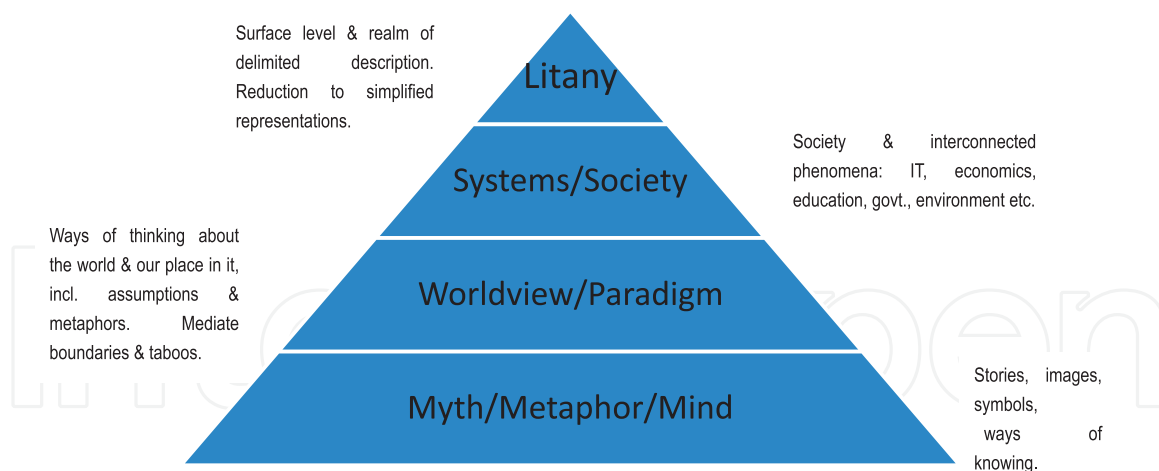


Figure 2.
Causal layered analysis.

Society and systems. More sophisticated analysis and discourse details the role of society and its multiple systems which help create the expression of the problematique under examination. These can include a myriad of interconnected phenomena, including technology, economics, education, governance, biological and environmental systems and so on. Interventions in the crisis in sensemaking at this level might employ systems-based approaches such as the legal (e.g., regulation of Big Tech and/or internet posters); technology (e.g., mandating open-source algorithms); education (e.g., teaching for digital literacy); biology (e.g., genetic modification of humans or neural chips to neutralise tendencies towards emotional projection). There are numerous other possible systems solutions.

Worldviews and paradigms. A worldview is a particular way of thinking about the world and our place in it. Paradigms are similar in that they are a set of assumptions and/or metaphors that mediate the boundaries and institute the taboos that structure specific disciplines. In Kuhn's [17] influential rendering of the idea of the paradigm, the concept referred to scientific discourses only, but it is now popularly applied more widely, including to the social sciences and humanities. "Worldview" can be applied to individuals as well as groups (industries and professions, institutions, tribes, ethnicities, religions and ideologies, countries, civilisations and historical eras and so on). However, while a "paradigm" may influence individuals, it operates via groups and collectives.

Both worldviews and paradigms tend to operate unconsciously and generate the unexamined "givens" of the discourse [2]. Thus, interventions in the crisis in sensemaking at this level would attempt to bring the unconscious boundaries of the thoughts, beliefs and narratives of stakeholders more clearly into awareness, and then expand beyond them where appropriate. Worldview and paradigm considerations represent a significant part of the argument below, where various common representations of the crisis in sensemaking are challenged.

Mind, myth and metaphor. Human stories, both old and more recent, are often drivers of what people think and what they imagine. When old and delimited stories drive people's visions, they represent what Inayatullah [2] calls "used futures." The images and metaphors that are employed in future thinking often betray biases and maybe self-constraining. Finally, the way thinkers frame human consciousness and

intelligence can influence the ways of knowing (cognitive structures) that are employed to perceive and solve problems. Philosopher Ken Wilber [18] identifies three essential ways of knowing: the introspective/intuitive, the philosophical/analytical and the scientific/empirical. Wilber finds that each has its legitimate domain of application, as well as illegitimate. This chapter posits that the introspective and intuitive are crucial for developing the Authentic Self but are often devalued in our Big Tech and science-driven cultures.

