Freedom, Justice and Sustainability:
Do We Really Know What We Are Doing?

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> *"We don't have the courage nor the capacity to admit that meaning for our individual and collective lives cannot be provided anymore by a religion or an ideology, cannot be given to us as a gift; that we have to create it ourselves."* (Castoriadis 2005: 327; my translation)

Eco-justice: vision and current unsustainable reality

Max Horkheimer and Theodor W. Adorno have defined the state of human liberation as such: freedom from oppression within oneself, freedom from oppression through other people, absence of exploitation of nature (1986: 61). You could also describe this as a situation where there are no hierarchies between people, where there is no abuse of power, or indeed no power structures that allow such an abuse. In such a world there would be no exploitation of nature or other species or other people elsewhere in the world or future generations to facilitate your life-style. In other words, there is no way that this life-style would be beyond what a just global distribution of ecological footprints would allow. But Horkheimer and Adorno's vision importantly also focuses on the world within: in this vision there is also no oppression from within: no belief systems or traditions or social structures or peer or family pressure to force us into an acceptance of subjugation which undermines self-determination, free will, freedom from fear and the true development of our human potential. To me this is the vision of a truly human society which in my understanding is also the vision of the eco-justice movement. It is a vision with a long history of millions of people fighting for it since many decades, even hundreds and thousands of years (see for example Zinn 1996). It is the vision of becoming truly human, without the shackles of slavery, religion,

wealth, aristocracy, economic exploitation, capitalism, communism, nationalism, patriarchy, sexism, ... It is, in short, the vision of the enlightenment which Immanuel Kant has so aptly captured in the following words in 1784:

> "Enlightenment is man's emergence from his self-imposed immaturity. Immaturity is the inability to use one's own reasoning without guidance from others. Self-incurred is this immaturity when its cause lies not in lack of reasoning, but rather of resolve and courage to use it without direction from others. Sapere Aude! Have courage to use your own mind! Thus is the motto of Enlightenment." (Kant 1784)

With John Lennon's "Imagine" in the ear (http://www.lyrics.com/imagine-lyrics-john-lennon.html, accessed 28 March 2016), it seems easy to imagine such a world where the aims of the French Revolution become reality: "liberty, equality, fraternity"; a world where a person is a human being and not a refugee, where woman and girls are equals in a true sense with men and boys, and not pressed into a state of dependency through moral laws which have long lost their validity; where all people respect the fundamental values of an open, democratic, secular society, based on knowledge and understanding, and not on myths, oppressive belief systems, autocratic rules and power structures based on status and wealth.

But, of course, we all know how far off we are from a reality which at least starts in some ways to resemble this vision. I note but four of the most obvious issues:

- ***capitalism:*** Why do we stick to an economic system which consistently destroys democracy and sound social ties, in addition to the planet? We know that our way of doing business, in fact, our idea that business and the economy are the core of our lives is not just plain wrong, but in fact the most destructive force ever unleashed on nature and human beings. Just read Sven Beckert's *Empire of Cotton. A Global History* (2014) or David Graeber's *Debt. The first 500 years* (2011) as impressive illustrations of this.
- ***power:*** As Noam Chomsky said a long time ago: "power never self-destructs" (1994). Yet are we really challenging the absolutely supreme power of the political and economic elites worldwide? Contrary to popular belief, the internet has not only given the people more self-determination and power. It has also amassed a concentration of power and knowledge in the hands of a few, not democratically controlled corporations (Microsoft, Apple, Facebook, Google, Amazon), and they, together with their state-brethren in the NSA, control us in a way that George Orwell's *1984* (1949) or Aldous Huxley's *Brave New World* (1989) look just like silly kindergarten games in comparison (see the film *Citizenfour* on Edward Snowdon for this: https://citizenfourfilm.com/, accessed 25 March 2016). But we are so engrossed in our individual happiness that there is no public discourse about the absence of democratic self-deter-

mination or, indeed, what a truly democratic political system might look like (see Lummis 1996).

