

Arto Mutanen, Mervi Friman,
Mauri Kantola & Taru Konst (eds.)

Human and Nature



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Introduction

Finnish Society for Practise Based Inquiry (Praba; www.praba.fi) opened a call of papers in autumn 2018. The call was based on the 17th Congress of Methodology in Hämeenlinna on April 24, 2018. The theme of the Congress was Human and Nature, organized by Praba and Häme University of Applied Sciences (www.hamk.fi).

The relationship between human and nature is very complicated. In the book, the intention is to characterize the relationship between human and nature from different perspectives and backgrounds. Obviously, humans are part of nature which does not cover the essential aspects of the relationship. However, seeing human beings as a part of nature gives the book a posthumanistic viewpoint; nature should be considered in all actions and human beings have NO intrinsic right to destroy nature or set themselves above it in ethical considerations.

The technological development made by humans also has impact on the relationship between human and nature. However, the technology does not change only this relationship but also humans themselves. Technology provides us with new skills and tools which change us. At the same time, technology changes nature, as global warming or pollution of nature demonstrate. Not all the changes are negative. The whole variety of nuances within the relationship between humans and nature tells us a rich story in which there are several different aspects.

The relationship between humans and technology is interesting and extremely complex. The tools offered by technology are not mere tools, but they have several different roles. They can change the relationship between humans and nature. For example, ships changed the distances between countries. However, there are different kinds of tools, like languages, cars, and factories, which change humans, nature, and their relationship. Moreover, technology is not merely separate tools, but it constitutes technosystems where humans are involved.

The relationship between humans and nature is not mediated merely by technology and technical tools but also by culture. Culture changes humans' understanding about nature and hence also changes the relationship between humans and nature. Because of cultural reasons, humans may think nature as a mere source of satisfac-

tion for our needs or as worthy in itself which entails changes in our use of technological tools. However, the distinction between technology and nature is not sharp as the example of language as a tool shows. Language is a tool mediating humans and external nature but, at the same, language is a cultural object. Moreover, technology is also a cultural object. The Western economic-technical cultural rationality is dominating; however, could tourism function as a step which shows us new kinds of cultural approaches?

Culture is a complex unity of individual, social, and environmental factors (milieu). This affects relationships both between individuals and communities, and nature. This can be considered from a general philosophico-cultural perspective (Droz) or from a specific cultural perspective (Fontes et al., Suoza et al., Freitas et al.). The latter, at the same time, exemplifies citizen science which deepens the cultural perspective. Cultural aspects give a clear and general understanding of the human–nature relationship. However, there is a need to consider the human–nature relationship from an individual point of view, which is interesting from the ethical perspective (Konkka). This raises several specific questions like travelling (Ketaraukis), machine and sport (Siitonen & al. and Väänänen). These individual aspects are closely connected to cultural aspects which is reflected in the context of peacekeeping (Anttila et al.). The connection is systematically built by education (Konst). Does this make everything a social construction (Dremel)?

During the writing and publishing process of this book, our planet has been in the middle of tragic natural disasters. The Amazon area, which was strongly in the focus in the Human and Nature seminar and in this book, has almost been destroyed. The results are dramatic and reflect all over the world. In the background of the Amazon case there is human beings' greed and endless aim to profit maximization. As a further example, the hurricanes in the Pacific Ocean have destroyed nature and constructed environments alike.

A phenomenon called climate anxiety has been diagnosed especially in young people, the worry and fear of climate change and its impacts are growing everywhere, and climate immigration is increasing too.

The intention of this book is to characterize the relationship between human and nature. There is no fixed viewpoint from which the relationship should be characterized. The articles aim to offer several different perspectives to the topic both from micro and macro perspectives. Interaction brings the articles together – the focus in

all articles is interaction between human and nature. Interaction has as many different models as the authors: physical or mental, bare or hidden. Globalization (or internationalization) is also strongly present in the relationship between human and nature – when changing the environment, human beings have to relocate themselves and find a position in the new nature.

In all, this book aims to generate both an opportunity and duty to open our eyes and minds to the reality, and also to support and encourage us to take concrete steps towards a sustainable future.

The editorial board thanks all authors for contributions and participation in the common journey in the publishing process.

Arto Mutanen, Mervi Friman, Mauri Kantola, Taru Konst

CHAPTER I:

Cultural multitude

1 What ethical responsibilities emerge from our relation with the milieu?

Lajna Droz

The meaning of the word “nature” and its multiple imperfect translations has various connotations in different contexts and cultures¹. For my Indonesian friend, nature means tropical forests and coral reefs. For her, nature is timeless and unchanging. For me, it is capricious and ever-changing. Nature means trees in all their variations, golden flowers, wide red leaves, dark needles and covered with silent snow. Depending on what nature means for each of us, even time flows differently, beating to the cadences of the seasons or standing still like pond water.

Maybe to escape the traps of these nuances, sciences and most of the mainstream international political discourses prefer to use the supposedly more precise word “environment”. Yet, until recently, the perceiver has been forgotten, and the “natural environment” is taken to be independent and isolated. The idea of “ecosystem services” attempted to illustrate the various ways in which we, humans, are linked to the natural environment (Jax, 2013). However, it generally fails to recognize the fact that we are the ones designing and defining this independent object standing in front of us apparently on its own. We are then left with an illusion of objectivity precisely where the diversity of understanding reaches its peak; in our relationship with the world. More strikingly, our relationship with the outside world (encompassing the natural environment) mirrors the construction of our very identities. Obliterating the former under a veil of apparently consensual objectivity thus hides the various nuances and differences that make us who we are as individuals and cultures. Possibly, the very fact that we can relate to the world and to ourselves in such a rich diversity of ways is precisely what makes us human.

¹ Acknowledgements: I am deeply grateful to Pr. Arto Mutanen and to the two anonymous referees for their precious encouragements and enriching comments, and to Jimmy Fyfe for his careful proof-reading.

Our relationship with the milieu

Almost a century ago, to understand better this fleeting relationship between humans and nature, the Japanese philosopher Watsuji Tetsurō (1889–1960, (2011)) introduced the concept of *fūdo*, or milieu as translated by Augustin Berque (1942–, (2000)). He writes:

What we usually think as the natural environment is a thing that has been taken out of its concrete ground, the human milieu-ity, to be objectified. When we think of the relation between this thing and human life, the relation itself is already objectified. This position thus leads to examine the relation between two objects; it does not concern human existence in its subjectivity. On the contrary, this subjectivity is what matters in our opinion. Even if medial phenomenon is here constantly questioned, it is as expressions of human existence in its subjectivity, not as the natural environment.²

In Japanese, the word *fūdo* is composed by the character for the wind, and the character for the soil. To perceive the dynamicity and ungraspability of the wind, one is still situated at a place on the soil. The soil is where one is always standing, the point from where we perceive the caresses of the air that constantly surrounds us. The word "milieu" itself comes from French and literally means "in the middle of", and by extension, everything that surrounds a being who is in the middle of it. Similarly, etymologically, the word "milieu" comes from the Latin "medius locus", "middle place" (Ménage, 1650). The milieu is the world surrounding us, which we perceive subjectively and on which we constantly act. For Watsuji, we are constantly in dynamic cycles of codetermination with the milieu. Like the movement of a restless pendulum, we negate our self to identify with our milieu, and then we once again assume our independence from the milieu to come back to our self (MacCarthy, 2010). Both our personal identity and the milieu itself are changing and evolving through these cycles of interaction.

Through one's life, one interacts with many different milieus. I grew up in the Swiss mountains, went to study in an ancient Japanese capital, and I am writing these lines from a train crossing the Siberian steppes. I absorbed elements from each of

² I use my own translation of *fūdo* as milieu following Augustin Berque's translation. The original Japanese text is in Watsuji, 2004, 1.

these milieus. Interacting with them changed me, and I will change even more by interacting with other milieus. I was also influenced by milieus that I encountered only semi-directly, such as the remote Indonesian island where my friend grew up, on which I have never stepped. By discussing and exchanging with my friend, I learn about this other milieu and I care about it, as it is part of the identity of my cherished friend (Droz, 2018). Like the two sides of one coin, we are shaped by our milieu while we are simultaneously shaping our milieu itself. On the one hand, we are continuously becoming who we are through interactions with milieus, but we always exist situated in one specific milieu. On the other hand, any specific milieu is the result of a process of co-creation involving multiple relational individuals and the natural environment.

The milieu is not merely the natural environment understood as a passive physico-chemical receptacle. It includes our natural surroundings, but as perceived and lived by us. It is both the matrix and the imprint of our human existence. As a matrix, it surrounds us and nurtures us. Always lived by subjective human beings, it includes the natural environment as viewed through our human eyes. The idea of milieu blurs the line between wilderness and nature organized by humans, as we are able to admire seemingly untouched wilderness precisely because we learnt to appreciate its beauty through our culture. As an imprint, the milieu is made of traces left by our human actions. It is a place of shared intersubjectivity, on which we project representations, significations and symbols through our common imaginary. It is never constructed solely by an isolated individual. It is built through the complex net of eco-techno-symbolic relationships that we develop between each other and with our environment as human groups and cultures. In short, the milieu is a dense web of meanings, values and norms connecting us with each other and with our environment.

It connects us by sending a multiplicity of small indices to orientate our behavior. The most basic example could be a forest path, snaking between the trees, sometimes with stone steps to climb a slope. When we perceive our environment, we always perceive it in terms of what we could do with it. We never see what surrounds us neutrally. Instead, we face a plethora of possibilities of actions. Some of these possibilities are extremely basic such as drinking and climbing stairs. Others are more complex and involve cultural backgrounds and learnt elements such as using a computer or chopsticks.

The milieu is composed of signs left by other human beings telling us how to use and understand elements of it. As such, it carries the signifying traces of the past, co-creates significance with the living human beings in the present, and transmits it to the future. For example, an arena made of stones millennia ago tells us stories about how the human beings who designed, built and used it understood the world. The same arena can be renovated and appropriated today for other usages and carry new meanings that future generations will observe as historical artefacts. The milieu connects us through times, beyond our births and deaths. Referring to this historical aspect of the milieu, Watsuji Tetsurō wrote: “The individual dies, the relation between individuals changes, but while dying and changing, individuals live and their betweenness continues³.”¹ The Japanese word for “human” is composed by the character for the individual, and the character translated by “betweenness” here. Drawing on this etymological basis, Watsuji insists that the relations are a constitutive part of what it is to be human (2007). Human beings are always entangled in their relations with the world. The space between the individual and the world is where agency appears, existing only in the relation of the “individual” with the “other”, be it human or environmental. Finally, the historical milieu is that by which the individual agent’s existence spans beyond her spatiotemporal point of observation, towards distant places and a distant future. Material artefacts and immaterial heritages are examples of how the traces we leave on the historical milieu continue beyond our individual deaths.

The concept of milieu reflects the ambivalence of the relationship between humans and nature. This relationship is elusive because it emerges from the ever-changing and dynamic process of weaving a relation with the world. How we relate with others and the world seems to be the key to both our understanding of nature, and to the ethical questions of how we should behave towards it. This process of relating begins with the very immediate and raw experience that we have at any instant of consciousness. Experience itself is already a relation. However, neither the experience nor the relation can be isolated, objectified or analyzed as such. Like moving nodes when the spider weaves its web, they are always essentially entangled with multitudes of other elements and escape our grasp. Yet, our experience of others and the world is always embodied. Therefore, our bodily experiences can be a possible anchor to start with when investigating this slippery question.

³ *fūdo*, 19–20 my translation.

Now, stop, take a breath. As you read these lines, pay attention to the flow of the air coming in and out of your chest. The air might be dry and sharp, or heavy with humidity; it might carry the soft familiar smell of your body and the abrupt smell of the printed ink. Maybe the scent of pollen or the aroma of pine resin floats in the air. These simple elements usually lay beyond our attention. Yet, they are constantly informing us of our surroundings and often contain some elements from the natural environment. Sometimes, they can be so strongly associated with some specific meaning or memory that they can catch our wandering attention. As soon as the scent of the pine resin reaches you, memories of childhood hikes with your grandfather and of the sweaty warmth of his calloused hands might come flooding back to you. Your mouth waters as you remember the stories he used to tell about the one pine under which he always found mushrooms. From the instant we perceive them, elements that seem neutral and to exist objectively around us are loaded with personal or cultural meanings and values. Even years later, while walking in the forest alone, you may instinctively glance at the root of a pine tree, spontaneously looking for traces of mushrooms.

Meanings attached to elements of the milieu are always developed between people. They often resonate far beyond the intention of the speakers. Both intimately personal and socially shared, these elements are powerful mediums that nourish feelings of belonging. Moreover, if you feel you belong somewhere, you are usually ready to take action to protect this place. Up to now, the most successful environmental social movements have been grassroots and local, led by people caring about an issue close to them. When plastic starts to block the river you used to fish in and when climate-change induced drought empties the lake where you used to ice skate, you often feel a greater concern for environmental problems. It is no wonder, then, why natural symbols are used on flags and in anthems all over the world. Nevertheless, the strong emotional link we develop with our surroundings is not only used to shape communities; it is also used to wage wars. Elements of the landscape trigger feelings of attachment that can be further exploited as expressions of nationalism. Some particularly meaningful elements of the milieu can be hijacked in order to channel these emotions into a particular political ideal.

We are so sensitive to some natural elements because they are constitutive elements of our identity. In the first lines of this article, I described how nature evokes such different images for me and for my Indonesian friend. What comes to mind when we think about nature is a part of who we are, influenced by where we grew up, where we have been, and with whom. Natural elements that have a constitutive value for us

can be abstract (for example, the wolf as a symbol), but they can also be particular, such as the tree in front of Kyoto University's clock tower. It is not the species of the tree that matters here; it is the individual tree itself. Surviving wars, typhoons and earthquakes, this specific old camphor tree grew to be the emblem of the university. We all attribute constitutive value to some elements of our milieu, and sometimes to our milieu as a whole.

A single breath and we drifted so far away! What is surprising here is less the path taken in this example, than the fact that – I hope – you could come along with me, relate to some parts of my story, and somehow understand how even a single breath of air can be embedded with hidden layers of meaning. This is because despite coming from different milieus, we still have a lot in common. By “coming from” here, I do not just mean our birth place, but the sum of the many milieus with which we interact and which play a role in forming who we are right now. Despite our variety of origins, we can relate to each other because we share a common ground. The most basic aspect of this ground is our common vulnerability to changes in our environment. We are vulnerable as individuals, with our bodily perceptions warning us of potential threats as well as possible rewarding actions (delicious mushrooms). We are also vulnerable as a species, especially if we continue to destroy the very conditions of our existence, i.e., our natural environment. However, beyond this primordial vulnerability, you could understand how the scent of a pine tree conjures up memories for me because you could make sense of the series of the written words on this page. In this case, we share a language, an important cultural tool. Furthermore, beyond this important tool we also share a common will to understand each other, and a belief that it is possible to understand each other.

In summary, we are building our identities as situated in a specific milieu, borrowing meanings, values and guidance for behavior from it. As individuals, we are all unique and different from each other, partly because we have weaved the narrative about ourselves and the web of our actions in particular ways in relation to particular milieus. Simultaneously, we all have in common this very process of relating to the world, and our essential vulnerability when confronted with it. The sharing and communal shaping of a milieu is also what holds a specific group of human beings together, by sketching a frame of reference fostering coordination and mutually supporting lifestyles. Because milieus exist historically beyond the spatially and temporally limited life of an individual, they also allow us to connect with stories and webs of meaning held by others far away from us, in other eras and continents. By

connecting and interacting with aspects of milieus that differ from our identity, we are confronted with the high diversity of worldviews, meanings, values and practices that humans have developed to relate to the world and nature.

Individual imprints shaping the milieu

The variety and the essential subjectivity of our understanding of what nature is matters, for it determines what we value and how we behave. And today more than ever, because of the power technology gives us, we need to be careful with these questions. The process of co-creation of the milieu is also partly composed of negotiations that all have an ethical dimension. How we experience the world reflects our relationship with nature and vice versa. We experience the world through concepts and ideas inspired by, borrowed from and co-created with our social milieus. Among these tools, we choose the ones that suit us better and orientate our own identities and actions. All these choices have consequences. Most of the consequences concern the meanings and values of the milieu itself, but many also have direct and concrete consequences on the natural environment. Our choices and actions shape the milieu in which we exist and interact with others – the milieu we will leave behind to future generations after our deaths. Any action that has consequences is subject to ethical evaluation and possibly to the assignment of responsibilities. Ethical evaluation and assignment of responsibilities is a thorny question, especially because our actions have consequences regardless of our intentions and knowledge. To address this delicate yet urgent question, I propose to explore first what kind of consequences our actions have on the milieu and on the natural environment. Then, I discuss how the importance of these consequences have to be balanced with the phenomenological experience of the agent to assign ethical responsibilities without suffocating us with pressure and guilt.

Some actions cause irreversible damage on our immediate surroundings, such as species extinction. Others also trigger domino effects spanning beyond the local scale of the action to the global level. These are the imprints left by one's actions on the milieu. For example, a farmer in a mountainous village uses an herbicide in her garden to cultivate corn. She repeatedly performs the action of spreading the product on her field. Her intention is to increase the yield of her land and her monetary income from selling the corns to be able to afford the education of her children. Regardless of her intentions, she may or may not notice the soil degradation in her own garden. A local and environmental consequence is the local extinction of a specific

species of a wild butterfly in the surroundings of her field. Her family may regret the disappearance of this butterfly, because it was emblematic of a season and the village identity. This is a consequence of the usage of herbicide in the garden affecting the local milieu, along with the loss of local knowledge related to weeding. Because it seems to be more convenient to use herbicide, the farmer may not feel the need to teach her children or her helpers how to use traditional tools and techniques. Tragically, if unstopped over a few years, the continuous usage of the herbicide may affect the physical health of her children, and even lead to the death of the soil. Due to the infertility of the soil, the family may then suffer from poverty and hunger.

The usage of herbicide in the farmer's garden also has consequences in distant localities. On the environmental level, it might pollute underground water, affect distant ecosystems and induce biodiversity loss. The water pollution may affect the milieus of other distant communities and force them to change practices or even to migrate. Finally, distant and local consequences might affect the individual directly in the form of stigmatization, social pressure and exclusion. The consequences of an individual action at the global level are generally coming from the domino effect. For example, the reduction of biodiversity and the drastic diminution of the population of insects in the area may hinder its usage as an important resting spot for a species of migratory birds. The migratory birds will be forced to change their migratory path, which might threaten the survival of the whole species. Other ecosystems around the Earth might be dependent on the seasonal passage of these migratory birds. It would be exaggerating to say that the specific individual action of spreading herbicide in one's private garden is solely responsible for the whole domino effect, but it would be equally wrong to say that it does not play any role in this consequence. The same goes for the global problems of desertification and habitat loss. For most environmental problems, domino effect across geographical scales is striking. Because the Earth's ecosystems and milieus are all closely interconnected and interdependent, an individual action might seem to have enormous consequences on the other side of the planet. However, it is crucial to make a clear distinction to prevent interdependency to be used in a *reductio ad absurdum* argumentation that would completely forfeit responsibility of individual agents. On its own, the fluttering of a butterfly's wings does not set off a tornado on another continent.

Contrary to the fluttering of the butterfly's wings, humans are constantly observing each other, making sense of the world together and normatively assessing each other's practices (De Jaegher, 2017, 497). Technologies of communications have made

this phenomenon of exchange stronger than ever before. Today, the video of a butterfly, shared by the clicks of thousands of individuals and promoted by the algorithms of social media companies might take some platforms by storm. It might become a part of a cultural imaginary or echo in the imagination of an artist who might produce a sculpture that is to become a famous part of a culture's tangible heritage. However, it is clear that all these are not the individual medial imprint of the videographer. The videographer only took a video and posted it online. It was then exchanged and shaped by thousands of individual actions (clicking, commenting, painting, writing, butterfly conservation campaigning, etc.). These individuals are all part of a specific social structure, namely, a network of practices that are normatively constraining and guiding individual behaviors (Haslanger, 2015, 12). As shown by the ubiquity of social media, this social structure can encompass different local milieus that preserve their own particularities attached to a point in the natural environment. Today, an individual action can be diffused through technologies of communication by multiple interventions of other agents and shape distant milieus. Still, going back to the video of the butterfly, without the action of the videographer, it is unlikely that the sculptor would have created this exact work at this particular time. I refer to these domino-effect consequences mediated by other humans' actions as the mediated medial imprints of the videographer as a member of a social structure and a milieu.

Because of the close interconnectivity within the social structures and the milieus, even our non-action has consequences. By "mediated imprints", I refer to the significant effects on the milieu that an individual agent has by virtue of being a member of a social structure. One's very existence already has consequences on the environment. In the market analysis for launching the production of a particular good, the individual is merely a number in a calculation table. Her intentions are predicted and modelled to be potentially manipulated by marketing strategies. One does not need to do anything to be counted as a potential consumer. Then, the number of potential consumers will be used as a basis to calibrate production, even if the individual later never buys the good. Still, the good is produced, using raw materials, energy and workforces, and necessitating proper disposal facilities.

One's appearance, body, clothes and social role also have consequences on the milieu, because they are influencing others' behaviors. One's inaction also has consequences, either by letting something happen, or by not complying with a consensual practice. We could argue that the consequences of the action of the farmer of spread-

ing herbicide in her garden are not only her medial imprint, but also the mediated medial imprint of the designers of the product, the salespeople, etc. Furthermore, we could argue that they are the consequences of the whole global social structure imposing conditions of poverty, consumer demand for corns, and an ideal expectation for children's education.

Phenomenology of the agent in the milieu

If we consider normatively the consequences mediated by an individual's existence and the domino-effect consequences of one's action and inaction, then the problem of where to draw the line is obvious (Vanderheiden, 2011, 217). Are we all partially responsible and normatively blamable for the consequences of the farmer spreading herbicide on her private field? How should responsibility and accountability be distributed? Up to now, we have been investigating the individual imprint on the milieu from the perspective of the observer, by listing the consequences of one's actions, inaction and existence. The perspective of the phenomenological agent might bring some further elements to sketch the line of what counts in the normative assessment of an individual.

The phenomenology of the agent sheds light on the agent's blindness. Indeed, we do most of our actions automatically and without deliberation. We are blinded by automatisms that are necessary for our survival, and also by a fundamental state of ignorance regarding the possible consequences of our actions. We are also limited by our worldview. What we can imagine and what possible behavior we can envision depend on the meanings, values and practices that are accessible to us through our milieus. Some of our rock-bottom beliefs might even hide and deform parts of our reality.

Moreover, the social role we inhabit at the moment of taking the action also influences our reasoning. When discussing her garden's yield in the council of her village, the farmer might not think about changes in her children's health. Meanwhile, in her social role as a mother, she might suddenly give utmost importance to her children's health and give a very different opinion about the situation. This incoherence might subsist even after understanding the relation between spreading herbicide and the children's health. On top of that, any deliberation process is limited by time and bodily constraints. Hunger and stress have important effects on the result of her reasoning.

A previously automatic action can be brought to the center of the attention of an agent when she faces unexpected outcomes. For example, if the corn itself starts to die out after a new version of the herbicide is spread, the farmer will reconsider her practice and reflect about it. Social pressure and blame are also crucial triggers of self-reflection about a previously automatic behavior. Finally, moral shock can also force individuals to articulate their moral intuitions and reassess some of their behaviors and inaction (James, 1997). Moral shock is a deeply shattering experience involving emotional, conative and cognitive aspects. For example, a consumer might decide to stop buying corn in the supermarket after watching a documentary about the consequences of the use of herbicide on the environment and the health and lifestyles of local people. Moral shock can provoke feelings of despair and pain that affect mental health when it is not subsumed into corrective actions that then bring about meaningfulness and fulfilment.

This gives us a practical limitation to the amount of responsibility an individual can be subjected to. Indeed, to make an individual desperate and suicidal is definitely not the goal of ethics. Because of the relational nature of humans, mental health goes hand in hand with ethical behaviors. In other words, the amount of moral responsibility that an agent can take should be balanced with mental health. The question is, then, what is the maximum one can do while being emotionally healthy.

Ethical responsibilities

We distinguished three types of consequences (direct, domino effect and mediated). We can also distinguish three phenomenological states of the agent when making a decision and performing an action. The effects of an action can be known and deliberately expected, they can be predictable yet ignored (voluntarily or because of one's worldview and automatism), and they can be unknowable to the agent given her situation and circumstances. When combining these three types of consequences with the three phenomenological states of the agent, we can then assess different types of responsibilities. Full responsibility is generally assumed for any consequences that are deliberate. Yet, as nobody but the agent herself knows her phenomenological state when performing the action, it is hard to judge others' actions by this criterion. It is still common to attribute full responsibility for the direct consequences of actions that are predictable yet ignored. Full responsibility here would require accountability and possible sanctions by others.

Most environmental problems arise from an accumulation of domino-effect consequences and mediated consequences. If these consequences are predictable yet ignored, then the individuals engaging in these actions have a partial responsibility for the outcome (Attfield, 2009). That is, as we all are members of a social structure, we have partial responsibility in designing it (Haslanger, 2015) and in the consequences it has on its members, on other human beings, and on the environment (Kutz, 2007). This partial responsibility needs to be balanced with mental health so that it does not overwhelm the agent and prevent her from taking appropriate actions.

Finally, we are all in a state of ignorance about some of the possible consequences of our actions. Contemporary environmental problems highlight this ignorance related to the complexity of the Earth's climate system and biosphere (Glazebrook, 2010). We can hardly assume responsibility for an effect that we could not possibly predict, but neither can we totally erase responsibility because of our ignorance. What we can do is estimate what is unknown to the agent, namely, what is inaccessible to her knowledge, excluding what is made inaccessible by personal choices. Conversely, what is knowable is the information that is accessible and that the agent decides to trust. Then, to assign individual responsibility, this assessment of the state of knowledge of the agent can be balanced with the severity of the harm induced by her imprint.

All in all, as individual phenomenological agents, members of a milieu and entangled in a social structure, we are responsible for designing and transmitting the milieu and the social structure. Because of our state of ignorance, we have a responsibility to design them grounded on the precautionary principle (Jonas, 1979). It implies that we are responsible for the meanings and values we attribute to elements of our world, as they directly orientate our actions and behavior. We are also responsible for holding worldviews that support decision-making that has regrettable consequences on the environment and on the milieus.

What does this concretely mean to us as individual living human beings closely attached to and dependent on our milieu, our lifestyle and our identity? It means that we must closely care about the way we relate to others. Indeed, we relate to other human beings and other elements of our milieu through actions, judgements, acts of communication, body languages, etc. Because of the interconnectedness of the mediated and domino-effect consequences of each and every of our actions, the way we relate to other beings in general impacts our milieu. Even by trusting and relaying

some piece of information, we give our support to the meanings and values grounded on it, and so to some specific worldviews and lifestyles. All of which results in impacting the environment itself. In short, we cannot isolate our relation to the environment from our relation with the world and with other human beings.

Consequently, we have a responsibility for actively seeking to increase our awareness of the consequences of our behaviors and to work on our important blind spots. Beside automatisms and fundamental ignorance, we are blinded by the limits of what we can imagine, and we might be blinded by some of our rock-bottom beliefs. One example of a potentially problematic rock-bottom belief is the conviction that there is an essential and hierarchical difference between humans and nature. Along with racism and sexism, beliefs in an essential difference with a specific otherness affect the emotional reactions that we may have when entering into contact with an idea, a worldview or a person that we judge to be essentially different from us. For instance, when one meets another person and sees their difference as an insurmountable obstacle to mutual understanding, the interaction that will unfold is likely to be circular. By not even contemplating the possibility of mutual understanding, one closes the fences around oneself and treats any input from the other as a display of the characteristics of an alien being. The refusal of reassessment of oneself inhibits the potential flourishing exchanges. What the other expresses is not taken to be relevant to oneself. This passive ignorance does not need to be associated with aggressiveness or bad intention to be harmful. On the contrary, this silent contempt with oneself is even more powerful when it is normalized. The impossibility of exchanges is then taken for granted, and any attempt to challenge this state of affairs is considered a foolish endeavor colored with pride.

Any encounter with another being or another idea is challenging one's own identity (Mayeda, 2006, 87). The reaction of closing oneself and rejecting the other difference as a potentially valuable input is a protective reaction for the existent identity. However, it might prevent one from adapting to a new milieu by isolating one from most of the information covering their surroundings. Moreover, this lack of adaptability might be more dangerous to oneself than confronting the differences when they appear. Indeed, our surroundings are always populated by other human beings' ideas and worldviews. They are present in the architecture of buildings, in the design of tools, and even in our heads, through the words we use to think and the grammar we employ to articulate the diverse elements. They are essential components of our identity and necessary supports for us to make our way through life.

Conclusion

In the case of global environmental problems, negotiations of practices and worldviews are highly complex because of the globalized context of the pluralism of worldviews. Differences and disagreements can be found everywhere, and may lead to radicalization and dogmatism. Nevertheless, we have in common a shared goal that is survival, or the continuation of our existence. This is not to be understood merely as the preservation of the conditions of survival for our individual life, but also the success of the projects we are invested in, and possibly the lives of other people we care about. All this is dependent not only on a livable natural environment, but also on meaningful milieus. Thus, in the midst of the high diversity of worldviews and the variety of milieus, a common goal we all have as living human beings is sustainability. The key point of sustainability is the continuous co-creation, conservation and transmission of a living meaningful milieu. Indeed, a healthy and meaningful milieu is a necessary condition for human flourishing, be it for ourselves, for the people we care about, or for future generations.

Many of the worldviews and projects we are constructing now are not sustainable in the sense that they undermine the very conditions for their continuation. When an unsustainable project collapses, its meanings and symbols collapse alongside it. It leaves social and cultural scars and can involve collateral irreversible damages such as loss of lives and biodiversity loss. Therefore, the sustainability of projects and worldviews we are inventing now is a forward-looking requirement. The high complexity of our world's social and natural systems also urges us to follow a precautionary principle and preserve the highest diversity of sustainable elements of the milieu (at all levels, from biological diversity to the diversity of worldviews).

To conclude, the milieu is both the ground and the result of interactions and ethical decisions made by all of us. We have seen how our lives and identities are shaped by the milieus we interact with, and how our actions are conversely shaping the milieus. Our most intimate identity and our milieu are so closely intertwined that we cannot thrive with one without caring for the other. Questions of environmental sustainability often seem to be distant from our everyday concerns, but actually, they touch us directly when it comes to the meanings and values that we attribute to our lives and milieus. Ethical responsibilities towards other living beings, the milieu, and ourselves are emerging directly from the relation we weave with the world. More than constraining and limiting us, they are guiding our behavior and giving

meaning to our lives. Maybe it is time to take another deep breath, and to face with joy the beautiful struggles of being entangled in so many diverse relations in an ever-changing world.

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2. Man–nature relationship in a reflection of Brazilian agriculture: a macro perspective

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Abstract

Nowadays, the main economic activity developed in Brazil is agriculture, which consists of the exploitation of rural environments through the planting of the soil and the creation of herds for cutting, especially livestock. This model of man-nature relationship has been constructed over time, leaving a trail of degradation due to the way in which cultivation and herd breeding have been practiced in recent decades, which have sometimes exhausted or bordered the exhaustion of our forests, with its focus on the liberation of new spaces for the development and expansion of this model, which so well characterizes the relationship between man and nature in our country. The present work aims, through a systematized study, under the field of soil usage, to present how this process of its occupation occurred for the development of herd and herd activities, as well as to discuss man-nature relationship through a cultural perspective. Finally, we intended to show some measures and paths that have been adopted in Brazil, with a view to improving this relationship that was the result of a historical construction that took place after the arrival of the Portuguese people, to colonize the Brazilian territory, in a time when just indigenous were there.

Key words: Agriculture and livestock; Exploration of the rural environment; Man-nature relationship; Historical construction.

Brief report of the beginning of Agricultural Activity in Brazil

The agricultural activity consists of the exploitation of the rural environment through the plantation of the soil and the creation of herds for the cut. This vocation in a rudimentary and simplistic way was already practiced by the Indians, as can be abstracted from the historical accounts, beginning a new phase from the arrival of the Portuguese.

In it, until now, we have not known that there is gold, nor silver, nor anything of iron or metal; nor did we see it. But the land itself is of very good airs, so cold and temperate as those of Entre Douro and Minho, because in this time of now we thought them as those there. Waters are many; endless And in such a way it is gracious that, wanting to seize it, everything will be there, for the sake of the waters it has. (Caminha, 1500) [Our translation].

As can be seen from the passage from Pero Vaz de Caminha's Letter sent to the King of Portugal, the noble writer already extolled the characteristics of the Brazilian land in relation to its agricultural vocation. In the mentioned fragment, the writer is emphatic in mentioning that it was not yet known of the existence of ores, but that due to the abundance of water and the favorable climate conditions, the "New Earth" had excellent agricultural potential.

The agricultural activity in the land, now a colony of Portugal, it can be said it started from the division of Brazilian lands into hereditary captaincies, which, according to Diniz (2005), were immense tracts of land that were distributed among some citizens who had some privileges in the society of those days, with the purpose of being a military and economic establishment focused on the external defense and also on the increase of activities capable of stimulating the Portuguese commerce. We can see the man-nature relationship demanding the needs of the local society.

As it is shown above, the mission of the hereditary captaincies resided in the protection of the dominion of the Portuguese crown on the new land and the stimulation of its commerce. To this end, the Grants of the captaincies had to encourage the rural economic activities developed by the first settlers.

According to Motta (2009, p.19) *apud* Silva (2019) the Institute of *Sesmarias* was the policy of colonization put into practice at the time of the creation of hereditary captaincies. Thus, the Grants were in charge of sharing the captaincies among the residents in the *Sesmarias* regime, as well as the author makes it clear that this model had a different way of "occupation" and legalization of the land.

In this context, it is clear that “the *Sesmaria* was a subdivision of the captaincy with the objective that the land was used” (Diniz, 2005), and whose purpose was the colonization of Brazilian lands, affirmation of Portuguese ownership and richness production from the use of their land.

It was with this in mind that the history of agricultural activity in Brazil began in such a way that it built a man-nature relationship that is sometimes based on the premises of disorderly exploitation, based on the incessant search for profit itself.

The overthrow of the forest for the formation of new areas of plantation and pastures

The overthrow of the vegetation cover for the formation of arable and pasture lands, came years after years, decades after decades, being multiplied. This practice had its support in the search for fertile soils for cultivation and consequent increase of production, associated with the expansion of livestock, in view of the, national and worldwide, growing local demand, by the need for food and profit.

It is in this panorama that the WWF / Brazil (2019) calls attention to the fact that every year, fire has been stealing parts of the Amazon Forest, which is the most striking feature of the advance of agriculture and livestock. These burnings are of such a magnitude that they even become visible from space, with the power to reduce to ashes everything they encounter along the way, including the forests.

The cited organization (op cit) still points out that during the dry season, Brazil calls the attention of the world to forest fires, since the burning is still a practice of agricultural management much used to make room for subsistence plantations (so-called slash-and-burn agriculture) and for livestock pastures. This method is nationally developed because of the ease and its zero-cost of preparing the soil for agricultural development.

Also in this context, IBGE (Brazilian Institute of Geography and Statistics) in a survey released by the news portal UOL, reported that between 2000 and 2010 agriculture was the largest responsible for deforestation in the country, followed by livestock:

The devastation of forest areas in Brazil between 2000 and 2010 was mainly responsible for the expansion of agricultural activities, [...] 236,600 km² of de-

forested areas, almost the size of the State of São Paulo, occurred for the implementation of crops. This represents 65% of the total deforestation in the period. On the other hand, the expansion of pasture areas accounts for the other 35% of deforestation (IBGE, 2015). [Our Translation]

Thus, although we are aware of the importance of agricultural activity for Brazil, we must not forget that without the preservation of renewable resources, such as forests, soils and water, this activity will not prosper.