The myths, metaphors and dominant ways of knowing that are commonly deployed in a given discourse may emerge from the human psyche (unconscious). Thus, unresolved personal and civilizational trauma may be an unconscious driver of any given discourse, as psychiatrist Stan Grof has long argued [15]. Bringing the contents of the human unconscious into awareness may thus assist in freeing us from its self-stultifying narratives and beliefs [2].³

Often the layers of CLA overlap. Its qualitative nature means that there will often be disagreements about where any given component of the analysis lies. Yet it is important to keep in mind that the purpose of using this framework is not to generate a faultless map of the focus problem but to lay out its components in such a way that the issues can be examined more deeply and at greater distance. The aim is thus to establish broader context and to bring to light the unexamined presuppositions, unconscious drivers and paradigmatic boundaries that typically remain implicit (unspoken) within the discourse.

CLA analyses can be conducted with the method explicitly and methodically applied (e.g., [3, 19]). However, a different approach is taken here, with the author regularly interspersing the text with points which emerge from all four layers of CLA, often without explicitly situating them within such layers. In this sense, it might be said that CLA informs the spirit of the article – or the underlying ideology, if one prefers more mundane language.

2.2 Deep futures versus money and machines futures

A simple dichotomy developed by the author for future discourse is that of Deep Futures, juxtaposed with Money and Machines Futures [3, 4]. Respectively, these are utopian and dystopian representations of future societies, and can be seen as emerging 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 can be viewed as emerging from the proliferation of Money and Machines Futures, and the diminishment of Deep Futures.

These two representations of the future are not meant to be static or metaphysically ordained systems, and stakeholders can discuss how they might be interpreted or reconfigured. Nor are they always mutually exclusive, as there may be overlaps in any given representation of the future. Nonetheless, these two disparate representations can be distinguished by their general guiding features and values.

The prime features of Money and Machines Futures are as follows.

- An Imbalanced focus upon technology and capitalist structures, which have shifted lived experience and values towards those in the list below [20].

³ In Inayatullah's [2] Metaphor/Metaphor. The author has added "Mind," because his experience and research has led him to conclude that it is a vital to understanding futures and conducting foresight.

- Estrangement from nature, and an unhealthy amount of time spent indoors and in urban environments.
- Disconnection between the body and the psyche (unconscious).
- Perception and lived experience are essentially exteroceptive and heavily screen-mediated, while the interoceptive is diminished.
- There is a lack of psychological depth, mindfulness and psycho-spiritual awareness.
- The prime ways of knowing are “rational” or emotional projection, with suppression of somatic, embodied awareness, as well as intuitive and spiritual perception.
- Competition usurps cooperation.
- Relationship becomes increasingly online and impersonal.
- Culturally and ideologically materialistic.
- Power and wealth tend to accumulate amongst a few.
- The population resides in state of distracted amusement (computers, phones, VR), echoing Neil Postman’s [21] *Amusing Ourselves to Death*.
- People’s relationship with time is distorted and chronically measured for optimisation and efficiency. Populations constantly push towards desired futures. As such, people tend to lose touch with the present moment and their lived relationships with other people and places.
- Depression and anxiety tend to rise [3, 6, 22].

A poetic rendering of the Money and Machines Society is put forth in the mid-twentieth century poem *Howl*, by Allen Ginsberg [23], where he pens his thoughts on the rise of the modern industrial civilisation. Here Ginsberg metaphorically summons the dark spirit of the pagan god, Moloch, one who demands human sacrifice as means to power and control.