- ***wealth:*** I am convinced that we need to make the rich a lot poorer to narrow the gap between rich and poor. In their thoroughly researched book *Spirit Level* Wilkinson & Pickett show that equal societies consistently score significantly better than unequal ones. Almost all problems which turn our modern societies into "social failures" are more common in unequal societies: "level of trust, mental illness (including drug and alcohol addiction), life expectancy and infant mortality, obesity, children's educational performance, teenage births, homicides, imprisonment rates, social mobility" (Wilkinson & Pickett 2010: 18–19). The conclusion from their book: "The evidence shows that reducing inequality is the best way of improving the quality of the social environment, and so the real quality of life, for all of us. (...) this includes the better-off." (ibid. 29)
- ***destruction of our life-support system planet earth:*** Let us be honest here: we have dangerously transgressed already three of the seven critically important planetary boundaries (Rockström *et al*. 2009), we are depleting crucial materials at an alarming rate (New Scientist 2013), twenty-four years after Rio the world is a dirtier (WCA 2014) and more systemically unsustainable place than ever before (LPR 2012: 9, Worldwatch 2013a and 2013b, eia 2013, Wardsauto 2015, NYT 2013, ScienceDaily 2012).

So I guess we are fairly clear about the vision or future we are prepared to fight for and we are fairly clear about the enemies which we need to fight in this process. I love the following quote from Chris Hedges because he takes no punches and doesn't flinch away from the uncomfortable fact that we have a fight, quite possibly a revolution, at our hands if we want to move from our unsustainable current world into a human world as outlined above:

> "We can cut our consumption of fossil fuels. We can use less water. We can banish plastic bags. We can install compact fluorescent light bulbs. We can compost in our backyard. But unless we dismantle the corporate state, all those actions will be just as ineffective as the Ghost Dance shirts donned by native American warriors to protect themselves from the bullets of white solders at Wounded Knee. (...) The oil and natural gas industry, the coal industry, arms and weapons manufacturers, industrial farms, deforestation industries, the automotive industry, and chemical plants will not willingly accept their own extinction. They are indifferent to the looming human catastrophe. We will not significantly reduce carbon emissions by drying our laundry in the backyard and naively trusting the power elite. The corporations will continue to

> cannibalize the planet for the sake of money. They must be halted by organized and militant forms of resistance." (Hedges 2010: 293)

I am convinced that it is not so difficult to understand these issues. It all boils down to the power structures we have created within and between us as well as the exploitative systems of abusing nature to fuel our greed. Horkheimer and Adorno understood this well after fascism and the holocaust shone the spotlight so clearly on these issues in their times.

It is more difficult to pinpoint why there is so little progress towards an eco-just society anywhere in the world. This leads me to the main focus of this essay: I argue that we need some serious self-critical reflection on our own concepts and actions. As I have done above, it is very easy to blame others, the capitalists, the media, the internet, the corporate vandals and religious fanatics of this world. And I am even conceding that this blame is, of course, in most cases more than justified—as Chris Hedges argues.

Understanding the world with intuition, opinion and emotion?

But I am also increasingly convinced that part of the problem why we are not making any progress towards eco-justice, equality and democratic self-determination lies in the fact that we ourselves, in our efforts to further eco-justice, are hampered by what Leiva has so aptly termed "arrogance of ignorance" (2012). The past thirty years of intellectual discourse of postmodernism, cultural relativism and infatuation with all sorts of esoteric and traditional or indigenous 'knowledge' have led us to a state where we have lost much of our bearings and cannot easily distinguish anymore between knowledge and opinion, between truth and claim (see Jucker 2014). I think Slavoj Žižek is making a really important point here:

> "There are not just different forms of knowledge—the scientific, the magic, the social knowledge, etc. No, there is true and false knowledge. (…) We have to re-learn to argue in a tough way—even if this means that we are hurting people's feelings. Their concern, their pain is no measure for the truth. And truth, after all, should be our guide. Only then will we arrive at a universalism which will move human kind forward." (Žižek 2016; my translation)

Today, the arrogance of ignorance ("I am entitled to my own opinion, however stupid and factually wrong it may be") reigns supreme and usually cannot be challenged. Just think of the utter nonsense many of us are happy to believe in the area of food and health, veganism arguably being the most popular and most ideologically driven example at the moment: it is almost impossible to get so many fundamentals

about life and death and systemic interdependence of species so wrong (just read Lierre Keith's *The Vegetarian Myth,* 2009).

