

DOI 10.31250/2618-8600-2022-2(16)-6-24

UDK 001.1

Noel B. Salazar

KU Leuven

Leuven, Belgium

ORCID: 0000-0002-8346-2977

E-mail: noel.salazar@kuleuven.be

Anthropologies of the Present and the Presence of Anthropology

ABSTRACT. This reflexive article combines recent as well as established insights from various anthropological subfields and beyond to address a world that is increasingly on the move, and this in ways that we do not fully understand, let alone manage or control. As such, the text involves a critical thinking exercise that focuses on the importance of processes of motion and communication, ranging from planetary and even cosmic mobilities to micro-movements and exchanges at the cellular and atomic levels. Taking this broader context of mobility and change into account in the Anthropocene Epoch automatically leads to a serious overhaul of how “the human” has traditionally been understood and the vital role of what we have come to term “the environment”. This radical rethinking has obvious consequences for a human-centered scientific discipline like anthropology in terms of ontologies and epistemologies, theories and methodologies. I end the article by offering some concrete suggestions on how anthropology, as a holistic discipline without clear-cut boundaries, can position itself in a world that is currently undergoing very rapid changes.

KEY WORDS: anthropocene, communication, environment, knowledge, mobility, more-than-human, relatedness

FOR CITATION: Salazar N. Anthropologies of the Present and the Presence of Anthropology. *Etnografia*. 2022. 2 (16): 6–24. (In Eng.). doi 10.31250/2618-8600-2022-2(16)-6-24

Н. Б. Салазар

Лёвенский католический университет

Лёвен, Бельгия

ORCID: 0000-0002-8346-2977

E-mail: noel.salazar@kuleuven.be

Антропологии настоящего и настоящее антропологии

АННОТАЦИЯ. Эта статья является рефлексией недавних и устоявшихся представлений из различных разделов антропологии с целью осмысления мира, постоянно находящегося в движении, которое мы не вполне понимаем, не говоря уже о том, чтобы управлять им или контролировать его. В статье предпринимается попытка критически осмыслить важность процессов движения и коммуникации, начиная от планетарной и даже космической мобильности до микродвижений и обменов на клеточном и атомном уровнях. Фокусирование внимания на более широком контексте мобильности и изменений в эпоху антропоцена автоматически приводит к серьезному пересмотру традиционного понимания человека и жизненно важной роли окружающей среды. Это радикальное переосмысление имеет очевидные последствия для такой ориентированной на человека научной дисциплины, как антропология, с точки зрения онтологии и эпистемологии, теорий и методологии. В конце статьи сформулированы предложения, как антропология как целостная дисциплина без четких границ может позиционировать себя в быстро меняющемся мире.

КЛЮЧЕВЫЕ СЛОВА: антропоцен, коммуникация, окружающая среда, знание, мобильность, больше-чем-человек, взаимозависимость

ДЛЯ ЦИТИРОВАНИЯ: Salazar N. Anthropologies of the present and the presence of anthropology. *Этнография*. 2022. 2 (16): 6–24. (In Eng.). doi 10.31250/2618-8600-2022-2(16)-6-24

INTRODUCTION

This article is an extended version of the keynote address I was supposed to give at the IUAES2022 Congress in St. Petersburg, Russia. The theme of the planned congress was “World on the Move: Migration and Communication”. Being the editor of Berghahn’s transdisciplinary *Worlds in Motion* book series and having conducted research on multiple groups of mobile people — be it nomads, migrants, tourists, pilgrims, exchange students, expatriates, sportspeople, or international volunteers — and on various aspects of communication — be it critical discourse analysis, (audio) visual representations and imaginaries, or social media — probably made me an obvious choice as a speaker. However, instead of presenting my own ethnographic findings on migration and communication, I decided to take a different route, slightly more off the beaten track. Just like singers need to hear a “key note” to get the tune of a song right, the defining presentation at a congress is meant to “move” the listeners, and this often in unexpected directions. While the congress unfortunately had to be cancelled, the publication of this written version will be hopefully “moving” an even wider audience.

The congress theme that was chosen for IUAES2022 can be understood in multiple ways. When reading the theme abstract, a couple of sentences caught my attention¹. First, the assertion that there are “diverse anthropological theories, perspectives and methodological approaches to understanding the dialectic of mobility and stability, dynamics and statics, sustainability and changeability”. Anthropology is, indeed, uniquely positioned to address complex (im)mobilities because of its holistic nature. I was introduced to Franz Boas’s four-field approach — Archaeology, Linguistics, Physical Anthropology, and Cultural Anthropology — as a graduate student in the USA. In Europe, and particularly as president of the European Association of Social Anthropologists (EASA), I became fully immersed in Social Anthropology, but I also started engaging with colleagues in important subfields such as Medical Anthropology. This type of intra-disciplinary boundary-crossing collaborations only intensified during my various leadership roles within the International Union of Anthropological and Ethnological Sciences. Within IUAES, and the World Anthropological Union (WAU) of which it is an integral part since 2018, I also became aware of the immense geographical and linguistic anthropological diversity (Salazar 2018b), captured among others in the concept of “world anthropologies”. It is by combining insights from these vastly different perspectives and approaches that anthropology has a unique “added value” compared to other scientific disciplines.

¹ <https://iuaes2022.spb.ru/>

Second, the theme abstract stated that studying a “world on the move” may require “a modification of the methodology and agenda of anthropological studies, which have often focused on relatively static structures and institutions”. As will become clear in what follows, this problem is not specific to anthropology but is something that has marked the (Western) scientific approach since the very start. One can debate whether the multi-scalar mobilities our world is currently witnessing differ from historical movements in degree more than in kind. In any case, we definitely need a better methodological toolbox to study processes of motion and change (Elliot et al. 2017). It is perhaps partially due to the lack of proper methods that the sciences have been so focused on “the static”. The birth of nation-states and external forms of control on science agendas — be it national, religious, or otherwise — are contributing factors, too.