In Ginsberg’s Money and Machines Society, humanity’s intrinsic joy or “Heaven” has been consumed by the ravenous Moloch, along with its innate spirituality and embodied presence. People have become ‘loveless’, chasing ‘unobtainable dollars’ like dumb mules stumbling towards carrots on a stick, not seeing what lies beyond the dangling, desired thing. The poem reminds the reader of the demonic AI systems of much late twentieth-century science fiction classics like *Snowcrash*, *The Matrix* and *Terminator*. Humans have become ‘Consciousness without a body’, lost in a “Mind” of “pure machinery.” And where the ‘sphinx of cement and aluminium (has) bashed open (our) skulls’ and consumed our ‘brains and imagination” [23].

What Ginsberg could not have foreseen was the effect that the internet has had on twenty-first-century society. Nor did the initial creators of the World Wide Web fully anticipate its impact, including the rise of the crisis in sensemaking. As The

Cosilience Project [20] argues, technologies are not neutral but shape personal and civilisational values. Technologies form interconnected operational systems. Those systems and their effects are typically not intentionally designed, but nonetheless via a cascade effect tip humans into futures that they have not carefully contemplated. Such futures feature new and often unanticipated power dynamics, privileged social and technological groups; and they normalise behaviour that may fundamentally shift human values and human societies [20]. In short, new technologies may unconsciously perpetuate particular worldviews, such as the techno-utopian and its dominant ways of knowing and being.

Deep Futures, on the other hand, can be seen as a more idealised alternative to Money and Machines Futures. They:

- Acknowledge the human need for material sustenance, and the importance of rational/empirical ways of knowing & being; while also permitting and encouraging other ways of knowing (including the introspective, mindful, intuitive and spiritual).
- Value and practice embodiment and presence; and the intuitive ways of knowing that emerge from that practice.
- Feature cooperation and competition, in balance.
- Value nature and sustainability and nurture a deep connection with the world and its environment.
- Value human relationships and understand the role of community in mental and spiritual well-being.
- Encourage and permit deep questions about human existence and humanity's place in the universe.
- Find importance in diversity, and the sharing of wealth and power [3, 22].

Below, the argument put forth shall be that the prophesised Metaverse – including the most well-known version that Meta's Mark Zuckerberg began to publically put forth in early 2021 [24, 25] – does not necessarily need to become a Money and Machines Future, despite the widespread criticism it has received. A more Mindful Metaverse steeped in the values and greater embodiment of Deep Futures may help mediate some of the effects of the crisis in sensemaking.

3. The context: the crisis in sensemaking, the metaverse and embodiment

The year 2021 saw the acceleration of the race for development and control of virtual and augmented reality spaces: and in particular, the metaverse. The most publicized competitor is Meta (formerly Facebook); but rivals now include Microsoft, Roblox and Epic Games, amongst others. In a CBS interview in August 2021, Meta CEO Mark Zuckerberg stated that he intends his platform to transition into a 'metaverse' company over the following five years [25]. 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 [25].

Zuckerberg's metaverse will thus be '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 one platform. The Meta CEO believes that it will become increasingly difficult to distinguish the real world from digital world and that there will be no 'logging off' [25].

It is this last comment that was the source of great media and social media commentary, much of which was negative, including criticism of the potential problems that might arise in an all-immersive, capitalistic virtual universe. A common critical refrain focused upon the potential for humans to become trapped in a kind of Matrix scenario, unable to escape the clasp of the soul-sucking machines. Many pointed out that the term 'metaverse' is taken from a similarly dystopian fictional world, found within Neal Stephenson's 1992 novel *Snow Crash*, where a pizza delivery driver and hacker named Hiro has to navigate his way around a virtual universe, and where certain netizens are unable to escape [25]. These critics were warning of the possibility of the metaverse morphing into a Money and Machines Future.

Whatever the merits of these concerns, given the massive financial incentives involved, it is very 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 billion dollars, while Facebook has already invested 10 billion dollars [26]. Therefore, it is crucial that the human species continues to actively monitor these developments such that we are able to deliberately and consciously exert control over the process, rather than let blind market forces dictate such a crucial shift in human technological and social development. For the cascading effects of interconnected developing technologies can morph cultures and societies in ways that distort core values, and in unpredictable ways [20].