But there is much more when it comes to the level of ignorance we still display when trying to make sense of the world. Much of it stems from our easy acceptance, induced by the above mentioned postmodernist, relativist and subjectivist trends, that there is no objective reality. Alan Sokal beautifully showed how much many of us have lost the ability to distinguish facts from fiction, sense from nonsense in his wonderful live-experiment with the renowned cultural studies journal *Social Text*. In the article where he testified to his scam, he writes:

> "What concerns me is the proliferation, not just of nonsense and sloppy thinking *per se*, but of a particular kind of nonsense and sloppy thinking: one that denies the existence of objective realities, or (when challenged) admits their existence but downplays their practical relevance. (...) Intellectually, the problem with such doctrines is that they are false (when not simply meaningless). There *is* a real world; its properties are *not* merely social constructions; facts and evidence *do* matter. What sane person would contend otherwise? Theorizing about "the social construction of reality" won't help us find an effective treatment for AIDS or devise strategies for preventing global warming. Nor can we combat false ideas in history, sociology, economics and politics if we reject the notions of truth and falsity." (Sokal 1996: 63; see also in more detail Sokal & Bricmont 1998)

My first example of such sloppy thinking is that we still trust in 'common sense' or 'intuition' when we should have learnt, historically and scientifically, that these are the things least likely to make us understand what really is going on. Most of the important advances in science in the last hundred years, for example in quantum physics—the one theory with the most accurate predictive quality humankind has ever developed –, have shown that intuition is a very poor guide to understanding the world. Just think of Einstein's theory of relativity (which, incidentally, has nothing whatever to do with postmodernist relativism mentioned above) which showed us that our 'intuitive', everyday assumption that mass, time and gravity is constant, is far from true; or our notion that matter is solid when it rather is empty space; or the fact that what we see with our eyes when we gaze into space is rendering only a very limited picture of what is really out there since there are a number of well-explained phenomena which make it impossible that our human vision 'sees' all there is (Crockett 2016).

In many indigenous cultures and particularly in eastern cultures—with an incredible allure to western people up to the present day—intuition is linked to the 'inner self', the 'essence' of us as a person, 'soul', the 'inner master' or whatever you might want to call it. The suggestion is that this 'inner core' can intuitively and more

reliably than anything else know the truth about us, our feelings and the world. But this is misleading on various levels. Firstly, the notion of an 'autonomous', individual unit such as 'I' or 'self' is a culturally constructed narrative which has no substance in biological reality, as Donna Haraway has so aptly described:

> "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." (Haraway 2008: 3-4)

But the notion of a coherent, inner, essential 'I' or self, which can be pinpointed, is also incorrect in terms of how the brain and consciousness works, as Francisco Varela explains (1999):

> "There are the different functions and components that combine and together produce a transient, nonlocalizable, relationally formed self … we will never discover a neuron, a soul, or some core essence that constitutes the emergent self of Francisco Varela or some other person." (quoted in Capra/Luisi 2014: 181)

We are truly relational beings, not isolated individuals:

> "Our existence is posited on our continued dialectic with the natural and social world that surrounds us, for as persons we cannot be monads, autonomous isolated individuals. I argue that our mental processes, and indeed consciousness, are created in and constituted by those relationships." (Rose 2006: 310)

This is rather important since the (false) construct of an 'autonomous individual self', independent of the life-support systems earth and social interaction, is still informing most of what we think and do, in eco-justice and elsewhere, in eastern, western and other cultures alike.

A second idea I would like to question is that there are these 'good' emotions versus the 'bad' mind, particularly popular in Eastern philosophy and religions like Buddhism. The slogan is, also in western 'How do I better myself' literature: "Less thinking. More feeling." (Brown 2013: 6) In yoga and meditation, the mind is constantly vilified as the great distractor, yet in fact we are nothing, literally and simply not alive without our brain/mind, which is always embodied, never transcendent (Capra/Luisi 2014: 142, 274). It is, after all, not a coincidence that the measure to determine whether somebody is alive or dead is to check if the brain is still working. There is no emotion, not gut-feeling without our brain processing the sensory information and

actually producing an emotion, quite apart from the fact that emotions are heavily culturally co-determined and therefore hardly ever only personal. Or as Kristen A. Lindquist put it: "It goes without saying that the brain produces emotions—in this day and age, you'd have to be a pretty staunch dualist to argue otherwise. The big question that remains concerns how the brain creates emotions." (2016)