Even with this inescapable finding, Bertoni and Lombardi Neto are categorical in stating that there are two fundamental reasons why specialized services for conservation programs do not achieve the expected success:

There are two fundamental reasons for the lack of a marked success: (a) restrictions on the exploitation of the soil are unacceptable to the people and government, since such exploitation is providing immediate prosperity to individuals and the nation and (b) in a hungry world, it is difficult to restrict food supply, even if this may mean a reduction in productivity in the long run (Bertoni and Lombardi, 1999, p.27). [Our translation]

In the search for the harmonization of these social and governmental demands, with the need of environmental preservation, that is a series of regulations appear in the Brazilian legal system with the purpose of equalizing such interests.

The conservation of the soil as a means for harmonious coexistence between agriculture and nature

The preparation and inadequate soil management associated with the topography of the land are the main causes of loss of soil fertility. It is already known that the intensive use, whether for cultivation or for pastures, of this resource and the more severe overturning of its vegetation cover, causes the land to produce less and less, due to the gradual loss of its productive capacity.

The vegetation cover prevents erosion, feeds the water table (...). The higher vegetation (...) improves and balances the local microclimate, due to shading, the effect of windbreaks and the retention of humidity. (...) An important step is the correct management of the vegetation inside the cultivated area and in its surroundings. The way in which crops are arranged in time and space, that is, the degree of spatial and temporal heterogeneity of each agricultural region conditions the local or introduced biodiversity (Armando, 2002, p.10). [Our Translation]

The soil is more complex than it can be imagined, the indiscriminate use of this resource leads to changes in its structure, interfering in the development and maintenance of macrovida and microvida in it, fundamental to the development of agriculture and livestock.

Soil works as a living organism: in 1 gram of healthy soil lives a biological community of approximately 10,000 different species, such as earthworms, larvae, beetles, collomen, mites, algae, bacteria and fungi. These organisms require food to live, mainly carbon and nitrogen that are present in the straw of crops and animal manure. Because of this, it is important that the soil has a certain content of organic matter to provide the food and energy that the microbes need to live. If the soil has a good life span, the microbial population (such as beneficial bacteria and fungi) will help plants absorb and pump or recycle nutrients that are “loose” in the soil and thus available to plants as food (Paulus et al. 2000, p.14). [Our Translation]

Based on Paulus's statements, it can be concluded that the overthrow of forests in Brazil, in addition to economic interest, is closely linked to the search for vigorous lands with full production capacity due to the gradual loss of fertility in the areas already occupied by agriculture, arising from the predatory preparation, management and / or the usage of this resource.

On this path, the Regional Advisory and Training Center – CERAC (2009) found that the practice of burning used to clear the land, as well as the illusion that burned land produces better, causes great damage to the environment.

Given that, in addition to burning the organic matter that fertilizes it, it also kills microorganisms, which are responsible for working to leave it ready to produce, and with its death, the soil is no longer worked and hardened (compacted), making it difficult and sometimes even preventing the entry of water and air into its composition, not lending to production, as well as becoming a land without life.

It was in this clash that some agricultural methods of preserving soil fertility and moisture were developed and are successfully applied to regions with tropical climatic conditions, as examples we have:

- crop rotation, which avoids the scarcity of soil minerals, as each crop basically removes one type of mineral, allowing the replacement of others. It is a simple method, where the crop / plant is changed year after year, only to be repeated after a considerable time lapse for the recovery of minerals by the soil that the crop had removed;

- contoured planting in rugged terrain that reduces rainwater runoff to prevent erosion. This technique consists of planting by making a curved line around the slope of the ground;
- green manure that replenishes minerals taken from the soil by the crop. It is a practice in which to grow leguminous plants in the soil with the intention of nutritionally enriching it with nitrogen, and these legumes are incorporated into the soil with the help of the plow.
- misting, which consists of constructing small depressions between crop lines to dam rainwater and encourage soil moisture.

Therefore, it is understood that the future of agricultural activity depends on the rational use of soils, linked to a conservationist feeling of this resource, considering that it is already known through technical-scientific studies developed, for example, by EMBRAPA (Brazilian Agricultural Research Corporation), which can produce more from the land it already has available for agriculture, without the need to destroy the remaining resource.

Brazilian environmental legislation and the preservation of the environment

With the advent of redemocratization, more specifically, with the promulgation of the Constitution of the Republic of 1988, Brazil sought to effectively adapt the environmental demands, so the constituent power reserved in Title VIII, which deals with the social order, Chapter VI, to the environment (art. 225), making it a constitutional matter.

However, as it is a constitutional norm of contained efficacy, that is, it has immediate, full, full applicability, but with its reduced scope because it does not establish the objective criteria to achieve the desired environmental protection, nor with the ability to establish a harmonious relationship between men and nature, in its entirety fauna and flora, for without the infraconstitutional norms, society, or at least part of it, would not control its destructive impulse, the punitive norm separates civilized man from the barbarian.

It is in the pursuit of this interest that the infra-constitutional norms the Brazilian environmental law arises, aiming to reach the difficult task of integrating the pro-

ductive activities of the field the necessity of environmental preservation. Imbued with this mission, the legislator drafted Law No. 6,938 of August 31, 1981.

To this end, it established the national environment policy as a measure of subjection of society and government to the development of a relationship of exploitation of the rural environment, which borders on the balance, as shown in its article 2, caput, and its paragraphs. In reading this device, it is noted that it does not go beyond what was brought by the 1988 Constitution, basically reproducing the constitutional norm.

However, this Law no. 6,938 / 81 advances in determining the conceptualization for the Brazilian legal system of what becomes the environment for legal purposes. This legal concept, article 3, item I, was of the utmost importance in view of showing that the Brazilian nation must understand as environment the “set of physical, chemical and biological conditions, laws, influences and interactions, which allows shelters and rules life in all its forms”(BRAZIL, LAW No. 6.938 / 81).

The importance of defining a legal concept for the environment is based on the scope and nature of public policies developed in the country that seek to effectively establish a balanced relationship between development and environmental preservation. This allows, for example, that bodies such as IBAMA (Brazilian Institute of Environment and Renewable Natural Resources) and NGOs (Non-Governmental Organizations) of environmental nature, can guide their work for conservation, environmental education and or punishment through existing legal and appropriate mechanisms in the country.

Thus, having the legislation, the Brazilian State has been trying to reduce environmental impacts, while seeking to meet the growing need for area for cultivation and pasture. This is a task that is not always successful, as legislation is often lacking supervision. For, as can be inferred from article 4, caput, and its sections, of the law that deals with the national policy of the environment, it can be concluded that the objectives outlined by it, so far, are far from a real achievement. Although the government claims that it is intensifying policing / enforcement, in fact, we are far from achieving excellence, considering the extent of the territory and the number of troops, which are intended to enforce enforcement.

While highlighting as positive the interest of the Brazilian legislature in seeking mechanisms through the creation of norms that aim to meet environmental claims,

for example, by elaborating Law No. 9,605 of February 12, 1998, known as “the Law on Environmental Crimes”, which seeks first to avoid any damage to the environment; second, if the damage occurs, oblige the responsible or responsible person to repair it; third and last, if there is no other way, to apply the sanctions provided for in the norm, there are sometimes maneuvers in the executive, legislative and judiciary powers, in order to reduce the scope of the norm, relieving or even removing the punishment of the environmental aggressor.

The Environmental Law legislation that aims to discourage environmental degradation actions and establish a man-nature relationship in a fair way, allowing the practice of agricultural activity to develop in a sustainable way in our territory, exist and are as varied as possible, that in addition to Law 6.938 / 81 and 9.605 / 98, we can also cite: Law 5,197 of January 1967, which provides for the protection of fauna; Law 6,902 of April 27, 1981, which provides for the creation of Ecological Stations, Environmental Protection Areas; Law 7,797 of July 10, 1989, which creates the national environmental fund; Law 8,171 of January 17, 1991, which deals with agricultural policy; Law 9,985 of July 18, 2000, which regulates art. 225, § 1, items I, II, III and VII of the Federal Constitution, establishes the National System of Nature Conservation Units; Law 10,831 of December 23, 2003, which regulates organic agriculture; among other Laws, Complementary Laws, Decree-Law, Decree and Provisional Measure.

Noticeably, Brazil not only has a diversified publication of works of environmental nature, ranging from NGOs to government institutions, but also a vast legislation to protect the environment and regulate human activity, focusing on sustainable development. However, it is also noted that the effectiveness of these norms occasionally dissipates in time like smoke in the air, by maneuvers thrown at some or all state powers, clearly targeting the benefit of the offender, stimulating the sense of impunity and environmentally uneducating man.

Final considerations

For all the above, it is understood that the future of agricultural activity depends on the rational use of soils, coupled with a conservationist feeling of this resource, bearing in mind that it is already known through technical-scientific studies that it can produce more with the land that is already available to agriculture and livestock, without the destruction of the remaining forests being necessary to expand

them, with the necessary preparation, management and proper use of this resource. Man-nature relationship in this problematic context is the key to balance the society real needs and search for profits, understanding the present profits itself as a future degradation and total lack of profits.

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3. Man–nature relations: reports of educational experiences in the community Porto do Capim, João Pessoa-pb

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Introduction

This chapter deals with educational experiences involving teams from two public institutions located in the city of *João Pessoa*, state of *Paraíba*, located in the Northeast of Brazil (image 1): State Experimental School *Sesquicentenário* / CEEEAS and the Federal University of Paraíba / UFPB. These experiences have been developed with the *Porto do Capim* community and, among many other aspects, promote actions and reflections on the Man–Nature relationship since the territory in which it is located, in the historical city center, is also determined by the presence of the *Sanhauá* River, an affluent of the *Paraíba* River basin and its mangroves, and recognized by the Brazilian legislation as a Permanent Preservation Area. Throughout the research and experience in *Porto do Capim*, it was possible to verify a sort of symbiosis between the residents and the fluvial environment, which extends beyond the aspects of subsistence and respect to the environment. This relationship also includes the artistic and religious manifestations experienced in the community that is embodied in the existence of legends, superstitions, and mythology composed of local elements and associated by daily living with the fluvial environment, mangroves, and forest. This interaction culminates in a very heterogeneous cultural environment rich in traditions that have been inherited from the ancestors and transmitted to future generations, producing a unique way of life that has been reinventing itself through time.

However, this balanced relationship experienced by the community has been endangered by the threat of its removal by the municipality of *João Pessoa*, which aims to build an ecological park in the locality. This process is part of a project to “revitalize” the historical center of the capital of *Paraíba*, conducted by the process of gentrification, which has been under discussion for some years. The existence of the community, and its struggle to remain in the space it has occupied for more than 80 years, has led to a debate involving environmental issues, human rights, the traditional populations rights, public policies, of projects related to the use of space and the management of the city, tourism, historical, natural and cultural heritage, among



Picture 1: Location of the city of João Pessoa/ Paraíba – Brazil. Source: https://en.wikipedia.org/wiki/Jo%C3%A3o_Pessoa. (Accessed in 3/26/2019)

many others. This debate has involved the cooperation of different social agents of the city, including, of course, the residents themselves and their organizations, in addition to the public power.

The necessity to debate the situation of the community, and to formulate a solution to the tension experienced by it, has brought together several groups/institutions that have become partners in its struggle, among them the CEEEAS and the UFPB. Since 2018, the CEEEAS has investigated the society–nature relations, cultural manifestations and history of efforts of the *Porto do Capim* Community through the Project *Nós Propomos! Paraíba: Revitalizing Citizenship Through Education*, an Extension Project coordinated by the State University of Paraíba / UEPB and linked to the Institute of Geography and Spatial Planning / IGOT of the University of Lisbon / UL that aims to foster successful educational practices among students and teachers of the high school in order to encourage the development of citizen attitudes from the identification of urban socio-environmental problems and formulation of proposals for their resolutions from those of local communities. CEEEAS high school students constructed this chapter with the guidance of a professor of the same institution.

The *Subindo a Ladeira* Project: Heritage Education and Teaching of History Through Art is an interdisciplinary university extension program, promoted by the UFPB since 2011, and has systematically brought together professors and graduates from the areas of History, Geography, Social Sciences, Pedagogy, Theater, Musical Education, Social Communication and Digital Media. Its starting point is the recognition that the Brazilian university should promote, through actions of formation and diffusion of artistic, cultural and scientific knowledge, an approximation and effective integration with the community. It tries to deepen the process of raising awareness of the population of *Porto do Capim* regarding their status in the debate about their importance to the city of *João Pessoa*, as well as their right to it. The actions of the project, in the form of weekly workshops, are directed at children between 6 and 12 years of age and are a means of developing the citizen's understanding of the participants and of other people in the community, since it occurs that information flows from each student into their home and other community spaces. The actions to appreciate the local identity and lived experiences collaborate for the recognition of these people as historical agents and protagonists of the transformations of their reality. Educational practices – guided by principles of popular education – are interdisciplinary proposals that involve knowledge of theater, music,

poetry, storytelling, popular games and community communication (SUBINDO A LADEIRA PROJECT, 2011:02).

As has already been said, it is the relationship between students and teachers of these public education institutions with the *Porto do Capim* community, in their experience of life with the natural landscape – the river and the mangrove, which sprang up the experiences presented in the following parts section of this chapter.

The community of *Porto do Capim*

The community of *Porto do Capim*, now constituted by approximately five hundred families, is today the site where the city of *João Pessoa* began to be built in 1585. This area is located on the right bank of the *Sanhauá* River, which is a tributary of the *Paraíba* River (Image 2). The watershed of *Paraíba* is one of the most important in the state, and its low course since the 16th century was a prime area of a sugar plantation, and the river was the main transportation route for sugar and other products that left or came into the city, where its commercial port was located, as well as other community ports (the docks) that connected the banks of the estuary and its islands (GONÇALVES, 2007). By the end of the first half of the 20th century, due to the silting process of the *Paraíba* river, in its medium and low courses, caused by the uncontrolled expansion of sugarcane activity in its floodplains, and by the growth of the cities and the consequent population densification at its banks, the commercial port was transferred in 1935 to the neighboring municipality of *Cabedelo*, where the river meets the Atlantic Ocean.

From then on, a process of economic decay began in the area where the port of *João Pessoa* was located, which eventually resulted in the transfer of the commercial and financial center of the city to other spaces. Meanwhile, the abandoned facilities of this former commercial port were occupied, from the 1940s onwards, by a low-income population originally formed by families of unemployed workers after the closure of port activities, businesses and services that existed around it. These families joined fishermen, collectors of crawfish and shellfish, and other workers' families who had lived there, withdrawing their subsistence from the river and the mangrove, since the city was founded in the sixteenth century (heirs of the culture of the natives, the *Potiguara* people). This process was certainly accelerated throughout the 1960s and 1970s when the agrarian crisis triggered by the expulsion of the workers from the land, due to the sugarcane expansion, and also by the decadence of cotton

farming in the areas of the *Agreste* and the *Sertão* of *Paraíba*, promoted an intense rural exodus that “inflated” the capital and other larger cities of the state. These are the social origins of a large part of the population that today form the community of *Porto do Capim* and that, having established itself in the area, it has lived and remained there for over eighty years (Catarino et al., 2015).

Located around the Historic Center of the city, registered as a national heritage by the National Historical and Artistic Heritage Institute (IPHAN) on December 6, 2007, the area occupied by the Porto do Capim community was also, during this period, a place where mechanical workshops and stores/deposits of wood and recyclable material were installed, as well as small businesses that are now in full operation and which employ part of the residents. It is an area that offers the public transport that runs through the center of the city, from the lagoon of the Park Solon de Lucena to the railway line (connecting the capital to Cabedelo to the east and to the cities of Bayeux and Santa Rita, to the west) that runs along this passage parallel to the Sanhauá River (where the community is located), to connect with intercity and interstate transportation at the bus station, in whose vicinity the Bus Terminal of João Pessoa (Kiyotani; Gonçalves, 2018: 405).

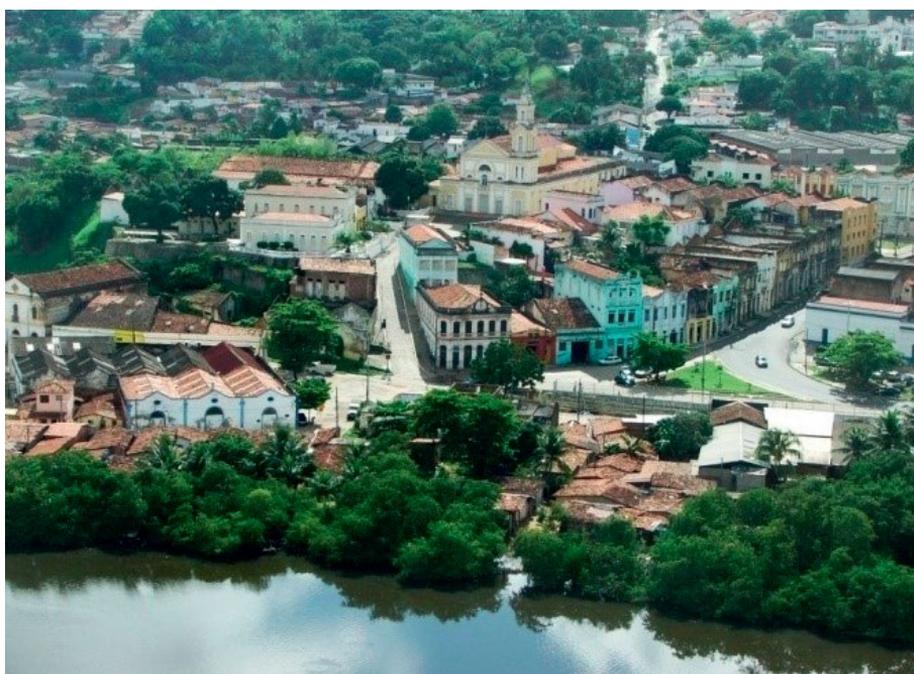


Image 2: Recent view of Port of Capim with mangrove of the river Sanhauá. Source: Rômulo Gondim, 2013 (photo by Marco Vidal). Available at: <http://romulogondim.com.br/porto-do-capim-joao-pessoa-pb/>. (Accessed on 3/25/19/19).

The ease of travel and its proximity to the commercial and administrative center of the city meant that, over the last decades, the community was consolidated and rooted, maintaining a strong bond with the territory and mainly, with the mangrove and the river on whose islands some of its members also practice family farming. However, the abandonment of the area by the public power, begun with the transfer of the commercial port to *Cabedelo* in 1935, deepened. The *Porto do Capim* community can now be understood as a segregated area of the city, where there is a lack of day-care centers, health care policies, and basic public services such as sanitary sewage and regular garbage collection.

Parallel to this, since the mid-1980s, the region became a focus of attention for the implementation of tourism and commercial exploration projects due to the overturning in 1987 of the historic center of *João Pessoa* by the Institute of Historical Heritage and National Artistic (IPHAN) and, more recently, projects linked to the Growth Acceleration Program (PAC) promoted by the Federal Government in partnership with the City Hall. Since then, the community has lived, not only precariously, but also with risk of removal, while its daily life, marked by work and its relations with the river and mangroves, has resulted not only in the preservation of (which had been destroyed – in the case of the mangroves – or degraded, in the case of the *Sanhauá*'s silting up due to unsuccessful city port reforms in the 1920s), but also in strengthening ties and community life. The evidence of this process resulted in the recognition, in 2015, of a broad mobilization of civil society throughout the first years of the second decade of the twenty-first century, through an anthropological report of the Federal Public Ministry, of *Porto do Capim* as a traditional and riverside community. A culturally rich community, embedded in the center of the city, which should be understood as a patrimony of the city, but at the same time a community that needs to be recognized and respected in its right to the same city.

The Porto do Capim community: society–nature relations in the low Rio Sanhauá course

The contribution of the project *Nós Propomos! Paraíba* for the construction of this chapter resides in the exposition of the operation of the society–nature relations mediated by cultural aspects between the residents of the *Porto do Capim* Community and the river *Sanhauá*. According to Rodriguez (2002), the *Porto do Capim* region is located in an area of accumulation of fluvial sediments in an estuarine ecosys-

tem colonized by an arbustive mangrove vegetation and arboreal size typical of the Atlantic forest biome, which, in turn, reflects the prevailing hot and humid coastal tropical climate prevailing in the eastern Northeast of Brazil. This environment has a fauna rich in fish, mollusks and crustaceans, as well as a floodplain with good conditions for the development of agriculture. Berger and Luckmann (2004) point out that the identity of a once crystallized site is mediated by the social relations of appropriation and interaction with nature, so Muccillo (2016) points out that agricultural practices, the extraction of wood for the construction of boats along with fishing, pickers of mangrove mollusks are the fundamental means of subsistence and income generation in the *Porto do Capim* community, mediated relations of appreciation and respect for nature, insofar as they observe the time of recomposition of local natural resources and compliance with current environmental legislation.

Cosgrove (2003) proposes that the notion of symbolic appropriation of the world as the generator of distinct lifestyles and landscapes becomes historically and geographically unique according to the environmental conditions and the availability of natural resources. The picking up of “shellfish” is performed respecting the reproductive cycle, characterizing a relation of respect of the community to the natural processes of the environment in which they reside. This activity later became an action that formed the local identity and the “*mariscada*” became a typical dish of the local cuisine, commonly served during the celebrations and celebrations in the community of *Porto do Capim*. The resident, “Dona Penha”, discusses this tradition:

I learned to fish with my mother. Whenever she went fishing, she would take me and my brothers to accompany her. Today when I go fishing, I am accompanied by my children who help me to guide the canoe on the way to and back of the course, “collect” and treat the seafood so I can make the seafood. For the preparation of the seafood, I take the coconut and herbs from my yard and it is cooked on the wood stove, which is also in my yard”, explains Dona Maria da Penha Nascimento. (Muccillo, 2016).

Campbell’s (1991) statements point out that the invisible plane supports the visible one and, as Haesbaert (1999) reiterates, even though a location is symbolically constructed, its more concrete dimension is somehow a structuring component of identity that is valid of own symbolologies to build their cultural environment. The *Porto do Capim* Community has built folklore rich in mythologies, legends, and superstitions associated with the local cultural identity, based on their respect for the environment and on the growth of the population’s sense of belonging to the *Sanhauá*

River, producing characters capable of connecting the physical and supernatural plane. In this context, for Assad (2014), *Cumadre Fulozinha* and *Pai do Mangue* are legends that represent a clear example of the influence that superstitions have within the riverine community. These figures are more than simply myths or legends, being better understood as entities that are part of their daily life, giving meaning to their expectations and stimulating the development of personality and citizenship, depending on the requirement of respect for the environment and character, imposed by them. The *Anthropocontando* website describes *Cumadre Fulozinha* as follows:

Inserted in Northeastern culture, there is an ethereal being known in Paraíba as Cumadre Fulozinha (flower-of-bush). Legend has it that it is the spirit of a cabocla with long hair, who lives in the woods protecting the nature of the hunters and, who likes to be pleased with gifts, especially porridge, tobacco, and honey. Some old people say that Cumadre Fulozinha was a child who got lost in the woods when she was still little, she searched the way back to her house but did not find it and ended up dying, causing her spirit to wander through the forest in search of the way back home. It is believed that it protects the forests and the animals that live in them. She carries with her a whip made of stalks of nettle to give a 'lesson' to disobedient boys, especially those who mistreat nature. [...]

From a survey made by the site of the *Lendas da Paraíba* project, we have the following description for *Pai do Mangue*:

The Pai do Mangue is a spirit who takes care of the mangroves and the rivers. It is believed that before fishing and even during, when performing certain rites, the fisherman receives help and his work becomes more plentiful and safe. Giving it up with smoke is one of them. In case of disrespect for the Pai do Mangue's "commandments", the offender may suffer various punishments, such as animal attacks (which some believe to be the transfigured Pai do Mangue), malfunctioning in the canoe, bad fishing or loss of what he had already caught. Another common punishment is the loss of orientation within the mangrove or river. The most rejected attitudes by the entity would be profanity, violence against nature and disrespect for life.

Studies by Silva (2016) point out that the *Porto do Capim* Community Culture Centre develops a series of activities that involve dances, theater plays, film sessions, dances and musical presentations aimed at fostering local cultural manifestations. In this space, the project *Vivenciando o Porto* is carried out, an initiative of the collective *Garças do Sanhauá* to stimulate tourism in the region through activities such as guided tours through the different community spaces, contemplation of the riv-

er through the river dock, tasting of the local cuisine, and performances of theater and dance of the Cultural Group “*As Comadres*” (picture 5). According to Gonçalves (2014), the *Garças do Sanhauá* stand in the front line in the battle for the population to remain in *Porto do Capim*, being formed by working women, housewives, retirees and students, who try to organize local events, to mobilize the other residents.

(...) the Porto do Capim cultural calendar, defined by a group of women living in the community, the commission Porto do Capim em Ação, formed since 2012, with the support of the Casa de Cultura Cia. Da Terra foundation, teachers and students from the Federal University of Paraíba and other advocates, for the benefit of the community organization for questioning and coping with the aforementioned “Revitalization” Project, which provides for the “removal” of the local communities. This calendar includes various “cultural events” relevant to the community, such as, among others, the Procession for Nossa Senhora da Conceição, São João, the carnival, the commemoration of the anniversary of the city, called Raízes do Porto. The territory of the community, thus, constitutes the essential material basis for the event of these manifestations (Assad, 2014, p.26).

All this cultural effervescence present in the community and the interactions between the residents and the environment.

On the morning of 03/19/2019, the Municipality of *João Pessoa* sent a removal notice to 162 families in the *Porto do Capim* community. The decision was taken without consultation and participation by the community, violating articles 182 and 183 of the Federal Constitution (Brazil, 1988), which regulate Law 10,257 / 2001, that creates the City Statute (Brazil, 2001). Its second article, item II, guarantees democratic management through the participation of the population and representative associations of the various segments of the community in the formulation, execution, and monitoring of urban development plans, programs, and projects. It also violates the 5th article of the Federal Constitution that guarantees the fundamental rights to life and the social right to property; the appropriation and use of space once abandoned, linking them to the Law of *Usucapião* (Law 13.105 / 2015) that gives the right to possession and permanence of the residents in that locality. The continuity of the occupation is also provided for in article 183 of the Civil Code, which guarantees the uninterrupted possession of an area of 250 square meters of urban area, using it for his dwelling and his family, as long as the residents are 18 years of age and have been occupying the area for at least five (5) years, provided that the residents do not have possession of any other property, and can acquire this property by judicial means, provided that the person is 18 years old.

Bidou-Zachariassen (2006) defines the process of gentrification as the removal of low-income populations and the reconfiguration of the structures and services of urban space aiming at the adaptation of areas with a strong influence of real estate speculation to offer cultural and consumption mechanisms. In the case of *Porto do Capim*, the mass media are in charge of legitimizing public intervention, which serves the private interests, stimulating the population of *João Pessoa* to adopt a position favorable to the “sanitization” of urban spaces near the historical center of this city. This causes a total and unrestricted devaluation of the importance of traditional populations and popular culture developed in the locality in order to leverage tourism by strengthening the industry of large events and ensuring a higher profit margin for the holders of speculative capital.

In view of the arguments presented, it is well known that the actions involving the withdrawal of residents from the community by the Municipality of *João Pessoa* violate several fundamental rights and guarantees in force in Brazilian legislation. The city hall has avoided dialogue with the residents, but the *Porto do Capim* resists.

Sanhauá: a River in the Memories of the Project Subindo A Ladeira

The project *Subindo a Ladeira – Patrimonial Education and Teaching of History through Art* has been carried out over the last eight years with children living in the community of *Porto do Capim*, which, from generation to generation, has preserved its characteristics for more than eight decades as a traditional and riverside community, due to its deep relation with the river and the mangrove. In this text, the presentation and analysis of some materials (written texts for storytelling, theatrical scripts and song lyrics) are created collectively, by teachers and students participating in the project, in their activities that have, as one of their objectives, to understand how the *Sanhauá* River, the mangrove, and the entire riverside culture are represented by the community tradition. At the same time, it seeks to understand the role of artistic creation in the process of building and sedimentation of memories and experiences in this territory. We understand that heritage education and knowledge about local history can be crucial transformative instruments for the development of participatory and protagonist democracy. The recognition that the existence of patrimony is a historical construction and therefore human, and that is not limited to the materiality of buildings built in stone and lime, but which translates even

immaterially is necessary for the community bonds to narrow and strengthen. A population capable of understanding its origins and the reality in which it lives, able to value its place, its cultural traditions, and its historical memory, will certainly be much more able to claim its participation in the decision-making processes, considering that it will recognize itself as an agent of history.

It is necessary to understand heritage education as a process, and to take into account the specificities of each group, each context. It can not be seen as a mechanism of cultural literacy by which the light of the ready knowledge is given to the population so that it understands, become conscientious and preserves the patrimony protected by the State. We do not preserve what is only known, people preserve the heritage that gives meaning to their lives, to their stories. Patrimonial education and local history teaching are therefore fundamental for the dialogic, active and collective construction that seeks and promotes the democratic participation of communities in the processes that involve them through the strengthening of their identity. In the case of the Subindo a Ladeira, it is sought to accomplish it through art, understood as a vehicle for the organization of the less favored social strata, the debate of its problems, and the formation of social subjects that can diffuse the defense for rights and full citizenship (Telles and Gonçalves, 2017, pp.63–64).

Theatrical language, popular games, photography, and music constitute the privileged vehicles for working with children. To work specifically with theater and popular games, the project is based on the methodology of theatrical games (Spolin, 2000, 2007, 2010 and Koudela, 1999, 2001), whose perspective, concerned with the process of creation, is compromised, in all its steps, with an educational proposal. Theater is thought of as a living experience, continually rediscovered in its encounter with the audience; ceasing to be a specialization of the few, that is, of those who theoretically have “talent”. On the contrary, art making is, in this perspective, conceived as a working relation; as something intended for all people, whether professionals, amateurs or children. The word that directs all actions is experience, the creative experience, which involves the intellectual aspect, but also the physical and the intuitive. Another important reference in the project methodology is the work of Augusto Boal (1975a, 1975b and 1998), translated into his conception of a “Theater of the Oppressed”, whose central objectives are the democratization of theatrical means of production, access of the social strata and the transformation of reality through dialogue and theater. In addition to performing arts properly, there is also the political purpose of awareness-raising, in which theater becomes the channel for organizing, debating problems, as well as enabling, through its techniques, the

development of social subjects that can become a multiplier vehicle for the defense of rights and citizenship for their communities. On the other hand, as far as music education is concerned, the adopted procedures are anchored in a methodology of music teaching inspired by three reference thinkers of the area: Carl Orff, Émile Jacques-Dalcroze and Murray Schaffer. In general, the three authors start from the idea that music is a form of human expression that must be learned like any other language, through observation, imitation, and appropriation. It is possible to think of common orientations in the proposals of these educators: the inclusiveness, respect for the students' experience and playfulness as a way for musical education.

The activities of the *Subindo a Ladeira* Project are developed from these theoretical-methodological premises. The starting point is always the collective observation and dialogue about the reality lived by the children, which is done in workshops that take place in the Community Culture Space or in field activities that involve, among other techniques, notes and to capture images through videos and photos. Images 3 to 4 are records of these actions.



Image 3: Field Class: Photographing the community dock. Collection: *Subindo a Ladeira* Project, 2018.



Image 4: Field lesson: The mangrove in the photographic frame. Collection: *Subindo a Ladeira* Project, 2018.

Throughout the eight years of the project, many experiments were carried out addressing aspects related to the traditional and riverine character of the community and its relationship with the river, mangroves, and forests, where most of the conditions of reproduction of family groups are based. The first scenic experiment produced, still in 2011, entitled “*Vida de Menino*”, related to the modification, through the centuries, of the physical space where the community lives today. Going back to the time when the Indians occupied the area, having several villages settled in the estuary, the importance and continuity of this relationship with the river and its ecosystem that has lasted until the present time was discussed. This theme was basically worked through the tale of a children’s story produced by the team that presented the panorama of the local reality of that time through the characters “*Tabira*” and “*Canindé*”, members of different indigenous peoples, respectively, *Tupi* and *Tarairiú*. The storytelling method helped children to imagery reconstruct the landscape, customs, fauna, and flora existing in that same geographic space in which they are currently inserted and reflect on the losses and permanence (Mendonça, Silva, 2011: 02). The central objective of the activity was to introduce the notion of “place” as a living space, besides characterizing the *Sanhauá* River as this place, calling attention

to one of several possibilities of social organization and relation with nature: that of indigenous peoples. This relationship with Nature created and continues to produce a very specific culture, which can be recognized in this part of the story told:

The community in which Tabira and his friends lived was very close to the river, on a higher ground where the waters of tide never arrived. Do you know what the tide is? Why does it go up and down every day, twice a day? I do not know! I would like to know. From here one could see the other bank, and farther away, the great river, the largest of them all. That one was impressive! But there only the older men could swim, because he was very, very wide. The great river was a forbidden place for the little ones. Except for the crawfish season ... That was another story! Everyone went along the shores, at low tide, into the mangrove swamp, sinking and smearing into the black mud that the little girl loved. Is there anything better than to paint the face of mud, to make mud war and to dive to clear the mud? There is not.

“*Vida de Menino*”, the story created and told in several workshops, inspired the elaboration of a scenic experiment script presented to the *Porto do Capim* community and the UFPB community with the participation, as actors and singers, of children and team. The same story inspired the songs “*Brincadeira no Rio*” and “*De Maré*” that were incorporated into the scenic experiment. The first one became, during those eight years, a kind of an anthem of *Subindo a Ladeira*, known and sung by the children and adolescents that today are, or were once, linked to the project. Importantly, the river is also a leisure space for the whole community and that is the meaning of the lyrics of this song. Although water pollution prevents swimming and other games in the proximity of their homes, residents take boats, cross the *Sanhauá* and go to the “*croas*” to spend the day at weekends, taking a river bath and eating seafood or crawfish with “*pirão*”.

Brincadeira no Rio

Erick de Almeida / Regina Célia

Ah!

O rio era lindo, largo, manso e profundo
Suas águas escuras e frescas
As melhores do mundo (2X)

Depois de uma chuvarada
Tombara um tronco de árvore
Virou trampolim de menino
Salto solto e mergulho da margem (2X)

É, brincadeira no rio
Bagunçando as águas do rio
Mergulhando
Nadando, nadando, nadando, nadando, nadando.

E um “rói-rói” na barriga anuncia o fim da brincadeira
Eita fome menino “simbora”
Subir a ladeira

In the course of activities, other themes that are part of their daily life, such as the river paths, life at the edge of the mangrove, crawfish hunting, fishing, the community in general and the relationship with beings that inhabit the local imagination, like *Comadre Fulôzinha* and *Pai do Mangue*, were brought to the fore by the children. This last theme refers to two elements of popular culture that were intensively worked in the following years so that the children reflect on the care with the place in which they live, since they are protection entities of the forests and the river/mangrove, respectively. In the year 2012, a new scenic experiment, entitled “*Sanhauá, a River of stories*”, was thought, produced and elaborated. The script followed the story of the river itself and how it had, over time, become polluted, dirty, dangerous, no longer what it had been at the period when *Tabira* had lived. *Comadre Fulozinha* and *Pai do Mangue*, accompanied by some real characters of the community, became central to the story. Both, according to the elaboration of the children, assumed roles related to social control insofar as they presented themselves as protectors of nature

against the predatory fishing and collection that some members of the riverside communities carried out, and against the dumping of garbage in the waters and mangroves. This was the dominant perspective in the script of the scenic experiment and the songs worked in the workshops.

The following year, 2013, due to the fierce confrontation between the community and the City Hall that threatened it with an imminent removal, all activities of *Subindo a Ladeira* turned to this question. A new scenic experiment was produced collectively, “*Pare, Olhe, Escute! Aqui tem Gente*”, in which *Comadre Fulozinha* and *Pai do Mangue* took on a new role, entities that protected not only nature but also the community against the actions of the “*Fantasma da Remoção*”. And why, according to the children, did they also come to defend the community and not just take care of nature? Because with the presence of the community, the damaged mangrove was renewed, the river, that was silted, had its situation improved allowing more appropriate navigation of small boats. In addition, shoals of some species of fish reappeared, extending to the shellfish and crawfish that were collected again in the mangrove mud. They concluded that it is the respectful and sustainable relationship of the community with the forests, the river and the mangroves that have guaranteed its preservation and that, therefore, it should not leave the place where it is. It can not be removed. In the process of producing the scenic experiment “*Pare, Olhe, Escute! Aqui tem Gente*” several preparatory workshops were held, among them, one of art with plastics that resulted in the elaboration of the costumes giving materiality to the two entities, from the representations present in drawings and speeches of the children.