More specifically, in this chapter, the focus is on what form the metaverse might take as it impacts human societies and cultures. What effect might it have on human minds, and how they are employed? In particular, how might a three-dimensional, all-immersive web impact the human sense of embodiment, and consequently somatic and intuitive ways of knowing? These issues will likely continue to deeply impact the crisis in sensemaking.

Stepping back for a moment, the race for meta-space can be viewed as occurring within a broader context. In the metamodern era, humans are effectively becoming more disembodied as more and more time is spent online [27–29], and our gaze is increasingly screen-mediated and exteroceptive. Humans are losing connection with the somatic body, which includes both relatively strong emotions as well as more subtle intuitions [13]. Our screen-mediated cognition is becoming increasingly dopamine-centric [6]. The concern being raised here is whether this disconnection from the body will deplete our emotional and intuitive wisdom.

3.1 The crisis in sensemaking

A further context to the race for meta-space is that this is happening amidst the crisis in sensemaking: namely, that it is becoming ever more difficult to make sense of the world and what it means to be human, as information, perception and reality itself become increasingly virtual and disembodied (Rebel [7]). Confusion abounds about what is real or true, and how people might determine such things. As

uncertainty has increased, conspiracy theory culture has proliferated [30]. This is compounded by an increasing distrust of traditional media [31]. The term ‘fake news’ has now become deeply embedded in popular culture, while governments and institutions are struggling to influence and control populations. Amidst the increasing rapidity of the spread of mis/disinformation, policymakers must respond very quickly, often without the time required for intelligent analysis or careful deliberation [32].

It can also be noted that an associated ‘meaning crisis’ is accelerating. This transcends the internet age and can arguably be traced back through recent centuries. It is perhaps best encapsulated by the Nietzschean dictum, ‘God is dead’. As traditional spiritual and religious cultures and life pathways have slowly evaporated across many populations, humans are faced with the age-old conundrum: just what is this life all about? [6]. Within this perspective, the crisis in sensemaking goes much deeper than mere considerations of the role of technology and disinformation. Thus, the increasing number of Americans (48%) now believing that governments should step up efforts to control the spread of disinformation online [33] may be suggesting a solution that is little more than a litany-level band-aid on civilizational cancer. This perspectival paper is therefore an attempt to initiate deeper thinking on the topic.

3.2 The authentic self and embodied presence

There are potentially multiple ways that the crisis in sensemaking can be addressed that go beyond the litany and social/systems levels of Causal Layered Analysis. Examining the issue via CLA, it can be seen that there are many levels at which stakeholders can potentially intervene. For example, as mentioned above, greater regulation of netizen behaviour and stricter control of the Tech Giants and their platforms is a common policy suggestion [33]. Yet such interventions function primarily at the social and systems level because stakeholders are attempting to change technology through the legal system, and ultimately shift online and real-world behaviour and cultures (which can be seen as entrenched social habits).

However, another approach is to go ‘deeper’, to examine the problem at the worldview/paradigm level (CLA, level 3), as well as intervening to shift our “minds” or consciousness structures via alternative ways of knowing (CLA, level 4). The focus taken here speculates upon the potential value of establishing an Authentic Self via the cultivation of Embodied Presence. This approach is not mutually exclusive from other hypothetical interventions at other levels of CLA, such as the technological, legal, educational and so on. This chapter’s suggested approach could work alongside them.

The wisdom of Embodied Presence is expressed via the somatic body and “integrated intelligence” (which shall be defined in the following section). Elsewhere, the author has argued that modern cultures have already damaged the relationship between mind and body [5, 22, 34]. To further diminish that relationship in a metaverse-centred, Money and Machines Future would represent the perpetuation and deepening of a major civilisational error that underpins the crisis in sensemaking [5, 22].