Third, the theme of the congress captured the present *Zeitgeist* by describing how the world in which we currently live seems to have “lost control over the speed of its own movement and development”. This is an indirect reference to the Anthropocene. Carefully thinking this sombre assessment through gave me the impetus for authoring this article. What I am presenting below is not a traditional anthropological article based on ethnographic fieldwork, although it is certainly inspired by my own empirical research and that of many others in the field. Rather, it is thinking piece that combines recent and not-so-recent insights from anthropology and beyond in addressing a world that is increasingly on the move, and this in ways that we do not fully understand, let alone manage or control. Doing this took me far out of my comfort zone, way past familiar thematic interdisciplinary fields such as migration studies or communication studies.

Returning to the musical metaphor of a key note, I approach the task at hand in four interrelated “movements”. In “Going Big”, I sketch the macro context of planetary and even cosmic mobilities. The geological epoch of the Anthropocene is precisely characterized by an unprecedented general increase in mobility. Keeping this in mind, I consider in “Moving Life” the importance of motion for all life forms. To thrive, animals and plants need to be able to move and to communicate with each other. This leads us to “Rethinking the Human”, with obvious consequences for a human-centred discipline like anthropology. The popular notion of “becoming” demonstrates that stressing movement and exchange opens new potentialities but should not blind us from boundaries that humans themselves create to hinder mobility. In “Environmental (Re)Connection”, I emphasize how mobilities at various scales are interconnected with each other and I discuss how much people are (un)aware of this. I end the article by offering some general reflections and a couple of concrete suggestions on how anthropology as a holistic discipline can position itself in a world that is undergoing (very) rapid change.

GOING BIG

“Everything is connected, everything
changes, pay attention”.
Jane Hirshfield

At the end of 2021, in the middle of a global coronavirus pandemic, the city of Leuven, where my university is located, organized the Big Bang City Festival to celebrate the cosmos and its origins. During the period the event took place, I happened to be teaching a course on world anthropologies in the old Physics Institute in the historical centre of town. It was there that Georges Lemaître (1894–1966), the father of the Big Bang Theory and one of the founders of modern scientific cosmology, had had his office and observatory a century earlier. Going against the prevailing (Western) theories at the time that the universe is in a steady state and has always been that way, Lemaître developed a visionary cosmological model, based on theory and observations, that the universe has been expanding since the dawn of time. According to this now dominant scientific model, the universe, the largest entity we humans can imagine, has forever been in motion.

Planet Earth, too, has always been marked by inherent “planetary mobilities” (Szerszynski 2016), including biotic (organic life) as well as abiotic (non-living, physico-chemical processes) movements (Birtchnell 2016). A significant fraction of the atoms in the Earth’s surface are in constant motion. Millions of different compounds are continually being created, in a process that has been going on, mostly unaltered, since the early Archean Eon, 4000 million years ago. The Anthropocene names the most recent geological epoch, in which humanity took control over biological, chemical, and geological processes, and pushed the Earth system into a stage of disequilibrium, with significant effects on all planetary mobilities. Mobility is, indeed, “a key term of reference for thinking with, through and against, the Anthropocene as either a philosophical problem, a political concept, a material condition, or an epoch of deep time” (Baldwin et al. 2019: 289).

While scholars argue over when exactly the Anthropocene started, they do agree that processes of industrialisation played a key role. The movement of coal stood at the centre of the change from agrarian to industrial societies. The use of coal as a fuel enabled the production and consumption of various large systems. Steam engines were first used to pump water out of flooded coal mines and were later adapted to move boats, trains, and road vehicles. Part of this history is encapsulated in the word “chauffeur” (driver), which etymologically comes from the French term for stoker, the person responsible for stoking steam-powered engines. The use of coal as primary source of energy radically changed human labour and mobilities. Before, people had moved around much slower, and their forms of locomotion did not involve huge transformations of the physical and social world. The increasing distributions

and automations of transport entangled human action with goods, resources, plants, and animals. The transportation of coal created multiple choke points, for instance where unionized labour exerted pressure on corporations and the state (Mitchell 2011). This is not the case with oil, currently still the preferred fossil fuel, which flows through pipelines that can bypass concentrations of (manual) labour. In contrast to coal, however, carbon emissions from oil are distributed over millions of mobile and stationary sources.

Philosopher Thomas Nail (2019) argues that we are now living in one of the most mobile geological eras in our planet's history. He calls the increasing planetary mobilities, and not just the geological impact of humans, the "Kinocene". Humans may have started surges in movement (and industrialisation certainly accelerated this), but now the whole planet is producing complex flows and positive feedback cycles (of carbon, nitrogen, etc.) that have lives of their own. The global nature of climate change, for instance, stems from the absolute mobility of greenhouse gas molecules in the atmosphere: the carbon dioxide emitted from a power plant anywhere swiftly mixes across the world resulting in uniform greenhouse gas concentrations globally. As political scientist Matthew Paterson points out, "while the logic of governing climate change entails the management, shaping and ultimately reduction of a whole range of physical mobilities, climate change politics has been precisely organised around the generation of newly mobile objects — specifically the rights to generate carbon emissions, as mobilised via carbon markets" (Paterson 2014: 570).

The revelation of an ever-expanding cosmos, as well as knowledge of an unprecedented growth in planetary mobilities (at all levels), are two of the most fundamental historical conditions that lead Nail (2019) to describe a new ontology of motion. Importantly, he argues that "[t]he preference for stasis and stability across the major domains of human knowledge and activity is the source of all contemporary global crises" (Nail 2021: 271). For a long time, for example, the Nobel Prize in Physics excluded geophysics, a field science studying planetary mobilities such as heat flows, vibrations, and fluid dynamics. *The Birth of Physics* (2000) by philosopher Michel Serres is a passionate plea for a science that emphasizes flow and movement, turbulence and chaos, rather than stability and law.

