

WANDERINGS THROUGH THE 'TERRA INCOGNITA' OF THE ANTHROPOCENE: CONSIDERATIONS AND THOUGHTS TO INSPIRE ONGOING DIALOGUE

A written input into the colloquium on Learning to Think in the Anthropocene,
Villanova, PA, USA, 25 to 29 July 2018

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Note: What follows is a collection of considerations and thoughts organized in preparation for the above mentioned Villanova dialogue on *Learning to Think in the Anthropocene*. It is a reflection of my thinking so far, since I started to work on these ideas during the first semester of 2016. I don't expect the Villanova dialogue—or any subsequent dialogue over the coming centuries, as humanity gradually comes to grips with the reality of the Anthropocene—to result in definitive conclusions. Hence the reference to 'ongoing dialogue' in the title of this paper.

Thought is the essence of where you are now.

There is an interesting moment in one of the early episodes¹ of the '*Star Trek - The Next Generation*' epic. Due to error, the Starship Enterprise has lost its bearings and finds itself 'where no one has gone before' (the title of the episode). Captain Jean-Luc Picard is desperately querying his staff to find out where they are. Their experiences make it appear that distinction between thought and reality has become blurred. In a one-on-one with the Traveler—an alien, who has been responsible for the error—Picard expresses his concern about this apparent mix-up of thought and reality and the fact that they don't know where they are now. The Traveler's response is simple and meaningful: "Thought is the essence of where you are now." I have chosen the Traveler's words as an 'advance organizer' for this thought piece.

¹ Season 1, Episode 6. See for detail https://en.wikipedia.org/wiki/Where_No_One_Has_Gone_Before.

The Star Trek episode is set in the 24th century. We live three centuries earlier, but the words are just as relevant now as they are then. Where are we? For most people, I'm afraid, their thought is not really where they are, the Anthropocene. That should change, before it's too late. We must learn to think in the Anthropocene.

Anthropogenic impact on our living environment is multidimensional and hugely complex, so complex that anyone who claims to have a solution is in the wrong state of mind. Complex systems are adaptive and can be made to adjust through the involvement of gentle forces. Solutions that are perceived as already existing, merely waiting for implementation wherever required, are not of that category. They are brute forces that may simply lead to creating new problems in the wake of—usually well intentioned—efforts to 'solve' existing ones.

Solutions in complex settings must grow, they should be allowed and facilitated to evolve. They cannot be 'had.' The focus in this evolutionary process must be on us and on "our becoming-other" (see Deleuze-Guattari quote on Page 9 in [David Cole's contribution](#) to this dialogue).

The Anthropocene reminds us of our mortality—of both life and death. The impending possibility of a Sixth Mass Extinction (the last of the previous five extinction events occurred 66 million years ago) is being noted increasingly in the scientific literature (e.g., Leakey & Lewin, 1996; Barnosky, *et al.*, 2011; Kolbert, 2014); Ceballos, *et al.*, 2015; Ceballos, *et al.*, 2017; Van der Valk, *et al.*, 2018). Our species may well be among those that go extinct.

As individuals we are dispositioned to do everything possible to stay alive. We defend our life when it is at risk. We are aware of life's eventual demise, but will embrace death, recognizing gratefully that life has come to fulfillment, only when death is in close proximity. "Those who embrace death will not perish, but have life everlasting," says the Tao Te Ching (In McDonald's translation) in Chapter 33. There is consolation in the awareness that generations of human beings succeed us, just as countless other generations have preceded us. Does something similar apply to us as a species?

Big History, as we know it, makes us aware that species come and go; that life emerges when the conditions on a planet are favorable, but that it can go extinct, as naturally as it once came, when conditions deteriorate. Should we be concerned, now that we live in times in which we may ourselves be a major contributing cause of fatal changes in the earth's environment? Facing the possibility of extinction, it is only natural to ask ourselves if we are here for a purpose. If so, what is it? Is this the right question? Do we actually need a reason to convince ourselves, as a planetary community, as a species, to take care of ourselves, our heritage, our progeny, and thus be appropriately concerned at this moment in the Big History of life on earth about the future of our species?

Questions of origin, purpose, and who we are, have been with humankind since time immemorial. They have inspired religious sentiment, philosophical thought, works of art, and the scientific spirit to seek understanding.

Questions such as those above, which are profound yet bound to remain without adequate answers, are nevertheless important. It is in our nature, as members of a problem oriented species, to pursue them. Such pursuit enhances life and, perhaps, it is exactly the 'enhancement of life' that is also the purpose of life.