As humanity approaches the dawning of web 3.0 and the metaverse, our burgeoning IT systems, cultures and dominant ways of knowing increasingly emphasise exteroception at the expense of interoception [14]. Most notably, exteroceptive stimuli are now typically mediated by invisible third parties and artificial intelligence, and where the drive for profit and power is typically obfuscated, along with the source

code. The values of the system are designed for optimisation of the profit and power of Big Tech, and via maximising clickability of content [6–8, 20]. 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 meaningful lives.

4. Embodiment, integrated intelligence and the extended mind

Traditionally, human intelligence was assumed to function purely through the brain, or at least to operate via sensory inputs that operated in tandem with the brain. This still remains the dominant model in mainstream science [14, 35, 36]. The argument put forward by the author is that this model is no longer tenable, given that humans are entangled with multiple sources of information from sensory and (as shall be explained) ‘extra-sensory’ sources. To accommodate this expanded framework, the author has developed the model of ‘integrated intelligence’ [5, 22, 34].

Integrated intelligence is the (potentially) conscious and active employment of an expansive range of human cognitive abilities – including those that draw upon the mental, somatic, digital and intuitive – and which helps us to solve problems and live successfully. **Figure 3**, below, provides a crude representation of the model.

In the model suggested in **Figure 3**, the intellect or conscious mind can deliberately draw information from any of the layers of mind listed above it, and may equally draw information *unconsciously* from any of those layers. The somatic body is the feelings and intuitions that the body provides us from moment to moment, as it processes information from the environment and the other layers of the model. The psyche is

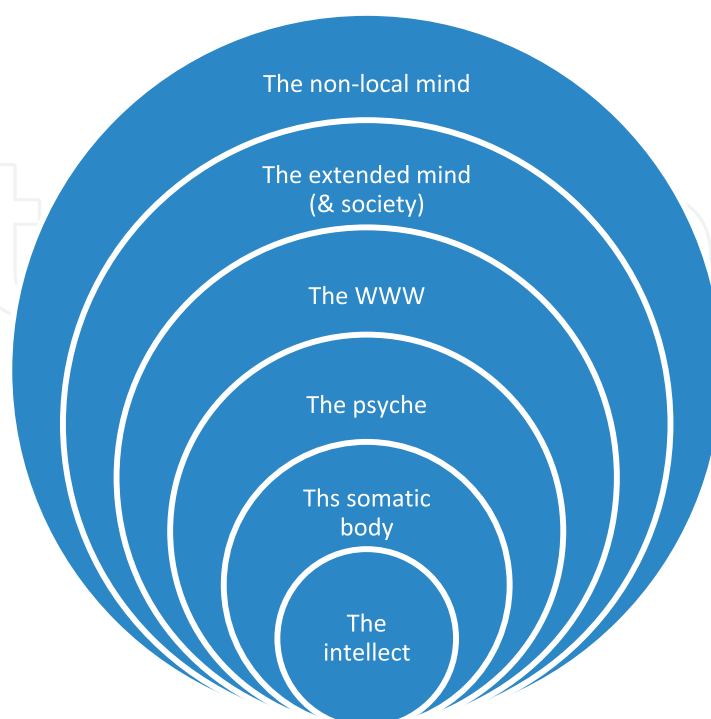


Figure 3.
Integrated intelligence.

the world of subconscious dreams, images and stories that inhabit our inner worlds. The 'WWW' is the information humans draw from the world wide web, including augmented and virtual reality systems.

The extended mind is the synchronisation effect and intuitions that emerge as human brains and bodies interact with other people and environments, which is now well-supported by experimental science [14, 37, 38].

The non-local mind, as the term is employed here, is distinct from the extended mind. The former is the field of consciousness that expands beyond the brain and the immediate environment and is entangled with other people, places and times [15, 35, 36]. The non-local mind is typically addressed explicitly or implicitly in parapsychology and many traditional cultures and spiritual traditions. It insists that consciousness has non-local properties that transcend space and time. Nonetheless, it must be conceded that the non-local mind remains controversial within mainstream science, and is an effective paradigmatic taboo [36]. Still, the author maintains that it is an extant and important part of human consciousness; and it is also crucial to the possible futures of the metaverse and human civilisation in general.