The scientific but also political preference for the "immobile" has been particularly strong in the Western world (Salazar 2021b). This was the case, too, in classical social and cultural anthropology, which, based on an island metaphor or insular model of society (Eriksen 1993), tended to ignore or regard boundary-crossing human movements as deviations from normative place-bound communities, cultural homogeneity, and social integration (Salazar 2013). The mainstream study of colonized non-Western societies, for instance, was mostly based on models of homogeneity and continuity, reflecting colonial administrative policies and structures. Many early anthropological

interpretations were so focused on internal processes that exchange networks between groups and other forms of mobility were mostly ignored. This, of course, is in contradiction with the worldviews of many of the Indigenous peoples studied (see below).

MOVING LIFE

*“Trust only movement. Life happens at the level of events,
not of words. Trust movement”.*

Alfred Adler

Only now, living in the face of a dramatically unstable and mobile planet, are more people — be it in science, politics, or the arts — starting to admit the capital mistake of ignoring movement and flow. Mobility is at the core of how our world is structured and thus also an essential part of the many challenges our planet is facing (Salazar 2021a). Take the coronavirus (SARS-CoV-2) pandemic. For at least the past 10,000–20,000 years, humans have interacted with, manipulated, and been influenced by a varied array of plants and animals, altering each other’s bodies, physiologies, and behaviours over space and time (Fuentes 2020). Communication, to an extent, always involves communion. Indeed, the root sense of communication has to do with sharing and bringing together. That is, communicating with others entails some measure of what biologist Donna Haraway (2008) calls “becoming with” these others. This includes the exchange of pathogens, microbes that migrate across bodies, changing, hurting, aiding, and even inserting themselves into the genomes of their hosts. Communication thus also includes pollution or contamination, but this is not necessarily a dreadful thing. Multicellular life was made possible by multiple, mutual contaminations of bacteria (Margulis and Sagan 2000).

For millennia, tuberculosis, influenza, rabies, malaria, salmonella, and a variety of corona and other viruses have circulated between humans and other animals (Fuentes 2020). As virologist Stephen Morse notes, “[v]iruses have no locomotion, yet many of them have travelled around the world” (1993: ix). Indeed, there are no efficient barriers to prevent the migration of viruses across borders. The rapid spread of the latest coronavirus and its mutations cannot be explained without resorting to processes of globalization, which have dramatically increased mobilities across the globe. The current condition is partially a consequence of what Xiang Biao (2020) terms the “mobility economy”, whereby the circulation of goods and the movement of people have arguably become more essential to the global economy than assembly lines in factories. Some authors have called Covid-19 “the disease of the Anthropocene” (O’Callaghan-Gordo and Antó 2020) because it is widely believed to be the product of extractive and displacement activities, “the material mobilities that have depleted natural habitats forced animal species into smaller environments enabling the virus to spread, and intensified human contact with ‘wet’ animal

wholesale markets” (Adey et al. 2021: 5). Covid-19 is perhaps the perfect expression of “Anthropocene mobilities” (Baldwin et al. 2019) whereby disease-carrying goods and animals (including humans) are transported across long distances.

While human mobilities have received a lot of attention, among others in migration, tourism, and mobility studies (Adey et al. 2013; Salazar 2018c), we know much less about other-than-human mobilities. Through the pioneering ethnographic work of Anna Tsing (2015), anthropologists have learned something about the global movements of the matsutake mushroom — transporting spores by water, by air, or by hitchhiking on other carriers such as humans — and its symbiotic relation with certain species of pine trees. The latter relation is possible thanks to mycelium, the vegetative part of a fungus, consisting of a mass of branching structures. Mycelial networks may migrate through a landscape at up to several centimetres per day by developing in one direction while pulling back in the other (Sheldrake 2020). The entire length of fungal mycelium in just the top 10 cm of soil throughout the earth is estimated to be 450 quadrillion kilometres, or half the breadth of the Milky Way galaxy. Tsing’s (2015) work, among others, focuses on the role and impact of humans in these networks but also on multi-species interdependence and the need for collaboration in order to survive.

The alarming degradation of tree health, for example, is often caused by a disruption of their mycorrhizal associations, which is induced by nitrogen pollution from fossil fuel burning and monoculture farming. The mycorrhizal relationship between fungi and trees is a communication system (Simard 2021). Trees exchange food and communicate because they rely on one another. A forest is required to generate a microclimate conducive to tree growth and sustenance (Wohlleben 2016). The forest itself is a part of much bigger cycles, such as soil formation, species migration, and ocean circulation; it is a source of clean air, pure water, and nutritious food. If trees are the “lungs” of the planet, underground fungal networks are its “circulatory systems” — also called the “Wood Wide Web”. Mycelium maintains continual molecular contact with its surroundings, inventing a wide range of enzymatic and chemical reactions to complicated challenges, making it operate “at a level of complexity that exceeds the computational powers of our most advanced supercomputers” (Stamets 2005: 7).

More than half of the world’s plant and animal species are on the move. Animal mobility is critical to biosphere functioning and species survival. Global loss of vagility, including both mobility and motility (the ability to move independently), changes an important ecological feature of animals, affecting not just population persistence but also ecosystem processes such as predator-prey interactions, food cycle, and disease transmission (Tucker et al. 2018). Millions of birds have altered their migration patterns because of climate change, as have whales, dolphins, and turtles. Long-distance migrators

are traversing shorter distances, while shorter-distance migrators are becoming sedentary. Migratory species are more susceptible than other species in several respects because they use many habitats, locations, and resources during their travels. The similarities with human migrants should not escape our attention here.