Two years ago, in a paper prepared for the third biennial conference of the International Big History Association, held in Amsterdam (J. Visser, 2017), I referred to learning in the Anthropocene as "...yet uncharted terrain—*terra incognita* on the map of the learning universe in which earthlings live" (p. 10). Mentally exploring that uncharted terrain, I stumbled upon some interesting wildflowers; things that I, somewhat intuitively, felt were worth looking at. I arranged them in a small bouquet and offered it—with explanatory notes—to my readers. I named the flowers *transdisciplinarity*; *multiplicity of spatio-temporalities*; *order of magnitude*; *mathematics*; *metaphor*, and *sense of beauty*. My choice for picking these particular wildflowers is motivated in the above mentioned paper. These flowers are still here for our contemplation as we start our dialogue about *Learning to Think in the Anthropocene*.

The Learning Development Institute designated '*Human Learning in the Anthropocene*' a "focus area of exploration, research, reflection and development (ERR&D)," departing deliberately and purposefully from the usual reference to R&D. Notions such as the ones highlighted above are the tentative outcome of exploration, not research. In this particular area of pursuit more and deeper exploration will be required as a basis for future research, reflection and development.

Continued dialogue regarding Human Learning in the Anthropocene, led to identifying four key adjectives as descriptors for life in the Anthropocene, which should be **enjoyable**, **compassionate**, **respectful**, and **responsible**. They are a first attempt at imagining essential values on which human life in the Anthropocene must be based for sustained existence of our species. Having a shared vision inspired by such values is a *conditio sine qua non* for effective transformation to a different world. To develop such a vision we must think in terms of futures hundreds of years from now.

Exploration of the values that underlie sustainable human life in the Anthropocene, such as the ones mentioned above, is crucial for developing a shared vision necessary for current and future generations to navigate to a better world.

The term 'Anthropocene' has only recently become part of common parlance. Only a few years ago one would have to explain what it meant when using it. Now, as a Dutch philosopher friend recently told me, it's use has become 'sexy.' We may soon see it appear on T-shirts. Commerce will be happy to make

money off it. Yet, we are talking about something serious, very serious. The challenge we are facing is enormous. It is without doubt the most complex challenge humankind has ever met. A *beautiful* challenge, I would add. If we are ready to engage with it, we will become better as a consequence. Humans are known for the power of their scientific mind, their unrelenting quest to understand. The Anthropocene offers us the opportunity to understand deeper than we ever were able to appreciate the miracle of our being in the world.

The Anthropocene is about more than climate change. It concerns everything we have done since the agricultural revolution that now starts having a significant impact on our living environment. In addition to changes in the atmospheric conditions of our planet, it includes changes in the planetary microbiota; depletion of essential resources; uneven access to resources across populations; diminishing tolerance of cultural differences; extinction of species; extinction of languages; depreciation of the communication sphere in the wake of technological development; overpopulation, overconsumption, and over-almost-anything. And the list goes on. A particularly worrying, rather recent, development is the move towards '*assisted living by default*,' the tendency to substitute machine action for human action. In the end, this tendency leads to atrophy of muscles and the mind. Besides, it is bad the environment. Thus the big question: How can it be changed?

We are all—individually and collectively—somehow part of the equation of change. If change is to happen, it will be through us, ordinary human beings who are able to learn, not because we are being taught, but by walking our own learning paths with an open mind, ready to engage, listening to those we meet 'en route,' reflecting on and asking ourselves questions about our lived experiences, the decisions we make, our behavior, our feelings, our way of being, as we walk on. (See [Sakhi Nitin Anita's contribution](#) to this dialogue for examples).

One cannot predict the outcome of anyone's, not even one's own, self-chosen and self-designed learning path. Conventional thinking about education would see this as a problem because nothing can be tested. It is not. Quite to the contrary, if one knew the outcome, no real transformation would be possible.

The Anthropocene imposes conditions that require unprecedented and dramatic change. Time is running out and is too short to let these transformations take place via biological evolution. They can only be achieved through cultural evolution. Urgent work is required to create the conditions for such a cultural evolution to happen. While we can't change our species identity of *Homo sapiens*, we, modern humans (*Homo sapiens sapiens*) may, thanks to such cultural evolution, eventually find ourselves transformed into another subspecies, *Homo sapiens anthropocensis*.

The big question to tackle here is: Can we create a vision of what *Homo sapiens anthropocensis* will look like, what its main descriptors (four already offered earlier in this paper) are and how those descriptors are different from those that apply to us modern humans? If such a vision can be created, it should not be seen as fixed. It must be malleable. However, for now, it would be helpful to get us start walking in the right direction.

The cultural transformation in question may lead us to rediscover a few things, allowing us to reinvent ourselves from the ground up. We must rediscover ourselves as organisms whose features and faculties have not evolved for the world we created. They belong to a different world. We are maladapted to the world in which we live because we changed the world faster than evolution could change us. We don't have to go back to a world of the past though, but must recognize that different future worlds, emanating from our current situation, are possible and that it is upon us and future generations to create such future worlds.

Two essential things must precede this exploratory and creative effort.