Both the concepts of the extended mind and the non-local mind suggest the importance of retaining somatic and intuitive awareness in digital futures. Yet the founding values of the metaverse and that of our civilisation's wisdom and awakening traditions appear increasingly at odds with each other. The essential argument being established in this chapter is that somatic awareness and introspection are both keys to accessing the wisdom of Authentic Self, which in turn can help address the crisis in sensemaking. They are crucial for building sustainable and preferred futures, even though they can be considered 'other' ways of knowing within science and tech environments.

But how might humanity counter the trend towards disembodied distraction, and help netizens establish a genuine capacity for embodiment and introspection, even as they continue to use the net?

5. Towards the Mindful Metaverse

Much of the discourse on the metaverse after the buzz of early 2021 has been negative and critical, focussed upon how the increasingly serious issues of web 2.0 will most likely expand in its three-dimensional version. Yet as the discussion above suggests, there are potentially more positive future expressions of the internet, including Deep Futures where integrated intelligence, embodiment and the intuitive mind flourish. There are ways that designers can create software, hardware and cultures which can accommodate an integrated intelligence. Beyond the suggestions made in the chapter above, individual netizens can develop cultural, legal, societal and economic processes which encourage the maintenance of our humanity.

This chapter has not discussed the present state of metaverse technology in any detail, as that has not been the focus. But it is undoubtedly true that humanity is in a universe far, far away from the Star Trek holodeck, or *Black Mirror's* eternal afterlife in the episode *San Junipero* [39]. To begin with, tactile engagement and current haptics (touch, movement) are quite limited, even though hand sensors (with gestures) have recently improved [24]. Meta's Horizons platform still requires bulky Oculus VR glasses, while at least some of the software is expensive. Eye contact, so crucial to establishing rapport and the synchronisation effect [14], remains basic. There is a lack of natural pixel distribution and depth, which often causes

disorientation, motion sickness and poor depth perception. Mark Zuckerberg has stated that it takes about two months for the human brain to adapt to the current Oculus hardware. Nonetheless, it is notable that he has set the goal of having netizens feel 'present' in the future of communication and work (Mark [24]).

Given that the future is by nature malleable, and that includes the future of the internet, the author's idealised scenario - the Mindful Metaverse - remains a possibility. In this Deep Future scenario [1, 3], humans will likely retain a high immersion in online worlds but create a more genuine life balance and a more embodied, humane online and offline experience. Beyond reasonable doubt, humanity's recorded information systems will remain predominantly electronic, but humans will ideally also value community, well-being and healing, along with a more interceptive psycho-spiritual development and mindfulness.

This is admittedly a utopian scenario, one which would represent a spiritual renaissance. Yet along with the balanced ideal of Deep Futures, it would also honour scientific knowledge and achievement. Thus, it would be an open society, where diversity of cognitive modalities will be permitted to flourish somatic and intuitive; philosophical and critical; and scientific-empirical. In short, in the Mindful Metaverse scenario, introspection and Embodied Presence would be balanced with reason. There would also be a healthy expression of compassion, equality, justice and cultural and ethnic diversity. Society would slow down, as cooperation would be valued as much as competition; while education systems would teach digital awareness – a practical understanding of how online systems, media and social media platforms function [40]. Thus, people's key life decision-making would be just as informed by the intuitive as by the exteroceptive (including digital information).

Though there is no space in this chapter for details, there are many direct processes which can be employed to enhance Embodied Presence and Integrated Intelligence in virtual futures, and possibly take us closer to a Mindful Metaverse where the crisis in sensemaking can be addressed at a deeper level than the merely technological or regulatory. Some of these processes can potentially be directly utilised by web, software and hardware designers, while others might best be employed by netizens in their own private, online or offline spaces. Here I list just a few possibilities.