Multilateral environmental treaties, such as the 2000 Cartagena Protocol on Biosafety, and scientists' contributions to the Global Invasive Species Programme, aim to enhance expert collaboration in the control and management of life on the move. The creation of Transboundary Biosphere Reserves and (bounded) wildlife corridors is what we have left to tackle the major need for large-scale cross-border animal mobilities (Wohlleben 2018). Think of the Jaguar Corridor that runs from Mexico to Argentina or the Green Belt Corridor in the EU. Linking twenty-four countries and winding past forty national parks, the latter spans nearly 13,000 kilometres, some of it following the former Iron Curtain, the chain of fences, walls, and watchtowers that once separated the East from the West in Europe and was meant to hinder human (east-west) migration. It is amazing how many boundaries and other structures and mechanisms have been created throughout history to hinder the free movement of people, and with them animals and plants (Abram et al. 2017; Salazar 2018a). This, of course, reminds us of the intricate political and power aspects of mobility — an aspect that anthropologists have stressed when studying human (im)mobilities (Salazar and Glick Schiller 2014; Salazar and Smart 2011), and should always be considered and analysed, no matter who or what is on the move.

RETHINKING THE HUMAN

“We know as we go, from place to place”.

Tim Ingold

Attention to mobilities, broadly conceived, necessarily leads to a rethinking of the human, the main “subject” of a discipline such as anthropology. More and more scientific disciplines are beginning to acknowledge the human “not as a pregiven reference or fixed category, but as a life form in movement, characterized exactly by its being-in-movement. In this vein, we should think of the universal category envisaged as ‘the human’ in a way that accommodates ‘the dynamicity and the indeterminacy of its reference’” (Wentzer and Mattingly 2018: 150). Phenomenologists already intuited the importance of motion, by stating that being human must be understood first as “moving being” (Farnell 2012). Philosopher Henri Bergson argued that “[t]he body is changing form at every moment; or rather, there is no form, since form is immobile, and the reality is movement. What is real is the continual change of form: form is only a snapshot view of a transition” (Bergson 1911: 328). Similarly, philosopher Karl Popper and neurophysiologist

John Eccles wrote that “the results of modern physics suggest that we should give up *the idea of a substance or essence*. They suggest that there is no self-identical entity persisting during all changes in time... The universe now appears to be not a collection of things, but an interacting set of events or processes” (Popper and Eccles 1977: 7). Quantum physicists have revealed that what were earlier assumed to be bounded “objects” are intertwined features of one another. Every event and thing in the cosmos appear to be intertwined with everything else in the universe — a thought that is also present in many Eastern philosophies.

Biomedical sciences are confirming these theories at the level of the human. Apart from the rare mutation, genomic DNA was long assumed to be the stable template of heredity, inactive and unchanging. However, according to research, DNA is dynamic rather than static, undergoing rearrangements, insertions, and deletions (Luning Prak and Kazazian 2000). There are also little-known exchanges *between* human bodies. Take, for example, the phenomenon called “microchimerism”, which occurs when cells from a foetus pass through the placenta and nestle in the mother’s body, and vice versa (Bond 2018: 111). As biologist Margaret McFall-Ngai writes,

Thus each one of us is a chimera of sorts, our bodies containing cell lines of others. If you are a first-born child, you will have a set of cells that come from your mother, including cells that she acquired from her own mother in the same way. If you are a youngest child, not only will you receive your mother’s cells, but you will also receive all of your siblings’ cells. We are thus not what we thought: every ‘I’ is also a ‘we’ (McFall-Ngai 2017: 52).

The idea (I) of subjects constantly in a state of “becoming” became popular in the social sciences and humanities through the writings of philosopher Gilles Deleuze, who continued a line of thought that was earlier developed by Heraclitus of Ephesus, Baruch Spinoza, and Friedrich Nietzsche. As a theory of process and change, his perspective on subjectivity privileges metaphors and figures of mobility (cf. Deleuze and Guattari 1987). “Becoming”, a notion used by Deleuze to contest the supremacy of identity in Western metaphysics, adopts the vegetal structure of the rhizome. Becoming requires the assemblage of disparate entities into a collective. Many of the mobilities involved are “molecular”, that is to say, they are “vital, incessant, and unruly, operating below the threshold of perception and associated with becomings of innumerable kinds” (Merriman 2019: 67). Becoming does not necessarily follow a straight or progressive path; it is, rather, creative, and unpredictable. For these reasons Deleuze and psychoanalyst Félix Guattari (1987: 238) prefer the term “involution” to evolution. The concept of involution captures well the entangled pushing and pulling of “organisms constantly inventing new ways to live with and alongside one another” (Hustak

and Myers 2012: 97). Pollination, communication, expression, and articulation are practices through which organisms involve themselves in one another's lives. The human immune system is a good example of a crossing between the human and the non-human. The genomics revolution has revealed that we are more microbe than human. Micro-organisms performing a wide variety of crucial functions are imperative to our health, such as breaking down foods we cannot otherwise digest.

In his seminal work *Beyond Nature and Culture*, Philippe Descola (2013) suggests that the essential difference between humans and the non-human world of plants, animals, geology, and natural forces is not only a specifically Western notion but also a very recent one. The more-than-human concept helps us to deconstruct such dominant dualistic ideologies (Welz 2021). Tim Ingold argues that a relational way of thinking involves “treating the organism not as a discrete, prespecified entity but as a particular locus of growth and development within a continuous field of relationships” (2004: 219). Stated differently, “[a] truly vigorous take on human life and human variation must integrate the social and the biological, the individual and the collective, ontogeny and phylogeny, organism and context, being and becoming” (Gíslí 2013: 242).