Also for this scenic experiment, a soundtrack was produced that incorporated elements of local cultural traditions, such as Carnival, with the song “*Ala Ursa Quer!*”, In addition to the samba “*Pare, Olhe, Escute! Aqui tem Gente*” which speaks about what and how life in the community is, calling the people of the city to know it. The *Subindo a Ladeira* Project has sought to be, throughout these years, a partner of this community that must be recognized as a patrimony of the city of *João Pessoa*. The non-formal educational actions that have been carried out in its field uninterrupted since 2011, seek to contribute to the residents’ recognition of themselves as protagonists of their history and to continue fighting for their rights as citizens.

Final considerations

As affirmed by Kiyotani and Gonçalves (2018), this community and its relations to the place, remain alive and pulsating, producing culture and landscapes. Its historical permanence is undeniable, since at the beginning of the colonization its territory was the place of life and work of those who were engaged in activities linked to the estuary of the *Paraíba* River. Thus, somehow, the residents of the current *Porto do Capim* are continuators and heirs of this original occupation. Another aspect is that the community of *Porto do Capim* is not an exception in the area of the estuary of the *Paraíba* River, on the contrary:

The Porto do Capim (...) represents ... the continuity of a Riverine culture (tradition) that articulated and continues to articulate the banks of the Paraíba River (Lucena, Guia, Forte Velho, Ribeira de Baixo and Cima, Jacaré, Volta, Jaburú, Carapeba, Gargaú, Livramento, Mandacarú and countless islands, among them Restinga, Mesquita, Stuart, Portinho and Ilha das Cabras), even downstream, in a constant coming and going not only of merchandise, and their knowledges (Catarino, 2015, p.7).

On the other hand, from the point of view of the impact of the experience with *Porto do Capim* on the education of the high school students of CEEEAS and the graduates of UFPB, as well as all professionals involved, it is important to highlight their academic maturity, especially refers to strengthening the understanding of what is a popular and inclusive education that guarantees the rights of all (Freire, 2003 and 2005), including the right to the city. That is, it is a process of dialogical, horizontal education, in which all are, everlasting, educated. It is considered that the debate about the problems that afflict our society, as well as about human rights, local history (in a critical and citizen perspective) and the importance of the historical, natural and cultural heritage (material and intangible) of the city of *João Pessoa*, can be major transformative instruments. At the same time, the debate on the man–nature relationship, culture and its place in our society are conceived as instruments for guaranteeing human rights. To paraphrase Paulo Freire (2006), the experiences presented can be understood as part of a “cultural action for freedom”. The fundamental commitment of the projects is to contribute so that this process of empowerment by the community continues to happen in an accelerated and multiplying way.

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4. Man–nature relationship and the drought mentality in the Northeast of Brazil

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Abstract

In the Brazilian Northeast, the relationship between man and nature is very conflictive due to the drought that afflicts the region and punishes the population by changing not only the physical landscape, but the society and its policies. However, it is undeniable that, over time, man has been learning to deal with such a situation to minimize the consequences of this climatic effect. Northeastern drought is considered a social and natural problem, which allows its inseparable relationship with life in society. For a long time, man has seen in this question a single solution: the arrival of rains. But the knowledge acquired in this experience, in arid lands, was constituted as a set of attitudes, the construction of a mentality, through mental processes, in order to create a new way of thinking-acting towards the water, as their precious treasure, culminating in paradigms and beliefs that endure even in times of rain. This new posture of understanding and respect, related to the environment, with its own characteristics is what we can explain, through the Mindset theory. Thus, what we intend to analyze in this article is the way in which the drought was historically responsible for the mindset of the Northeastern.

Keywords: Man-nature relationship; Northeastern drought; Mindset; Northeastern mentality.

From mentality to mindset, a psychologic perspective

The term “mentality” is widely disseminated as being the set of information (beliefs) gathered in our minds that define who we are, how we behave and how we react, it is not by chance that there is a popular saying that says: “you are what you think, you are what you do. Based on this popular belief, various fields of knowledge such as

linguistics, psychology, sociology, neurosciences, as well as fields of behavioral study, among which the study of gestures and performance, can obtain various information from the mentality of an individual, through the observation of his gesture and the performance with which he accomplishes his communicative goals.

The online dictionary Google Translator translates the term Mindset as mentality, the word being a junction of ‘mind’ with ‘set’, that is a composition derived from a juxtaposition process. The word ‘mentality’ comes from the Latin *mentālis* and arrived at the Portuguese through the French *mentalité*, it means what is produced in the spirit”(Torrijo, 1995). It is our individual beliefs that constitute our mentality, what modern psychology calls **mindset**, they are the ones that direct our lives and not our physical force that drives us, that is, this psychological tradition proposes to demonstrate the power that this set of beliefs has about our longings and dreams and also about our possibilities of achieving what we want.

It is our mindset that guides a large part of our lives, including the process of awareness of those beliefs, followed, when necessary, by changing those beliefs, if they are ineffective or have negative effects (Dweck, 2018). For Torrijo (1995, p. 140) “the term mentality refers to a psychological predisposition that a person or a social group has for certain thoughts and patterns of behavior, yet referring to how whole nations are ideologically led.” From this statement it is possible to relate the relationship of man towards nature, in his behavior, initially individual, and tended in social groups exposed to extreme situations, in this text, in climatic situations, such as the coexistence of the Finns with low temperatures and extreme cold.

The mindset of this people is marked by transformations, by concepts applied with certain efficiency, such as resilience and also the ‘penguin walk’ meaning patience, ability to reinvent and believe in the power of personal and / or collective beliefs. Binet 1973 *apud* Dweck 2018 believed that education and practice would be capable of producing fundamental changes in intelligence, stating that:

Some modern philosophers (...) claim that the intelligence of an individual is a fixed quantity, an amount that can not be increased. We must react and protest against this brutal pessimism ... with practice, training and, above all, method, we are able to perfect our attention, our memory and our capacity for judgment, making us literally smarter than we were before. (Binet 1973 apud Dweck 2018)

On the other hand, in Brazil there is a high temperature and, in some regions, in the northeast, there is a dry coma, that is, no rainfall. In the northeast of Brazil, it is

common for one region or another, more affected by drought, to enact an emergency situation and to request support from other regions and states, by means of kite trucks, which transport water from one place to another, temporarily supplying the affected people's needs.

For many years, the drought issue was resolved through the exodus of Northeastern cities to the southern and southeastern cities of the country, regions not hit by the problem. However, adherence to the traditions, culture, sense of belonging meant that the retreatants returned to their original cities, after conquering something that their origins did not allow them, due to the lack of natural conditions.

Dweck (2018, p. 11) quoting that he believed for a long time that there were only two types of people: those who knew how to deal with failure and those who did not, was surprised to find that there are people who feel challenged and they can find a positive way to deal with failure: "I would never have imagined anyone would like failure" This difference between individuals presupposes a difference of mindsets, and there is a "kind of mindset that is capable of turning a failure into a gift. (Dweck, 2018, p.12)

The American people believe that man, through his work, is able to control nature, proof of this was the underground construction of hydraulic mechanisms to contain the waters of the Gulf of Mexico that were temporary in some regions of the south of the country, which, at some times of the year, made them suffer from the absence or excess of these waters, for example we have the region of New Orleans in the State of Louisiana, southern US, a region bathed by the waters of the Gulf of Mexico.

Human qualities, such as intellectual abilities, can be cultivated through effort (...), for "our intelligence or our personality are characteristics that we can develop, rather than being something fixed, a deeply ingrained trait." Dweck (2018)

The relation man-nature is something inherent to the being, is something that involves affections, the mind, the spirit, because as mentioned Torrijo (1995) is something that takes place in the spirit, therefore it is rooted in the nature of the being, the desire to return to the origins walked along with the desire to find a way of coexisting with the extreme cold, the semi-arid or the drought abusing.

It is not about nature or stimulus, genes or environment. From conception, there is a constant exchange between one thing and another. Indeed, as Gilbert Gottlieb, an eminent neuroscientist, says, not only do genes and the environment coop-

erate with one another as we develop, with genes needing the contribution of the environment in order to function properly. At the same time, scientists are realizing that people have more ability than they had imagined to learn and develop the brain throughout their lives. (Dweck, 2018, p.13)

Reprogram the mind, seek and find solutions not to stray from its natural environment, it requires effort, adapting is synonymous with survival. However, some people or groups are unable to develop a way of coexisting in harmony with nature: with drought or snow, such as the already mentioned examples of Brazil, Finland and the United States, however “the main way of acquisition of specialized knowledge is not some prior, fixed ability, but dedication to the object.” (Dweck, 2018, p.14)

According to Dweck (2018: 14), “your opinion of yourself profoundly affects the way in which you lead your life.” For Nietzsche (1929) “there are no eternal facts, as there is no absolute truth, “it is the fixed mindset can be inflated to change, it requires a lot of work and motivation. “Each of us is capable of modifying and developing through effort and experience ... for” the true potential of a mind is dishonored. “(Dweck, 2018, p. 11)

Rather than flee the difficulty, why not face it and find a way to adapt to a reality? It is already known that drought abuses, “and why seek what is known and proven, instead of experiences that will make us develop?” (Dweck, 2018, p.16). The exodus will require of the individual another form of adaptation, being cultural, climatic or linguistic. We are beings in constant process of construction, deconstruction and reconstruction. The problem of drought or low temperatures is often in the way we see them and our mentality is built on the target subject, work before our beliefs generates a new reality.

Climate diversity in Brazil

Due to its continental dimensions, Brazil’s geographical physiognomy presents a diversified relief that interferes with the air masses, causing a great diversity of climates and, consequently, temperatures. In the Amazon region the equatorial climate is observed, with temperatures between 25° C and 27° C, characterized by abundant rainfall throughout the year and low thermal amplitude. The tropical climate is a characteristic of the central region of the country, with temperatures between 18°C and 28°C, with thermal amplitude of 5° C to 7 ° C and well-organized seasons.

The humid tropical climate comprises the coast that extends from Ceará to Sao Paulo, with intense rainfall and temperatures from 18°C to 26°C. The subtropical climate occurs in part of Sao Paulo and extends to Rio Grande do Sul with well-distributed rains during the year, where the lowest temperatures of the country happen, promoting frequent frosts and rare snowfall.

The semi-arid climate occurs in the interior of the Northeast, which corresponds to 11% of the Brazilian territory, highlighted in this work, where there is the “Drought Polygon”, the northeastern backwoods, which suffers from drought. This climate is influenced by the tropical Atlantic mass that loses water in its path, reaching this region with little humidity. Its characteristics include low humidity and low rainfall.

The northeastern drought, for many years, generated many retreatants, which can also be considered as a type of refugees, however the IOM (International Organization for Migration) explains the difference:

There have been some attempts to broaden the existing definition of a political refugee to include those displaced for environmental reasons or to write a new convention that specifically protects such people. The lack of an accepted definition of an environmental refugee means that, unless they're relocated by extreme weather events, their displacement does not trigger any access to financial grants, food aid, tools, shelter, schools or clinics. [...]However, there has been a collective, and rather successful, attempt to ignore the scale



Picture 1 – E FONTES, F.Q.X. Barra de Santa Rosa. June of 2019

of the problem. Forced climate migrants fall through the cracks of international refugee and immigration policy—and there is considerable resistance to the idea of expanding the definition of political refugees to incorporate climate “refugees”. Mean-while, large-scale migration is not taken into account in national adaptation strategies which tend to see migration as a “failure of adaptation”. So far there is no “home” for climate migrants in the international community, both literally and figuratively. (IOM, 2008, p. 14–40)

However, in Brazil part of the inhabitants of this punished region found ways to continue to inhabit the area and to live with its climatic conditions, a fact that contributed to the reduction of the exodus to the less-punished regions of the country. The picture above shows a system of collection water from the rain that falls on the top of the houses into a box made of hard material to endure the weight of the water.

The water and the drought question in the Northeast

Water is one of the main elements responsible for the development of living organisms and the characteristics of the earth’s surface. The portion of the hydrosphere located in the emergent lands constitutes the continental waters. They can appear in the form of rivers, lakes, glaciers and underground deposits, which are the most important source of drinking water of the planet. Water is the most precious and indispensable commodity for all forms of life on planet Earth. Since the earliest recorded human fixation, water was one of the reasons humans set housing.

According to the National Water Agency (ANA, 2012), Brazil has the largest water reservoirs in the world since most of its relief is in the form of plateaus, so, in relation to other countries in the world, it has a comfortable situation. In the North, South and Southeast regions, the highest rainfall rates are recorded in the country, while in the Northeast the rainfall is scarce. The northeast region of Brazil comprises an area of 1,556,000 km² and has more of the medium of its territory subject to periodic droughts since the semi-arid climate prevails.

The promotion of a water vulnerability coupled with a historic lack of public policies to effectively minimize the effects of drought on the lives of the population living there has been the ideal plan for the emergence of natural disasters. According to Castro (2003), this denomination corresponds to the result of adverse events, natural or anthropic, on an ecosystem that presents vulnerability, causing human, material and / or environmental damages and consequent economic and social damages.

Such losses can, for example, be observed in sectors of the economy, since agriculture is heavily affected by the absence of rainfall; the functioning of hydroelectric dams, responsible for providing energy to the population, as well as the commitment - in some cases, suspension - of water supply in cities. The consequences of drought in the Northeast have been responsible for intense migratory movements throughout the nineteenth and twentieth century as an attempt to survive on the part of the population since, in more severe cases, the drought has caused the death of many people. The table below exemplifies these situations.

Table 1: chronological representations of the most severe droughts and their consequences

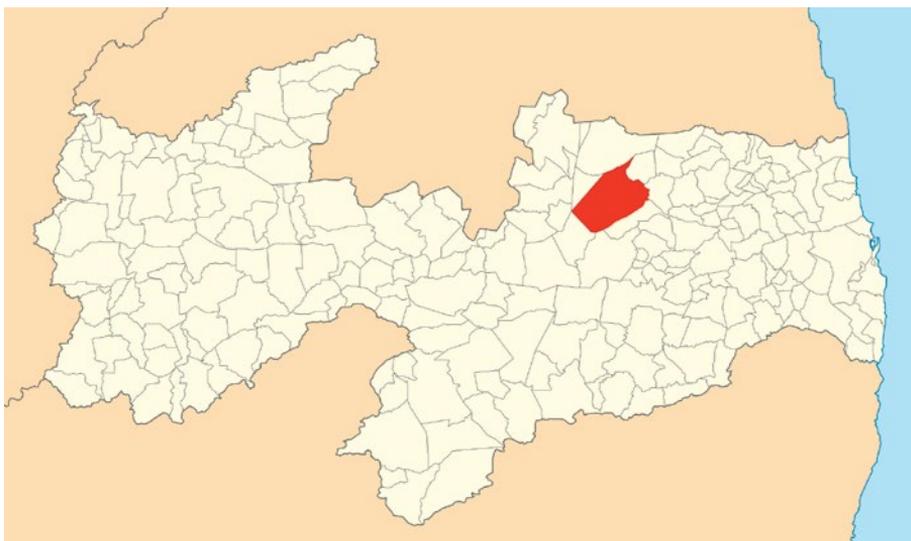
Period	Main consequences of major droughts
1723/1727	The drought registered in this period is intensified by a major plague reaching the captaincy of Pernambuco. According to the historian Frei Vicente do Salvador, there were numerous groups of indigenous people who, on their way from the mountains, had advanced on the farms.
1744/1745	In this period, the drought affects all the population, also decimating the cattle.
1776/1778	The drought was intensified by the large outbreak of smallpox, which began the previous year and continued until 1778, causing a high mortality rate. Huge losses of cattle. The flagellates were gathered in settlements on the banks of the rivers, in determination of the Portuguese Court.
1808/1809	The drought in this period is milder, reaches only Pernambuco, in the region of San Francisco, where 500 died from lack of food.
1824/1825	Another period of intense drought, intensified by smallpox, was several numbers of flagella, generating many deaths in the Northeastern region. The fields became sterile, and hunger reached the sugar cane mills.
1887/1879	This period was remarkable, one of the largest and severe droughts reached the entire Northeast. Ceará, for example, had a population of 800,000 at the time. Of these, 120 thousand (or 15%) migrated to the Amazon and 68 thousand people went to other states.
1888/1889	Great droughts affected the entire population. The crops of Paraíba and Pernambuco were destroyed and the villages abandoned.
1903/1904	Large rural exodus, thousands of Northeastern people, victims of droughts, leave the region. An installment for works against the droughts was included in the Budget Law of the Republic. Three commissions were created to analyze the problem of Northeastern droughts.

1914/1915	During this period, a great drought reached the entire northeastern semi-arid region
1919/1921	There was an intensification of the rural exodus due to great droughts (with great proportions in the backlands of Pernambuco). The press, public opinion and the National Congress demanded the government's actions. In 1920, the Special Box for Irrigation of Cultivable Lands in the Brazilian Northeast was created, with 2% of the Union's annual tax revenue and other resources. But effectively, nothing was done to ease the drama of the droughts.
1970	Creation of emergency fronts. An alternative to 1.8 million people, due to the great droughts that reached the entire Northeast. 1979/1984 The longest and most comprehensive drought in the history of the Northeast. It hit the whole region, leaving a trail of misery and hunger in all states. In the period, no crop was harvested in an area of almost 1.5 million km ² . In Ceará alone more than a hundred looting was registered, when legions of hungry workers invaded cities and forcibly extracted food from me or free-trade or warehouses. According to data from SUDENE, between 1979 and 1984, 3.5 million people died, mostly children, due to hunger and diseases derived from malnutrition. UNESCO research pointed out that 62% of northeastern children aged 0 to 5 years in rural areas lived in acute malnutrition.
1988	During this period, a very intense drought hit the whole population, precisely at the end of April. Hungry population, promoting looting of food deposits and fairs, dying animals and lost crops. With the exception of Maranhão, all other states in the Northeast were affected, with a total of about five million people affected. This drought was foreseen more than a year ago, due to the phenomenon El Niño, but, as of previous times, nothing was done to mitigate the effects of the catastrophe.

Available at: <https://www.e-publicacoes.uerj.br/index.php/polemica/article/view/6431/4839> Accessed on: April 2, 2019. [our translation]

The need for discussion about this problem that plagues the Northeast region has become urgent in the national context and, beyond the measures in the political sphere, this problem has gained relevant space in Brazilian literature with the so-called "Generation of 30" of the Modernist movement, as for example, Graciliano Ramos' "Vidas Secas" and Raquel de Queiroz's "O Quinze" works that reveal the degradation of the human being in the face of economic misery, often provoked and aggravated by drought, in contrast to the high spirituality of the sertanejo (people from hinterland areas). Thus, what is perceived is a long period of knowledge and discussions involving the issue, however, few measures aimed at mitigating the effects of drought disasters.

In the interior of Paraíba: Barra de Santa Rosa



Picture 2 – Map of the localization of de Barra de Santa Rosa in the state of Paraíba. Available in Google Search. Accessed in: April 2, 2019

According to IBGE data (2018), the city of Barra de Santa Rosa, a Brazilian municipality in the State of Paraíba, has a population of 15,268 inhabitants and a territorial area of 825 km², in addition to presenting the 4th highest rate of desertification in the State. The municipality is included in the geographical area covered by the Brazilian semi-arid region, defined by the Ministry of National Integration in 2005, based on criteria such as rainfall index, aridity index and drought risk.

The main economic activities developed in the municipality, contrary to climatic conditions, but pertinent to the lack of employment opportunities in the city, are agriculture, through the family farming system in which the items are sold in a free fair held weekly, on Thursdays, and livestock, which is justified by the ease of adaptation of these animals to the environmental conditions of the place.

Parallel to this discomfort we have environmental problems such as: pollution and silting up of rivers and their tributaries, as well as the accelerated deforestation of river banks by farmers who, during the dry season, harvest the wood for coal, fences and supplies from the bakery furnaces. Looking at the rivers Santa Rosa and Po-



Picture 3 – Barra de Santa Rosa's Fair. Available in <https://adamastorfotografia.wordpress.com/2016/11/14/barra-de-santa-rosa-paraiba-e-sua-feira-livre/>

leiros, which is born in the Chapadão de Campos Novos, municipality of Pocinhos about 78.2km, we see how they suffered and still suffer from these problems. The image below portrays the Poleiros dam, responsible for supplying the municipality.

Reports of older people living there permit to compare and verify the real situation of the main rivers, besides understanding its modifications, the rationing of water and the reduction of the superficial volume of the reservoir that depends on the reception of water from the rains. In the same situation or even worse, due to the level of pollution, is the Curimataú dam, belonging to the Curimataú river basin, which has a Federal domain. It borders the states of Paraíba, once in the Paraíba municipality of Barra de Santa Rosa, in the Cariri Velho mountain range, belonging to the Borboremae Plateau complex of Rio Grande do Norte in the municipality of Nova Cruz and flows into the Atlantic Ocean through the estuary called Barra de Cunhaú, in the municipality of Canguaretama. Its basin occupies a total area of 3.346 km².



Picture 4 – SANTOS, M. M. H. Poleiros Lake. (2019) Personal Archive.

Final considerations

Thus, in several regions of the Brazilian northeast, the citizen constructs a necessary mindset for living with the drought, taking care of the water, avoiding waste, using consciously, in the work to store rainwater, built handicraft mechanisms that collect any surplus that will be used at a later date. The management of water, its reuse and its conscious consumption are part of the mindset of the Northeastern people who learned over the years to save, when there is plenty, not to miss during the dry season.

It is evident that the natural and urban environments are subject to continuous change processes, whether by the action of nature or man. However, what is perceived over time is that man does not have his actions based on respect and care for the preservation of the environment. This posture is further aggravated in areas punctuated by drought, as it potentiates damages to the environment.

Drought, therefore, as a natural phenomenon, cannot be altered by human action. However, a new awareness, above all, of the responsibility each citizen has for the preservation of natural resources, especially water, is an urgent measure that is presented as a strategy to be adopted by municipalities experiencing serious problems such as lack of water, example of Barra de Santa Rosa.

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5. Human facing different environments: feelings, thoughts, and behavior

Aman Pablo Souza de Freitas, Carolina Correa de Carvalho, Henrique Caldas Chame, Isaac Ferreira Mendonça, Joana Paula Costa Cardoso e Andrade, Kelson Barbosa Ferreira, Lara Torrezan Gonçalves Ramalho Nitão & Williana da Silva Santos

Introduction

Human interacts with nature in different ways, depending on whether it is a natural or a built-up environment. The result of this interaction are unique experiences with diverse feelings, thoughts, and behaviors related to each human background. This work aims to present two reports of human and nature experience, one facing a natural climatic diversity and another facing a built-up environment created by humans using technologies and different tools. Both perspectives emerged from students' and teachers' experiences, during the *Gira Mundo* program in 2018, held in several countries in Europe and North America.

The first report brings the experiences of three students and a teacher from *Paraíba*, a state located in the northeast of Brazil, who are used to living in a humid tropical climate and had to face harsh winter, cold weather and snow during the program. Considering these contrasting realities, their perspective approaches the idea of how climatic conditions changes the way people live with natural spaces and society, affecting the basic daily habits, the way of interacting with the environment and with people, the way of thinking and behavior.

The second report brings the experience of participants who attended the 17th Congress of Methodology held in 2018 in Hämeenlinna, Finland facing a built-up environment called Amazon Room. The Amazon Room was a living environment using technology, live plants, controlled atmosphere, and people dressed as native Indians to represent the enormous biodiversity of the Amazon rainforest. Attributes as tem-

perature, humidity, water, soil, the “voices” of the forest, the animals, as well as the songs of the indigenous peoples brought to the participant a reality quite different from the Finnish forest. Also, the living environment provided different feelings, experiences and self-knowledge from each participant who attended the room. This report presents how the room was set up in order to represent the tropical environment and show the participants’ point of view of living this experience.

The *Gira Mundo* Program

The *Gira Mundo* International Exchange Program is an initiative of the *Paraíba* State Government initiated in 2016 that has two development approaches: 1. Teachers’ training and qualification in partnership with universities in Finland and Israel through courses between one and two months; 2. High school students’ experience studying abroad and living with a local family for five months. The program aims to improve *Paraíba’s* education system by adapting educational initiatives learned abroad to our local reality and sharing successful experiences in the same field from countries such as Canada, Finland, and Portugal (FAPESQ, 2019).

During the program, the students need to start working on individual projects related to citizenship, differences, and similarities between the cultures of Brazil and the country visited by them, the environment, globalization, economy, social impact, and other topics. These projects are implemented in the students’ home communities upon their return to Brazil Miladinovic (2019). As for the teachers, they also have to work on a project to develop new practices and methodologies in their home schools in order to improve their skills and share the knowledge learned at the exchange program. The *Gira Mundo* program has already positively affected *Paraíba’s* public education system, as written by a team of Global Education at Häme University of Applied Sciences – HAMK (D’Andrea, Ouverney-King & Medeiros, 2019), “this positive educational movement turns to the development, production of income and social well-being in Brazil.”

Some of the teachers from the *Gira Mundo* program took part in the Amazon room to help to create a living environment according to the Amazon reality.

Report on *Gira Mundo* international exchange experience

The Gira Mundo program provided to us, three students and a teacher from *João Pessoa* – the capital of *Paraíba*, located in a hot, humid tropical zone, well known for its extreme heat – the opportunity to go on international exchanges between 2017 and 2018 in Canada, Finland and Portugal. After our return, we shared our experiences within the school environment and were able to perceive some similarities regarding climatic conditions and peculiarities that we observed about the socio-cultural aspects that are affected directly by the climate.

Given this, we emphasize that expressing orally and socializing our perceptions was very enriching because the collectivization of what we experience allows us to perceive each focus of observation. Also, we were able to verify that, even though there are similarities between our perceptions, the points of view are always different, since the way each one interprets reality permeates our personal experiences. This perspective reinforced our choice to produce a collective report aiming at the inclusion of diversity of points of view. Seen within a spectrum of similarities that is our city of origin, João Pessoa, and our conviviality in the same school environment, the state experimental school C.E.E.E.A Sesquicentenário.

To approach our main notes about the experiences abroad, regarding the natural conditions of winter periods in the northern hemisphere, and the adaptations in our daily life to achieve a healthy living in these places that differ so much from what is habitual to us, we sought to understand which observed and experienced components were essential for us to have our interpretation of each experience. The humanist approach to geographic thought serves as a basis for understanding how “the study of people’s relation to nature and their feelings and ideas about spaces, landscapes, and places reflects geographic phenomena to better understand the man and his condition” (Tuan, 1983 in Cabral, 2000, p.36); therefore, our report is based on this perspective to justify the relevance of our individual experience.

According to Razaboni (2008), the geographic reality is interpreted through the marks that the society prints in its environment, in the organization of the spaces and in the creation of its landscapes. Therefore, its approach presumes that the landscape is constituted not only of the physical elements visible to the human eye, but also the lived space where human interaction with the environment takes place, objectively and subjectively, including the expression of ideas, moral and cultural val-

ues and worldview. We started from this reading to understand that our interactivity with different realities, made possible by the international exchange, was permeated by those elements of the landscape that came to integrate our daily life during the months of participation in the Gira Mundo program.

As far as our experiences are concerned,

The landscape presents characteristics of the physical-biological environment and is shaped according to the economic, historical, social, cultural and technological context of the society that constantly constructs and transforms it. An understanding of the world passes through the reading of the marks that the society prints in its geographical environment in the organization of the spaces and the creation of its landscapes. (Razaboni, 2008 p.8)

Therefore, this part of the chapter highlights our perspectives on the physical-biological aspect, mainly due to the climate of the countries where we live during the program, knowing that this is a part of the “landscape” that man learns to coexist, creating alternatives for their adaptation to nature, through constructions, habits or developed technologies. While experiencing these new landscapes, we have realized that the process of adjustment to the conditions of nature is essential for a good relationship with natural diversity.

Report on living with climatic diversities

We originate from Brazil, a vastly diverse territory, the country is mostly located between the Tropics of Cancer and Capricorn, more precisely between the Equator (north) and the Tropic of Capricorn (to the south), but because it is located in low latitude areas, there is a predominance of a hot and humid tropical climate. While Portugal, Canada, and Finland, countries where we live in our international exchanges, are located closer to the North Pole, which explains the presence of lower temperatures and harsh winters. Thus, when we arrived at our destinations, we felt the contrast of the temperatures present in the humid tropical climate, predominant in the Brazilian northeast, and in the climates of the countries we visited: Mediterranean, polar subarctic and cold temperate, predominant respectively in Portugal, Canada, and Finland. Consequently, our organism felt the thermal differences, imposed by nature, provoking bodily reactions such as chills, redness at our bodies' extremities, and respiratory difficulties.

Moreover, the landscape is very antagonistic to our usual, since the warm and saturated colors were not present in the shy palette dimmed by the European and Canadian winter. Even though the enthusiasm to know a new country as well as to experience a new climate raised great expectations, so, the visual difference led us to a level of satisfaction and joy that, did not allow us to realize the true influence that the white snow and sky cause in the life of individuals. That is to say, the recurrence of this color with the passing of days increased a strange impersonality and sentimental coldness that reflected our behavior, modifying the expectations of our first impressions. For example, when we come across the leafless and afforestation lacking the unique character that we are used to, we fail to perceive in nature the elements that bring us the idea of life.

We point out that the disparities found in daily life are also perceived in the practices and habits of the population, which serve to meet their needs in the face of climatic conditions. For example, in the actions performed by individuals, such as their dress and concern when leaving the house, they combine what is indispensable for winter comfort with their preferences. In this bias, our first need was to wear thermal clothing, since temperatures were between $-20\text{ }^{\circ}\text{C}$, minimum in Canada and Finland, and $12\text{ }^{\circ}\text{C}$, which is a large thermal difference for us who are accustomed to another variable, given that, according to the reports of the company “WeatherSpark” (1981–2016), the temperature of the city of *João Pessoa* varies between $23\text{ }^{\circ}\text{C}$ and $32\text{ }^{\circ}\text{C}$, rarely reaching a level below $22\text{ }^{\circ}\text{C}$ (WeatherSpark, 2018). So the garments differ totally from the ones we use in the Brazilian Northeast, since we usually wear light clothing such as T-shirts, shirts, shorts, and dresses and we had to get used to the cold-resistant clothing such as scarves, gloves, caps, snow boots and heavier or feathered coats. However, the use of several layers of clothing made it difficult for locomotion and also to interact with people, in terms of greeting and showing affection, in which physical contact was not as present as in Brazil, where we constantly embrace each other, walk hand in hand and kiss each other on the cheek.

The perceived need is one of the most fundamental due to the physical effects that the cold causes on human bodies. Depending on the temperature conditions, the blood vessels contract or dilate, in case of cold, they carry out the process of vasoconstriction, since the blood circulation is much lower to maintain stable body temperature. Therefore, if the resident does not perform the proper care, it can cause reactions in the body that requires a certain temperature for its regular functioning. So, the use of winter clothes is part of the northern hemisphere countries culture due to the needs of the body to adapt to the environment.



Image 1: C.E.E.E.A Sesquicentenário sports area, João Pessoa/PB, Brazil – Author's Personal archive

We would like to emphasize that the first weeks of this kind of exchange are an adaptation phase lived by anyone who has never left their home country. Therefore, even though some think they are prepared after long researches on Blogs, YouTube channels, and profiles on social networks, to experience much lower temperatures than those present in the humid tropical climate is a factor that implies changes in everyday practices in a drastic way.

However, due to technological resources, it is possible to get warm in the houses even during the winter, through heaters and fireplaces. Consequently, residents can do their daily activities without worrying about the cold. Nevertheless, Portuguese houses do not have as much heating as Canadian and Finnish houses, so they are colder than the others, even though the Portuguese winter season is less rigorous. Another evidence observed by the experience in environments with lower temperatures is the provision of heaters in public spaces to cherish the well-being of the population. The governments of Portugal, Finland, and Canada endeavor to promote public policies that allow society to carry out its work activities in colder periods,

such as schools that need to have a closed-door structure (image 1) in their environments, canteens, and gymnasiums so that is possible to perform physical activities. Thus, in the case of the students, the activities that were carried out in the Physical Education classes led us to try out other non-traditional sports in the classes in our country of origin, such as tennis, gymnastics and swimming in heated pools.

Besides, it is worth mentioning that the scarcity of sunlight also causes diseases, such as insufficient production of vitamin D responsible, among other things, for the development of bones and teeth. In our experience, we were able to experience what the lack of this vitamin can cause us, such as the dismay in performing the most basic daily activities, the sensation of greater fatigue and so on. Therefore, it was necessary to use multivitamin supplements or vitamin D capsules, as well as the search for habits that would help improve our physical vigor, such as walking.

To perform physical activities, we were able to perceive that it is common to search for thermally comfortable places, as this is a way to keep exercising during the winter months. In this period, we acknowledge that these places are constantly fuller than open spaces, such as parks and squares, since weather conditions make it difficult to practice outdoor activities. In this subject it is possible to verify that:

The relation between functional use and microclimatic conditions has been confirmed by several studies (e.g. Gehl, 1971; Westerberg, 1994; Nikolopoulou et al., 2001; Zacharias et al., 2001; Thorsson et al., 2004, 2006) which show that comfortable weather conditions, i.e., high temperature and access to sunlight increases the number of people present in an urban space. (Eliasson, Westerberg, Thorsson & Lindberg, 2007).

From our experience and studies such as Eliasson et al. (2007) and Chen, Wen, Zhang & Xiang (2015), we have been able to understand how the climate presents a great influence in the interaction with the urban spaces in the open air. It is essential for the population of the countries with more severe winters to attend the parks and open spaces, because, after dark and really cold days, the need to enjoy the sun and the heat is enormous.

Concerning the social life of each locality in colder periods, it was possible to notice that there are not so many encounters outside of private spaces; with this, the family atmosphere ends up becoming the scene of meetings, and parties that provide the dialogue and the closest relationship between friends and relatives. However, the fact that people constantly socialize in a place, results in isolation that does not stimulate

the coexistence with other groups to which it does not address their family and social cycle. Nevertheless, with summer, public spaces, because they are in more favorable climatic conditions, become meeting points of different groups of civil society, reinforcing what was presented in Eliasson's et al. (2007) study, regarding climate as moderator of emotional states and attendance:

It is very clear from the study that the people visiting the four places do care about, and are influenced by, the weather and climate. Thus, weather parameters are important—not only did they influence the number of people who visited the spaces and whether they assessed the weather as being good or bad for outdoor activity, but they also influenced how people assessed the places and how being in these places made them feel, i.e., the psychological component of a place.

In this subject, it is possible to notice that the inhabitants feel more comfortable to carry out activities without facing the restrictions of the winter, the reason why many yearn for the arrival of the summer to take walks and to use lighter clothes. In the period when temperatures are warmer, we realized that there were a lot of people



Image 2: Intense fog day in Coimbra, Portugal (January 2018) – Author's Personal archive

who meet to sing, speak and see themselves freed so they can share their tastes and ideas in spaces such as squares and parks.

Because we live in a region where there is no existence of climatic phenomena such as snow or intense fog, we had to get used to them in our routine. So, habits like looking daily to the street to check if we should remove the snow to facilitate the exit of the vehicle or to use boots with staples; to consult the weather forecast to see if there is the possibility of snow days or, density level whose fog is (image 2); and preparing us to leave home earlier than usual, to have time to wear the necessary clothes and walk more carefully, have become routine habits for us. Therefore, snow and cold climate that once seemed exciting to who have never lived with this reality, have become mostly monotonous.

In order to face such obstacles that, added to ice and extremely cold climate, become something quite difficult to deal with, the inhabitants of the countries where we had our cultural experiences, used to eat foods that would help to make the winter more comfortable; hot soups and meals were excellent in engaging this thermal function. Regarding beverages, coffee and tea were the most popular ones, since they stabilize the body and give energy for the work to be performed. Therefore, the route to coffee shops was quite attractive, since we were enjoying the typical cuisines of those countries, and we would be warmed by these foods and the heater of the place.