Body awareness exercises include 'open monitoring,' and the 'soft gazing' process developed by Dor Abrahamson at the University of California, the latter inspired by tai chi [14]. The 'body scan' stress-release practice designed by Kabat-Zinn [41] is a related tool. Meanwhile breathing exercises are an old but effective mindfulness practice [1, 10, 11, 40], and they can be done while sitting at a computer, or in almost any setting. Another self-awareness tool called 'noticing the trigger point' can be combined with creative visualisation and can also help us avoid wasting precious creative energy on online drama (which could be seen as a key driver of the culture wars and the crisis in sensemaking). Physiology is what drives the anger/projection response in online environments, not merely the other's words. Physiology without immediate judgment and action soon fades, and the brain/body system returns to baseline. Eyal [42] suggests reconditioning online habits by 'reimagining' more appropriate responses to trigger points. This can involve doing regular, short visualisation sessions where a person imagines him/herself responding differently at the moments when they habitually pick up the phone, peruse emails or respond angrily to online posts. In a similar vein, people can explore the benefits of mini-rituals as means to create more desirable online habits. Experimental evidence supports the claim that short rituals can offer effective interventions to online trigger points. Eyal [42] states that rituals can help build an empowering identity, as they help people take control of

personal habits. Finally, journaling can assist with developing a strong connection to the somatic body. We can keep a record of the choices we make and how we *feel* when we make them. Paul [13] details this approach in *The Extended Mind*. Such journaling can help us clarify and codify the body's emotional messages.

The tools and processes mentioned here represent just a few means by which humans can keep connected to the somatic body, as well as to intuitive intelligence in general. As Web 3.0 develops, and as the metaverse emerges, hardware and software creators, curriculum designers and netizens, in general, can keep these kinds of tools in mind and employ them (or other tools) as they create their preferred futures.

Perhaps in the next decade, something akin to the Mindful Metaverse [1] will occur in isolated pockets, just as there are netizens and groups today who use the net wisely and mindfully, balancing it with their broader lives and psycho-spiritual development. Likewise, there is no reason that the kind of Deep Future briefly described in this chapter cannot also occur in the metaverse and on Web 3.0. Individual netizens have the potential to take their power back from the system and restore their inner/outer balance.

6. Conclusion

In this chapter, it has been argued that the crisis in sensemaking – and the associated meaning crisis – have strongly intensified in the digital age, along with a loss of a sense of embodiment, presence and intuitive and somatic wisdom. The causal chain posited in **Figure 1**, above, is merely provocative and suggestive at this time, inviting the possibility of further scientific and analytical research.

Inayatullah's [2] Causal Layered Analysis was broadly applied to indicate that both causes and solutions to the crisis in sensemaking may operate at different levels. It has been suggested that deeper levels of examination which address layers three and four of CLA (worldview/paradigm, and mind/myth/metaphor) are less commonly discussed in relation to the crisis in sensemaking but may potentially be fruitful spaces to apply crisis management. The discussion of embodiment, integrated intelligence, expanded ways of knowing and the Authentic Self lie at these deeper levels.

An idealised alternative future posited by the author is the Mindful Metaverse, and it can be contrasted with the dystopian Money and Machines scenarios commonly seen depicted in popular science fiction, where the machines and Big Tech colonise the hearts and minds of our species. Several tools have been suggested that may help create what the author sees as a preferred future.

As a civilisation, humanity needs to refocus, to reclaim its sense of power as residing within, rather than as being constantly manipulated by external forces beyond its control: including the internet, bad faith influencers, Big Tech, governments, politicians and authority figures, and institutions. Despite current concerns, there is an opportunity – both within the tech industry and across broader society – to use the internet to cultivate embodied presence, return to an internal locus of control, and to re-establish a greater sense of personal empowerment. This may even go a long way towards resolving the crisis in sensemaking.


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