In the 1950s, Gregory Bateson was a pioneer in bringing complex-systems theory from the natural sciences into the social sciences. He proposed a cybernetic paradigm for comprehending human–animal relationships and famously wrote about human–dolphin communication (Bateson 1972). This line of thinking has evolved in what we now know as “multispecies ethnography” (Kirksey and Helmreich 2010). The ethnography of Eduardo Kohn (2013) among the Runa in the upper Amazonian basin, for example, seeks to account for the communicative worlds Runa share with their dogs. Kohn contends that to properly appreciate what it means to exist, we must rethink our relationship to a broader living universe that, in some surprising ways, also “thinks”. Metaphoric dreams are means of experiencing specific types of ecological relationships between different sorts of organisms in such a way that their differences are recognized and kept while maintaining the potential of communication (Kohn 2013). This type of research brings us seamlessly to the last of the four “movements” of this article.

ENVIRONMENTAL (RE)CONNECTION

*“What we most need to do is to hear within
us the sound of the Earth crying”.*

Thich Nhat Hanh

Protecting “the environment” does not come at the expense of human prosperity and well-being; it is the source of it. Unfortunately, many people are unaware that the vast, expansive living system that inhabits our planet is who

“we” are. We are an integrated living system in constant motion, surrounded by and infused within a large system called the biosphere, which includes all living beings. Moreover, “as a result of [the] shift from stewardship and trust to ownership and control it is harder for us to behave as people with commitments to the wider Earth community’s health and well-being” (Higgins 2012: 107). We have no more awareness of hazards such as climate change, pollution, or deforestation if we do not communicate about our (externalized) environment, especially the non-human aspect of it, and hence cannot respond to them. Today it is hard to conceive of the environment without also thinking about the global climate. Yet, only in the 1960s did climate come to be considered an environmental problem (Warde et al. 2018). It was mineralogist Vladimir Vernadsky (1998) who popularized the concept of “biosphere” in the 1920s. Vernadsky had the planetary approach that was required to conceive of global climate as something vulnerable. As he emphasized, “the material of Earth’s crust has been packaged into myriad moving beings whose reproduction and growth build and break down matter on a global scale... We are walking, talking minerals” (quoted in Margulis and Sagan 2000: 49).

In 1955, the Wenner-Gren Foundation for Anthropological Research funded a conference with as theme “Man’s Role in Changing the Face of the Earth”. It was called the first large-scale evaluation of what *has* happened and what *is happening* to the earth under man’s impress (Warde et al. 2018). The interdisciplinary conference gathered seventy-three researchers who offered viewpoints upon “man’s capacity to transform his physical-biological environment and upon his cumulative and irreversible alterations of the earth”². According to Bruno Latour (2017), the Anthropocene marks the end of human mobility, if this is understood metaphorically as moving from one’s current circumstances to a “better” or otherwise enhanced world. Instead, people must recognize that they are “earthbound”. For Latour, mobility itself — trying to escape Earth’s limits — is what got us to the current precarious condition in the first place. Ironically, imagining anthropogenic climate change and its associated ecological and socio-cultural transformations has opened options for the development of new types of human-environment connections. Contemporary attempts to (re)connect humanity to the (natural) environment are taking multiple forms, many of which can be linked historically to well-established but dated ideas of romanticism in Europe and transcendentalism in the USA (and the incorporation of Asian spiritual influences by both philosophies). In my own recent research on increasingly popular recreational outdoor practices such as hiking and running, for example, traces of these connections are visible in practices such as walking meditation, chi-running (inspired by *t’ai chi*) and yogging (a combination of yoga and running) (Salazar 2018d).

² <http://www.wennergren.org/history/mans-role-changing-face-earth>

Working with flow and change, Serres (2000) suggests, is the basis of a revised contract with nature. Geographer David Turnbull, too, states that “[a]ll processes of knowledge generation are based in the dynamics of movement through space, and of change over time, but how those dynamics are conceived, lived and represented vary between traditions, cultures and eras” (Turnbull 2007: 141). Or, in the words of Lesley Green, “[s]cholarship that attends to flows and movement offers the beginnings of a route to a knowledge of nature that is free of the fiction that nature is composed of singular objects that may be described in science against a blank background of space and time” (Green 2020: 225). The epistemology of commons thinking, for example, believes that we live in a shared lifeworld, which is not necessarily synonymous with an ecosystem or a biosphere but recognizes the interdependence of human life on Earth on which we all rely. Commons are worlds in movement; they are communities that create forms of life in common and that together produce and share, and are continuously transformed.

Cultural historian Thomas Berry (Swimme and Berry 1992) calls the “Ecozoic” the era defined by the recognition that human life is only a part of the greater living planetary processes that hold and sustain us. The term captures well the integral functioning of life systems in their mutually enhancing relations. Already in the 1950s, Robert Redfield (1953) argued that we cannot talk about humans and nature since humans are a part of nature. If we have a sense that we are “all planetary life”, then the inseparable connection between life and non-life shows that we must broaden that circumscription to “incorporate” the non-living components of this planet in our definition of self. The project of “posthuman ecocriticism” goes a step further by attending to animal, water, stone, forest, and world — and attributing force, thought, agency, emergence or thriving to any of these entities (Oppermann 2016). As such, it is an engaged, diffractive interpretation of the co-evolution of animals and inorganic materials in its hybrid forms.

While many of these epistemologies may seem novel from a contemporary Western perspective, the global history of anthropology and Indigenous knowledge systems shows a different picture. The “topokinetic” (Turnbull 2007) nature of knowledge through movement has been described on every continent, including Aboriginal song lines and dreaming tracks in Australia, and some Amerindian trails and taxonomies that order creatures via their type of movement (flying, swimming, walking, etc.) (Green 2020). *Ubuntu* is the philosophy of Africa’s Bantu speaking peoples, stressing the concept that motion is the principle of existence. All creatures exist in an ongoing dynamic flux of interactions and change as a result of motion (Ramose 1999: 50–59). The concept of *Buen Vivir* (living well) originates in South America and entails recognizing intrinsic qualities in nature, thereby breaking with the dominant Western anthropocentric position that humans are the only subjects of worth (Fatheuer 2011). *Buen Vivir* is a notion of happiness or fulfilment that can only

be reached by strong relationships among communities of extended or relative ontologies that include other living beings and components of the environment.