Consequently, the facts mentioned make us reflect on how different the relationship between diverse human societies and nature, which are notorious in the socio-behavioral aspects. The international exchange experience as far as the field of ideas and respect for cultural differences is extremely enriching, as when we are in touch with something outside our comfort zone, we broaden our view of the world and what exists in it, since the diversity of the same is presented in the natural, social and cultural aspects. Among this, it is worth mentioning that even when living in places so different from Brazil, with regard to language and accents, history, territory and nature, services and social rights, we recognize the capacity that we humans have to experience the diversity, seeking alternatives, solutions, creating emotional bonds and interacting with nature and social environment.

From our experience, we can point out that the being, part of a particular culture with its peculiarities and customs, transitions to another highly diverse one in terms of climate, interpersonal relationships, clothing, everyday habits, and lifestyle. For Sachs (2000), the fact that a Brazilian does not live in the same way as a Hindu, or

a Frenchman does not live the same way as an American, is not justified only by the cultural difference, but mainly to the lifestyle that is an extremely important variable in the game of harmonization of social, ecological and economic and that determines the pattern of demand of each society regarding the use of natural resources for their coexistence with nature.

In this manner, this experience gave us a closer look at the world around us and on our own being, since we not only carried the learning of a new language, in the case of the exchange students who followed to nations that have a different language of our country of origin, as we acquire personal growth, by dealing with situations and people completely distinct from our circle and social environment. We also highlight our academic growth made possible by the exchange, since Canada, Finland, and Portugal are at a higher level in this scope than Brazil and are worldwide outstanding for the performance it has achieved in recent years, according to the Programme for International Student Assessment (OECD, 2018).

Therefore, we conclude that the utilization of the resources available in these countries are given in a way to meet the needs of the inhabitants according to what the territory has to offer. Together with the daily studies in schools and universities about them, they have better use of territorial availability, thus leading to a concept of culture affirmed by Professor Ignacy Sachs (2000):

It is culture all our knowledge of the environment in which we live. Culture is a mediator between society and nature. The concept of a resource is an eminently cultural and therefore historical concept. It is a resource that portion of the environment that I know how to use for an end that I consider useful.

Thus, it was necessary to use resources in a very different form from our country, we can mention the agricultural sector that undergoes several changes during the year to cover the necessities of the population in winter time; what is possible to do is carried out with the products grown and stored in the middle of the restriction for planting a variety of foods. In this bias, we realized that there is a large consumption of conserved foods, since, after harvest periods, the inhabitants store the food in spaces that have been properly molded for it, such as air-conditioned rooms at a temperature lower than the rest of the house. Considering these events, we realize that the way people act and show itself to be, dialogues with a set of practices dependent on nature and how the human being responds and uses his resources amid the permissions and limitations of each place.

Thereby, we can comprehend that the interaction between man and nature occurs bilaterally, in which the human being can transform the environment in which he lives to meet his needs as well as his ambitions. However, nature is also a determining factor in the actions of individuals regarding the influence of their composition – geographical relief, climate, rivers, and seas among other elements – and the limits that it imposes on the man. In this manner, it is possible to understand that how each society interacts with nature interferes directly in cultural matters, since this factor determines some determinations and actions in the life of diverse societies.

Amazon Room Experience

Contextualization of human experience in a built-up environment

This part of the chapter brings the experience lived in the 17th Congress of Methodology holding in Hämeenlinna, Finland in 2018 with the theme Human and Nature. The section “Relationship between human beings and nature in the Amazon area” was organized by a Brazilian researcher, Carolina Correa de Carvalho, who presented her personal impressions from experience at Amazon, Brazil. She showed the landscape of the Amazon rainforest and talked about the native’s relationship with nature, animals and the environment. As a complementary experience, the researcher with the teachers from *Gira Mundo* program, built up an environment called “Amazon Room”. The main point was to design a tropical experience room that allows the participants to experience the Amazon rainforest during wintertime in Finland. The idea was to create circumstances totally different from the circumstances that the visitors get to use, characterized as a continental subarctic or boreal climate. What were the necessary elements for that? Creativity and collaboration between the Brazilian group.

The “Amazon room” provided an experience of immersion and interaction with the Amazon rainforest and its mysticism allowed visitors to experience the warmth, colors, sounds, aromas, legends, people, culture and life of the Amazon rainforest.

Building up the Amazon Room

The Amazon rainforest is the world’s largest rainforest located in the north of South America covering the Brazilian states as Amazonas, Acre, Amapá, Rondônia, Pará and Roraima, and also other countries; Peru, Colombia, Venezuela, Ecuador, Boliv-

ia, Guyana, Suriname, and French Guiana (Magalhães, 2019). In the Brazilian side, there are more than 30 thousand species of plants, 1.8 thousand of continental fish, 1.3 thousand of birds, 311 of mammals and 163 of amphibians. Amazonia also has a huge socio-cultural diversity with 1.6 million indigenous people (Carneiro Filho, 2009).

Thinking in this wide diversity and in the Amazon climate, the “Amazon room” was built using technology, live plants, controlled atmosphere, and people dressed as native Indians to represent the enormous biodiversity of the Amazon rainforest. Attributes as temperature, humidity, water, soil, the “voices” of the forest, the animals, as well as the songs of the indigenous peoples brought to the participant a reality quite different from the Finnish forest.

The Six Islands

The starting point of building up the “Amazon room” was the idealization of the room. We organized and designed the room into six small islands, in order to represent the main characteristic of the Amazon rainforest. They are represented in Image 3

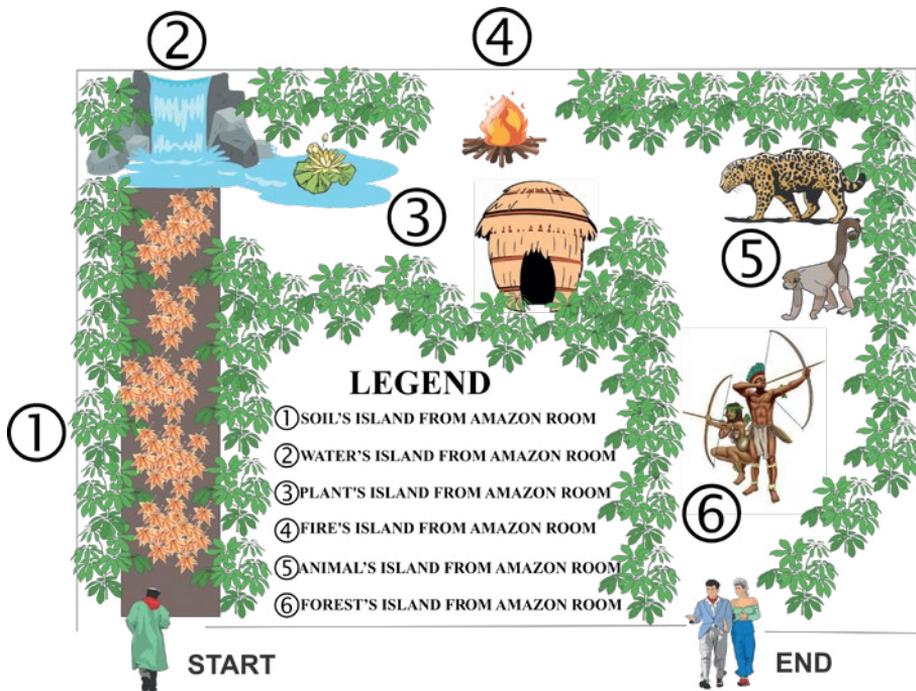


Image 3 – Layout of Amazon Room Experience – Drawing by the authors

3, the layout of the Amazon room, showing each planned island: soil's island, water's island, plant's island, fire's island, animal's island and forest's island.

The soil's island was thought in order to represent the soil of the Amazon rainforest. Indeed, the Amazon soil is considered poor of nutrients but has a unique feature coming from the humus formed by the decomposition of organic matter, i.e. leaves, flowers, animals and fruits (Magalhães, 2019). To represent this soil, the Brazilian group collected soil from outside HAMK University of Applied Sciences, where the conference was held. This soil is covered by gravel and humidified, becoming a soft and fluffy soil.

The water's island was designed to represent the abundance of water and also to bring one of the most well-known species of plants from the forests of igapó, one of the characteristic forests of Amazonia, the *vitória-régia* (Linhares & Gewandsznajder, 1998). Also, on that island, the Brazilian group made use of a vertical television to show a video from a waterfall with natural sounds during the visitor's tour. In addition, we represent with fabric and origami paper the Amazon flour *vitória-régia*.

The plant's island was designed to represent the dense tropical forest as well as the equatorial climate characterized by high temperatures (from 22 to 28 °C) and high humidity that can exceed 80% (Magalhães, 2019; Linhares & Gewandsznajder, 1998). To represent that we have used around 10 palms from the HAMK campus, an ambient humidifier in order to simulate this moistly environment and the temperature of the room was raised.

The fire's island was thought in order to bring the presence of life in the jungle by the native Indians, firewood and Indian Hollow (knowing in Brazil as *Oca*). To represent the native Indians living in the jungle, a pair of Brazilian teachers painted their bodies using indigenous drawings and dressed using colorful clouds, articles such as feathers and seed collars. Also, the couple was singing an indigenous song during the tour involving the visitors into a native dance, inviting them to taste coconut water and participate in the dance ritual. The couple also sat down around an artificial bonfire made by wood in which a strong red light was used, and speakers brought more reality with a bonfire sound.

The animal's island was set up using two televisions at the eye level to bring the visitor the idea of being close to the animals. Two videos gave animation for this experience. The first screen was set up with a video from jaguar hunting in the Amazon rainforest showing your strong body and how this kind of animal is at the top of the

food chain in the jungle. According to Dillinger (2018), the jaguar is an important animal in the Amazon rainforest and has the strongest bite force of all the predatory felines. The second video brings the Amazonian wild monkeys in the high tropical trees representing the fauna biodiversity.

The forest's island was representing from two data-show using a fabric of approximately five meters to project an Amazon forest image, showing the density and the height of the trees. This island was covered by many leaves collected from the surroundings of the university (Finnish late winter leaves). These leaves with humidity bring the perfect environment for our artificial environment.

The atmosphere and environment

The atmosphere and environment were designed to represent the typical tropical rainforest. The group set up the air conditioner temperature to the highest temperature of the air conditioner, around 22 °C. The humidity was set up as mentioned before and we have covered the windows to provide a dark environment represented by the tops of the dense trees that gather at the top of the forest, making the entrance of sunlight when in the middle of the forest. Finally, we have set up a main sound in the room using Amazon rainforest with a diversity of birds singing and with the sound of rain and thunderstorms, typical of tropical forests.

Five Human Senses

In order to motivate the visitors to interact with the environment, we use the native Indian to guide the tour. Also, we encourage them to try new experiences and feelings. During the construction of the Amazon, we try to build opportunities so that the visitors could use their five human senses: touch, sight, hearing, smell, and taste during the tour. Touch everything on the room, sight all visual stimuli, listening to the loud and diverse sound from the nature, animals and climatic conditions of the Amazon rainforest, smell the wet leaves and most environmental and taste coconut water and tropical fruits.

Participants' experiences

The room visit took place in groups of 10 people guided by Brazilians dressed as indigenous peoples in order to strengthen the reference and reaffirm the importance of these peoples. The visitor, upon entering the room, was invited to stand barefoot in order to be exposed to the soil, water, leaves and mostly to experience the entire

process of immersion. During the tour, the participants were invited to experience the whole experience: Stepping on the wet ground covered with dry leaves, feeling the scents of the plants, the flowers of the fruits, the fluidity of the water, the heat of the fire, the sharing of indigenous songs and dances. Also, the visitors were invited to dance with the natives that were walking around and singing natives songs. The tour lasted approximately 20 minutes.

After the tour, the visitors report their personal experiences and feelings, writing on a virtual wall with photos and words about the experience and others just commented on their personal experiences. In general, the reports show that the participants really enjoy the experience, and they have had different feelings during the tour. Curious comments about the sounds like “feels like a concert of sounds and singing” and “voice and sounds as a peaceful atmosphere” show that the environment brings unique feelings for each human being. Other comments were about the richness, real and deep experience that the Amazon room provokes in the visitor suggesting that even though the experience came from a built-up environment, the humans can be related with it and have diverse and real feelings.

The experience of the Amazonian room gave new opportunities to Finns and other foreigners. But at the same time, it brought to the Brazilians group, who built up the environment, new possibilities to know their own culture, to be close to their own roots since only one member of the group had the opportunity to get to know the Amazonia in loco. This experience made this event a mimetic and cathartic experience. Even if it differs from that one lived by foreigners, it culminated in an epiphany experience since it gave us new knowledge about ourselves and our cultural traditions, now lived in a built environment not just known theoretically. We do believe that using the living environment constructed with technologies and tools bring the section emotion in the Brazilian culture and diversity very deeply.

The process of creating the room can also be translated as a moment of learning and singular professional growth, because at all times we were required the ability to work collectively, solve problems, find solutions, adapt materials, become a learning subject when accepting a challenge of this magnitude. These challenges are essential to our development. It is interesting to notice this double relationship while trying to offer a subjective experience, sensorial to the visitors of the room; we ourselves are stimulated to undergo a personal experience of growth and self-knowledge, which for us is very important. Also, we realize that a living environment provided differ-

ent relationships, experiences, and self-knowledge from that experience, natural and cultural ones even though the experience is made by an artificial environment. The technology connected to human creativity can enable the construction of a rich, real and lively environment in which man could relate to nature bring up unique feelings and experiences.

Conclusion

In this chapter, we seek to report in two perspectives the coexistence with climatic diversity, through the observation and experience of Brazilians who had the opportunity to make an international exchange in the academic field. The first report brings the case of humans facing a natural environment resulting in a unique experience, showing that interaction with environment depends on the subjectivity of each one as an individual, as Cabral (2000) mentions in his humanist perspective. This perspective suggests the idea that climatic conditions change the way a human lives. The second report brings the case of human facing a built environment using technologies and tools, showing that despite the experience of built up the environmental or to experience it is possible to affirm that each person had a personal interaction with it. Therefore, when it comes to coexistence in a “natural” or an “artificial” environment, in the case of our exchanges, each of us faces this experience from our perspectives, yearnings, expectations and emotional and intellectual maturity, as Chen et al. (2015) affirm that the individuality of each experience is about the physical perceptions of each being in dealing with natural diversity not only in the subjective aspect.

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CHAPTER II:

Individuals Encountering Culture

6. ‘Follow your nature’ – a mongrel approach to good life

Jyrki Konkka

Introduction

If someone were to ask me about it, I wouldn't hesitate to describe a good life as a happy, lucky, and well-lived life. That kind of life is one almost everyone wants for those they care about (including themselves). Nothing else is required for a good life. One does not need to leave a trace behind, nor connecting to something bigger than oneself in order to have a good life. Nor does a good life require that there is a great narrative in which one is playing a leading role. The description seems self-evident. As usual, that kind of description is a good starting point of philosophical scrutiny. The self-evidential appearance is only superficial. What is a happy life? What does a well-lived life mean? What does it require? Luck? What does it have to do with a good life? The description requires both conceptual and substantial clarification. Especially, we want to know what a good life consists of, and why it is good. We need a definition. When trying to define what a good life is, we hope that our definition fits with the description I just gave. In other words, the description is a guiding principle of our scrutiny. In this article I am trying to provide a definition that fits the description.

There are several alternative conceptions of good life, and I have had a hard time in choosing a favorite between them. I find them all more or less attractive. (I have no taste that separates between them.) They all seem to be roughly true. Still, they conflict with each other in many ways, and they all have problems they cannot answer to while their rivals can. So, I am perplexed. Being perplexed is another good starting point to philosophical scrutiny. In this article I hope to succeed in giving some clues to how to deal with the perplexity that seems to be the case in the discussion about good life.

As the topic of this book is human and nature, I will start there – what is a good life from the point of view of human nature? However, I am not aiming at proposing an account that is usually attached to human nature. My approach is not a perfectionist one. There are other routes to take. Good human lives are varied. Some kind of lives suit some, but not others. Still, there are some very general features that are common to all good lives. There is a list of goods that all good lives share. It is not a matter of opinion what goes on the list. Thus, the account of good life that I am proposing is pluralist and objectivist. This is a common feature of Aristotelian theories of good life. (Kraut, 2018, 43; Hurka, 2010, 6; Bishop, 2015, 139) However, any good (human) life is evaluated from a point of view of someone interested in that life. That is, what the term ‘good’ amounts to when attached to a particular life. Thus, any good human life has a subjectivist tone in it. It is important for humans to decide for themselves what is good and what is not. It is even important for their life to be good for them to be able to decide against their best interest. Good human life is a life that has some freedom and autonomy.

The approach I am proposing is what Richard Arneson (2016, 593) calls the ‘follow your nature’ approach. Accordingly, I assume that there is something in common in all good (human) lives, and the collecting feature is human nature (whatever it turns out to be). But I may disappoint my readers by not offering any essential or specific account of human nature. Instead I propose a short list of fundamental features of good (or bad) human lives.

The list consists of three entries that are characteristic to human lives. First, humans are experiencing creatures. Controversially, it can be said that a human life is a set of all said human’s experiences. (Bramble, 2016, 207) Our experiences matter to us. There is something it is like to live our lives, and part of their goodness comes from how our lives feel. That is, this entry takes seriously the phenomenological intuition that some experiences’ value as experiences lies entirely in the phenomenological quality of those experiences. (Haybron, 2016, 354; Kraut, 2018, 138) Pleasant experiences are good just on the grounds of what they are like. A good life is in part good, because it is experienced as good.

Second, humans are creatures with certain powers (or capacities). It is good for humans to develop, practice, and actively use these powers. In the most general sense these capacities consist of affective, emotional, cognitive, social, and physical powers. (Kraut, 2007, 145) Thus, there are some matters of fact besides mere experiences

that are fundamental to good life. Being capable and actively using one's capacities are part of living well, or having a well-functioning life.

Third, humans are appreciating creatures. (Haybron, 2013, 98; Tiberius 2008) They have values and preferences. This is an attitudinal aspect of good life. It matters to humans that they can live according to their values, and occasionally accomplish what they value, or prefer to get.

The account I am proposing is rather inclusive. Some may consider it as a hybrid view, since it combines subjective aspects, such as attitudes toward one's life, with objective aspects, such as good functioning and good experiences. Good life is multi-faceted. It contains many aspects and an incredibly rich variability in realizations of these aspects all of which behave in their own ways, sometimes pulling to different direction, sometimes cooperating with each other. (Kraut, 2018, 24; Bramble, 2016; Bishop, 2015, 7) So, it seems like a hopeless project to fit the separate aspects with all their different realizations in the same frame. Usually, philosophers have adopted an alternative strategy, and emphasized one or another aspect in their theorizing, thus amounting to several competing conceptions of good life and well-being. These include for instance hedonism, desire theories, and objective list theories, to follow Derek Parfit's (1984, 493–502) lead. I shall take the hard route and embrace the mongrel nature of good life. (Haybron, 2008, 44; Block, 1995) I hope the discussion will add to our understanding of good life and how to live one.

The definition: a short and dirty list based on a vague assumption of the most general aspects of human nature

The account of good life proposed in this article consists of a short list of entries that define the most general aspects of good life. Thus, the approach is a pluralist one. The entries on the list are selected on the grounds of being fundamental to one unifying principle, that of human nature. Furthermore, I am mainly interested in the question, what is good for a human life, a life that goes well for a person living that life. In other words, I am interested in questions of prudential value, things that are (ultimately) good for, or beneficial, or advantageous, to humans. A life is good if it is full of prudential value. Other values may also contribute to good lives, and they may in many ways be conflated with prudential value. For, instance being good at something (a perfectionist value) (Kraut, 2018, 15) may be good for a person and her life (a prudential value). (Campbell, 2016, 403) For the sakes of simplicity and

lack of space I'll focus on good life from the point of view of prudential value, and leave aside the questions of other values and their conflation with what is good for a person living her life.

The entries I present make a good life look like a mongrel. No clean and clear account seems to be possible, if a collection of the relevant features are included. The ontology, the axiology, and the epistemology of the entries on the list are different, and so the shape of each aspect studied here is different from the other aspect. Thus, it may look like we are discussing totally different topics when we are focusing on the different aspects of good life. In a sense we are: we are focusing on distinct aspects, and studying good life from the point of view of these distinct aspects may provide us with conflicting results. From the point of view of 'normal science' the distinct aspects, however, follow some general commitments. For instance, we are dealing with a real condition that is multiply realizable. (Bishop, 2015, 12) Furthermore, we are dealing with something that has value and what is experienced by humans. (Alexandrova, 2017, XXI, XXIV) The aspects studied here are selected on the short list for the reason that they all seem to be most relevant to human nature and life, and they all have some support in accounting for good human lives.

The list consists of relevant aspects of human nature in the most general way. In a sense, the entries are uncontroversial. They are related to Parfit's (1984) distinction of hedonism, objective list account, and desire satisfaction account. Furthermore, the entries name the phenomena studied in the empirical research of well-being. (Alexandrova, 2017, XXXVI; Bishop, 2015) The aspects on the list are 'experience', 'functioning', and 'appreciating'.

Experience is usually related to hedonism, for hedonism has been considered as the conception that takes seriously the phenomenological intuition that other conceptions are not comfortable with. (Haybron, 2016, 354) According to hedonism, the quality of experience is what counts. Especially, pleasantness and unpleasantness of experience, the phenomenological quality of the experience itself, is where the value of the experience is. However, also Aristotelianism takes experience to be a fundamental part of good life. (Kraut, 2018, 44; Hurka, 2011, 11) Good experiences are "the goods of the soul" that Aristotle took to be of the highest value, and he also took pleasure (a pleasant experience) to be good. (NE: I.8, 1098b13–14; NE: X, 1–5) In short, there is something it is like to living a good life. A life is good if it is experienced as good.

Functioning (or good functioning) is related to perfectionism (or an objective list account of good life), and thus it is a natural entry to an Aristotelian account of good life. (Bradford, 2016, 126) Good functioning refers to flourishing. This aspect on the list emphasizes that the good of an individual depends on what kind of individual it is, and what is required for such an individual to flourish. (Foot, 2001, 91; Bradley, 2015, 48) Specific features of a good life for a human are different from those of a horse or a dog. (Kraut, 2007, 3; Bradley, 2015, 48) Human flourishing means developing, practicing, and actively using the powers that humans naturally have. In the most general sense, the fundamental capacities that are good for humans to develop, practice, and use are cognitive, emotional, social, and physical powers. (Kraut, 2007, 137) When focusing on “the goods of the soul” functioning refers among other things to developing and exercising practical rationality. Practical rationality provides a structured way of thinking one’s life. (Annas, 2011, 121; LeBar, 82) A life is good if it consists of actively using those powers one has. On the other hand, good human functioning refers to the physical and psychological structures that form a network of states that are beneficial for a human. (Bishop, 2015, 8)

Appreciating relates to subjectivist accounts of good life and well-being. Humans are appreciators, they value things, and they want the things they value to be fulfilled. (Haybron, 2013, 98; Tiberius, 2018, 13) Ultimately, values are nothing more than strong preferences. They are pro-attitudes that motivate us, and give us reasons to act. The stronger the desire, the more we appreciate the object, the more satisfied we are when the object of our desire is accomplished, and the more frustrated when we fail in accomplishing it. Thus, not just valuing something, but accomplishing or fulfilling what we value is important. The more satisfied strong desires and preferences, and the less frustrated strong desires and preferences there are in a human life, the better it is for that person’s life. (Bradley, 2015, 36; Griffin, 1986, 15)

These entries on the list all behave in different ways depending on the viewpoint. One basic question about the discussion of the aspects is concerned with whether they are subjective or objective, and in what sense they are subjective or objective. As is clear, there are many different senses of subjective and objective. (Searle, 1995, 8) I am mainly interested in their ontological and axiological senses, and their consequences to our subject matter. Especially, I am interested in what is their fundamental nature ontologically and axiologically. I also take a look at their epistemic features. In Table 1 I have brought the mentioned elements together. Depending on the viewpoint, the answer to the question about their subjectivity and objectivity

varies. Sometimes, however, depending on the interpretation of the conception at hand, the answer changes. I have marked some examples of a possible change with a question mark in the table. An interesting result of looking at the table is that the philosophical viewpoint emphasizes objectivism, whereas from the point of view of aspects, that is the point of view that empirical studies of well-being finds interesting, emphasizes subjectivism. The arrows in the table are meant to point out this result. However, the point of presenting the table is not the (controversial) results just mentioned, but in pointing out the mongrel nature of good life. The table shows neatly why no clean and clear definition can be nailed down, when the fundamental aspects of human nature are brought together: the different aspects of good life behave differently depending on the point of view.

Now, let us take a closer look at the aspects from the basic philosophical viewpoints. Experience is considered as ontologically subjective. There is nothing controversial in this. Experience is mind-dependent: it is a feature of a conscious mind. Experience is inherently internal: there is something it feels like to an agent whose experience it is. Tickles, itches, pleasure, pain, joy, boredom etc. exist only as experienced by a human or animal subject. (Searle, 2010, 18; Kraut, 2018, 24; Chalmers, 1996, 4)

However, the epistemology of experience is not that clear. On the one hand, an experience of e.g. pain is about a fact – that of pain – and not a matter of opinion or attitude of an observer. (Searle, 1995, 9) So, it seems to be epistemically objective. On the other hand, experiences are not truth-conducive. That is, they do not guarantee a connection to reality. Examples like experience machine show clearly this possibility. More realistically, a person may experience that her life is going personally and professionally well, while her friends, family, and co-workers are mocking and betraying her behind her back. (Bradley, 2015, 28; Nagel, 1993, 64) There is no fact that things are all fine, there is just a subjective experience – a feeling – that things are so. This possibility suggests that experiences are after all epistemically subjective. All there is, is the subjective experience in which the entry is based on 1st person perspective that no-one else can have independent knowledge of. The experience may be as real as it is, but nonetheless it may be based on an illusion, and it is realized from the 1st person perspective only. It is subjective knowledge.

The value of pleasure and pain, and other experiences are based on what they are like, not on any attitude or opinion of them. (Haybron, 2016, 350; Kraut, 2018,

138; Hurka, 2011) Thus, from the axiological viewpoint the value of experience is objective, despite the fact that we are dealing with an ontologically subjective issue.

Functioning is a naturalist term that is used in the context of causal dynamics and explanations. In the context of good life and well-being, it refers to physical and psychological processes that are beneficial for an individual of a certain type, e.g. processes that are beneficial for human flourishing. (Bishop, 2015, 12; Chalmers, 1996, 11) As a natural feature of human activity and development, (good) functioning is ontologically objective. Physical functioning, developing and exercising it, is not mind-dependent. For instance, the facts of how a heart works do not depend on there being a mind that is experiencing or appreciating it doing its job. However, when focusing on the “goods of the soul” as perhaps the most fundamental feature of a good human life, it seems that we are dealing with mind-relative matters. But being mind-relative rather than mind-dependent does not yet mean that we are dealing with ontologically subjective stuff. People having minds (if they do) and the (good) functioning thereof is not a mind-dependent matter (at least from the ontological point of view). Good functioning provides a distinct fundamental aspect for studying good life from an objective and naturalist (good old empirical science) perspective.

Epistemically there is no controversy. Good functioning is a natural fact that does not depend on any experience, attitude or opinion of the observer. (Of course, someone may claim that we are dealing with phenomena or constructs created by the scientific community and larger public when discussing what is good functioning, but that is not the point here. The point is, that knowledge of the good functioning rests on the view from a 3rd person perspective.)

Axiologically speaking, it is clear that good functioning is not a matter of experience, attitude or opinion of the person whose functioning is at stake. It is good for a person to have the powers and capacities required for a good life and well-being despite one’s bad experiences or whether one cares at all about one’s capabilities.

Appreciating anything is most clearly an ontologically subjective matter. There are no values without valuers, no preferences or desires without beings that have pro-attitudes towards the world. Appreciating refers to our intentional states, that is, our attitudes and opinions about things – our subjective projections on the world. (Haybron, 2013, 89) However, a fundamental feature of appreciating is fulfilment of

values or desires, or satisfaction of preferences. In other words, appreciating is tied to achievement or accomplishment – a real state of the world. It is not just a matter of experience, opinion or attitude of the observer, whether the values or desires of the person are fulfilled, or her preferences are satisfied. In fact, the person may not even know that they are. (Heathwood, 2016, 141; Bradley, 2015, 43) Knowledge of the state of the world, that is knowledge whether the values of the person are fulfilled or preferences satisfied is epistemically objective. (Searle, 1995, 8)

Appreciating adds a subjective element to good life. The question of what a person values is a matter of her attitude or opinion of the object of appreciation. It means connecting to things that matter personally, to things that make one's personal life meaningful. What makes life meaningful is appreciative engagement with merit and worth. (Haybron, 2013, 101; Darwall, 2002, 80) So, it may seem that appreciating something is ultimately tied to objective value: to the object of appreciation that has merit and worth. One conception of meaning has it that meaning arises when subjective attraction meets objective attractiveness. (Wolf, 2010, 9) This may be the case if our preferences are fully informed, or if our values are sustainable from the point of view of ideal observer. But our preferences are never fully informed and we hardly are ideal observers. If the meaningfulness depends on objective merit and worth, a value that is not our own, it may turn out that all our important life-projects turn out to be meaningless. For most part of our lives, especially when we evaluate that our lives are going well, we are engaged in personal projects, that is, projects that have value for us. Fulfilling those projects is a source of satisfaction and failing in them a source of frustration. No objective good is needed for fulfilment of values. (Haidt, 2010, 97; Tiberius, 2018, 62) Of course, good experiences and good functioning are good for a person regardless of her attitude or opinion, and it is good if she cares about her experiences and functioning, but there are arguably other things that are meaningful and what the person personally cares about as well. These things, the values, desires, preferences, and appreciations, are matter of personal attitude and opinion only. Thus, appreciating is from axiological viewpoint subjective.

In short, the emphasis in defining the account rests on the question whether the subject matter is objective or subjective. This is a fundamental division in metaethics, value theory, as well as in questions of well-being and good life. (Bradley, 2015; Driver, 2007)

Table 1: Viewpoints and aspects: objective or subjective?

<i>Viewpoint:</i>	<i>Aspect:</i> ↓		
→	Experience	Functioning	Appreciating
Ontology	subjective	objective?	subjective
Epistemology	subjective?	objective	objective
Axiology	objective	objective	subjective?

Ideally, and in favorable conditions, the distinct aspects cohere with each other, and push to the same direction making a life good (at least from the prudential point of view). When they do cohere in this way, they support and strengthen each other creating a positive causal cycle. A similar observation that seems to conform this claim is made by Michael Bishop (2015) in his network theory. Bishop’s network theory is constructed of objective and subjective facts that make life good and they include 1) positive feelings, 2) positive attitudes, 3) positive traits; and 4) accomplishments. (Bishop, 2015, 7) Here’s an example on applying the aspects to a case of friendship in the spirit of Bishop (2015, 76): Good functioning (e.g. healthy relationship skills) provides success in fulfilling (or accomplishing) what one appreciates (successful relationship) which in turn provides good experiences (positive affect, happiness). Good experiences, in turn, strengthen and support good functioning that strengthen and support success in fulfilling what one values. There is plenty of empirical evidence supporting this type of claims. (Graham, 2016, 432)

However, it is not unusual that the aspects on the list pull to different directions. This has been shown in several empirical studies. (Graham, 2016, 437; Decanq and Neumann, 2016, 554) The worst case scenario is that the aspects that pull to different directions tear one’s opportunities to good life to shreds. Another bad scenario is that even if the aspects push to the same direction, the circumstances are too unfavorable for thriving. However, sometimes the pull to a different direction does not matter that much. It seems that it is becoming a standard practice in well-being research to distinguish between different aspects of good life. For instance, longer commutes mean less pleasure even when one appreciates the neighborhood one has recently moved in. In this case it may be that the long commute makes the everyday life intolerable as a whole. Parents with a newborn child may report low pleasure while still finding their situation as rewarding and meaningful. The parents may

find that their life is good despite the disruptions caused by the newborn. Sometimes, one's values may be in deep conflict with what one enjoys the most and what the person is. This may be the case with a homosexual person that belongs to a religious community that disapproves homosexuality. The person herself may also disapprove it, thus making one's life miserable.

Testing the definition: following some basic philosophical practices

Now, we may ask whether the definition based on the mongrel view fits the description stated on the first line of this article: good life is a happy, lucky, and a well-lived life.

A common philosophical practice in evaluating definitions of good life and well-being consists of criteria of coherence, descriptive adequacy, normative adequacy, and empirical adequacy. Similar tests are also used in empirical research of well-being. (Alkire, 2016, 630) Coherence means the internal consistency of the definition. (Badhwar, 2016, 307) It is a general requirement of all theories. If a theory is internally inconsistent, it should be rejected. Descriptive adequacy requires that the definition we are after is in accordance with our commonsense judgments of good life and well-being. (Sumner, 1996, 8; Bishop, 2015, 20; Badhwar, 2016, 307; Tiberius, 2018, 19) Descriptive adequacy criterion provides the basic test for our definition (Sumner, 1996, 10), and, thus, it is considered as the most important test on the list. (Bishop, 2015, 21; Tiberius, 2004, 299) Normative adequacy requires an explanation why we should follow the lead of the definition offered to us. (Badhwar, 2016, 307; Tiberius, 2018, 19) Questions of normative adequacy belong to value theory, and, thus, they belong to the terrain of philosophy. In this article I have focused on prudential value. In other words, the focus is on what is good for a person living her life. Empirical adequacy requires that our definition is in accordance with reality, or to be exact, with evidence and facts. (Tiberius, 2018, 20, Bishop, 2015, 23)

The mongrel view I have presented in this article is well supported by the evidence and facts, and it provides a better explanation than the rivals of why different measures point to different directions in happiness (or, when evaluating whether one's life is good). The explanation is that the aspects of good life emphasize different things. Sometimes the different emphasis is important for good life, as may be the case of a homosexual belonging to a religious community who is reflecting her

values and way of life. (Tiberius, 2018, 5) Sometimes the different emphasis is not that important as may be the case of a family with a newborn child. Even if the everyday activities in such a family are relatively low in pleasure (experiences), they are thought as rewarding and meaningful, since the parents themselves and their culture appreciates families with newborn children. (Graham, 2016, 437; Bishop, 2015, 209) The mongrel approach realizes such complexities that are crucial for a good life.

Philosophical practice may take two alternative routes in analysis. They are the conceptual analysis and the substantial analysis. Both have been applied to the questions of good life and well-being. (Bradley, 2015, 2; Campbell, 2016, 405) Questions of prudential value are often answered from the point of view of the conceptual analysis. Thus, the analysis aims at clarifying what we mean or what we can expect to hear when we are discussing good life. Such discussions of prudential value aim at telling why such and such things should be considered as good, and why one should pursue such things. That is, why they are normative for us. Two popular analyses are the rational care analysis introduced by Stephen Darwall (2002), and the suitability analysis introduced by Richard Kraut (2007) and Connie Rosati (2006). There are other conceptual analyses available as well (Campbell, 2016), but the two analyses just mentioned suit for our purposes.

Rational care analysis, in short, states that a good life of a person is a life that one should want and promote insofar as one cares for that person. (Darwall, 2002, 7) A concrete application of the rational care analysis is the crib test. (Feldman, 2010, 164; Bradley, 2015, 7, Darwall, 2002) According to the crib test, a good life is something that a loving parent wants for her newborn child in its crib. The idea of the test is, that the life a parent wants for her child is a life high on prudential value, a life that is filled with anything that is good for the child. The test, however, is inconclusive. For instance, a moral zealot may want her child to have a high level of virtue in her life, and not care about her well-being at all. (Feldman, 2010, 164) But such difficulties do not concern us here, for we are interested in testing whether our definition fits with the characterization just given. And it does. Who wouldn't want her newborn child to have a life rich on good experiences, developing her powers and being able to use these powers in her important life projects, and having sufficient freedom and security to live according to her values and aiming at what she appreciates the most? The aspects of the mongrel view seem to be well covered by the rational care analysis.