- (1) Our dominant mode of learning must be inspired by profound awareness of where we come from and where we are now. Such 'situational awareness' ([J. Visser, 2018](#)) cannot but lead to the recognition that we are in the wrong place. It should be noted that the 'profound awareness' I am referring to goes beyond mere cognizance. One must feel and know 'in the flesh' what our home in the universe is, what it entails, and why we must keep our house in order. This requires a different kind of pedagogy than what is normally offered at most schools.
- (2) We must feel the urgency to get away from where we are. Where to go next, we don't really know. It's an adventure. For a problem-oriented, exploratory species, which we are, this is a positive motivation. Finding things out (Feynman, 1999), discovering our world (Boorstin, 1985) and recreating it (Boorstin, 1993), are pure pleasures. But we must have the audacity to think five centuries ahead of where we are now.²

There may be no specific purpose for human life other than that we are part of the ecology of planet Earth and that dropping out of it would (slightly) diminish its diversity (but it may, regrettably, also benefit some other species). There may be no specific reason why we should preserve human life. But doing so is simply what we have evolved to do. We can't help it. Like all species we are programmed to preserve ourselves. It's the reason why I am writing this paper.

Other worlds are possible. Creating them requires transformative processes. This involves learning and rebuilding the mind in ways that are currently not well conceived in the context of formal education. The focus must be on transformative learning and on rediscovering the value of 'Bildung,' Von Humboldt's vision of learning as a process of becoming, of self-cultivation. We must abandon the attitude that tells us that such dramatic transformations cannot be achieved, because they must.

This brings me to calling attention to the need to take a critical look at what—despite tremendous investment of time, resources, and human effort—has so far been accomplished in terms of reshaping the world of learning. Very little, compared to what is necessary. It is work I have been involved in and written about extensively over the past two decades and a half, exploring new and more comprehensive

² I am giving it 500 years, assuming there are still humans around by then, but we may have long been wiped out well before those five centuries are over (see [J. Visser, 2438](#)). In fact, if we don't manage to dramatically change course within the next 100 years or so, we may well have passed a point of no return, in which case there is nothing more to do than wait until it is all over (Scranton, 2015).

meanings of what learning in a lifelong, life-wide and life-deep perspective entails and how it can contribute to the development of mind, of an inquiring mind, a mind that seeks to understand and do so deeply. In the interest of brevity, I will refrain from elaborating on these issues here and thus merely refer to a very short paper, that served as an input to another colloquium, on 'Two things commanding attention,' (J. Visser, 2015).

Fundamental 're-architecturing' of the learning landscape will be required. In terms of formal learning, it calls for creativity and astuteness in reimagining our schools (Egan, 2008) and perhaps creating entirely different structures, whether with walls, under trees, or in cyberspace, or all of these and more. It must be recognized that education entails a risk, a beautiful risk, as Biesta (2013) argues. "That risk is there because, as W. B. Yeats has put it, education is not about filling a bucket but about lighting a fire." It is there "because students are not to be seen as objects to be molded and disciplined, but as subjects of action and responsibility" (p. 1). Besides, we do not just learn in schools or thanks to schools. In fact, we spend only a very minor portion of our learning time throughout life in schools. Most of our learning takes place in informal settings (Bransford, Slowinski, Vye, & Mosborg, 2008), calling for new designs and technological invention.

Changing our perceptions about such things as learning may be difficult, as Yusra Visser and I argued at the turn of the century at a conference in Denver, Colorado (J. Visser & Y. L. Visser, 2000), but if it weren't difficult it would not be worth our time and effort to attend to it. The change is crucial for sustained human life and growth in the Anthropocene. A mere 18 years on, since that conference in Denver took place, we find ourselves in a dramatically changed world. It is time to take a serious look at that world, reflect on its future in the perspective of our much bigger history, ask ourselves questions, and be inspired and appropriately knowledgeable to act constructively and change the world.

Recommendations (among many others that I could think of) **for the Villanova dialogue** (and beyond):

- (1) We can't go on with the world as is. Different worlds must be envisioned. What could such worlds look like? What characteristics would the humans inhabiting them have?
- (2) Being motivated by visions of different worlds, and aware that change from 'what is' to 'what is desired' cannot be linear but must be complex, what conditions should be put in place that encourage and facilitate the cultural evolution that should eventually lead to a world in which human and other life can sustain in harmony?
- (3) Curiosity and creativity, the passion to find things out and create mental frameworks to capture how the world works (science) and to interact with the world, contributing to its change (technology), are fundamental dimensions of our being. They will go away only with our own demise. What should go away, though, while we are still here, is our proclivity to not be concerned with how science and technology are used and our preference to wait until later before opening our eyes and see the long-term consequences of what we have done. How can this be fixed to ensure that henceforth we interact constructively with our world, our precious home in the universe?

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