Many Indigenous peoples have (environmental) mobility traditions. James Fairhead (2016), for example, describes how farmers in West Africa encourage *Macrotermes* termites because of the way they “wake up” the soil. The idea of **banua*, which focuses on people and their customs, land, and location, incorporates both movement and immobility and is found across the Pacific Islands area (Suliman et al. 2019). This ancient Austronesian idea implies an expanding, emerging, and yet comprehensive system across space and time; a complex network of (im)mobilities linking people, ancestors, stars, canoes and other boats, seas, islands, and continents. Contemporary Pacific cosmopolitan efforts are beginning to address the geographical rupture to cosmology by emphasizing and reclaiming mobilities and vast interconnections (Teaiwa 2018).

Some of these ontological and epistemological insights also have political consequences. Ecuador updated its constitution in 2008 to offer *Pachamama*, or Mother Earth, rights, while Bolivia approved a law in 2010 granting Nature the right to sustain and renew her life cycles and evolutionary processes. There is also the 2010 Universal Declaration on the Rights of Mother Earth, which encourages all residents of the planet to become more conscious of several, diverse worlds. Around the globe, burgeoning rights-of-nature movements are advocating to give nature, or parts of it, legal personhood, or an independent right to flourish.

CONCLUSION

“Survival, in fact, is about the connection between things”.

Edward Said

Modern (Western) science has begun a colossal catch-up in mapping the deeper complexity and interconnectedness of the natural world, and the equally impressive impact that humankind has made on it, especially over the past two centuries. In the biosciences, what constitutes living and communicating is undergoing fundamental modification. As Stefan Helmreich notes, “Life’ migrates into quotation marks — not just in cultural studies of science but in recent theoretical biology as well — because it is at once so quotable and so definitionally unstable” (Helmreich 2015: 79). These insights stand in sharp contrast with the “motionless” models that have dominated science for so long. No amount of research into life forms at rest can teach us much about their potential mobility. Current research reveals that communication connections inside and between species in all domains, including bacteria, protozoa, mammals, fungi, and plants, are vital. All living forms work together to generate complex, dynamic, sensitive, and ever-changing systems. Life in general is mobile. In other words, “[l]ife extends over the planet as a

contiguous, but mobile, cover and takes the shape of the underlying Earth. Life, moreover, enlivens the planet; Earth, in a very real sense, is alive” (Margulis and Sagan 2000: 23).

If we humans are (re)learning anything in the late Anthropocene, it is that we are not separate at all. Humans, according to the post-human paradigm, are living tissue amalgamated from diverse aspects of the world that momentarily make up the human body before transforming into other systems. A lifeworld is marked by the fact that humans cannot be separated from the dynamic environment in which they live and are engulfed. Human movement and knowledge assemblage are constantly interacting in adaptive co-production processes. As philosopher Alphonso Lingis (2000: 29) reflects, “Our movements are not spontaneous initiatives launched against masses of inertia; we move in an environment of air currents, rustling trees, and animate bodies”. The Anthropocene suggests that these localized environments or lifeworlds are, indeed, not isolated unto themselves, but part of a “planetary conviviality” (Mignolo 2000: 157). Entire relational fields — worlds — are always in motion and subject to reconfigurations. Investigating multi-scalar mobilities is thus central to understanding the complexities of the Anthropocene.

And, yet, there is a paradox here. On the one hand, there is the increasing acknowledgment that everything on this planet is somehow related, which implies that most of the pressing issues need to be tackled at the global level. However, the planetary scale seems simply too big for humans to fathom. We have become “exhabitants” rather than inhabitants of the world in which we live (Ingold 2011: 96). If we like to think of ourselves as cosmopolitans, or world citizens, we should evolve to planetary citizenship and conviviality. This starts in a world that is lived and experienced nearby, an idea that is very present in contemporary ideas of “commoning”. We need new religions, not in the dogmatic sense, but to cherish again the idea of *religare*, of connectedness and relationality. The task ahead is to reimagine how to inhabit the planet we share with the vast but delicately interconnected community of life within which we are interdependent, and thus to radically rethink what it means to be human.

It is ironic that both in the debates on post-humanism and the Anthropocene anthropologists have been latecomers. Anthropology, as the holistic discipline *par excellence* that focuses on humankind in all its complexity, has a crucial role to play. For one, anthropologists can illuminate the myriad intertwined biological and sociocultural complexities of life on planet Earth. Epistemologically, this entails a willingness to “engage with the alterworlds of other beings” (Kirksey and Helmreich 2010: 553), which, in turn, necessitates the development of novel ways of observation and interpretation, an invitation to develop a “close attention to the world” (Tsing 2015: 5). There is also a pressing need to integrate Indigenous sources of knowledge, which have historically been neglected, with academic scholarship so that we can

come to understand much better the complexities of ecological networks and their (im)mobilities. Unfortunately, some of this knowledge is already lost; some was or is being “salvaged” by anthropologists and other concerned planetary citizens. We should not forget that “[m]odernist scholarship whose core conceptualisation of knowledge is that it focuses on objects set in space and time, without attention to their movements and relations, is the effect of an extraordinary rollout of science that is deeply invested in the logics of capitalism” (Green 2020: 229). The latter points to the importance of discussing matters of (im)mobility within their political and socio-economic context, a point that anthropologists have always taken to heart (Salazar and Glick Schiller 2014; Salazar and Smart 2011). Anthropological insights can certainly also help us when we examine, critically, what types of trade-offs we need to make to live in a more sustainable future. Finally, anthropology can help providing a healthy balance between specialist and generalist, holistic knowledge to address the world’s most pressing issues.