The suitability analysis takes a different route in assessing the normative adequacy of a definition. According to it, anything that suits a being or serves it well is good for that being. (Kraut, 2007, 87) The suitability analysis focuses on whether the elements of good life are matching with each other. This may be interpreted to mean both the aspects of good life studied above and the circumstances of the being whose life is at stake. (Of course, the scope of Kraut's analysis is even larger than sentient or even living beings. The suitability analysis applies to plants and artifacts, as well as to activities and individuals. (Kraut, 2007, 3)) Thus, there are two different questions that need an answer: Do the aspects of the mongrel view match with each other, and when they do, do they support good life? The second question is: Are the circumstances favorable for the being's flourishing? The suitability analysis tells that what is good for a (human) being is that the aspects push to the same direction, and that the conditions are favorable for experiencing one's life as good, being able to develop and use one's powers, and being able to fulfill what one appreciates the most. This is very close to Richard Boyd's (1988) well-known idea of moral realism. According to Boyd, there are a number of important human goods, things which satisfy important human needs that under a variety of circumstances are clustered with each other. (Boyd, 1988, 203) When the parts of these clusters fit with each other, it is safe to say that it is also good for the person. However, the suitability analysis does not provide any normative reasons for promoting what is good for a being. (Kraut, 2007, 75) It only states what is good for a being and why it is good.

Descriptive adequacy usually takes the route of substantial analysis. (Haybron, 2008, 43; Sumner, 1996, 10; Bradley, 2015, 2; Campbell, 2016, 404) This is understandable, since the aim is to find the best theory on the subject matter, and the best theory of good life should be in accordance with our commonsense descriptions. We are not so much interested in what we mean by such terms as 'happiness', 'well-being', 'quality of life', or 'good life' in general, than what the things under scrutiny consist of, what are their ultimate determinants, what they are. That is, we are mainly interested in the nature of good life. The intuitive description of good life serves as the starting point of assessing the descriptive adequacy of our definition. Thus, the starting point is the description of good life as a 'happy, lucky and well-lived life'. Such a life is a life that a loving parent would want to her newborn child in its crib.

The emphasis of our analysis is in happiness. However, there are several senses of the term 'happiness'. Often, happiness is treated as a descriptive term with an evaluative content. (Lucas, 2016, 403; Graham, 2016, 424; Tiberius, 2018, 181, n2) Research-

ers use the term interchangeably with ‘subjective well-being’. Subjective well-being studies have taken two distinct routes to analyze happiness: the “hedonic” route and the “eudaimonic” route. (Graham, 2016, 425, 436) The hedonic route focuses on the quality of life and experience, whereas the eudaimonic route focuses on opportunities, capabilities and meaning in life (or, what one appreciates in life). These routes are faithful to commonsense intuitions on the topic. Both routes emphasize that we are ultimately dealing with a success value. That is, good life is a matter of the success of an organism in achieving its goals. (Haybron, 2008, 168) Succeeding in one’s goals is always a matter of luck, but living well also helps. Living well, aiming at being good at in what one is doing or what kind of person one is, is often connected to the eudaimonic approach. Developing, practicing and actively using one’s capacities and skills provide an insurance, but do not guarantee success in life. Happiness is the ultimate value of good life. That seems to be uncontroversial. But the case with living well, or living according to virtue, is not that clear. Some hold that it is not an ultimate, but an instrumental value, even if it is necessary for a good life. (Baril, 2016, 248) So, the question is, whether our definition fits with the happiness-part of the description.

Philosophers have made it easy to figure out alternative commonsense intuitions of what good life is. (Bishop, 2015, 109) They are listed in the alternative theories of good life (or well-being). The problem, however, is that the commonsense intuitions (formulated in the philosophical theories) seem to conflict with each other. It seems that either the definition that is faithful to the commonsense description is incoherent, or we must leave something out of the definition and risk not answering to the requirement of descriptive adequacy.

The mongrel approach, however, succeeds in answering the challenge without leaving out any important elements of the description and risking the coherence of the theory. Experiences, functionings and appreciations are all relevant from the commonsense point of view of good life. The distinct routes emphasize different dimensions of happiness. These dimensions are covered in the mongrel approach without privileging one over the other. (Bishop, 2015, 111) Following one’s nature requires taking different aspects into account. The problem is how to fit the elements together. (Bishop, 2015, 110) With lesser luck it does not happen. One can, however, try, and develop, practice and use one’s powers to gain better chances in succeeding in life – accomplishing what one appreciates. The best bet for a good life is a well-lived life. But even then, if circumstances are unfavorable, no matter how hard one tries,

the best bet does not guarantee a good life. Tragedies happen. There is nothing incoherent in this. Thus, the mongrel approach passes the tests of descriptive adequacy and coherence by realizing and explaining from the point of view of human nature what is good life (for humans) in the most general sense, and what are the chances of succeeding in one's life goals. An important feature of good life is, then, luck.

Luck: a pervasive feature of human life

Luck is an element that is not explicit in our definition. It is not explicit in any conception of good life that I know of. This is a natural result for the mongrel approach, for it provides an account of good life based on the most general features of human nature, and luck is not among those features. Luck is, however, a pervasive feature of human life, and it has everything to do with the aspects of good life taken separately and together. (Williams, 1981, 21)

There are four ways that luck appears to arise. (Lippert-Rasmussen, 2018; Statman, 1993, 11; Nagel, 1979) They are:

1. Resultant luck
2. Circumstantial luck
3. Constitutive luck
4. Antecedent causal luck

All these manifestations of luck are crucial for realization of some aspects of good life. Our achievements are always affected by resultant luck. The best bet against bad resultant luck is developing, practicing, and actively using one's powers and skills, but the powers do not guarantee success. They just provide the most reliable bet for a good life. (Hursthouse, 1999, 172; Baril, 2016, 248) Even so, it is prudentially wise to develop, practice, and actively use one's capacities and skills.

Sometimes even the best of skills and powers do not help. The aspects may pull to different directions – one's values and experiences may not fit with each other, or one's physical or cognitive makeup does not serve the person in the best way. This is how the constitutive luck affects to our lives. Also, the conditions may not be favorable for good functioning or fulfilling one's values. It may be a matter of luck what kind of circumstances one is in when pursuing the important life goals. Furthermore, it is beyond one's control, what were the circumstances in which the crucial events and choices earlier in life took place, thus leaving the individual with unsat-

isfactory set of options. A person with better resources, knowledge and skills is more likely to succeed in one's pursuits than a person that lacks them.

Constitutive, circumstantial, and antecedent causal luck are often concern of a good society. A good society, according to some egalitarian views, is a society that provides equality of opportunity to its members. (Cohen, 1989; Arneson, 1989) If an individual cannot be held responsible for her situation, and therefore lacks the opportunities that a good life requires, a good society should somehow compensate the lack for the individual. Social background and some inherited characteristics are matters of antecedent causal and constitutive luck that a good society should, according to some reasonable arguments, compensate. (Ferreira and Peragine, 2016, 750) But sometimes an individual must face the tragic fate in the case of constitutional luck, if for instance one's values or emotional and social capacities are such that the (good) society or culture disapproves, and lack the opportunity for a good life, or what it would be in the poor individual's own lights. Put together, the manifestations of luck appear to show that there is no area of life that luck has no role whatsoever. (Nagel, 1979, 35; Lippert-Rasmussen, 2018) Sometimes one can personally do something to increase the probability to succeed in one's pursuits, sometimes one can do nothing at all about it. Sometimes it is a matter of whether the society is good enough that one can have an opportunity for good life, and sometimes it may be the case that the good society is blocking the individual's all opportunities for good life.

Finally, too much good luck may even be bad for an individual, at least from the point of view of psychological functioning, if not from the point of view of experiences. Psychological literature is full of cognitive biases that describe all kinds of alternative ways in which an individual may turn out to act against her best interests. Many of these biases are based on the individual's illusionary picture on her skills and capacities. The overconfidence effect is one of the most apparent of them. For instance, an individual may think that her achievements are a clear result from her personal skills, while in reality they are more results of strokes of luck. The overconfidence effect and other similar biases are ubiquitous in our modern western society. That may be the reason why luck has not been a very popular topic of discussion when connected to discussions of good life.

Concluding remarks

I now hope to have clarified what good life, to my opinion, most generally and fundamentally consists of. I think a good life is a happy, lucky, and well-lived life, and I think the above discussion shows this well enough. A good happy life requires some skill and a lot of luck. What it does not require, however, is any wonderful narrative nor connecting to anything bigger than oneself. Nor does one have to leave a trace behind to have lived a good life. Ordinary everyday stuff suffices. Of course, meaning in life is important for happiness and good life. But having a meaning in one's life does not seem to require connecting to what is objectively valuable. It may help, however.

In this text, I focused on good life from the point of view of prudential good. That is, the emphasis was on what is good for a person living her life from the point of view of human nature. I did not offer any account of human nature that rests on distinctiveness or essence of humanity, though. Human nature may be considered as a placeholder for something we still need to figure out. The approach I presented, the mongrel approach, takes some features to be fundamental for good life from the perspective of what some commonsense intuitions have said about the subject matter.

The mongrel approach is broadly an Aristotelian approach to good life. It is a pluralist account in which the plurality is unified under the placeholder of human nature. Some may think it is also a hybrid account, since it combines experiences, natural (physical, mental, social) capacities, and subjective projections of the world together as fundamental aspects in studying good human life. The title of what type of a conception my approach represents does not worry me. The mongrel nature of good life is clear, as is shown in Table 1. The approach passes all the relevant tests for a theory of good life. Finally, the approach realizes the fundamental obstacles for succeeding in life from the prudential point of view.

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7. Next step – philosophic nature, or how to travel with mobile media

Saulius Keturakis

Introduction

If nature is something that is not a human being, then one of the most prominent allegories of human and nature distinction belongs to media theorist of Czech descent, Vilém Flusser. He defined the distinction between a human being and nature by a skin allegory in his essay “The Skin” (Flusser 2006). I am here, and nature will always remain beyond the skin. It is possible to access nature only partially, using a variety of technologies, named as *skin openings* by Flusser. Each such opening shows the outside world in a different way, e.g., the world when one reads a book differs from the world when one eats a sandwich. Without going into the nuances of Flusser’s dermatology, which he calls the discipline of human-nature relations, it is important to identify the phenomenon to be mentioned in this text the most. Every time we want to reach nature, which is beyond our skin, we have to take a journey. The journey is an endless endeavor to get closer to nature. A man tries to do this with the help of a variety of technological equipment rather than on foot, hoping that the new technological means will allow him to completely eliminate the distance between him and nature. He will finally be able to have a real philosophical picnic surrounded by nature to celebrate that incredible experience of having managed to outstep the threshold and find himself on the other side. Only nature here does not mean trees, meadows or bushes by the river or a lake, but an immediate, unedited relationship with the reality, when I myself and everything beyond the skin are not separated by any traumatic boundaries.

It is this nature and search for it that will be discussed in this text. Such nature could be called philosophical, because its main feature is not plants or animals, but a convincing sense of immediacy, an ideal situation where presence requires no understanding nor explanation. In other words, nature is a situation where a person feels

in the way nature has created him – naked, without any media shells, as a part of the surrounding environment. Philosophical nature is a state of authenticity.

In terms of the history of philosophy, such a journey to Flusser’s world beyond skin could also be called a journey from uncertainty to certainty, which was described by French philosopher Jacques Derrida as a concept of “the metaphysics of presence” (Derrida 1997). That is a journey between the signifier and the signified, between words and their meaning in the text. We want to find a way to tell something about the world as the final definition, which would coincide with the reality we communicate about. Therefore, the philosophical nature could be a term, which describes the dream of all the history of philosophy – to live in the world, where mind and reality existed in an inseparable unity.

It is important to emphasize another point when we speak about the journey to this philosophical nature. The most important means of transport here are not feet, cars or planes. Most probably, movement in space is not relevant here, because this journey to the world beyond human beings is made by means of communication, such as a typewriter or a camera. This journey is more about changing our notional structures until we find ourselves in a form of experience that makes us believe that we have succeeded and reached the goal. Only communication technologies have the power of transforming these notional structures and adjusting our notional world for us to feel that some activity was meaningful or meaningless. Without going into the details of the media history, a few situations can be mentioned as an illustration, when the choice of a certain communication technology gave the aforementioned sense of traveling in the right direction. The technology that gave Plato this feeling was an oral conversation (Plato 1972), it was reading and writing for M. Proust (Proust 2011), and A. Warhol already represented the era of electrical communication – he had a phone that could call god (Kelly 2015). Finally, the mobile device, the most important phenomenon of today’s discourse of communication, is transforming the experience of human activity in a unique way and transmitting it to others incredibly quickly.

The next chapter discusses the changes of a journey towards the philosophical nature, determined by mobile technology, which is constantly on the road in accordance with its essential function. Mobile technology intervenes into the processes of travel experience mediation and in this way creates completely new practices of movement, environment, self-experience and its communication.

What is travel?

As stated above, movement in space is not an essential feature of a journey towards nature (especially philosophical). However, the concept of a journey itself should not be abandoned, as it is one of the most intense activities that a person takes when he wants to change an existing situation. Therefore, before discussing the influence of mobile media on traveling towards philosophical nature, it is precisely this aspect of a journey that deserves to be explored.

According to Derrida, travel is probably the most significant spatial category, because it can be related through genealogical ties to almost all the most important concepts of spatial experience, such as home, staying abroad, crossing the border, departure, arrival, etc. (Derrida, Malabou 2004).

In addition to spatial semantics, as Derrida has it, travel is the act of making the actual moment privileged (Derrida, Malabou 2004). A journey is always happening now, and it finishes upon arrival. Therefore, the traveler is the one who in no way settles for the actual moment and feels that the essence constantly slips from his view; and to be the closest to the essence means to be on the road. Discontent with the actual location links a traveler with a thinker, as both of them are searching for something new and unexperienced, in a certain sense forsaking themselves to fulfil their dreams about something else. In other words, a traveler is the one who leaves the original source and often only for the reason to discover that source again (Derrida, Malabou 2004).

The link between traveling and thinking creates ambiguity, which destabilizes and disturbs traditional philosophical perspective, based on the idea that thinking is only a mental event. George Santayana in "Philosophy of Travel" (Santayana 1968) describes the difference between a plant, fixed to one place and an animal, which can change the place. He states that the concepts of an explorer, a tourist and a migrant are not just identifications of a traveling status, but of a mind status too. Therefore, this paper focuses more on literary texts rather than philosophical ones, because they are more adapted to the description of movement and its interpretation as a performance of meaning.

It can be said that travel is a state of a permanent encounter with Another and sustention of experience and intellectual life in the state of constant change and performativity. "Nothing behind me, everything ahead of me, as is ever so on the road",

as it is put in Jack Kerouac's *On the Road* (Kerouac 1999). It is difficult to grasp or reflect the actual moment, because it is too volatile and collapses, dies immediately after it has been fixed in any form or imbedded in the media. However, paradoxically, the moment of death makes it possible to get back to the essence of travel at the intensity, inaccessible to the traveler himself.

Travelling via writing and image

After having told what this chapter is about, it has to be mentioned what it is not about. This chapter does not analyze the very moment of a traditional journey and its subject; it focuses on the situations, where travel performativity is suspended, and the movement turns into a becalmed wordy story, travel notes, photographs or filmed cinematographic fragments. It is likely that the traveler's choice to capture his experience in one or another way is important to understand the journey itself, its nature and the traveler's relationship with the repeatedly encountered philosophical nature. However, the chapter does not discuss the historical panorama of the ways to capture travel experiences and diachronic changes of the travelling subject. As can be seen from the title of the article, the research focuses on the specifics of anthropology of a traveler with a smartphone. Nevertheless, a couple of historical illustrations as a background to the formulated problem cannot be avoided. I would like to remind of a couple of classical cases of a journey for the sake of a description, a journey via written text and a journey for the sake of a text: travel notes of an American writer Ian Frazier, *Great Plains* (1989), and John Steinbeck's novel *Travels with Charley: In Search of America* (1962).

With regard to Frazier's work, it is necessary to remind that the Great Plains in the culture of the United States have predetermined the creation of plenty of great American stories. That is the place where the great Indian chiefs Sitting Bull and Crazy Horse have come from and have been perpetuated in dozens of texts; Billy the Kid went on the rampage here, and buffalo hunter and showman Buffalo Bill created and popularized cowboy romanticism. However, in the second half of the 20th century, the Great Plains had neither heroic cowboys, nor herds of buffaloes remaining. Americans themselves no longer wandered in the former source of great stories, which turned into an inhospitable province. According to Frazier, they just flew past at an altitude of a dozen kilometers. Nobody read the texts that arose from the aura of the Great Plains anymore. The location and associated cowboy culture were no longer the space in which the journeys took place.

Frazier dedicated two years to travelling in this area and his novel *Great Plains* became a bestseller. When reading this book, it is obvious that the journey took the route through the previous texts devoted to the Great Plains, and not actually through the geographical area. It shows the new residents of the Great Plains and the new heroes, arising from an infinite emptiness after the disappearance of the cowboy mythology. After all it becomes clear that it is more a journey through a written text than through an unknown terra nullius: the journey is intended to remind the reader of that forgotten literature of the Great Plains and to make the reader revert to the literature in the same way Frazier returned to the location which has given birth to so many heroes of American literature. It has to be noted that the author of these travel notes does not invite to start on a real journey. Readers can make a completely adequate choice to travel through a written text, which has been designed for the origins of cowboy culture and become aware of their roots.

The key motif of starting on a journey represents written literature here, and Frazier becomes sort of a reader, who shows how the former glorious cowboy times can be read nowadays. He invites his readers to repeat his journey through the great plains of written texts. In this way, a written text and classical literature become the most important exhibit and a relative tourist attraction.

A little bit earlier, in the 1960s, another American writer Steinbeck decided to see how America “he had written so much about” looks like. He bought a house on wheels, called it Rocinante after Miguel de Cervantes’ Don Quixote’s horse and started on a journey with his beloved poodle Charley. As in the case of Frazier, the kilometers of a written text and not of real America were counted; Steinbeck travelled through his own and Cervantes’ text areas (Benson 1984).

This is the journey of the discourse of written words, or memory shaped by written culture. Frazier offers Americans to recover it in the very dawn of the Internet boom and remember American history in the way it was written. Steinbeck had another purpose of his journey – to perceive his own text as a map and try to understand the world conversely, as a descriptive text and not in an ordinary way (Benson 1984).

Continuing this as if was a historical excursus and speaking about a journey in terms of capturing images, both photography and cinema create different forms of memory. On this occasion, it is worth remembering a conversation between a Lithuanian avant-garde filmmaker and poet Jonas Mekas and vanguardist Italian director and writer Pier Paolo Pasolini, which took place in Rome in 1967 (Staff 2014). In this

conversation, Mekas enthusiastically praises cinematographic cameras, categorically contrasting them to typewriters, because a camera captures the reality as it is. There are many cameras; thus, the reality cannot be hidden or falsified. In response to this optimistic question, Pasolini asks an ironic question about the difference between a cinematographic camera and a typewriter. Why cinema is a better way to release the reality than literature?

Mekas responded that in writing, everyone reflects the reality in his own way, and a cinematographic camera eliminates the individuality of each of us, at the same time preserving the reality as it is despite us. Pasolini does not continue the discussion, neither do we. It is enough to distinguish the difference in attitudes towards two machines producing reality, i.e. a cinematographic camera and a typewriter; the way these machines handle us, thinking subjects, if we choose them as partners in our journeys.

The examples discussed above show how the script and the image could take part in journeys aimed at escaping from the notional structures of the present moment to others, the simple ones. The main goal of both Steinbeck and Frazier's journeys was to discover what had been lost and disappeared from the present-day world, and what is now available only in the form of a mediated written text. These journeys started and finished in the texts, but the belief that those texts could change the notional human structures and help restore what had been lost in the flow of history was of the most importance. Mekas's optimistic talk about a film camera, which should capture reality so that it remains safe from any notional erosion, reflects exactly the same faith. In all the cases mentioned here, it is important to believe that it is possible to take a journey from the present oneself towards something that is no longer present at all.

Mobile non-reflection

In a journey towards immediacy, French surrealists were looking for ways to avoid active critical consciousness, which was thought to only interfere with the relationship with the reality, free of any deformities caused by the media. One may recall the famous scene of an eye destruction in Luis Buñuel's movie "Un Chien Andalou" (1928), where the dictatorship of an eye is rejected, and one dives into a dreamy reality. Interestingly, the mobile media are moving even more intensively in the same direction of non-reflection, transforming the relationship with the reality so that the

memory is almost absent from it, and everything turns into a ripple of the present moment.

To expand this thesis, if we recede a little and perceive a journey not as an actual moment, as Derrida envisages it, an issue of memory will become of great importance, because a journey as a whole is remembered. Mobile media, such as smartphones, transform this memory in a different way than a written text or photography. Smartphones transform memories so much that researchers have proposed to introduce a special term *memobilia*, which is intended to describe the forms of memories, transformed by smartphones (Reading 2008). The term itself has encoded the most important features of modern human cultural practices: “me”, as orientation to oneself, “mob”, as orientation to mobility as well as a meme form, which allows information to be disseminated like a viral infection.

What is characteristic to this specific memory, transformed by smartphones?

To begin with, smartphones are more likely to be worn as garments than carried as tools (Campbell, Park 2008). The change of smartphone status has determined an increased intimacy scale of mobile equipment in human life. A traditional cinematographic camera is usually used for recording special occasions, such as weddings, birthday parties or other celebrations. The participation of a camera in an event shows the uniqueness of the event first of all, because it is not with us at all times. On the contrary, smartphone cameras are always with us and in this way, they are intended to record and remember everyday moments of our lives (Kato et al. 2006).

Another important feature of a smartphone is its constant connection to communication networks. It takes just a second to see the moment of the reality somewhere on social networks after it has been captured. It can be said that the time distance between the direct experience, the moment it is recorded in a visual or textual form and making that experience public is so short, that it is possible to talk about the simultaneity all of these three situations (Gye 2008). Speaking about travelling and a journey, especially having in mind the meaning of travelling, suggested by Derrida, smartphones take away any possibility of reflection from the traveler. Or, in other words, the center of reflection of a journey wearing mobile devices is the traveler's observer, able to observe the journey almost in real time rather than the traveler himself. If we stick to the classic concept of travelling as a certain reflection, a traveler, who collects and transmits his travel experience via his smartphone, does not travel

at all. The actual traveler is the data interpreter, who gives it narrative coherence and meaning. This point can be supported by Lev Manovich's idea that the new media has fundamentally changed the concept of image, as it has turned passive viewers into active users. The image is no longer something the viewer looks at, trying to find a match in his memory, afterwards combining that match with the image and discovering a variety of meaningful effects. The user of the new media is the one who employs the image by enlarging, cutting or adapting it in other ways to his own information reality (Van Looy 2003).

A journey with memory and critical thinking turned off is paradoxical, as the goal would remain unnoticed or forgotten even when it is reached. We would never know if a traveler had succeeded in cutting Flusser's skin and participating in the aforementioned philosophical picnic, a festival of immediacy of nature and humanity.

Defective reality

When the experience of the reality, its capturing in any mediated form and publication lasts only a blink, the usage of certain media becomes very problematic. Written media requires a much larger investment in time than creation of an image. Therefore, smartphones and changes in cultural practices, caused by them, are one of the reasons an image and visual culture have established themselves in modern culture (Bruno 2008). It can be said that mobile devices dictate their own terms and give us too little time to write or record our impressions on the reality in other ways that require more time. At the same time, it must be stressed that an image captured by a smartphone differs from a traditional one or even from those captured by a digital camera. Mobile images are often experienced as very personal or even intimate. Communication of almost a tactile nature is experienced while sending mobile images, as if communication takes place through carnal fragments of the very self (Christensen 2006). Exactly the same experience is related to text or video communication on smartphones, which give an illusion that communication is very authentic and private. Some studies sometimes describe this illusory experience of immediacy as if smartphones enable some kind of a telepathic connection or sharing dreams (Shusterman 2000).

Paradoxically, time deficit conditioned by smartphones has determined not only the change in the meaning of a traveler and travel, but also the images captured. As smartphones have weakened the interface between travel and reflection, the most

common object captured by a traveler is... the traveler himself. Travelling with a smartphone is an entire selfie performance, when the main experienced object is the travelling subject (Peters 2001). It is claimed that a user of a smartphone poses a greater interest on his device than on a place where he actually is (Ihde 2002). In a sense, the user's body is more important to him than the place where the body is. Thus, a smartphone has become a device for exploring one's own body, and not the environment.

This is a fundamental change of experience, which can be described as transfer of sight from the surrounding reality to the hands holding a smartphone (Lobet-Maris 2003). A smartphone, especially with an integrated camera, begins to create digital images that can be described as a process involving a range of body practices rather than autonomous spectacles. These practices have begun to depend not only on the body itself, but also on the intimacy of the relationship with a smartphone and its spatial characteristics (Christensen 2004). As it has been poetically observed in some explorations of a smartphone as a special object, it is constantly provoking us to engage in a joint game, especially if the model has appeared in the recent couple of years. It even tempts us with its animated apps icons and sounds, the shape and surface coating, key projections and any other details (Manovich 2006). Such an interpretation basically attributes the smartphone to the phenomena of postmodern reality, characterized by the connection of form and emotion. In contrast, the form was associated with the function according to modernist model (Stappers 2003).

In other terms, unlike the classical camera, which requires human body to obey its logic, the smartphone adapts to human body and does not interfere with its natural kinetics anymore. The altered body practices are vividly reflected in the images produced, so the shift from oculacentric to haptic aesthetics with all its body practices are formulated when speaking about images produced by a smartphone (Hansen 2004).

As etymology indicates, the word of the Greek origin "haptic" means being in contact with someone. First of all, tactile sense is distinguished by haptic function, and it creates a mutual contact between us and the environment. The way we touch creates the communicative user interface between us and our environment (Bruno 2008). The interface between us and the environment, created by a smartphone, has a certain aesthetic expression. It is associated with impulsive smartphone users' need to connect the device with a gesture and adjust characteristics of photographic

images, such as focus and contrast, by a movement. Users see poor focus, detuned brightness and contrast settings determined by the movement as playful, performative traces of their own body activity in an image. This disengagement from the imperative of the technical quality of an image, on the one hand, represents a secession from consumerism aesthetics; on the other hand, it refers to the performativity of the image, where visual features of the image connect to the body in hybrid combinations.

Video and photography captured by a smartphone are valued in today's communication due to low resolution, as they are immediate and have their own aesthetics of spontaneity, speed of thought, idea mixing and blending, connection of images with emotions, multi-layering of the meaning, stream of consciousness and collective, albeit chaotic, consciousness. This aesthetics is determined by poor technical quality.

Mobile location

The abovementioned smartphone aesthetics has been named by a Japanese term *keitai* aesthetics in research after Japanese *keitai denwa*, the name of a mobile phone. Essential feature of this aesthetics is the integration of body experience in video, photography, writing, watching, or reading practices. Constant presence somewhere “among” (among photography, video, written text, or music) is also characteristic to this aesthetics. *Keitai* aesthetics is a permanent creation of interfaces, when communication is linked to the media, generated by optical lenses, a screen or a keyboard (Kato et al. 2006). Communicativeness of any information, recorded by smartphone, creates a state, which has been called “connected presence” by a French scientist Christian Licopp (2015). This term is used to describe the state, when a viewer is regularly sent information for a certain longer period of time. In this way, communication via a smartphone makes the user feel a special state of constant communication and staying connected. This state colors substantially all the information that is shared on a smartphone. An image sent on a smartphone is no longer limited to just an image; it is a part of an illusion of constant connection.

Practices, resulting from this communication unexpectedly throw images and texts, created by smartphones, back to the times when a work of art was necessarily tied to a specific place – a cave, or a building. Such artistic experience was inevitably linked with some ritual. A smartphone user is always informed about the message received by sound or vibration. This moment creates a certain situation full of expectations

and impatience; it is a very important part of the message “opening” ritual (McLuhan 2005). The message itself is sort of separated from the flow of everyday life to the moment a smartphone user embraces his powers and opens it (Auslander 1999). However, one of the most important features of *keitai* aesthetics is the interconnection of text and image with a specific location. Paradoxically, constantly moving smartphones eliminate the boundaries among different media and in particular emphasize the meaning of location in mediation of experience, because it remains the only feature of original and authentic experience. As research indicates, a smartphone reacts against the tendency to decouple a viewer from a location, a tangible sensation of being there (Hansen 2004). Nevertheless, this particular location of the reality becomes permeable to other “realities”, various virtual digital environments, and avatars. Smartphones can create connectors among all of them and transform a classical location into a hybrid one, where a physical location will be mixed with a variety of digital “locations” as well as virtual social environments (Souza e Silva 2006).

A smartphone combines real world experience with the new media contexts; it combines technology with a body and the sense of location (Christensen 2004). It becomes a window into the world (Mickūnas 2015), helping us to feel that in this way we see the world more clearly, and most importantly, that these experiences can be shared immediately. In this way, we discover the world and ourselves in it. Feeling that otherwise we would not be able to experience the world in this way or that it would not show itself in so many details make us highly dependent on smartphones.

Automatic on the road

The text above mentioned a journey towards the reality in the works of Steinbeck, Frazier and Kerouac, where the most important goal was the change of the notional human world, a certain illusion that it was possible to cross the boundary and bring back what had vanished or never happened. However, here is another story in American literature, which is a great illustration of a journey with a mobile device and its results.

In 2017, the American creator of new narrative forms of the reality (as he presents himself) Ross Goodwin announced his project to write the longest literary work of all time (Goodwin 2018). He was going to rent a car, incorporate a camera, a microphone, a GPS navigation device, and connect everything to a computer with

artificial intelligence software, which “knew” the manner of the American road literature. In fact, Goodwin himself intended only to drive the car, and artificial intelligence was going to be engaged in active writing, narrating the captured images, sounds and location.

Two years have elapsed since the announcement, but so far, the largest literary work remains unpublished; Goodwin might still be driving around America, and the computer is narrating the environmental data in various literary manners. What are the circumstances of this idea, how has it happened that mobile technology has started boldly competing with a person to create new notional formations? Because in this case, a computer, artificial intelligence rather than a man is going to tell about America.

Goodwin started his career as a text writer at Barack Obama’s election campaign in 2008, later he worked in the White House and then in the Department of the Treasury. After all, a strictly regulated job became tedious to him and he became a freelance writer. It was at this point that Goodwin got interested in applying algorithms to writing.

In 2014, Goodwin became interested in programming, especially in the possibility to use the software, as he called himself, for the narration of the reality. One of his first projects carried out with the support of New York University was the “word. camera” project, later named “novel.camera” (Goodwin 2015). Externally, it was a device similar to an antique mirror camera, because Goodwin believed that antique look soothed the surrounding people. However, the archaic appearance concealed a digital video matrix, a mini-computer, and a wireless device that tied the “novel. camera” system to various external databases. After taking a picture of any object, the artificial intelligence system automatically recognized objects in the photos and, in accordance with the “ConceptNet” word and object interface database, developed by the Massachusetts Institute of Technology, linked the objects identified in the pictures with words. The outcome was first introduced in 2015 in Amsterdam (Goodwin 2015). After directing the camera to the audience, the voice synthesizer described individual people, their facial features or smiles.

Today automatic image recognition is a widely used technology, but Goodwin was one of the first to decide to apply it to literary texts. The biggest problem he encountered was the training of artificial intelligence to tell what it “saw” in a literally way, because the mere attribution of some names to the individual objects in the picture

was far from literature. But it wasn't easy, either. Initially, in order to teach artificial intelligence to attribute words to images the least mistakenly, Goodwin decided to use the television series "X Files". He hoped that the sequence of images and the corresponding dialogues of the characters would teach the artificial intelligence to better grasp the relations between words and images. However, it didn't work out because it became clear that there was little connection between talks and images in the series. After the training, the system reacted simply by saying "I don't know", "I don't know what to do", etc. Then Goodwin tried another "school" of images and the way to talk about them – the Reddit portal, the images posted there and comments on them. In addition, he tried the database of objects and their contexts MSCOCO (<http://cocodataset.org>), created by Microsoft, where each image had five names. The problem of image recognition and the interrelation of the objects with words was solved quite well, as shown in the project demonstration in Amsterdam. However, there was still a need to teach the software to speak literally. Goodwin decided to use literary templates taken from various literary corpora. In this way, the style of the 19th century prose or poetry, 20th century modernist poetry or, as in the case of the road literary project, the generalized style of road literature could be set on his "novel.camera".

Imagine now such a device in your car and you might feel what the longest literary text of all time and the latest example of American road literature look like. However, the problem is that it will not be easy to answer the question of who is the author, the creator of the device or the device itself. If a person is just a driver of a car, then the goal is reached, because human consciousness, the main obstacle to existence together with the environment, is here retreating and giving way to a machine that mechanically fixes what enters the camera's horizon. Although the French surrealists might find it acceptable, if there is any immediate collision with nature, there is no human in it. He stays out of the way, speculative and maybe jealous of the immediacy of the machine and nature.

Conclusions

It has been recently decided in Washington and Antwerp that people do not see the surroundings when immersed into their smartphones, as they bump into each other, smash expensive appliances and hurt themselves. A traveler usually chooses an unknown and unseen expanse. However, special lines have been drawn for people with smartphones to ensure their safe journeys without a risk to get lost or bump

into somebody or something; these people can walk and write short messages or browse through their social media accounts (Ednolb 2015). Although they move, these travelers can only follow the predefined trajectories, as it seems from the outside. Is that extinction of cultural and intellectual practices of travel and a traveler, which is owed to the mass use of mobile phones? The research discussed in this chapter permits the assertion that practices of travelling still persist. However, it has happened that mobile media travel more intensively than the traveler himself, who seems to have turned into a means of transport for a mobile device, moving on a certain trajectory. And the journey of a mobile device, permanently connected to the network, takes place in a much wider digital space. In general, it can be said that a mobile device is the only one who takes a journey in a classical sense of an adventure and a search for authenticity, and no human can keep up with technology. Here, one could remember Paul Virilio's idea of speed products (Virilio 2007) that first appeared in the 19th century, and which began to affect a human life pushing everything forward – new vehicles, electrical communication devices. However, only mobile media seem to have forced a person to stop or move on a pre-marked trajectory when they are involved in the flow of information at a fast pace themselves. So, apparently, they will reach the philosophical nature much faster. A man may even remain unaware of that.

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8. Regarding the philosophy of speedway

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Introduction

The philosophy of sport is a special field of philosophy where the topic is the very nature of sport as well as the character of the athlete. The athlete is related to himself or herself but also to nature. The relationship between the athlete and nature can be more or less mediated by tools. In sports like long distance running, the relationship is quite immediate and in motor sport the relationship is mediated by a machine. However, in such mediated cases the mediating tool does not function merely as a tool, but the athlete and tool constitute a unified totality. A tennis player does use the racquet to hit the ball, but hits the ball with bathe racquet.

The form of nature that the athlete is connected to varies from sport to sport. In long distance running, nature is a road or footpath in the forest, which can be seen as “natural”; on an athletics field, “nature” is an artificially built track. In motor sport as in running, there is quite a “natural” road or track. In e-sport, on the contrary, nature is only virtual. Doing sport hence allows us to “experience the environment limits and challenges in a different way than we can in our everyday life” (Zimmermann & Saura 2017, 155). However, the adventure is not only related to the external environment, but to the athlete himself or herself. An athlete must know his or her body very well. Nonathletes may have some idea of the intensity of the exercise if he or she thinks about recovery from an accident, where the patient rehabilitates by training one muscle at a time and one singular elementary bodily action at a time. This step-by-step procedure re-acquaints the person with his or her own body and is directed by propositional knowledge that tells the patient what to do and how to do it. This shows the importance of Ryle’s well-known distinction between “knowledge that” and “knowledge how”. Ryle emphasizes that there are certain parallelisms and certain divergences between the two. (Ryle 2000, 28; Niiniluoto 1999.) The above analysis shows how divergences can be overrun and how some of the parallelisms

can be seen. However, maybe it is this kind analogy may be behind the use of the notion of resilience in characterizing sport. (Russell 2015.)

We can classify sports on the basis of how competitive the “logic of the sport” is. The notion “logic of sport” refers to the structural properties of the sport and more to the point it does not refer to the psychological character of athletes. Of course, competitive sport classes, by definition, all sport as competitive. There are some sports, like football, ice hockey, tennis, or boxing, which are by their very nature competitive. For example, in boxing the possibilities are ‘win’, ‘lose’, and ‘undecided’; and if one wins the other loses, which demonstrates the logic of the sport. There are also sports in which competition is not built-into the structure of the sport. Basically, some individual sports where the athlete tries to beat himself or herself are like this. This might be seen, for example, in ultrarunning. The possibilities are first, second, third etc. as opposed to win/lose.

There are several ways to classify sports. A central classification is to classify sports as individual or team sports. (Nguyen 2017.) In principle, the distinction is clear. Football is a team sport and long-distance running is an individual sport. But how do you classify a relay race? So the distinction is not so clear cut, since, there are some sports, like cycling, which are somewhere in between. In cycling, teams play a very central role, yet it has several characteristics which classify it as an individual sport.

Athletes do physical training exercises to bodily recognize themselves and the relationship between himself or herself and the environment. All sports are adventures into oneself and into the environment (Zimmermann & Saura 2017) which obscures the above classification. However, different sports instantiate the adventure in different ways. Some sports, like mountain climbing or motorcycling, forces athletes to confront danger, whereas others, such as long distance running or cross-country skiing, are rather meditative. All of them, however, promote awareness of the self and of the environment.

Sports are practical activities which presuppose some knowledge. The character and amount of knowledge varies from sport to sport. The knowledge presupposed may be propositional (theoretical) knowledge or tacit (practical) knowledge. In the activity, all the knowledge and skills meet each other. There is no time to reflect or to deliberate. Athletes must act. However, the acts are not haphazard, but deliberate. Training unifies knowledge and skills in such a way that concentrated

acts are executed skillfully and with awareness. If the athlete starts to consciously deliberate on what they are going to do, then the action might become “porous”, so that the knowledge resulting from deliberation and trained skills become separated, which the audience can see from the performance. (Breivik 2014; Siitonen 2007; 2008.)

In the following, we will focus our attention on speedway. It is a motor sport, but there are several special factors which make it a very interesting topic of study. We will give more detailed information later, but let us mention the following now. The motorcycle is very “simplified” and all competitors have a similar motorcycle. The track is a very short oval which entails that the drivers form a compact shape when going round. So, in a certain sense, a speedway race is like a team competition, even if it basically is an individual competition. The small track and the team-like race mean that the competitors need quite a lot of propositional knowledge which must also be internalized. There is no time to deliberate during the race.

The Experience of a Driver¹

Speedway – Australia’s present to the world. The sport was created in Australia at the beginning of the 1920s. As many of humankind’s inventions, speedway was also created by chance. Early on in the history of motorcycles, it was noted that it was possible to take curves of sand tracks fast and gracefully by sliding the back wheel in a skid. As a counterbalance to sliding, the driver turns the front wheel in the opposite direction from the slide. Based on this principle, a new sport was founded – speedway.

The tracks and the vehicle were developed according to the demands of the basic principles. The vehicle has no need for gears because the track is short. The foot rest pivot on the side of the inner curve was cut off, because it hindered the tilt needed for initiating the skid. Thus, the driver can also drag his left foot, which is clad in a steel shoe, along the sand track – this is an essential part of speedway. The brakes were also removed to avoid collisions. The side slip, easing off the throttle, the tilting of the bike and sharply turning the front wheel to the right are sufficient for slowing down.

¹ This chapter is based on Siitonen 1992.

The powertrain of the speedway bike is a very elegant implementation of the four-stroke engine. The 500 cc engine uses methanol as fuel and delivers more than 70 horse power. The start of the race is characterized by strong acceleration and the drivers have to press themselves strongly against the bike, so that the motorcycle does not throw them off. In the curve, the engine has enough power to draw the motorcycle so that it keeps the transverse position, provided that the driver does not stop hitting the gas pedal – I dare say the horse-drawn chariots of Classical Greece were similar to speedway: they circled an elliptical track like demons and surely also skidded round the curves like speedway bikes.

Speedway gives pleasure to the senses, appeals to the emotions and puts our capability to think to the test. The pleasure of the senses relates to the color, speed and the deep, solemn rumble of the motor and the smell of burning methanol. Four drivers with their motorcycles make a harmonious, mobile unit. The passion of the expectancy before the four laps and the one minute of intense concentration during every round let both riders and the audience experience some magnificent moments.

The presentation of the drivers before the competition accompanied by marching music is a touching spectacle. When the same men reappear masked on the start line, the bikes growling, the anticipation is rewarded and the audience begins to follow the performance. The intelligent satisfaction grows when the audience can see smart overtaking and changes in the riding line. Speedway challenges our conventional way of thinking:

- (i) The front wheel is turned away from the direction of the curve.
- (ii) There are no brakes, and this is actually for safety.
- (iii) The rider drives into curves at full speed.

Speedway teaches the rider a new way of perceiving the world and increases self-knowledge. What looks easy from the outside requires years of training. One can never practice too much; new nuances are always found in the start, whizzing along on the Using present day colloquialism straights and the skidding round the curves. Speedway requires a good physical condition, courage, skill and intelligence. The biker needs both feeling and reason. Knowledge of engine techniques is an advantage. Speedway is a skill close to art. It should be mentioned that at the beginning of the history of speedway, an Austrian master driver by the name of Killmeyer worked in Vienna as a ballet dancer. In the 1970s, the Finnish championship was won by Kari Vuoristo, who excelled in gymnastics.

Speedway can be used as an example when teaching physics and chemistry. The motors of the bikes are greased with vegetable oil² and the waste oils are carefully collected. The methanol which is used as fuel is a side product of industry. In the language of today, one could say that speedway is environmentally friendly, if any competitive sport could be classed that way.

The knowledge of the speedway driver

In epistemology, the fundamental question considers the human capability to know; the foundation and boundaries of human knowledge. In epistemology, the starting point is what is known as the classical notion of knowledge, which says that knowledge is well justified true belief. In elementary textbooks, the question of the foundation of the justification is either in reason (rationalism) or in experience, in particular in observation (empiricism).

However, it seems that there is no clear and simple characterization of human knowledge. The analysis of knowledge has shown that the notion of knowledge is a complex and multidimensional notion, which entails the plurality of subdivisions of the notion of knowledge. This multitude of subnotions confuses the situation: what is the relationship between the different subnotions of knowledge? Analysis of concrete examples justifies the opinion expressed by Hintikka (2007, 66) that there is essentially one notion of knowledge. Hintikka refers to epistemic logic in which there is a single knowledge operator that is used in all the different occurrences of the notion of knowledge. However, Hintikka's semantical notion is based on possible world semantics which offers a model that can be used in the analysis of knowledge in speedway. Possible worlds can be interpreted linguistically, but also behaviorally which allows a similar analysis of skills and propositional knowledge (Hintikka 1975; Mutanen & Halonen 2007). This does not reduce all the knowledge into propositional knowledge, but instead it allows generate semantics for knowledge which includes all the different kinds of knowledge.

The driver perceives the environment using all the senses he or she has. The information received via perception increases the driver's knowledge. Perception includes both visual observation, touching, and smelling. Together, these give a lot of infor-

² About since the beginning of the 2000's, synthetic oils have been used.

mation about the environment, but also a more holistic understanding of the environment. The holistic understanding reminds us that it is not descriptive characterization given by proposition (as is the case of mere propositional knowledge), but artistic experience.

In speedway, it is not knowledge but skill that is central. There are different kinds of skills which have different relations to knowledge, as already Plato demonstrated. In speedway, the very central skill is the skill of driving the motorcycle, which presupposes years of systematic training. However, the training is not mere driving, but the grasping of the whole situation – both in driving alone and in the race. This grasping includes both “tacit knowledge” and propositional knowledge. For example, the driver must know that “the front wheel is turned away from the direction of the curve”, which is a clear example of propositional knowledge, but which must become living knowledge in action. In the analysis of this kind of situation, behavioral interpretation of the possible worlds plays central role (Mutanen & Halonen 2007).

The driver has no time to deliberate but the action must be skillful and knowledgeable without any conscious deliberation. So, the actions of the driver must be “intuitive”. To analyze the intuitiveness we follow Kahneman (2011) which separates intuitive and fast thinking from deliberative and slow thinking. The very idea is that speedway driver’s intuition is “skilled intuition” which is based on “skill and expertise” (Kahneman 2011, 185). Intuition is contrasted to deliberative thinking which is calculating. More generally Kahneman (2011, Ch. 21) discuss the relation between intuition and algorithmic thinking. Kahneman refers to Meehl’s (1954) excellent analysis of the distinction between clinical and statistical prediction in medical treatment. The problems in intuitive thinking appear within “low-validity environment”. Experts think “outside the box” which causes biases within complex situations. In speedway the driver is not trying to make (long-term) predictions and, moreover, he or she is working within an environment which is regular. Hence, learning “through prolonged practice” becomes possible (Kahneman 2011, 240).

The speedway driver’s intuitive skill is like art. However, this does not mean that the speedway driver would act “legs out of the ground”, but, in fact, literally the converse. He or she should recognize all the small clues coming from the ground. So, the artistry of the speedway driver is sensitivity to small subtleties in the environment which can be analyzed as sensitivity to separate different possible situations (possible worlds).

Conscious deliberation during the race is counterproductive because it cuts off concentrated action. Skillful and concentrated action in which the driver reacts immediately to the environment. The deliberation cut the immediate relationship between the driver and the environment. However, in such situations the relationship between the driver and the motorcycle is very curious. The driver is not merely driving the motorcycle, but he or she is connected to the ground via the motorcycle in a way which “unifies” the driver and the motorcycle. This shows why conscious deliberation is so disastrous. The driver may not think that “I know that ...” or “if I do ...” because such thoughts break the unified wholeness. This entails that the driver sees his or her action “from the third person perspective”. So, driving becomes formal and objective. “The first person perspective” keeps driving immediate: the driver neither thinks about the end result of the race (winning or losing), nor the singular acts he or she must do (if I start very fast ...).

Referring to French philosopher Maurice Merleau-Ponty’s phenomenological thinking (Merleau-Ponty 1986; 1968), there is no clear distinction between the driver’s body and the motorcycle in the driver’s immediate perspective. In the action of braking, the driver’s body and the motorcycle are intertwined; the body and the bike are merged into a “common flesh” (see Merleau-Ponty’s late ontology of *Flesh* 1968). When there are no brakes, the driver must do the braking with his own body. In this sense, the driver’s body is not only an objective body in the physiological sense, but a lived body as a skillful “tacit knower” of the demands of varying situations (see Merleau-Ponty 1986, 402; 1968, 144–145, 155).

In speedway, the question is about competition. However, it is obvious that a driver cannot primarily focus on the winning or, more generally, on competition. The primary goal of the driver is driving well. Here the primary goal is not empirical (psychological) characterization – of course, a driver might intend to achieve money, achieve admiration, or just to win. Of course, competition as a secondary goal might be supporting the achievement of the primary goal (see Nguyen 2017). Conversely, the targeting to the primary goal might be, and in fact is, essentially trying to achieve success in competition.

Driving well is something which feels good and looks good. The driver recognizes immediately when he or she has succeeded in a race or in training. The recognition of success is both intellectual and emotional. The successful drive entails pleasure and joy which can be felt also during the good drive. The audience can see the quality of the performance; especially all the “mistakes” become evident.

The knowledge presupposed in speedway is holistic and immediate. This presupposes systematic training of the necessary skills. The training also includes physical training, but also training to drive in different kinds of situations. The training also includes the learning of the relevant knowledge which orientates the driver in his or her actions. This makes the driving holistic which presupposes skills and knowledge. This makes it possible to become more acquainted with the driving and with the environment. Eventually, this may increase a driver's self-knowledge.

To become a good driver, one needs help in planning and carrying out the necessary training. In this a coach may be of help. It is important that the coach has in-depth knowledge of the sport. Basically, some experience of driving might be helpful, but it is not necessary. It is important that the coach has good knowledge about the sport and he or she has a good relationship with the driver so that he or she can help the driver in his or her development.

For the audience, the speedway race is a marvelous experience. The atmosphere of the race is very great. The air is full of nuances which transfer the spectator into the world of the drivers. The cohesiveness of the races makes the audience a part of the speedway family empowering them and giving them a deeper understanding of the speedway.

Speedway can be seen as an example of how human skills and technology meet each other. In this sense, it can be used as an example in humanities, but also in natural sciences and technology. The environmentally-friendly attitude that was present in speedway already several decades ago shows the responsibility for nature.

Closing words

Speedway is an adventure not only for the driver, but also for the audience. The race continues for only a few intensive minutes within which all the skills and all the knowledge have to be put into practice. This is very challenging for the driver. The audience can feel the tension. All the time there is something going to happen. Now! The intensity of the race fills the atmosphere. Sometimes nothing special happens, sometimes a bypass takes place. The audience expects a good race. In a good race one can see all the skill of the drivers demonstrated at the track. After a good race, the drivers feel great satisfaction. And if the race has not been good, the driver feels dissatisfaction. He knows when the driving goes well and when it does not. This is immediate knowledge, comparable to Russellian knowledge by acquaintance.

Speedway demonstrates an example in which trained skill and propositional knowledge together constitute excellence in action. Moreover, in speedway the driver is not using his or her motorcycle, but the driver and the motorcycle is a unified totality which acts in the environment. Propositional knowledge orientates the driver. As orientating background knowledge, propositional knowledge builds a good drive. However, if the driver starts to deliberate and to reason, then propositional knowledge breaks the drive and the driver make mistakes.

Speedway is not just an interesting sport, but it is a good example of a craftsman's skills being evident. Speedway demonstrates how the human-machine relationship is deeper than a mere agent-tool relationship. All this becomes evident because all these aspects are present in speedway in a simplified manner. Speedway is a sport in which trained skill plays a central role, allowing us to understand speedway not as mere sport, but as art.

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9. A rolling stone gathers no moss!

Ilkka Väänänen

Introduction

Urbanization and inactivity are global phenomena, which show no signs of slowing down. Evolution has changed in the heritable characteristics of biological populations over successive generations. At the moment “homo ludens” is mostly “homo sedens”, who is much more sedentary than playing. Today our lifestyle is quite passive (Husu et al. 2016). Although, as many as four in ten (41%) Europeans spend five and a half hours or more sitting down each day (European Union 2017), about 82% of the Finnish adult population has participated in exercising, sports, fitness or outdoor activities during the past year and the most commonly reported physical activity habits of the adult population have remained the same from one decade to the next. These include self-employed basic forms of outdoor exercise, such as walking, cycling, cross-country skiing and running. (Mäkinen 2019)

Three cultural representations of outdoor activities in nature have been identified (Simula 2012). The traditional-pragmatic representation of nature was conceptualized as follows: “It connects the rural-culture heritage relationship with the nature to the contemporary interpretations of outdoor activities. It reflects, on one hand, the rural change, and on the other hand, the preservation of traditional practices and meanings of outdoor activities in the nature.” For example, picking berries, hunting, fishing, acquiring commercial supplies and everyday exercise are explained in a very pragmatic way. The meanings of outdoor activities are attached to the benefits received. In addition, in part, the values of traditional moral culture determine this interpretation.

A romantic-expressive representation of outdoor activities in nature is derived from the portrayals of countryside, natural landscapes and nature experience created by the romantic movement. In this representation, these issues are positioned as op-

posites to urban and modern everyday life. They are placed outside the premises of everyday environments of activities. Nature is determined by an aesthetic mode, to which one can escape from the routines of everyday life and where one can focus on their own experiences. The meanings of outdoor activities are attached to visual, auditory and aromatic experiences, and release the mind from everyday thinking. The statements do not focus on characterizations of activities, but they describe, among other things, memorable nature experiences and adventures as well as clarifying one's own thoughts. The statements form a representation of beauty and wonder of nature. Nature experiences are described to bring enrichment to life, and they belong to a good life. (Simula 2012, 198)

The third, recreational-collective representation of outdoor activities in nature is connected with the people's movement of nature-goers and recreational cultures. Nature is interpreted as a recreational environment and outdoor activities in nature are seen to be a recreation cultural content of life. The statements form a description of things linked with recreational issues, such as the equipment needed, good recreational sites, norms of recreation, using the media products linked with recreation, communication between the enthusiasts, recreational-cultural valuations, recreation events and recreational activities of associations. Communion of the enthusiasts, outdoor activities as a lifestyle and definitions of recreational identities are also frequent topics. These themes complement the interpretations, for example, of scouting, climbing, fishing and hiking. The understanding of the importance of a certain recreation as a part of everyday life forms a frame for this interpretation. (Simula 2012, 198–199)

This article focuses on a positive interpretation of Finns' physical outdoor activity in nature, and the potential of such health promotion projects. At the beginning, information on the physical activity of Finns and the practical possibilities of nature exercise will be presented. The second chapter provides the views expressed in the studies on the relationship between nature exercise and health. Then, in the following section, well-being from nature projects are addressed and their results presented in more detail. Finally, some theoretical observations are concluded. The purpose of this article to lift up the positive items of outdoor activities and to introduce a number of nature projects from the city of Lahti, Finland.

Environmental approach to promote physical activity

One possible environmental approach to promote physical activity is to enhance physical activity in green spaces; in other words, green exercise that takes place in natural environments (see e.g. Barton et al. 2016). The Eurobarometer (European Union 2017) indicates that a lot of physical activity takes place in informal settings, such as parks and outdoors. The proportion of Europeans who exercise regularly or with some regularity is the highest in Finland. In 17 European countries, the most common setting for sport or physical activity in the park or outdoors, vigorous or not, is the highest (67%) among the respondents of the barometer in Finland (Green bars in figure 1.).

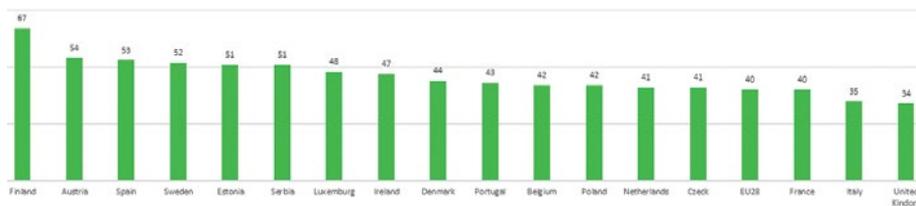


Figure 1. The country level data for the settings in which Europeans engage in sport or physical activity, vigorous or not, in a park, outdoors etc. (Modified from European Union 2017, 20)

The societal costs of physical inactivity in Finland are several billion euros every year and they are increasing because of ageing and the prevalence of many noncommunicable diseases, which are increasing in the Finnish population. Small daily actions can increase people's well-being and make cities more attractive. In Finland, there are several types of physical activities, which can be executed outdoors in the wild nature like canoeing and kayaking, cross country skiing and running, kite surfing, mountain biking, open water swimming, orienteering, sailing, stand up paddle boarding, surfing, sub aqua, traditional rowing, trail running and so on. Several national parks offer the opportunity to enjoy hiking routes and nature trails by foot or bike. Walking is the most popular type of leisure time physical activity in Finland (Official Statistics of Finland 2019). Most of the outdoor activities in Finland are part of everyman's right. Green wellbeing is defined to be a broad activity that promotes people's well-being

and quality of life from a natural perspective (Sitra 2019). One of the goals of the National Forest Strategy 2025 (Ministry of Agriculture and Forestry of Finland 2015) is that Finnish forests are active, economically, ecologically and socially sustainable and versatile in use. In connection with that, a state-owned enterprise (Metsähallitus), responsible for the management of one third of Finland's surface area, has published the Healthy Parks, Healthy People – Health and Wellbeing 2025 program (2017). Its goal is to improve the health and well-being of Finns by means of nature. The objective of the program is that people's social, physical and mental well-being will be increased with a diverse nature and a vibrant natural relationship. In addition, a provider of forest management related advisory and consulting services (Tapio), has launched the "Public health from the forest" project (Matila, Koistinen & Lahti 2018). Its purpose is to provide citizens with sufficient opportunities to exploit forests to promote the physiological and mental health for the body and mind. For example, in the city of Lahti, there are nearly 7,000 hectares of forest owned by the city and about 1,000 hectares of

nature conservation areas open for green exercise.



An environmentally sustainable lifestyle does not mean misery, but hopefully a more enjoyable and balanced life. Nevertheless, physical activity should have absolute value, not just instrumental value. Finland's first ex-

Picture 1.
A boarded path in Lahti forest, Finland.

ercise policy report (Ministry of Education and Culture 2018) aims to significantly increase people's physical activity. A state-owned enterprise (Metsähallitus) has given their comment to the Ministry of Education and Culture's statement (2018, 9): there are many opportunities for nature sports in Finland. Nature could affect well-being and health positively through three routes: 1) physical activity increases in nature, 2) nature revives and helps to recover from stress, and 3) activities in nature promote social well-being and communality. There are epidemiological studies (Gascon et al. 2015; 2016; Maas et al. 2009), which report that people living in greener environments have better mental and cardiovascular health than those living in more built-up environments. The visits to urban green environments were associated with beneficial short-term changes in cardiovascular risk factors, which can be explained by psychological stress relief with a contribution from reduced air pollution and noise exposure (Lanki et al. 2017). As short duration as 20 minutes in contact with nature significantly reduced stress hormone levels (Hunter, Gillespie & Chen, 2019).

Hartig et al. (2014) have reviewed works done in recent decades to characterize the health benefits of contacts with nature. Their illustration of different pathways and possibilities for effect modification by individual or contextual variables is presented in Figure 2.

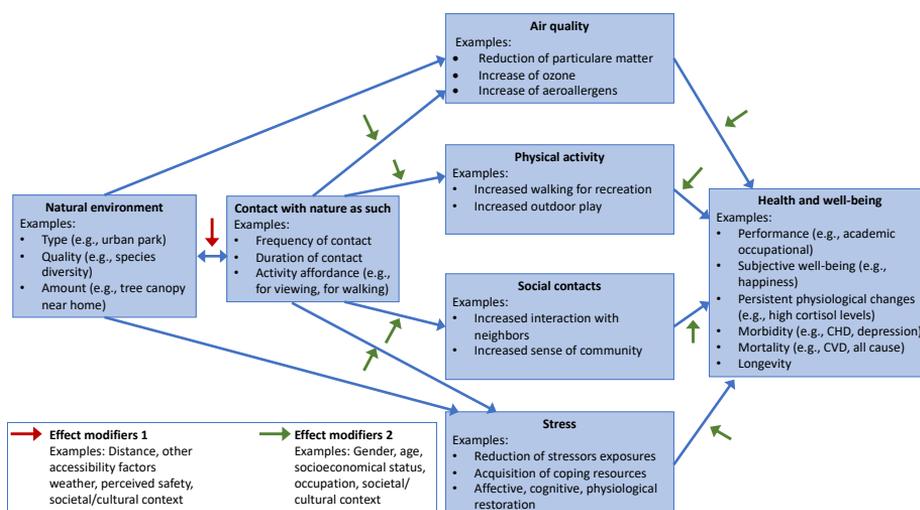


Figure 2. The different pathways through which the natural environment can affect the health of broad segments of populations (Hartig et al. 2014).

Four of these pathways (Hartig et al. 2014) go through contact with nature, whereas two others go directly from the natural environment to air quality and stress. The research evidence linked to the health and well-being benefits of nature, in particular, the benefits of forests has been summarized. The health effects of nature could be explained mainly by psychological stress relief and benefits from enhanced physical activity. The research evidence regarding healthy adults has been found to be already relatively strong and forests are suggested to have considerable potential in public health promotion and disease prevention. (Tyrväinen et al. 2018)

Nature and health projects

Well-being and Regenerative Growth is one of the strategic research, development and innovation (RDI) focus areas of Lahti University of Applied Sciences (Lahti UAS). One of the key RDI themes of this focus area is well-being from nature and health enhancing physical activity. This chapter presents one recently completed RDI project 'Let's go to the forest' (Ihalainen, 2018a; 2018b) related to the well-being from nature and physical activity focus area. The Let's go to the forest project developed a network of high-quality hiking routes in collaboration with municipalities in the Päijät-Häme region and other project participants. One of the key objectives in the project was to produce information about the terrain and signposts to be placed along the routes under development. Signage and maps for the route's start, and signposts to be placed along the routes had been designed. The project has included making visible the area's route data, traditional stories of the area and cultural history. The work had been carried out in co-operation between the municipalities, students and specialists at Lahti UAS, local communities and village associations. Recording the stories, making them visible and transmitting them support and enrich the protection of cultural heritage of the area, and deepen the visitors' experiences and memories of the area. In addition, there is an excellent example of the community-led local development of forest activity in Hollola, near the city of Lahti, where a 15-meter-deep staircase (Picture 2) for fitness and other outdoor enthusiasts has been built to the ice age supression. These activities increased the accessibility of nature.

With 14 partners, Lahti UAS has participated in the Horizon 2020 Work Programme of Better Health and care, economic growth and sustainable health systems with Nature Works proposal submission coordinated by Dr. Tadhg E. MacIntyre from the University of Limerick, Ireland. The Nature Works proposal addresses the challenge

Picture 2.
Staircase for fitness
and other outdoor
enthusiasts in mu-
nicipality of Hollola,
Finland.



of mental health problems and well-being of workers with a low-cost, novel, non-invasive, inclusive and preventative approach using nature as a healing technology. It was a novel approach to upgrade the recovery of employees: well-being, organizational resilience, knowledge and

sustainability. It was planned to promote good mental health through innovative nature-based interventions. Nature-based interventions (e.g. green exercise – physical activity in natural spaces) offer a low-cost, non-invasive route to promote mental health and mental well-being. Growing evidence in environmental psychology has shown that exposure to the natural environment leads to a significant reduction of negative emotional states and increases good mental health. Nature-based interventions have already been successfully applied to individuals with a clinical diagnosis, resulting in reduced symptoms and improved rehabilitation. To date, knowledge has not been sufficiently translated into work and organizational settings. Nature Works was planned to tackle this issue and attempt to overcome barriers of mental health in the workplace.

In the Lahti area, another interesting nature and health related project plan was made by the student of landscape planning and management (Westerlund 2018). In her diploma thesis, she presented the general plan for the Kinterö health forest. The forest was planned to be located in Lahti, in the surroundings of the Central

Hospital of Päijät-Häme, where nature is dominated by the Salpausselkä recreational forest. The health forest aims to provide an outdoor environment that supports the Central Hospital and the health and well-being of its customers and staff. The design and the activities of the health forest are planned to support rehabilitation. In addition, its goal is to help people to master emotions, relax and cope with a difficult life situation and promote the feeling of social cohesion.

Kintterö Health Forest was planned to consist of two differing parts (Westerlund 2018), “the Oasis of Experiences” and “the Forest Path”, that are united by a shared gate. The gate is going to symbolize transition and creates a link between the forest and the hospital. “The Oasis of Experiences” was planned to be an accessible area that help people to easily get in contact with nature. “The Forest Path” focuses on individual recovery, with places to stop, relax and refocus along the route. The health forest concept is going to bring together different fields of knowledge, such as forestry and psychology. Kintterö Health Forest has the possibility to act as a pioneering example of hospitals utilizing forests and nature in Finland, combining the knowledge of different disciplines and the potential of its surroundings. (Westerlund 2018) Unfortunately, so far only “the Forest Path” plan has been implemented.

Discussion

The purpose of this article was to highlight the positive items of outdoor activities and to introduce a number of well-being from nature projects from Lahti, Finland. The case project (Let’s go to the forest) was reviewed from the original articles of 2017 and 2018 in the Well-being and Regenerative Growth Annual Reviews of Lahti University of Applied Sciences. In addition, the Nature Works proposal submission (847982-1) to the Horizon 2020 call coordinated by the University of Limerick, and Kintterö Health Forest plan were presented.

The findings of the Physical Activity Guidelines Advisory Committee Scientific Report (2018) showed that in addition to disease prevention benefits, regular physical activity provides a variety of benefits that help individuals sleep better, feel better, and perform daily tasks more easily. The conclusion statement based on the systematic review says that “Moderate evidence indicates that having access to indoor (e.g. gyms) and/or outdoor recreation facilities or outlets, including parks, trails, and natural or green spaces, is positively associated with greater physical activity among adults and children compared to environments that do not have these features.” The Advisory

Committee found evidence to support improved accessibility to indoor and outdoor recreational facilities for physical activity promotion. Greater access generally was shown to be related to more physical activity among adults. For the specific case of access to parks and trails, some evidence supported the implementation of built environment interventions for encouraging specifically the use of urban green space. Evidence that is more promising exists for a combined approach (i.e., changes to the built environment such as building a new footpath and a physical activity promotion campaign or skills development program). Other studies indicated more mixed associations between exposure to parks and green space, and physical activity levels. (Physical Activity Guidelines Advisory Committee Scientific Report 2018)

The combination of nature and health is common in the fields of medicine, nursing, dentistry, veterinary medicine, health care systems, and preclinical sciences. E.g. biomedical and life sciences journal citations database (PubMed; <https://www.ncbi.nlm.nih.gov/>) comprises more than 77 800 citations from biomedical literature from MEDLINE, life science journals, and online books by using them in search (“nature”[MeSH Terms] OR “nature”[All Fields]) AND (“health”[MeSH Terms] OR “health”[All Fields]). The conditions for outdoor and daily activity are present the first time in the latest Government Program of Finland (The Finnish Government 2019) and it is on the plot of many ministries (Kokkonen 2019). Practice-based RDI-projects, like those presented in this paper, are not without limitations. Professional practices in the social and health care sector are quite traditional, and such new openings are not always very well scientifically evaluated in practice. Often, they are more or less innovative ideas and agile trails than objective study designs. Because of the multi- and interdisciplinary aspects of the human–nature relationship, there is a risk that the ‘intertwining green pathways to health and well-being’ topic are expressed with a too ‘clinical’ impression that is sensitive to criticism, e.g. because there is still not much evidence based research of the ‘big picture’. Anyway, it can be stated that nature is an affordable and versatile place to exercise. It is near us and the mind and body can be affected there. Mental and physical resources can be downloaded. It is an environment where you go alone or with others. It is a situational and contextual, fresh and renewed experiment. In the winter it is white, in summer green and in autumn many colors with blue water. Nature is vivid and picturesque. There are over 400 million photos and videos with the hashtag #nature on Instagram. In nature, you can move gently and stop whenever you want to, or you can run with high intensity if you want to. There are natural obstacles and contours,



Picture 3. Hiking in Lapakisto Natural Park, Lahti.

which could increase the intensity. The technique and speed are optional, and no special skills are needed. For example, orienteering and trail running have become a more and more popular type of leisure-time physical activity in Finland. Last year, in 2018, the Finnish Jukola and Venla orienteering relays were organized in the Lahti-Hollola region with 15 000 participants and after that the local newspaper declared that “the popularity of evening orienteering in Päijät-Häme region exploded”. There is a possibility to participate in arranged recreational orienteering five times a week around Lahti. In Finland, the Excursionmap.fi service can be used to search for suitable areas and services for hiking.

According to the Environmental Performance Index (2018), Finland is the best country in the world when measured by environmental health. More than 70% of Finland is covered by trees, which means that Finland is the Europe’s most forested country. More than 80% of Finnish people say the forest is important to them. (The Finland Promotion Board 2019). Leisure-time physical activity is a broad descriptor

of the activities one participates in during their free time (e.g. gardening, hiking, walking, etc.) based on personal interests and needs (Bouchard and Shephard, 1994, 77). The future of the Kintterö Health Forest is unknown but modifying the former Finnish president: All the reasons that prevent us from being physically active in nature are excuses. Although, there is a ceremonially cast on the coffin that “we commit the body to the ground; earth to earth; ashes to ashes, dust to dust” it is good to remember that a rolling stone gathers no moss and “mens sana in corpore sano”. Instead of sitting, you should remember to get up, go out and walk or jog!

Although this article emphasizes only the positive aspects of physical activity in nature, it is good to remember that Finns are not exercising well enough in relation to the health enhanced physical activity recommendations, and that during the last years the daily physical activity has not increased (Koponen et al. 2018). Supporting all kind of physical activities (e.g. leisure-time, occupational), including nature-based exercise would assist in reaching these recommendations in the future, whatever the representation of the outdoor activity is.

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10. Action competence and resilience – a conceptual analysis and study of relevant factors affecting peacekeepers' wellbeing

Ulla Anttila & Arto Mutanen

Abstract

This article focuses on a conceptual analysis of action competence and psychological resilience. Resilience is described according to the definition of Steven M. Southwick and Dennis S. Charney (2018), who describe ten factors which induce psychological resilience. Action competence is analyzed in the framework developed by Jarmo Toiskallio (2004; 2008; 2009). The article also describes these concepts in the context of peacekeepers' services and wellbeing. Peace operations have become riskier and more challenging because of the changes in armed conflict, and it is therefore also important to understand how to support peacekeepers' resilience and action competence. Factors involved in supporting peacekeepers' resilience and action competence, and which can be enhanced to promote peacekeepers' wellbeing, are also described.

Some results from an empirical study of peacekeepers' perceptions on their return and their recommendations on policies to facilitate the processes of homecoming are introduced. Finally, some recommendations for policies to promote peacekeepers' wellbeing in promoting their action competence and resilience are made in the article's conclusions.

Introduction

Warfare has affected nature throughout human history. Especially since the twentieth century, warfare has caused widespread environmental destruction. Peace processes and peacekeeping operations are therefore important for environmental rea-

sons, besides their significance in alleviating human suffering. However, the historical study of the environmental impacts of warfare is still a new field of research (Laakkonen 2007).

It is important to provide support for individuals' wellbeing during and after their peacekeeping duties. Building a conceptual framework for understanding how to support peacekeepers' wellbeing is therefore important. In this regard, resilience and action competence can be seen as a conceptual basis for further work to analyze peacekeepers' wellbeing.

Action competence entails a holistic framework to analyze human beings. It consists of inseparable physical, psychological, social and ethical constituents. Action competence has been used as a broad concept in military pedagogy to link scientific results from various disciplines. Psychological resilience can be defined in several ways. It often refers to a capacity to deal with or work on an adversity, and psychological endurance. By its nature, it is multidimensional and can also be learnt and taught. Resilience is also a broader concept, which is used in security studies (see Hanén 2017), ecology and other contexts.

Peace operations as a working environment

Traditionally, peacekeepers' duties have consisted of work to guarantee a pre-existing peace agreement. Today, many peace/military crisis management operations are robust and may involve relatively high risks. Peace operations have largely been motivated by human security and the need to enhance the safety and security of civilians in conflict areas. There has been much debate on how the international community should strengthen the UN and other international actors in promoting the responsibility to protect, which means that if states cannot protect individuals within their borders, the international community has an obligation to do so. However, this obligation entails a responsibility to prevent any armed conflict by addressing the "root causes and direct causes of internal conflict." The responsibility to protect also entails a responsibility to react to the conflict, which means responding "to situations of compelling human need with appropriate measures, which may include coercive measures like sanctions and international prosecution, and in extreme cases military interventions". The responsibility to protect also includes rebuilding after a conflict or war. This includes providing, "particularly after a military intervention, full assistance with recovery, reconstruction and reconciliation, addressing the caus-

es of the harm the intervention was designed to halt or avert” (see Responsibility to Protect 2001; Evans 2008).

Peacekeeping operations are intended to restore peace where it has disappeared or to protect peace where there is a danger of conflict arising. A central task for peacekeepers is to protect civilians. All these are justifiable goals. Usually, a mandate is given by the UN, meaning the international community justifies the operations. All this amply justifies the goals of operations. However, means should also be justified. They depend on the environment. This may require the use of force: Violent methods may be required in a violent environment.