To end, let us return to where I began this article. Back in the 1930s, Lemaître’s cosmological theory was so wild and out-of-the-box that many of his contemporaries, including Albert Einstein, spurned his premise that the universe was expanding. Lemaître’s story has long been neglected in the history of science because he himself was never interested in grandstanding or building worlds around ideas. His ground-breaking thesis was published in *Nature*, in an article that had less than 500 words. We know now that the entire universe is accelerating away from us in every direction, driven by a mysterious dark matter, and that all of “reality” consists of continuously fluctuating quantum fields. Our planet is in urgent need of more boundary-pushing thinkers such as Lemaître. Anthropology can provide the right holistic “environment”, behind the desk and in the field, to cultivate such innovative intellectuals.

REFERENCES

- Abram S. et al. The free movement of people around the world would be utopian. *Identities: Global Studies in Culture and Power*, 2017, vol. 24, no. 2, pp. 123–155. (In English).
- Adey P. et al., eds. *The Routledge handbook of mobilities*. London: Routledge, 2013. (In English).
- Adey P. et al. Pandemic (im)mobilities. *Mobilities*, 2021, vol. 16, no. 1, pp. 1–19. (In English).
- Baldwin A. et al. From climate migration to anthropocene mobilities: Shifting the debate. *Mobilities*, 2019, vol. 14, no. 3, pp. 289–297. (In English).
- Bateson G. *Steps to an ecology of mind: Collected essays in anthropology, psychiatry, evolution, and epistemology*. San Francisco: Chandler Pub. Co., 1972. (In English).
- Biao X. *From chain reaction to grid reaction: Mobilities & restrictions during SARS & coronavirus*. 2020. Available at: <https://www.compas.ox.ac.uk/2020/from-chain-reaction-to-grid-reaction-mobilities-restrictions-during-sars-coronavirus/> (accessed: 01.01.2021).

Birtchnell T. Mobilities and the multinatural: A test case in India. *Transfers*, 2016, vol. 6, no. 2, pp. 120–127. (In English).

Bond E. *Writing migration through the body*. Cham: Palgrave Macmillan, 2018. (In English).

Deleuze G., Guattari F. *A thousand plateaus: Capitalism and schizophrenia*. Transl. by Brian Massumi. Minneapolis: University of Minnesota Press, 1987. (In English).

Descola P. *Beyond nature and culture*. Transl. by Janet Lloyd. Chicago: University of Chicago Press, 2013. (In English).

Elliot A. et al., eds. *Methodologies of mobility: Ethnography and experiment*. Oxford: Berghahn, 2017. (In English).

Eriksen T. H. In which sense do cultural islands exist? *Social Anthropology*, 1993, vol. 1, pp. 133–147. (In English).

Fairhead J. R. Termites, mud daubers and their earths: A multispecies approach to fertility and power in West Africa. *Conservation and Society*, 2016, vol. 14, no. 4, pp. 359–367. (In English).

Farnell B. *Dynamic embodiment for social theory: “I move therefore I am”*. London: Routledge, 2012. (In English).

Fatheuer T. *Buen vivir: A brief introduction to Latin America’s new concepts for the good life and the rights of nature*. Berlin: Heinrich Böll Stiftung, 2011. (In English).

Fuentes A. A (bio)anthropological view of the COVID-19 era midstream: Beyond the infection. *Anthropology Now*, 2020, vol. 12, no. 1, pp. 24–32. (In English).

Gisli P. Retrospect. *Biosocial becomings: Integrating social and biological anthropology*. Cambridge: Cambridge University Press, 2013, pp. 229–248. (In English).

Green L. *Rock / water / life: Ecology & humanities for a decolonial South Africa*. Durham: Duke University Press, 2020. (In English).

Haraway, D. J. *When species meet*. Minneapolis: University of Minnesota Press, 2008. (In English).

Helmreich S. *Sounding the limits of life: Essays in the anthropology of biology and beyond*. Princeton: Princeton University Press, 2015. (In English).

Higgins P. *Earth is our business: Changing the rules of the game*. London: Shephard-Walwyn (Publishers) Ltd, 2012. (In English).

Hustak C., Myers N. Involutionary momentum: Affective ecologies and the sciences of plant/insect encounters. *Differences*, 2012, vol. 23, no. 3, pp. 74–118. (In English).

Ingold T. *Being alive: Essays on movement, knowledge and description*. London: Routledge, 2011. (In English).

Ingold T. Beyond biology and culture: The meaning of evolution in a relational world. *Social Anthropology*, 2004, vol. 12, no. 2, pp. 209–221. (In English).

Kirksey S. E., Helmreich S. The emergence of multispecies ethnography. *Cultural Anthropology*, 2010, vol. 25, no. 4, pp. 545–576. (In English).

Kohn E. *How forests think: Toward an anthropology beyond the human*. Berkeley: University of California Press, 2013. (In English).

Latour B. *Facing Gaia: Eight lectures on the new climatic regime*. Transl. by Catherine Porter, Cambridge: Polity. 2017. (In English).

Lingis A. *Dangerous emotions*. Berkeley: University of California Press, 2000. (In English).

Luning Prak E. T., Kazazian H. H. Mobile elements and the human genome. *Nature Reviews Genetics*, 2000, vol. 1, no. 2, pp. 134–144. (In English).

Margulis L., Sagan D. *What is life?* Berkeley: University of California Press, 2000. (In English).

McFall-Ngai M. Noticing microbial worlds: The postmodern synthesis in biology. *Arts of living on a damaged planet*. Minneapolis, MN: University of Minnesota Press, 2017, pp. 51–69. (In English).

Merriman P. Molar and molecular mobilities: The politics of perceptible and imperceptible movements. *Environment and Planning D: Society and Space*, 2019, vol. 37, no. 1, pp. 65–82. (In English).