The justification for operations has been divided into general justification, which is connected with the problem of a just war (*jus ad bellum*), and the acts of individuals in operations (*jus in bello*). In general, peacekeeping operations are justified in the first case, but the second requires further discussion. The complexity of operational situations means that the identification of justified and non-justified actions is an extremely difficult task. Moreover, the complexity of international conflicts requires the entire peacekeeping operation to be planned with extreme cultural sensitivity and an understanding of the conflict’s historical background.

Indeed, all this makes operations extremely difficult and challenging for their participants, whether they are military personnel, police officers or civilians. Challenges can be analyzed at the organizational level of the UN and other organizations involved in peace operations, as well as at field level. Unfortunately, at the institutional level of the UN, the institutional learning options have not been adequately promoted (Benner et al. 2011, 214).

Personnel working in crisis management may find homecoming more difficult than the start of their service in a peacekeeping or crisis management operation (Anttila 2012). Much attention in previous research has focused on trauma and the severely negative effect serving as a peacekeeper may have on an individual. However, more research is also required to understand the impact of a less severe operation and especially the long-term impact of peacekeeping on women peacekeepers (Brounéus 2014).

Although it is important that the risks in military duties in peacekeeping and crisis management are assessed, and that they involve a psychological impact and potentially traumatic battlefield and similar experiences, it is and has been necessary to reduce them as much as possible.

Action competence

Jarmo Toiskallio (2008) sets a challenge to which it is extremely difficult to respond. Referring to Putnam, he posits a choice between the glorification of warfare and machismo, and the ethics of compassion. The response to Toiskallio's challenge is not to say that his distinction is incorrect. Most – or rather all – examples certainly lie between the mentioned extremes. The idea is to emphasize that we must reflect on how to direct our actions. Obviously, the preferred goal is based on the ethics of compassion. However, there is also – implicit or explicit – a glorification of war. It must be remembered here that the glorification of warfare does not mean respect for veterans, and the ethics of compassion does not mean disrespect for them. The glorification of warfare may sound quite outdated, yet in spite of its long history, it retains some support even today. War may therefore be seen as a joyful adventure.

The ethics of compassion force the security sector to re-evaluate its foundational values. Questions like “who are we?” or “who is the enemy?” are of central importance. They are a quest for the core of humanity: What is good in humanity? Such a quest touches every aspect of humanity.

In the following, we consider the idea of action competence, which is the most central notion in military pedagogy, and in environmental and health education. Its meaning varies greatly. In health sciences it is used in the sense of functionality, which connotes to performance. We speak of action competence in the sense developed by Jarmo Toiskallio and his associates.

Traditionally, the notion of action competence has been divided into four interrelated constituents: physical; psychological; social; and ethical. There is a debate about which of these constituents is most fundamental. There is no consensus. The question of order seems to relate to the framework in which the question is asked. We must therefore examine the notion of action competence more closely.

Toiskallio (2004) speaks of embodied agency, by which he means a holistic agency in which physical, mental, social and ethical existence are simultaneously present (embodied). These modes of existence are not separate but are “constituents” (or “aspects”) of the human being. Being human implies them. Toiskallio (2004) uses the word “constituent”, which emphasizes that the human being is a combination of these four constituents. The danger is that these constituents are understood as separate. The notion of aspect has no such connotation, but it may suggest that these

aspects are not “real” but only perspectives. They are real, yet they have relative autonomy. The measure of a constituent may vary from one individual to another, and it may also vary within a single individual over time.

We look at humans as acting agents. The constituents of existence therefore show themselves as actions. “Action (in the meaning of *praxis*) is always situated, intentional, purposeful, deliberated, it creates experiences and thus it can produce changes in the acting subjects themselves” (Toiskallio 2004, 112). Acting in this sense is the agent’s self-expression. It is therefore separated from action as making (*poiesis*), which presupposes “technical” knowledge. Knowledge about the goals of human action includes the social (who we are), the psychological (who I am) and the ethical (what I should do).

The question “Who am I?” is polysemic. A key meaning, especially in the social sciences, is that the questioner is trying to locate himself or herself on the social map (Gleason 1983, 912). Thus, the questions about myself and about us are closely interlinked. Ethicality refers to the ethos of society, but it is also an individualistic notion (Toiskallio, 2004, 116; 2008; Pihlström 2014).

Human intentional action is – by definition – goal tracking. Deliberation may consider either the means or the final end of human action. The deliberation of means has a “technical” character. This may be knowledge about the technology needed for achieving the goal, but it may also be factual or instrumental knowledge. The notion of technical norm von Wright (1963) introduces explicates the means-end relationship. Knowledge about goals is basically understood as given; Aristotle emphasized that we do not deliberate ends, we deliberate means. The goal is given as a goal of the profession or role. Good examples of such professions are medical doctors or soldiers. Of course, in practical situations, one needs to deliberate the end and how to actualize it. However, this deliberation is not a proper deliberation of what the end should be, but it is how it should be understood in a specific situation. In peacekeeping, peace is, of course, the final end. However, it is far from obvious, and it therefore needs to be repeatedly redeliberated (Toiskallio 2008).

The notion of action competence refers primarily to persons as such, not to any singular activity (Toiskallio 2004, 115-116). That is, action competence characterizes the agent himself or herself, not his or her (singular) actions. As such, action competence is a deep notion which refers to practical actions that are “not the same thing as value-free know-how” (Toiskallio 2004, 112). This connects ethicality with action

competence. Ethicality means a certain value-orientation in action. Orientation is partly social (ethos), but it also entails personal responsibility for the agent's actions. The agent should be committed to ethical good in his or her actions.

It is obvious that an agent is responsible for his or her actions. However, the character of responsibility is not at all obvious. The problematic becomes clear if we speak of a simple singular act. However, even such a simple act has infinite consequences, so a complete evaluation is problematic. The obviousness thus disappears, at least when we speak about more complex action, which may include a series of acts and a lack of information. It is generally agreed that responsibility presupposes control and information about action and its consequences (Hakli & Mäkelä 2018).

Complex and informationally ill-defined contexts do not erase responsibility. However, this forces us to rethink agenthood and responsibility. Whatever the case, the agent should live with his or her actions. The agent's responsibility cannot be avoided. Responsibility also entails guilt: The agent is guilty of the consequences of his or her acts. It is important for the agent that he or she can confess his or her guilt (see Pihlström 2014). A step in this direction is to recognize "that concerns of ethics and efficacy are increasingly congruent" (Toiskallio 2004, 117).

Toiskallio (2004, 117–118) makes an important conceptual classification between ethical behavior and technical competence. A similar conceptualization has been made in the philosophy of medical science (see Mutanen 2019 and references therein). The conceptual classification has important consequences. For example, physical action competence can be understood as being built from the physical capabilities of physical performance. It is therefore important to recognize brawn, the actor's maximal oxygen consumption etc. These factors indicate the potential capability of physical performance. It is important to recognize that an actor cannot exceed his or her capabilities. Technical competence focuses attention only on these physical capabilities.

Human physical action is not merely physical; it is also psychological, social and ethical. If we take all these other constituents into account, the consideration will move from technical to ethical competence. It is important to recognize that ethics themselves do not need to be included in ethical competence. Of course, the agent's ethicality is constitutive of ethical competence.

Von Wright (1996, 156) distinguishes between an *ethics of value* ("Wertethik") and an *ethics of duty* ("Pflichtethik"). In the former, values are fundamental; in the latter,

norms are fundamental. In the latter, it may happen that values remain disconnected from norms. Ethics then become only external or only part of technical competence. Toiskallio (2004, 122) identifies the ethics of value as an essential part of the personality of some individuals who generate the ethicality of the community. Without such individuals “all kinds of moral rules and codes will remain as dead words” (Toiskallio 2004, 122).

Resilience and its relationship with action competence

Resilience is a multidisciplinary concept. It has been used in both ecology and disaster analysis. Security analysis also seeks new perspectives on resilience (see Hyvönen et al. 2019). Regarding human beings, resilience is a broader concept than psychological resilience alone, though psychological resilience is important if an individual is to handle all the aspects of resilience. A more systemic approach to the psychology of resilience is also needed (Poijula 2019). As a psychological concept, resilience is multifaceted and dynamic. Because the concept is widely used, it has also been defined in a multitude of ways. A common feature in different definitions of resilience is that they refer to the ability to deal with an adversity. Some definitions also include “the ability to grow from adverse events and find meaning in them”, and some underline that resilience means the ability to bounce back. Resilience can be seen as an essential contributing factor to stress (Southwick and Charney 2018, 8-25.) It also signifies a capacity for recovery or restoration (Uusitalo-Malmivaara & Vuorinen, 2016; Mutanen 2019).

When assessed in the context of action competence, psychological resilience can be seen as an essential aspect of psychological action competence. Toiskallio (2009) sees psychological, physical, ethical and social action competence as inseparable, but these aspects can be seen as interlinked. Southwick and Charney (2018) describe resilience within a psychological framework. However, having studied resilient individuals, they conclude that psychological resilience is induced by ten different factors, which are not only psychological but also relate to all the aspects of action competence, namely psychological, physical, social and ethical (see Figure 1). The resilience factors are named as “realistic optimism, facing fear, moral compass, religion and spirituality, social support, resilient role models, physical fitness, brain fitness, cognitive and emotional flexibility, and meaning and purpose” (ibid. 15-16). Those who had faced potentially traumatizing events and who had been interviewed for the book belonged to the following groups: Vietnam veteran prisoners of war (POWs);

special force instructors; and civilians who had experienced severe trauma (ibid., 10-15). They represented different types of resilience expertise.

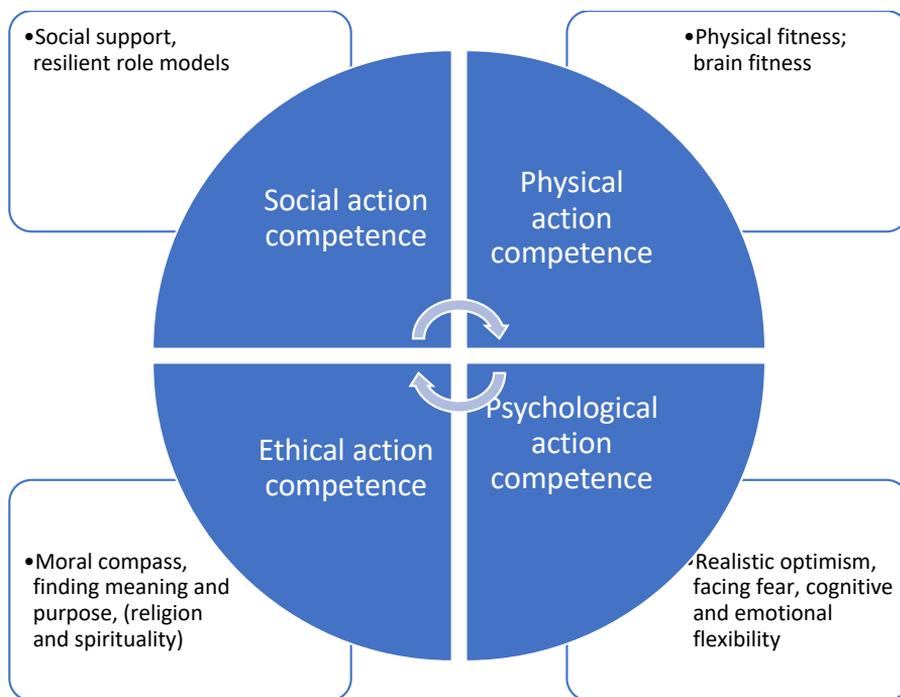


FIGURE 1. Action competence and factors affecting resilience, based on Toiskallio (2009) and Southwick and Charney (2018)

Factors operate in different “fields” correlated to the corresponding constituent of action competence. Social support and resilient role models realistically operate in the field of social action competence; facing fear and cognitive and emotional flexibility operate in the field of psychological action competence; physical fitness operates in the field of physical action competence; moral compass and religion and spirituality operate in the field of ethical action competence. Brain fitness is multi-dimensional and operates in the fields of psychological and physical action competence. Meaning and purpose are “holistic” notions which refer to the balance of an individual’s life. Similarly, realistic optimism is a holistic notion which presupposes good knowledge about the present situation and future possibilities but also an evaluation of future probabilities.

There are interesting connections between resilience and action competence. However, key differences between the notions of resilience and action competence remain. The notion of resilience has a deep empirical foundation, making it a central notion in empirical theory building. This also explains the applicability of resilience to so many practical problems. However, the notion of action competence has a solid theoretical-conceptual foundation, deepening its theoretical applicability. It broadens our understanding of humanity. It is therefore a theoretically fundamental notion.

Conceptually, as Figure 1 illustrates, psychological resilience is associated with support from all the aspects of action competence. To our knowledge, there is no previous conceptual analysis of the concepts of resilience and action competence. This bridgebuilding relies on the analysis of Southwick and Charney (2018) of the factors that support individuals' resilience.

Figure 1. Action competence and factors affecting resilience, based on Toiskallio (2009) and Southwick and Charney (2018)

The study of de Terte et al. (2014) of the resilience of police officers supports the idea that psychological resilience requires multidimensional support. The authors conclude that optimism, adapting cognitions, and health behavior and social support from the environment are essential for an individual's resilience. Although resilience in this context is a psychological concept, many kinds of factor therefore support its development.

Resilience is relatively common, though people may not always acknowledge it. It is essential that resilience can be learnt and trained (Southwick & Charney 2018, 25). Resilience training is therefore important for those who have a higher potential risk of facing traumatic events. Traumatic events may lead to post-traumatic growth, when an individual has faced a potentially traumatizing event and has succeeded in positively overcoming adversity (Seligman 2013). However, traumatic events do not necessarily lead to either trauma or growth, and suffering and growth can exist side by side (Poijula 2019, 186).

What is the relationship between psychological resilience and action competence? Psychological resilience can be constituted on the basis of action competence and its four dimensions. However, can functional action competence exist without psychological resilience? This question prompts another: Can we prove this claim? If action competence is not measurable, we cannot empirically prove whether psychological

resilience is part of action competence or whether (functional) action competence is a prerequisite for psychological resilience.

As Southwick and Charney (2018) describe, psychological resilience can also be defined as a process, an idea Soili Poijula (2019) also supports. The process of resilience is based on the support of functional action competence, and it also develops over time. However, it seems that resilience presupposes action competence. Action competence is therefore, as mentioned above, a theoretically fundamental notion, but it is also pedagogically fundamental.

Resilience training has been developed for military contexts to provide support to soldiers in dealing with potentially traumatizing and other challenging experiences (Seligman 2013). The program is called Master Resilience Training. It consists of training officers to assist soldiers to become more resilient and has been motivated by the desire to prevent PTSD (Positive Psychology Program 2017). Resilience training has also been carried out in military contexts in Finland, and the role of the self-regulation skills of action competence has been underlined (Paananen & Huhtinen 2013). In military contexts, training should include learning environments that provide support for collective and individual agency (Paananen 2015). Interventions planned to enhance resilience are being studied. They will also be studied in future to obtain more detailed information about their impact (Poijula 2019, 247).

It may be seen as a paradox that dealing with adversity requires resilience, while working on adversity may induce internal psychological growth which contributes to an individual's resilience (Poijula 2019). This may be a key insight into how to support peacekeepers' resilience before, during and after an operation.

Action competence and resilience in the context of peace operations

Because peacekeepers bear the constant responsibility of choosing whether to use armed force, it is important that each soldier also receives support in developing his or her ethical action competence. In analyzing peacekeepers' action competence, their agency is their individual decision making in a stressful environment. These competences are also relevant to the mediation of agency for resilience.

In modern peace operations, the personnel involved should receive adequate support to maintain their action functioning. Both action competence and resilience play

constitutive roles in this. Action competence characterizes an agent's capabilities, and its role is therefore to lay a foundation for the agent's action capability. Resilience as reactive capability plays a more central role in the field, and it plays a central role in restoring the capability to act. Action competence refers to the capability which intends to restore. Both action competence and resilience are broad concepts, so policies to reinforce them include a wide range of options. Training to become more resilient is needed prior to, during and after an operation. During and after an operation, psychosocial support is also required. Psychosocial support is often carried out by medical care, psychology or psychotherapy professionals.

Peer support has been included in Finland's official peacekeeper support policies. A contract between the Defense Forces and the Peacekeepers' Association to provide a systematically developed peer support service has been made (Holma 2011). Helsinki University Hospital also provides psychosocial support at the level of specialized medical care. In the last ten years, more policies to facilitate peacekeepers' psychosocial wellbeing have been adopted. For example, the Ministry of Defense has strengthened its support for peacekeeping veterans. Every homecoming peacekeeping veteran has the right and obligation to attend a special training course approximately two months after their return (Finnish Ministry of Defense 2015).

In an empirical study undertaken in 2018 and 2019, thirteen recently returned Finnish peacekeepers were interviewed twice about their peacekeeping experiences and especially about their lives after their return. Two of the interviewees were women; eleven were men. The interviewees had experience of various operations to which Finland had contributed. They had participated in an average of 2.7 operations. With one exception, they had returned from their latest peacekeeping operation not more than three years prior to the first interview (Anttila 2019).

The study also included a survey of twenty volunteers for a telephone hotline for peacekeepers and their families, based on peer support for peacekeepers. Four specialists from this support channel were also interviewed in a group interview. A group interview with four peacekeeping veterans who had become disabled during or because of their peacekeeping service was arranged (Anttila 2019).

Some of the interviews' questions focused on the recently returned peacekeepers' personal experiences of change management after homecoming. On a scale between 0 and 10 (a larger number indicating higher levels of change management), the interviewees described their change management level to be 8.7 on average. This figure

was 7.2 on average soon after they had returned home (ibid.). Veterans with higher levels of change management may be seen as more resilient because they are able to deal with different changes after their return.

The recently returned peacekeeping veterans emphasized that both peer support and professional psychosocial support should be provided for all returnees, though it was up to every veteran to assess whether he or she might need such support. Peer support was especially important soon after returning home. The interviewees also underlined that peacekeepers' families and relatives needed support for changes when peacekeepers left on a mission and returned, as well as during their operational service. They suggested it would be especially important for relatives and family members to understand the impact peacekeeping service might have on a peacekeeper or veteran (ibid.).

An assessment scale can be used to study peacekeepers' subjective views of their personal action competence. Various focus groups can assess their personal views of their action competence on a scale of 0 to 10 (a higher level indicating a higher level of action competence). Although this scale is not standardized, it may be used to obtain subjective assessments of action competence. The study focus group assessed their action competence at an average 8.0 soon after their return and at 9.1 at the time of the first interview, indicating a subjectively assessed feeling of improving action competence among recently returned peacekeepers after they had spent more time at home (ibid.).

It is also important to understand that different focus groups within the larger group of peacekeeping veterans may have different needs and different views concerning the arranging of services for peacekeepers' psychosocial support. For example, the telephone hotline volunteers underlined that callers had usually not returned recently to Finland. They had usually returned several years previously. Usually, they were facing an acute crisis. Peacekeepers who had been disabled during or because of a peacekeeping operation emphasized that peer support was needed from individuals with a similar background and experiences. Families and close relatives also needed special support when a peacekeeper became disabled (Anttila 2019).

It is noteworthy that peacekeeping experiences may remain vital during a veteran's post-operational life. It is therefore important that officials take responsibility for providing adequate psychosocial services for peacekeeping/crisis management veterans for a long time after they have returned. Although resilience was not operation-

alized in the empirical study described above, change management can be seen as an important part of psychological resilience after homecoming.

Conclusions

The relationship between psychological resilience and action competence can be understood differently. Having analyzed Southwick and Charney's (2018) argument, we conclude that action competence may be seen as a wider category constituting a broader and supportive basis for peacekeepers' post-operational change management, as well as processing for resilience. Southwick and Charney (2018) argue that ten factors promote resilience. These factors can be categorized in four aspects of action competence, as Anttila (2019) also describes.

In some definitions, resilience is seen as the capacity to bounce back after adversity. Resilience can therefore be assessed only in the context of change or an experience of adversity. Resilience is today conceptualized as a process (Pojula 2019, 247). If it is seen as a process, it can also be affected and strengthened. Yet there are reasons to underline the interlinked nature of resilience and action competence. Resilience strengthens action competence.

Supportive processes for resilience and action competence after return from a peace/military crisis management operation occur at different levels. Some are internal within an individual veteran; some are social in their nature. The institutional level is also important, because military institutions provide supportive mechanisms, including training and access to psycho-social support and peer support resources. Besides post-operational training and support, it is important to provide adequate training and psychosocial services to peacekeepers prior to and during an operation.

Action competence and psychological resilience are relevant concepts for peacekeeping. Although they may be seen within a framework which focuses on an individual, the institutional level is also important for providing sufficient resources to maintain and support an individual peacekeeper's capacity to develop his or her resilience and action competence. However, as notions they characterize human beings and their relationship to the environment. Extreme situations underline fundamental questions and hence allow us to better understand several aspects of humanity.

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11. Towards posthumanistic curricula in higher education

Taru Konst

Introduction

During the last few years, the European discussion on the development of higher education has mainly focused on lifelong learning and future competences required at work. This also concerns Finland, where change in work and its requirements from education are emphasized in educational discussion. Additionally, more attention is paid to economic questions and cuts in the financing of education, and less to the role of education as a provider of the wellbeing of people or socially and ecologically sustainable development. Themes such as climate change, equality or a sustainable future are usually ignored in the discussion of higher education (Tervasmäki & Tomperi 2018). However, higher education must be able to generate competences, which can solve challenges related to these issues. The world's leading panel of climate experts lately sounded the alarm that we are running out of time to get rising temperatures under control (IPCC 2018). Globalization continues and the challenges caused by it, such as climate change, are not to be solved by one actor, one state or one government. It requires extensive commitment to common goals, and multi-lateral co-operation and decision-making. Higher education has a significant role in ensuring knowledge and skills operate in this kind of environment.

The aim of this article is to discuss whether we should move from humanism in higher education (the traditional approach) to posthumanism, which better answers to the scientific view of reality in the 21st century, realizing that nature must be considered in all actions. The concept of posthumanism is here examined in the context of education, and the article justifies why the posthumanistic approach is necessary in education development. The empirical findings give examples of how we ignore posthumanism in curricula and in educational discussion in general. The outcome of this article is that we should initiate shared discussion on the values of higher education, take posthumanism into account in our values and in educational policy, and

renew curriculum planning so as to embed posthumanism there. Thus, we could get relevant new tools and concrete new ways of operating when providing higher education, which is able to build a more sustainable society and future for all species.

Posthumanism as a framework

Pedagogical discussion in European higher education has traditionally been based on humanism. However, science has taken huge steps forward, and it is worth considering whether the posthumanistic approach is more realistic and sustainable in relation to the current and future worlds, updating it to answer to the scientific view of reality in the 21st century. Posthumanism is based on humanism, but it differs from it by relegating humanity back to being one of the natural species, rejecting any claims based on anthropocentric dominance. According to posthumanism, humans have no right to destroy nature or set themselves above it in ethical considerations a priori. Human knowledge, earlier seen as the defining aspect of the world, is also reduced so that it has a less controlling position. Human rights exist on a spectrum with animal rights and posthuman rights. The limitations and fallibility of human intelligence are confessed, even though this does not imply abandoning the rational tradition of humanism. (Wolfe 2009; Evans 2015.)

Humanism affirms that human beings have the right and responsibility to give meaning and shape to their lives. According to humanism, a human being is self-imposed, determined and curious and has a strong potential for learning (Ruohotie 2002, 157). In addition, humanism is not theistic, and it does not accept supernatural views of reality (International Humanist and Ethical Union 1996). The development can be simplified and described as follows. According to Christianity, God is the most important, and because human beings are 'pictures of God', they are the second most important ones who can control the third most important one: nature. Humanism drops out gods and leaves human beings to control nature. Posthumanism sees human beings as a part of nature, and nature must be considered in all actions (Figure 1).

Posthumanism is a broad concept, and there are several different approaches to it and there have been several attempts to define it. Sometimes it is connected to transhumanism, achieved through the application of technology in order to expand human capabilities. In this article, we define *posthumanism* as follows: *posthumanism means seeing human beings as a part of nature and nature must be considered in all ac-*

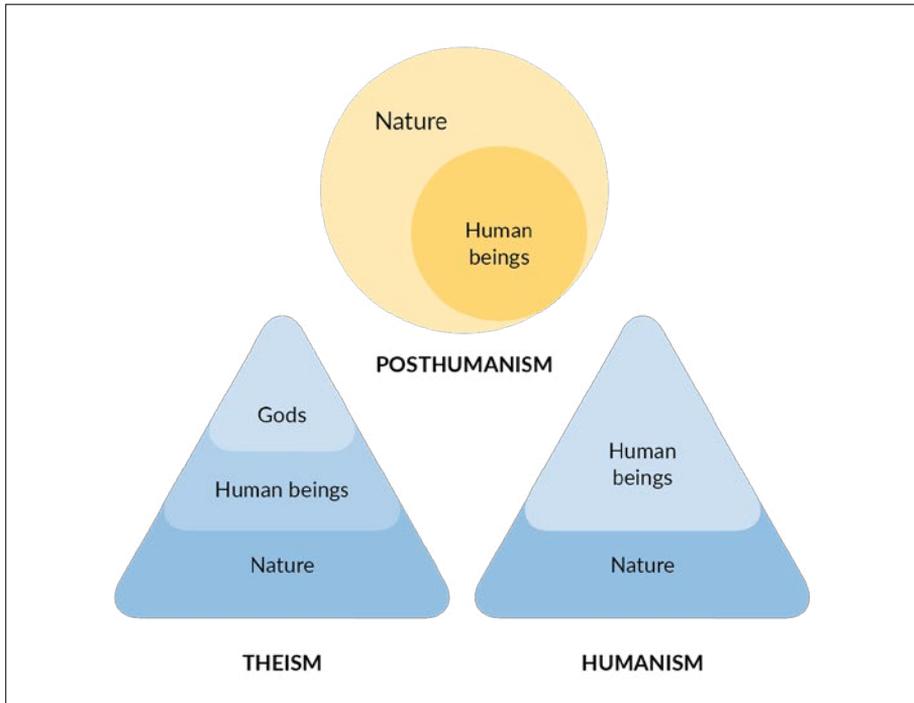


Figure 1. The core idea of posthumanism (Konst & Kairisto-Mertanen 2018, 27)

tions; human beings have no right to destroy nature or set themselves above it in ethical considerations. Thus, posthumanism is close to many Western, modern philosophies that recognize the holistic circle of life in which everything is related to every other thing. These are often also recognized in other cultural environments, for example, in the Buddhist tradition of the interconnectedness of all beings and its respectful relationship to nature. (Evans 2012.)

Posthumanism in the context of education

For the present, posthumanism has been quite invisible in education research and curriculum studies. However, there have been some attempts to bring posthumanism into educational discussion. For example, Snaza et al. (2014) state that posthumanism could transform educational thought, research and pedagogical practice and could do this in three ways: by forcing us to understand how resolutely human-

istic almost all educational research is, by allowing us to reframe education in order to focus on how we are always already related to animals, and by building on and incorporating these first two insights. (Snaza et al., 2014.)

How does posthumanism differ from humanism from the learning viewpoint? When humanism emphasizes the human social aspects, it does so in favour of non-human aspects. In other words, humans are considered active learners whereas non-humans are seen either as passive objects to be learnt about or as objects that facilitate learning. If we question the human centrism, we see learning where the learners are co-participants, entangled in the world they are learning from. Here learning is seen as a student's process wherein he or she learns through acting with the world she or he is part of and is co-creating. This approach emphasizes 'learning from the other', as a position that is not subject centred but other centred, and view on 'learning with', realizing that one is not the only one acting intentionally in the world. Instead, each subject needs to discover the human and nonhuman relations he or she is part of in our world. The widening of the understanding of each learner causes an unavoidable change process, wherein comparison to other learners is not important and constructing one's conception has a necessary and continuous impact on societal change. From an educational perspective, this means that all occurrences in learning situations are valuable because they generate various alternatives, especially compared to the current system, which is based on a permanent concept of knowledge, and searching for predefined answers. (Snaza et al. 2014; Ceder 2018.)

Thus, there is some research conducted on posthumanism from the learning viewpoint, but in the context of curriculum research, it has not been discussed much. However, curricula have a huge potential, both conceptually and politically, to forward values, attitudes and ways of thinking.

Today schools and universities are expected to respond to the social and economic needs of society: facilitating graduate employability, contributing to economic growth and development, assisting innovation, encouraging entrepreneurship etc. The curricula aim to generate competences in order to answer to these challenges. However, too often the curricula ignore or neglect the competences needed to solve the most wicked problem, climate change, and the issues closely connected to it, such as intensive livestock farming and animal rights. In other words, the values and ways of thinking behind curricula are not posthumanistic, although the sustainable future requires it.

Posthumanism can easily be justified from numerous viewpoints, such as ethical, environmental, economic, health and well-being, and equality viewpoints. Despite research results and alarming climate changes, our current lifestyle, based on the utilization of natural resources and animals, is still seen as acceptable. This practice, often called the *meat norm*, allows us to use animals as a means of production, food, entertainment and clothing. A society based on the meat norm is ethically and ecologically unsustainable, and thus meat consumption can no longer be considered citizens' private issue but can be considered a fact that threatens the continuity of life and the future of the whole planet. Avoiding meat and dairy products is the single biggest way to reduce one's environmental impact on the planet; without meat and dairy consumption, global farmland use could be reduced by more than 75% and still feed the world (Poore & Nemecek 2018). According to several research results, avoiding meat and dairy products (i.e. having a balanced vegan diet) is good for human health and prevents many diseases (e.g. heart disease and strokes), reduces the risk of diabetes and improves the symptoms of arthritis (see e.g. Craig 2009; Barnard et al. 2006; Campbell 2017; Clinton et al. 2015; Mishra et al. 2013). A plant-based diet is closely connected to climate change and to health issues; a global switch to diets that rely less on meat and more on fruit and vegetables could save up to eight million lives by 2050, reduce greenhouse gas emissions by two thirds and lead to healthcare-related savings. It could also avoid climate-related damages of US\$1.5 trillion (Springmann et al. 2016). However, the problems related to meat production and consumption can be reduced remarkably in the future if innovations such as artificial and/or cell cultured meat can be developed further.

In addition, exploiting animals is morally and ethically wrong because animals, as feeling creatures, have an absolute value that does not depend on humans or a monetary value imposed on them. The fact that humans are able utilize other individuals does not make the utilization justified. The freedom of an individual cannot hinder the freedom of other individuals, such as animals, which is why captivity and suffering surpass the limits of equitable individual freedom. Therefore, otherness does not justify unfair treatment because it is not logically sound to value differently the needs of humans and animals only because individual capacities are different. Even if different species have different typical qualities, all animals, just like humans, share basic common needs, of which avoiding pain and aiming at pleasure are essential. The fair treatment of animals is the minimum requirement for our own ethical and mental wellbeing. It is impossible to promote righteousness and nonviolence

between humans in a world where humans are allowed to treat other humans ‘like animals’. Respecting animal justice is a natural continuum in the process of dismantling inequality from social structures. Equity in society means emphasizing the similar rights and equal value of different individuals, whether they are of a different sex, race, age, intelligence or species.

Altogether, animal issues are widely interconnected with other posthumanistic themes. They have a central position in such big challenges as environmental problems or injustice. Intensive livestock farming escalates climate change and is connected to social inequality and injustice. The justifications for posthumanism being as numerous as presented here, it is essential to also consider the posthumanistic approach in curriculum research and development. We need to include the viewpoints justifying posthumanism in the value basis of education, as well as in curricula contents. In Finland, curriculum reform should not be too challenging because universities and universities of applied sciences can decide both about curriculum content and methods to implement it. Especially in the universities of applied sciences, this autonomy has led to the development of so-called postmodern curricula, which integrate different subjects, are flexible and are based on working life’s needs (Karjalainen 2007; Raivola et al. 2001). Here *postmodernity* is understood to focus on difference and diversity; recognize shifts in time, space and boundaries; and on openness to flexibility, creativity, agility and responsibility. According to MacDonald (2003), a postmodern curriculum may be viewed as moving towards an open system with constant flux and complex interactions; requiring interactive and holistic frameworks for learning, with students becoming knowledge producers rather than knowledge consumers; and as transformative rather than incremental with respect to change, such change requiring errors, chaos and uncertainty through the actions of the learners. In brief, postmodernity in the curricula of higher education allows us, if we want it, to reform and renew them to become posthumanistic curricula. In particular, the curriculum and its reform must be prevalent as a result of the awareness of the needs of society, the environment and nature and must take relevant action in accordance with those needs.

The absence of posthumanism in higher education: Empirical findings

On a practical level, it is easy to notice the absence of the posthumanistic approach in higher education. There is a lot of unawareness and ignorance of the topics related to posthumanism, and posthumanistic topics are not visible in curricula contents or

in the value basis of education. In the following we present some practical examples of the absence of posthumanism in higher education.

Several studies demonstrate unawareness, even among the highly educated adult population, about the living conditions of farmed animals, conflicts between their consciousness and treatment, or the impacts of animal-based food production on the environment or societal structures (e.g. European Commission 2005b; Jokinen et al. 2011; Kupsala et al. 2011, 2016; Foer 2009; Deemer et Lobao 2011). According to Eurobarometer, nine out of ten EU citizens think that the EU should do more to increase the awareness of animals and their treatment. In the EU countries, there is a growing concern about animal welfare, and the biggest changes have taken place in Finland, where 99 % think that farmed animals should be treated better. (European Commission 2005.) Despite of the general concern, the knowledge level of the everyday life of farmed animals is incomplete. For example, people are very often unaware what tie-stall cattle barns or farrowing crates mean in practice or what dairy production means for a dairy cow (the separation of calves from their mothers within the first 24 hours after birth, year after year, ending with the slaughter of the mother cow at a young age when the milk production lowers). These topics are not usually discussed at school at any level.

Curricula in higher education do not mention topics such as farmed animals and their living conditions, treatment or consciousness; animal rights; the impacts of animal-based food production etc. As an example, the curricula in all degree programmes at three universities of applied sciences in Finland were studied for the year 2018 and these topics were totally absent in all study fields (covering engineering, business and administration, health and wellbeing, and arts and culture). A more in-depth study was conducted for the year 2012, covering all degree programmes ($N = 101$) in the study field of social sciences, business and administration leading to a BBA (bachelor of business administration) degree. The primary objective of this research was to examine whether there were environmental issues in the curricula. The findings were that there are not any generic environmental issues or related labels that are usually covered in business studies at the Finnish universities of applied sciences. The most common context for environmental studies was in logistics / ethics / sustainable development / corporate social responsibility, which illustrates the embeddedness of environmental topics at the wider corporate level or social governance themes, or their mainstreaming in the context of other business studies. All in all, the research findings revealed the relatively weak position of environmental

issues in business education at the Finnish universities of applied sciences. This research material also indicated the total absence of animal questions in these curricula. The content and discourse analyses of the curricula studied not only the contents of courses and the study units offered but also the programme descriptions in order to examine the value basis behind these degree programmes. There were only two degree programmes out of 101 that mentioned that sustainable development and ethical issues were mainstreamed in the studies, and one degree programme especially emphasised ethical and responsibility perspectives in all their studies (Penttilä 2012). All in all, the humanistic approach is strong in curricula (the role of posthumanism being very weak), covering environmental issues to some extent but ignoring animal issues completely.

Higher education in Finland (i.e. universities and universities of applied sciences) enjoys extensive autonomy. Their operations are built on the freedom of education and research. They organize their own administration, decide on student admission and design the contents of degree programmes. The curricula in Finland are competence-based, and all degree programmes aim to provide their students with study field-specific competences and with the generic competences defined in the European Qualification Framework (EQF). The core of the EQF is formed of its eight reference levels, defined in terms of learning outcomes, in other words, in terms of knowledge, skills and attitudes expressing what individuals' know, understand and are able to do at the end of a learning process. Countries develop national qualifications frameworks (NQFs) to implement the EQF (European Commission 2005a). The reference levels concerning higher education do not mention competences, which could be interpreted as explicitly describing posthumanistic values.

Higher education institutions express the aims of their degrees in degree programme descriptions, usually in the context of the curricula. The description of a degree programme is a written document representing the purpose, objectives and core contents of a degree programme. These descriptions aim to give a realistic but also an appealing picture of the degree programme, because their purpose is to be informative, but they also form a part of programme marketing efforts. The texts usually focus on describing the main contents of the programme, the professional expertise that they provide, the educational and pedagogical solutions used, and the future positions of students graduating from the programme. These descriptions seldom mention posthumanistic values, such as a sustainable future, environmental protection, respect of life and all species etc. in any context.

In Finland, the absence of the posthumanistic approach is common on all educational levels. The curricula in upper secondary education offer some optional courses covering 'posthumanistic topics' such as environmental issues and animal protection, but in vocational education, these topics are only included occasionally at the initiatives of individual teachers and they are usually not covered at all. In primary education, topics such as environmental protection or sustainable development are included in the new curricula, but animal protection is only mentioned in the curriculum contents of the last course in biology, in the spring semester of the ninth class (OPS2016). Considering all this, the unawareness about animal questions described earlier is not surprising, even among the adult and/or highly educated population, in Finland. The invisibility of posthumanism seems to be a norm in the educational continuum. The situation does not look different outside Finland either. For example, research shows that a third of British children do not know where milk comes from and one in five believe milk comes straight from the fridge or supermarket (British Nutrition Foundation 2017). More than a third of British young adults (aged 16–23 yrs old) do not know bacon comes from pigs or butter from a dairy cow (Linking Environment and Farming 2012).

It is not only the curricula but also everyday practices in higher education institutions, which are very traditional and not considered from a posthumanistic viewpoint. Ways of thinking such as specism/speciesism (defining the value or rights of beings on the basis of the species one belongs to) or carnism (the culture-based classification of animals into edible and non-edible) are not discussed or questioned. For example, different diets are taken into account at university lunch restaurants, but the choices are accepted as individual decisions; institutional values do not guide the decision-making or question whether the choices have an impact on other living beings or on the environment.

Discussion

Why is posthumanism especially important in higher education? There is no longer time to rely on early childhood education and primary education developing our attitudes and ways of thinking, and ensuring that the future generations are more aware and responsible in their decision-making. The latest IPCC Report (2018) requires that we must act now to save the planet and slow down the climate change, and therefore young adults in higher education play a key role in our decision-making on how to make the required changes in our lifestyles. Considering the current

state of the world and all the justifications given earlier, we can state that we have to add posthumanistic values to the aims of higher education and ensure that all degrees given must be able to generate competences that show the way to a more sustainable and equitable future where all life is respected. Higher education can focus on these themes better if its values enable them and lead them in this direction. This also enables the development of higher education on an operational level according to the values.

Values do not mean empty words in curricula or extra costs in the implementation of education. They can generate new competitiveness and sustainable economic success for societies. Values turned into practices can mean, for example, new technical solutions constraining climate change, novel food innovations and their international development and export, sustainable and profitable food production, and innovations improving public health and decreasing health care costs.

The first practical steps focus on the change process of values and competences among university staff. The teaching staff needs to know facts about climate change and the ways to solve it, animal research results on animal consciousness and treatment etc. and therefore further training is useful, as is including these topics in teacher training. The Internet being the most popular information source for children and young people everywhere, is it important that teachers and education institutions of all levels are armed with the correct information and are able to help students to decipher between fact and fake information.

For the change to be real, the learners (i.e. the teaching staff here) must become motivated to unlearn something and replace it with new learning, and they will do so either by the mechanism of identifying with a new role model or by scanning the environment for the information most relevant to the problem. The actual change can then be thought of as a cognitive restructuring or redefinition of the problem that leads to new perceptions and judgements, and ultimately new behaviour (Schein 1987). In other words, the people must have the will to change their behaviour, it is not enough to just offer some new information. When there is the will and need to make change, the new information will also be adopted. Therefore, the values and competences of teaching staff cannot be changed with further training courses alone, but time and discussion on why the change is necessary are also needed. Embedding posthumanism in curricula – in its contents, methods and assessment – can then be the real and explicit outcome of this change.

Higher education aims to develop students' competences, generating opportunities for success in work and life, and these competences must be based on values. Moving towards posthumanism in values of higher education mean big challenges as Seshadri (2012) states, 'perhaps it is time we acknowledge that we cannot do anything at all about the appalling ways human beings treat other human beings or animals without rethinking and renewing our norms, presuppositions, platitudes, and morals with regard to life and what is living.' As animal researcher Elisa Aaltola writes, we need to ask ourselves: 'What are we doing to other species? Who are we as a species, and what sorts of values do we wish to follow?' (Aaltola 2018). Curriculum studies must return to the emphasis on new forms of being together without insisting on human exceptionalism. By doing so, curriculum studies could become the most politically and conceptually radical field of intellectual labour in the post-humanistic landscape. This sets many pressures on our traditional ways of thinking and needs new and radical repositioning of the teaching profession. 'It is said that it is education that can change the world, but we think it is people who first can and must change education' (Konst & Kairisto-Mertanen 2018, 6). The teachers, as well as the management and administrative level, in higher education institutions are in key roles in regard to how we will be able to move towards posthumanism in higher education. In brief, by paying attention to the posthumanism behind pedagogy and by renewing curriculum work and research, we could get new, relevant tools with which to build a more sustainable society and future for all species. The uncommon and invisible must be made common, transparent and explicitly expressed when developing higher education.

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12. Social constructionism, nature and gender

Anita Dremel

Introduction

The practice of academic writing requires an introduction to situate the topic in a disciplinary matrix and make expected contributions meaningful and comprehensible. The writer of this text comes from a sociological background, but tackles topics that spread across a series of disciplines belonging to humanities and social sciences, thematically even tackling the notion of nature in its dialectics with the human and thus daring to reach even more radically unknown territories. Let this paper therefore be introduced by a provocation: We have never been human! This exclamation is the title of the first chapter of Donna Haraway's book *When species meet* (2007), where a fascinating reflection on what it is that comprises a (living? human?) body is offered. Haraway states there (pp. 3–4):

I love the fact that human genomes can be found in only about 10 percent of all the cells that occupy the mundane space I call my body; the other 90 percent of the cells are filled with the genomes of bacteria, fungi, protists, and such, some of which play in a symphony necessary to my being alive at all, and some of which are hitching a ride and doing the rest of me, of us, no harm. I am vastly outnumbered by my tiny companions; better put, I become an adult human being in company with these tiny messmates. To be one is always to *become with* many.

Humans are a part of nature and the relationship with it has always played a fundamental part in the organization of life, culture and society. In the production of (scientific) knowledge about human and nature, the history of thought has so far offered immensely different positions that are situated in various epistemologies and ontologies. Today, we can read critical contributions that question the notions that result from the process of knowledge production, aware of its situatedness and embeddedness in social and cultural contexts. We can even track the development of different *cultures of inquiry* (Hall, 2004): to recognize that research is cultural means

to recognize that it is embedded within historical and socially practiced activities of cultivating the ground on which knowledge is grown. More famous negations of unique foundations and cumulative developments of scientific knowledge were inaugurated by Kuhn's concept of paradigm (1999); within sociology, Ritzer (1997) classifies three paradigms: of social facts, of social behavior and of social definitions.

Many research approaches that have developed within the last several decades, including but not limited to deconstruction, poststructuralism, discourse analysis, postcolonial studies etc., share a theoretical orientation we may refer to as social constructionism. The emergence of this approach in social sciences and humanities has been influenced by various factors from the fields of philosophy, sociology and linguistics and is fundamentally characterized by interdisciplinarity (Burr, 2003). Many overviews, introductory prefaces or textbooks predominantly associate social constructionism with the so-called representation crisis, which problematizes epistemological and ontological issues regarding the social contingency of knowledge production and challenges the unquestionable status of truth and objectivity of reality (Rorty, 1991).

Social constructionist claims in social sciences and humanities revolve around the proposition that objects are caused or controlled by social and cultural rather than natural factors. The questions that thereby appear tackle the issues of agents of social construction (impersonal like culture and institutions or personal like scientists), furthermore of what is constructed (representations, non-representational facts or facts about human traits), and what it is to construct. The debates included the so-called science wars, discussions on global and local, overt and covert constructions, analytic and synthetic distinctions (whether the source of truth is in the meanings or in the world) etc.

The precise meaning of the notion social constructionism remains however; it is claimed in this paper, evasive and itself subject to various processes of social construction. The aim of this paper is to discuss the meanings of the concept of social constructionism, to outline the paths of development of ideas that present a relevant theoretical background when discussing various uses and abuses of the notion of social constructionism (including the so-called science wars), to illustrate how conflicting constructionist and anti-constructionist arguments are developed on the example of a series of attacks and replies by two authors, and to present similarly opposing sides different researchers take when explaining the relationship between gender differences and language use.

The first chapter after the introduction tries to precisely situate the concept of social constructionism in its theoretical framework and to outline historical contingencies accompanying the debates around it, as well as to give some main typologies and views of social constructionism. The chapter following it analyzes a conflicting debate through a series of articles by two researchers who reply to each other's criticism of (anti-)constructionism, revealing the processes of social construction of social constructionism. Lastly, the two sides are illustrated on the example of explanations of gender differences in language use from the opposing camps of new biologism and social constructionism. The conclusion eventually summarizes the main points and criticism, deliberately avoiding to provide definite answers, aware of suspicious status and ideological dimensions of the positions that claim to be able to lock the discussions.

Sketching the concept, its theoretical backgrounds and the related main issues

This paper consistently sticks to the term “social constructionism” rather than “social constructivism”, with the latter commonly being used in theories of learning and personality. There are instances of the terms being used interchangeably as synonymous and there are authors who stress relevant differences between the two (Ackermann 2001). A Dictionary of Sociology (Marshall & Scott 2009) states both terms, noting that constructivism is customary in psychology and constructionism in sociology. However, the Sage Dictionary of Sociology (Bruce & Yearly 2006) makes use of only “social constructionism” with zero appearances of the term constructivism. Given this terminological situation, there is a need to justify the conceptual choice made here. Firstly, the term social constructionism is used throughout the paper to avoid association with constructivism as a line of thought in avant-garde art in early 20th century, and secondly to put accents on the process of construction rather than on the product.

A multitude of theoretical approaches that can critically be seen as social constructionist share certain similarities: they insist on critically distancing themselves from assumed and unquestionable knowledge (they problematize the perspective which claims that knowledge is founded upon objective and unbiased observation of the world), they take into consideration the historical and cultural specificity of the categories and concepts we use, and of the ways in which we interpret the world, they

think our versions of knowledge are created in everyday interaction and that our constructions about the world are tightly linked to the relations of power because they have different implications for social action (Burr 2003, 2–5). Andy Lock and Tom Strong (2010, 6–9) enumerate several basic tenets that hold different “schools of social constructionism” together. Firstly, all “schools” are interested in meaning and interpretation as the central characteristics of human activity, which is why the focus is put on language and even private activities can be studied from this perspective, because they have conversational structure. Secondly, meaning and interpretation (understanding) stem from social interaction i.e. the consensus on what symbolic linguistic forms mean. Thirdly, the ways of creating meaning, inherently embedded within socio-cultural processes, are specific to a certain place/space and time. Fourthly, the majority of social constructionists refuse the idea that people possess essential characteristics that science is supposed to discover, because they see people as self-defined and socially constructed participants in shared living. Social constructionists are thus interested in the research on the processes at work in socio-cultural spaces that produce discourses within which or through which people are constructed. The result of this affiliation of social constructionism with anti-essentialism is the uneasy connection with ideas on realism and consequently science, which is why it tends to be pejoratively seen as relativism. The question has therefore moved from the main enlightenment epistemological concern about the best way to reveal the essence of the world to a post-enlightenment ontological concern and the issue of the creation of new worlds (McHale 1989). Finally, the fifth shared assumption of social constructionist approaches is the critical perspective in the sense of their shared interest in changing social relations in addition to only understanding and explaining them. The roots of such designation of critical science are in Marx’s philosophy, but the entire neo-Marxist reinscription is referred to here as well. This is not to say that Marxism is characterized by social constructionism, but that they share a sensibility, which Ken Gergen described as a move from the search for generalized Truth to research on how what we consider to be true actually functions, what procedures it facilitates and what it disables, who profits from it and who loses (1994, 53).

There are many other classifications of social constructionism. Danzinger (1997) divides it into “dark” continental, which significantly relies on Foucault and subsequent poststructuralist and postmodern thought, and is interested in power, articulation of subjectivity, relativity of knowledge, and “light” Anglo-American, which is

embedded in pragmatic interests and predominantly empirical tradition, but without the Cartesian impedimenta. It is important to stress the multiplicity of the sources of the idea of social constructionism, because it is a par excellence example of an idea whose genealogy keeps being distorted. There is often an impression that social constructionism is a Foucauldian idea (Jackson 1999), resting on the oblivion that the idea of social constructionism was developed in sociology in works of for example George Herbert Mead, Charles Wright Mills, Berger and Luckmann, and in works on social construction of sexuality (e.g. McIntosh, Gagnon), as well as that feminist sociologists like Ann Oakley, Liz Stanley and Christine Delphy had a radical anti-essentialist understanding of gender before Judith Butler and Denise Riley for instance. Such oblivion of various contributions deprives a perspective of its vital analytical tools. The fact that sociological perspectives in feminist theory were once central but have ceased to be so reflects the growth and diversification of disciplines as well as the change of disciplinary hierarchies and intellectual fashion connected with the so called linguistic and cultural turn (also cf. Jackson 1999). A shift from things to words or in other words a shift in formulations of research interests from household, labor market and violence to language, representation and identity (politics) does not mean one should lose the materiality of sociological ideas from sight, but only accentuates that issues of language and representation and consequently research reflexivity must also be taken into consideration. Maybe many of the approaches would be better described as cultural or linguistic constructionism, because social constructionism takes both micro and macro, social structure and everyday practice into consideration. Our identities are products of individual socially located biographies, socialization, memories and stories around us, but also of the objectives formulated for future.

It is important to reveal extensive intellectual contributions to the development of this idea that many see as causing a Copernican turn in social sciences and humanities (Lock & Strong 2010, 11). In the overview of the sources of the idea of social constructionism, Lock and Strong (2010) list Giambattista Vico, Husserl's phenomenology, Alfred Schütz's attempt to incorporate philosophical phenomenology into sociology, then Heidegger Gadamer, Ricoeur, Habermas, Levinas and other hermeneuticians, Marxism, Bakhtin, Vygotsky, Mead, Wittgenstein, Bateson, sociologists Goffman, Garfinkel, Giddens and Elias, Foucault, linguist Labov and some discourse analysts, Ken and Mary Gergen, and many more contributors. It is interesting for example to single out Vygotsky, because both anti-constructionists and

constructionists rely on his work in their respective argumentation: Ratner (2005, paragraph 30) claims that Vygotsky worked in the tradition that aimed to attain objectivity, together with Marx and Durkheim, while Lock and Strong (2010: 104–121) see him as significantly influencing the development of social constructionism. Thus, it is clear that the theoretical background of social constructionism is broad and goes way back in the history of ideas on society. Still, it has only recently been recognized in the fashion of structurally dominant ideas that the phenomena of our experience cannot reveal to us their implications and meanings in an objective way, that they are not neutral tools. Researchers in this tradition mainly use qualitative research methods. However, the disciplines within which they work, that define themselves as scientific, put such researchers in a secondary position, because they pervasively stick to experimental, quantitative and hypothetic-deductive models. Science has maybe advanced and improved the conditions of our lives, but there is a contradiction in the root of its preference of the experimental approach – at least in the sense that such preference and valuation itself cannot be experimentally established. Even if it could be, there remains the issue of responsibility for research outcomes. The time we live in confronts us with the questions of human rights, climate change, terrorism and only seemingly arbitrary changes in human lives. The way people experience the world and give it meaning is a product of socio-cultural processes. This means there is a political component of social sciences: facts are discursively constructed in fields of activity and the way they are constructed may empower some and disempower some other actors. This possible political status of facts is of key significance in the globalized world of today.

The problematic (not neutral) academic status of qualitative methodology, leaned against critical tradition, may be well illustrated by debates between researchers who occupy different methodological positions. One such example is elaborated in the following chapter.

The social construction of social constructionism

Let us use the example of the discussion between Carl Ratner and Pascal Dey. Carl Ratner is a social psychologist who aggressively attacks social constructionism as a dangerous and intellectually degenerative current of thought. The gist of his arguments revolves around several major critiques (Ratner 2005). Firstly, that epistemology of social constructionism is like cultism or dogmatism, because it denies the status of final objective truthfulness to any claim or statement, which leads to

the consequence that no opinion or attitude can be refuted or disproved. He claims that social constructionists reject all views of social or natural reality different from theirs as incommensurate interpretive conventions, which leads to the situation that social constructionists can never be wrong, because they do not even try to describe anything that is a part of reality as such. Furthermore, Ratner accuses social constructionism of subjectivism and nihilism. Even though he advocates the rejection of naïve realism, Ratner thinks critical realism should be accepted as it can otherwise easily be fallen into the dangerous trap of justifying every opinion, which has ethically dangerous consequences and aims to justify one's own (bourgeois, says Ratner) interests rather than socially responsible attitudes.

Moreover, Ratner considers the social constructionists' conception of human activity and the relationship between culture and knowledge simply wrong. Because values and beliefs are based in cultural concepts and depend on active interpretation, social constructionists think (according to Ratner 2005, paragraph 21) they cannot objectively deal with the real world i.e. that culture and human activity are antithetical to knowing the real world. Ratner says this dichotomy is false and contains a fallacy, because it seriously misses to correctly grasp the meaning of culture and activity of people, failing to see that culture itself may contribute to objectivity. Although some cultural constructions are mythical, some are objective – genes for example are constructions, but reflect the reality in a correct manner and have real effects. Accordingly, some interpretations are biased, while some are not. Physicists interpret X-rays and astronomers light waves in order to reveal real properties of the matter. Even the 2000-year-long hermeneutic tradition, from ancient Greeks to Dilthey, is founded upon the possibility of rigorous and objective interpretation of textual meaning – it was interpretations that connected the observer with the outer world and enabled him (or her, although rarely ever) to understand it. To conclude the anti-constructionist argument by Ratner: knowledge is mediated by culture and interpretation, but this does not mean that knowledge necessarily lacks objectivity or that reality cannot be reflected in it.

Ratner agrees with Dilthey, Marx, Durkheim and Vygotsky that a cultural base can be known in an objective fashion (cf. Ratner 1997; 2002; 2004; 2007). He thinks that social constructionists like Barbara Zilke or Ken Gergen, who he often debates and argues with, live their lives based on the evidence of real things. Their real life action and thinking refutes the tenets of social constructionism that they advocate in their academic discourse (Ratner, 2005: paragraph 26). Therefore, he thinks, a

subjectivist turn in social sciences in general represents a dangerous path we should confront and oppose (Ratner 2005, paragraph 31), and he aggressively criticizes social constructionism for reflecting social disintegration and supporting intellectual degeneration (Ratner 2005, paragraph 32).

Layers of meaning of social constructionism can maybe be better understood through the reply to this criticism, for instance by Dey (2008). He claims that Ratner constructs a certain reality of social constructionism and produces a certain truth that can have real effects (Dey 2008, paragraph 1). According to Dey, Ratner's construction of social constructionism produces a hyperreal illusion that social constructionism is unique. Ratner's monological reading has in this way joined a choir of scientists who claim that social constructionism is an anti-rationalist, subjectivist and nihilist feat, which denies the possibility of truth, reality and meaning. Dey concludes that this way Ratner in fact conveniently illustrated that the truth (about social constructionism) is an effect of knowledge production. By claiming that the question of truth (separated from the question of validity of knowledge) does not mean much to social constructionists (because all truths are on the same level), Ratner creates a paradox on the hiatus of what he really says and de facto does in his text. Even though he speaks from the position of a declared anti-constructionist, Ratner plays the role of an imaginary constructionist – because the truth (about social constructionism) that his description contains is not defined based on the correspondence with an irrevocably real Reality. This is how Ratner does a magician's trick of transforming social constructionism into a *sui generis* reality. Thereby he conceals the “real truth” of social constructionism (understood as what has so far been written about this topic) and establishes his own truth, which in return conceals the fact that there is no one truth. Irony is according to Dey contained in the fact that Ratner's criticism serves as a good illustration of relativism, a perspective Ratner was striving hard to criticize (Dey 2008, paragraph 7). This is to say that Ratner does not focalize the question of the wrong representation, but the understanding that truth is never actually real (stable, objective, a priori determined). Ratner thereby turned from an anti-constructionist into a constructionist, because he creates the conditions in which the distinction between the real and the virtual implodes.

Dey suggests, following Baudrillard, to look at the text as simulacrum or a hyperreal construction (2008, paragraph 8). The hyperreal has no direct reference to the real, it is a copy without the original (Deleuze, 1990). A convenient illustration of the hyperreal nature of Ratner's article can be found in the fact that his article (2005) is a

reply to the argumentative attack by Barbara Zielke (2005) on his previous article *Social Constructionism as Cultism* (2004), which in turn is a reply to Gergen's criticism etc. Copies, interferences and influence are this way multiplied to the extent of overly complex opacity (born in search for the original). Even if someone claims to have found the beginning, it will turn out to be fake, because it most frequently relies on the confrontations that never really took place but present replies to articles published in different journals and it is often the case that several years go by between two replies or articles. Dey concludes that social constructionism is in the ontological sense of the word only what it does and what is done with it (2008, paragraph 10). Although Ratner defines a unique truth of social constructionism, excluding layers and pluralism of different phenomena, or in other words although he haunts the ghost not knowing whether it is dead or alive (Derrida, 1994: 6), there remains the question of textual authority or the effects that such interpretation of social constructionism might have, as it instructs theoreticians and scientists about what good or bad is, what to ignore and what to take into consideration (Dey 2008, paragraph 13).

In this or similar accounts of social constructionism, denoted as hyperreal truth-telling or mimesis without the original (Dey 2008, paragraph 15), there is a lot stuffed under the carpet. Even though Ratner's understanding of social constructionism is amiss, his text "works" or "is active doing something" and can thus continue to create a negligent way of reading and performing academic practice in general. There are moments in which hyperreality can become a more powerful version of reality (Baudrillard 1988). If the situation with social constructionism were simple, as suggested by Ratner, we would probably know it, there would probably be a consensus that social constructionism is singular and that it can be understood and practiced effortlessly (or without close reading). The dangerous possibility is that it could seem to many a future reader and researcher, based on Ratner's account of social constructionism, that they can use abstracts and summarized accounts to understand everything important about an object of interest, and this possibility is often seductive. The ethos of reading in the scientific community (if such community can be said to exist) should on the contrary be quite different, similar to Foucault's recommendation that a writer should read and do research on everything in the course of his analysis (1996, 14). A new ethos of reading, besides, implies enamored reading (Deleuze 1995, 9), which never seeks speed of vertical browsing or possession. Such reading implies an escape from the desert connected with second-hand denotations and obliges us to go back to the "sources". It is the only

way we can enter the details of the text, small imperfections and possible good qualities of whatever is at hand, including social constructionism. Otherwise, whenever there is the smallest trace or reference of the notion “social constructionism”, a new magician will be able to enter the field and use this term as an umbrella to make variety level out into sameness (Dey 2008, paragraph 20).

The main mistake interpreters of social constructionism make is that of reductionism. The mentioned ethos of reading implies one step further – to make an author an unknown margin, which would force critics to deal with a completely anonymous production (Foucault 1996, 302). Indeed, the entire discourse of social constructionism should be made not only free from authors, but also separated from disciplinary boundaries (important and inevitable academic traditions). Foucault even suggests that social constructionism presents a category that exists for others, the ones who are not social constructionists – that we can say that social constructionists are such and such only from the outside. In other words, only when we declare that people are social constructionists can the idea be supported that they constitute a coherent group and a whole, even though its members do not perceive it and do not declare membership in it (1996, 53).

Of course, the reflection on reading brings us to the reader, who has obligation and responsibility to read in a way that focuses on multiple lines of exegesis of social constructionism rather than reveals the absolute truth about it. Putting variety into the center assumes we accept that every text has a margin of play and that re-reading directed at erasing the boundaries of the label does not confirm the identity of the previous label but only confirms internal variety (Deleuze 1994). Reading is an active process, not passive consumption. The heritage of writing about social constructionism, whether critical or affirmative, is not something given, but a task; it simultaneously assumes (inherits) and re-examines it, which is why the readers themselves participate in the processes of forgetting and/or remembering the heritage. Also we, yes, you and me, as the readers of theory, participate in a similar process and are shaped by similar processes at the same time. Each interpretive process is necessarily marked by selectivity, defined by pragmatic purposes of action at hand.

The disturbance of the fit between reality and representation, which is customarily assumed as necessary for a successful epistemic activity, challenges the so-called naturalism. The following chapter aims to look at debates on the social construction of nature in relation to gender and use of language.

Gender and language use between new biologism and social constructionism

Particularly challenging arguments in the so called “science wars” connected with debates on realism, objectivity, ontology and epistemology in contemporary discourse on science pertain to the so called naturalism and biologism, even though many authors claim that these debates generated far more heat than light. The claims that even nature and biology are social constructions stirred the waters when it comes to understandings of nature, knowledge and the world. Demeritt (2002) distinguishes two broad varieties of construction talk in the social sciences: construction-as-refutation (of false beliefs about the world, consistent with orthodox philosophical stances, such as positivism and realism) and construction-as-philosophical-critique (questions the culture/nature, subject/object and representation/reality dualisms that provide the conventional philosophical foundation for distinguishing true conceptions of nature from false ones). For one side, he claims, the social construction of nature refers to the construction of our concepts of nature, while for the other, the construction of nature refers to the process of constructing nature in the physical and material sense. There have recently appeared critical approaches to apparent self-evidence and ontological fixity of nature, particularly so from the point of view of social power (e.g. Castree and Braun 2001; Proctor 1998). Others, on the contrary, claim that seeing nature (and related phenomena, including the climate change for instance) as a social construction is dangerously relativist and encourages political passivity (Dunlap and Catton 1994; Schneider 2001).

When it comes to social categories and kinds, like gender, ethnicity or race, questions of naturalism and social constructionism are especially prominent. Social constructionism as a theory of knowledge holds that characteristics typically thought to be fixed and biological—such as gender, race, class, ability, and sexuality—are products of human definition and interpretation shaped by social, cultural, linguistic and historical contexts. As such, social constructionism highlights the ways in which cultural categories—like “men”, “women”, “black”, “white” – are concepts that are created, changed and reproduced. Bodily variation among individuals does exist, but we construct categories and attach meanings to them, and then we place people into the categories by considering their bodies. Identity categories are not based on strict biological characteristics, but on the social perceptions and meanings that are assumed. The boundaries around categories are always changing. Binary definitions of sex and gen-

der make evident how even the things commonly thought to be “natural” or “essential” in the world are socially constructed. For sociologists who deal with the processes of social construction of difference, whether racial, ethnic, sexual etc., it is always of great importance to stress that differences are not neutral or innocent, but contain dimensions of social power (they produce them and are in return produced by them). Difference is consequently not conflated with inequality. Debates over constructionism in relation to kinds, species and categories are very important for social and political debates regarding categorization of human beings and the politics of difference it reproduces. Abby Ferber (2009), for example, argues that the social construction of difference cannot be separated from understanding privilege and social power. There are even contributions that might already be considered classical, like that of Charles Wright Mills, who analyzed in his *Racial contract* (1998, 48), the role of interests and power relations in determining the content of representations of race (borders of racial categories), which is why we may refer to him as a critical constructionist. Some authors even argue that inequality and oppression actually produce ideas of essential racial or gender difference. Social constructionist analyses seek to better understand the processes through which differentiations occur in order to reveal the power relations within them. Understandings of “nature” change through history and across place according to systems of human knowledge, which contributes to the fact that social constructionist analyses examine categories of difference as fluid, dynamic, and changing rather than fixed, inevitable or immutable.

Let us proceed by first giving examples of sexuality and second of the relation between gender and language use, especially because the so-called linguistic turn inaugurated the topics of language and meaning to a prominent place in social analyses.

Firstly, it is interesting to look at the meaning of the notion “heterosexuality”. Foucault’s (1978) claims (and those of some others, like Halperin’s, 1990) that there were no homosexuals before the 19th century are famous. In addition, historians have done analyses to show that heterosexuality was invented and that it used to have a completely different meaning (e.g. Katz 1995). For example, Dr. James Kiernan in 1892 defined “hetero-sexuals” by their attraction to both sexes (not to the opposite!), and as people inclined to abnormal methods of gratification (Katz 1995). Looking at this historical example makes visible the process of the social construction of heterosexuality. It indicates that cultural and historical contexts shape our definition and understanding of concepts and illustrates how categorization shapes human experience, behavior, and interpretation of reality.

The second example, more elaborated here, is from research on gender and language in use, where there have been appearances of the so-called new biologism in contrast to social constructionism in explaining gender differences in using language. According to Cameron (2009), advocates of “the new biologism” (e.g. Pinker 2002) contest the belief that male–female behavioral differences are effects of social and cultural processes. They argue instead that many such differences are biologically based, produced by evolutionary processes which have led the two sexes to differ not only in the obvious physical ways, but also in their cognitive abilities, their psychological dispositions, and consequently their habitual ways of behaving. This is not just an argument about language, but the resurgence of biologism in debates on sex/gender is one manifestation of a larger “Darwinian turn” in the study of human behavior, thought and culture.

The influence of new biologism is felt not only in science, but also in everyday discourse and social policy. Cameron (2009) outlined a series of pro and contra new biologism/social constructionism argumentation theses about sex/gender and language use. For example, in the US there is a campaign for single-sex classrooms, the idea being not just to teach girls and boys separately, but to educate them differently, according to their distinctive intellectual capacities (girls excel at verbal abilities e.g.). Cameron warns that this model is no less in need of critical interrogation than the other verbal deficit claims (for instance, about working-class non-standard dialects, Black Englishes and ‘semilingualism’). New biologists explain sex/gender-related variation in linguistic behavior in terms of inherited biological traits. Some problems thereby are that language itself and the uses to which it may be put are conflated (Bickerton 2006) and that, although a biological basis for the mental faculty (producing speech) exists, gossiping or telling stories are for example hardly themselves part of our genetic endowment. The adherents of biologism share the assumption that observed differences in men’s and women’s linguistic behavior must be expressions of underlying differences in the two groups’ verbal abilities (“deeper” differences in verbal ability). However, distributional analyses suggest that the important links are to social factors such as speakers’ relative power and status, their differential access to resources like education and jobs, and their varying involvement in local networks and communities of practice (Eckert & McConnell-Ginet 1992; Holmes & Meyerhoff 1999). The finding that women’s speech is typically closer to the standard or prestige norm than men’s (Baron-Cohen 2003, 60; Kimura 1999: 91) is repeatedly interpreted as evidence of women’s more advanced verbal

skills, where evidently the production of standard or 'correct' rather than non-standard or 'incorrect' variants is seen as an indicator of verbal ability, but this is an obvious non sequitur for linguists, warns Cameron, since judgements of correctness are based on social rather than linguistic criteria and are not exclusively linked to sex/ gender, but also to socioeconomic classes and (in some contexts) ethnic groups. If this variation arose from innate differences in verbal ability, then presumably it would be logical to conclude that such differences exist not only between men and women, but also between middle-class and working-class speakers or white and non-white ones.

On the contrary, socio-cultural approaches to sex/gender variation not only prefer socio-cultural over biological explanations of male–female differences but also discard 'essentialism' (the assumption that there are characteristics, which all men or all women axiomatically share). Researchers nowadays avoid universalizing statements and 'look locally' (Eckert & McConnell-Ginet 1992), because similarities and differences between men and women can be related to (though not determined by) occupations, social networks, power relations, levels of literacy, rates of exogamy, beliefs about identity etc. So, maybe the empirical finding about women's superior verbal abilities and more grammatical use of language is connected with the salience of gender as a dimension of personal identity among children and adolescents: for many boys there is a conflict between the kind of behavior that promotes success in school and the kind that is judged by peers to be appropriately masculine (Carr & Pauwels 2006). Socio-cultural explanations deal with the empirical evidence better pointing to the lack of cross-cultural and historical conditions. The new biologism tends either to overlook the effects of male dominance or else to reinterpret them as manifestations of innate difference and often ends up with reductive and inadequate explanations, flawed according to Cameron by their reliance on generalizations which the evidence does not support (such as the belief that women talk more than men), and/or assumptions which are linguistically ill-founded (such as the equation of 'correctness' with verbal skill).

Finally, it is of use to discuss brain lateralization and hormones within the topic of gender differences and language use. The new biologists' claim states that high levels of testosterone (a hormone which is found in both sexes, but normally at significantly higher concentrations in males) produce earlier and more rapid growth on the right side, including the right side of the brain, and that this has implications for our understanding of both normal male–female differences (e.g. that most males

have less well-developed verbal abilities, but better-developed visual–spatial skills) (e.g. Geschwind & Galaburda 1985). Linguistic functions are typically concentrated in the left hemisphere and visual-spatial functions in the right one. However, studies on both hormones and lateralization have proliferated, but their findings are very mixed. Even Doreen Kimura, an influential supporter of the general thesis that there are innate cognitive differences between the sexes, has urged caution when interpreting this body of evidence (1999, 181): the widely held assumption that there are major differences in the degree of brain lateralization of function between men and women is debatable. Even where sex differences in lateralization clearly exist, no convincing case has yet been made that they influence cognitive function. The new biologism is part of a larger ‘Darwinian turn’ (according to Cameron, 2009), in the light of which researchers are now frequently urged to re-examine their assumptions about the nature and behavior of human beings. Even though it is worthwhile to pay attention to developments in various fields, there is a need for caution and especially so when it comes to heavily naturalized, though social, dimensions of our identity like sex/gender and its relation to yet another naturalized and hard to reflect phenomenon – language use. It is after all the responsibility of researchers from the field of social sciences and humanities to warn against selective and misleading ways in which linguistic research evidence is often used, also by some supporters of the new biologism. As Cameron (2009, 189) puts it: “When these scholars accuse others of being unwilling to follow the evidence where it leads (i.e. to the conclusion that male–female differences are biologically based), they are open to the charge of throwing stones from a glass house.” What the debate has shown is that gender categories and their differences regarding language use are no monolith categories and simple distinctions just do not work. This leaves us with the conclusion that theoretical essentialism and binary fixed views of categories we belong to are to be abandoned in favor of the views that see these categories, including but not limited to gender, as multiply determined places of potential resistance.

Conclusion

This paper has strived to show that the notion of social constructionism is layered, complex and in many ways and many fields connected with the dialectics of human and nature. If there is a bare fact about human beings, it is their embodiment, which is culturally variant although universally found in humanity. Cultural and social dimensions of embodiment are (at least among other things) discursive and

there is grammar to discourse, grammar that is far more concerned with how things should be than with how they really are. This is why it seems wise to separate the world from our knowledge of it, under the actually hopeful assumption that the world contains far more possibilities than are exhausted by our current discursive and other resources.

Although the task of conventional epistemology is to found research on a unique logically consistent theory of knowledge, this project has turned out to be quite questionable. It should be refrained from turning methods into self-contained objectives abstracted from wider issues they were developed to do research on. Crude and binary distinctions between naturalism and constructionism or qualitative and quantitative methodology etc. are overly simplified and indicate the immaturity of the research process. The choice of the adequate method depends on a series of assumptions about the nature of knowledge (and knowledge of nature) and how this knowledge can be gained, as well as on our root assumptions about the core nature of the phenomena we conduct research on (in sociology positivism and constructionism are usually seen as two main theoretical orientations). However, we cannot speak of the entire autonomy of any of research traditions or scientific disciplines. The debates illustrated in this paper have shown the main arguments, ranging from the radical critiques of science in general stemming from doubts that any general not least objective claims about knowledge can be made, to deconstructive search for traces of silenced phenomena and social epistemological inspection of the position of the knower or the producer of knowledge. There are proposals to accept the “third path” (Hall, 2004) and be aware of those who wish to establish the purity of their methods by guarding the boundaries and excluding the (epistemological) Other. The ultimate statements of superiority of any research practice are suspicious, because various types of knowledge are constructed under discursive circumstances of *impure* mind shared by all.

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