Mignolo W. The many faces of cosmo-polis: Border thinking and critical cosmopolitanism. *Public Culture*, 2000, vol. 12, no. 3, pp. 721–748. (In English).

Mitchell T. *Carbon democracy: Political power in the age of oil*. London: Verso, 2011. (In English).

Morse S. S., ed. *Emerging viruses*. Oxford: Oxford University Press, 1993. (In English).

Nail T. *Being and motion*. Oxford: Oxford University Press, 2019. (In English).

Nail T. *Theory of the Earth*. Stanford: Stanford University Press, 2021. (In English).

O’Callaghan-Gordo C., Antó J. M. COVID-19: The disease of the anthropocene. *Environmental research*, 2020, vol. 187, pp. 109683–109684. (In English).

Oppermann S. From posthumanism to posthuman ecocriticism. *Relations*, 2016, vol. 4, no. 1, pp. 24–37. (In English).

Paterson M. Governing mobilities, mobilising carbon. *Mobilities*, 2014, vol. 9, no. 4, pp. 570–584. (In English).

Popper K. R., Eccles J. C. *The self and its brain*. New York: Springer International, 1977. (In English).

Ramose M. B. *African philosophy through Ubuntu*. Harare: Mond Books Publishers, 1999. (In English).

Redfield R. *The primitive world and its transformations*. Ithaca: Cornell University Press, 1953. (In English).

Salazar N. B. Anthropology. *The Routledge handbook of mobilities*. London: Routledge, 2013, pp. 55–63. (In English).

Salazar N. B. *Afterword: Borders are there to be crossed (but not by everybody). Borderless worlds for whom? Ethics, moralities and mobilities*. London: Routledge, 2018a, pp. 224–229. (In English).

Salazar N. B. Enriching the academic canon: From singing one tune to embracing multivocality / Obogaćivanje akademskog kanona: Od pjevanja jedne melodije do prihvaćanja višeglasja. *Etnološka Tribina*, 2018b, vol. 41, no. 48, pp. 42–46. (In English).

Salazar N. B. *Momentous mobilities: Anthropological musings on the meanings of travel*. Oxford: Berghahn, 2018c. (In English).

Salazar N. B. ‘Moveo ergo sum’: Mobility as vital to humanity and its (self-)image. *The human image in a changing world: Proceedings of the 5th World Humanities Forum*. National Research Foundation of Korea, 2018d, pp. 330–340. (In English).

Salazar N. B. Existential vs. essential mobilities: Insights from before, during and after a crisis. *Mobilities*, 2021a, vol. 16, no. 1, pp. 20–34. (In English).

Salazar N. B., Schiller N. G., eds. *Regimes of mobility: Imaginaries and relationalities of power*. London: Routledge, 2014. (In English).

Salazar N. B., Smart A., eds. Anthropological takes on (im)mobility. *Theme issue, Identities: Global Studies in Culture and Power*, 2011, vol. 18, no. 6. (In English).

Serres M. *The birth of physics*. Transl. by Jack Hawkes. Manchester: Clinamen Press, 2000.

Sheldrake M. *Entangled life: How fungi make our worlds, change our minds & shape our futures*. First edition. New York: Random House, 2020. (In English).

Simard S. *Finding the mother tree: Discovering the wisdom of the forest*. New York: Alfred A. Knopf, 2021. (In English).

Stamets P. *Mycelium running: How mushrooms can help save the world*. Berkeley: Ten Speed Press, 2005. (In English).

Suliman S. et al. Indigenous (im)mobilities in the Anthropocene. *Mobilities*, 2019, vol. 14, no. 3, pp. 298–318. (In English).

Swimme B., Berry T. *The universe story: From the primordial flaring forth to the ecozoic era — A celebration of the unfolding of the cosmos*. San Francisco: Harper, 1992. (In English).

Szerszynski B. Planetary mobilities: Movement, memory and emergence in the body of the Earth. *Mobilities*, 2016, vol. 11, no. 4, pp. 614–628. (In English).

Teaiwa K. Our rising sea of islands: Pan-Pacific regionalism in the age of climate change. *Pacific Studies*, 2018, vol. 41, no. 1/2, pp. 26–54. (In English).

Tsing A. L. *The mushroom at the end of the world: On the possibility of life in capitalist ruins*. Princeton: Princeton University Press, 2015. (In English).

Tucker M. A. et al. Moving in the Anthropocene: Global reductions in terrestrial mammalian movements. *Science*, 2018, vol. 359, no. 6374, pp. 466–469. (In English).

Turnbull D. Maps narratives and trails: Performativity, hodology and distributed knowledges in complex adaptive systems — An approach to emergent mapping. *Geographical Research*, 2007, vol. 45, no. 2, pp. 140–149. (In English).

Vernadsky V. I. *The biosphere*. Transl. by David B. Langmuir. New York: Springer, 1998. (In English).

Warde P. et al. *The environment: A history of the idea*. Baltimore: Johns Hopkins University Press, 2018. (In English).

Welz G. More-than-human futures: Towards a relational anthropology in/of the Anthropocene. *Hamburger Journal für Kulturanthropologie*, 2021, vol. 13, pp. 36–46. (In English).

Wentzer T. S., Mattingly C. Toward a new humanism: An approach from philosophical anthropology. *Hau: Journal of Ethnographic Theory*, 2018, vol. 8, no. 1–2, pp. 144–157. (In English).

Wohlleben P. *The hidden life of trees: What they feel, how they communicate*. Transl. by Jane Billinghurst. Vancouver: Greystone Books, 2016. (In English).

Wohlleben P. *The secret network of nature: The delicate balance of all living things*. Transl. by Jane Billinghurst. London: The Bodley Head, 2018. (In English).

Submitted: 25.01.2022.

Accepted: 01.04.2022

Article published: 01.07.2022