Thirdly, let me bring up another issue: overpopulation. Why do we pretend that the P (for population) in Ehrlich's "I = PAT" formula doesn't count? Paul Ehrlich's "I = PAT" formula is used to describe the impact of human activity on the environment: human impact (I) increases with increasing population (P), with increasing affluence (A) and with increasing resource intensity of technology (T) (Ehrlich 2013). Here, the 'arrogance of ignorance' quite literally is visible by fact that we are ignoring the entire issue for fear of being politically incorrect. In our societies it is a total taboo to talk about overpopulation, about the scientific reality that there are way too many people on this planet and that a plethora of issues actually stem from this overpopulation (such as overuse of natural resources, the social failings of megacities, mobility problems, etc.). During all my years of researching eco-justice issues, I have not once encountered a single eco-justice text or website engaging with this issue which is clearly central to our concerns. Others such as Bello (2013: 173–180) have written about why population growth is indeed such a massive problem. Gregory Bateson already stated quite a while ago that "the population explosion is the single most important problem facing the world today". Why? "The very first requirement for ecological stability is a balance between the rates of birth and death." (Bateson 2000: 500) According to calculations from many different scenarios planet Earth cannot sustain more than 3 billion people (high estimate) in the long run (see discussion in Latouche 2011: 150–157). Obviously, one of the reasons for not engaging with this issue is that it is very difficult, as Jean-Paul Besset has put it, to "not be progressive (as in 'uncritical progress believer') any more without becoming reactionary" (2005). The discourse of 'too many (foreign) people' is one that is emanating from the political far right and there is no way I want to have anything to do with this xenophobic approach. The problem is clearly not immigration or people less privileged than we are, forced to leave their home as environmental, political or war victims. Yet, there *are* way too many people on the planet as a whole, and there is overwhelming evidence that Paul Ehrlich is right with his formula: overpopulation is not good for the planet, and this means also: not good for our long-term survival.

I am bringing up all these issues because I am convinced that they ought to be of highest concern for anybody with an interest in eco-justice. As long as we still refuse to engage with these burning issues and refuse to let go of the dualistic, non-systemic, non-scientific approaches sketched out above we will never even come close to an understanding of what is going on within and around us, let alone come up with

solutions that actually deal with reality as opposed to some ideologically conceived notion of it.

Is modernity and science really the biggest obstacle to eco-justice?

Now you might say: all very well, I get it. But what does this have to do with eco-justice thinking and practice? Surely, we eco-justice practitioners are all on the same page here and are not in any way guilty of such non-systemic approaches. In a lot of cases, I would not want to argue with this. There are fantastic projects going on, such as ecojustice Canada, with their down-to-earth approach (http://www.eco-justice.ca/approach/, accessed 27 March 2016), or, similarly, the Eco-Justice Collaborative in Chicago (http://ecojusticecollaborative.org/, accessed 27 March 2016), to name but two examples. And even if we look closer to home, very close, such as the Eco-Justice Press website, there is, at first sight, nothing wrong. When we look at the five criteria which should guide submissions to the Press (http://ecojusticepress.com/ > Eco-Justice as a Guiding Conceptual and Moral Framework, accessed 28 February 2016) there is clearly nothing to be said against the vocal criticism of the abuse of the multinational chemical industry of natural resources, the criticism of western hyper-consumerism and the call for truly sustainable practices in all walks of life.

But as always: the devil is in the detail. We can see here and in other eco-justice texts and websites some sloppy thinking and ignorance at work. Underlying it all is a value-bias which makes me distinctly uneasy. As I shall argue below, scientific progress is nothing to be ashamed of, on the contrary. It is, together with the other achievements of modernity, namely democracy, equal rights, free speech, communities guided by law, etc., the only basis we have for an ever better and sounder understanding of life in all its dimensions and it is the only way to free us of the shackles I mentioned at the beginning. That science in the hands of powerful elites and corporations can lead to precisely the colonial destruction, exploitation and injustice we want to eliminate, is not an argument against scientific understanding but against power, greed and non-democratic structures—which links us back to what Chris Hedges said above about the fights we need to pick. But, once again, as the ISIS terrorist attacks in more than 20 countries (including in Paris, Baghdad, Beirut, Tripoli, Brussels, Tunis, as well as the Sinai Peninsula, Saudi Arabia, Yemen, Kuwait, Turkey, Russia, Afghanistan and Indonesia) have so clearly shown: only free, open and democratic modern societies allow us the safe space to argue about truth and values; the ideologies of the ISIS and other non-secular states and societies only know the language of violence and oppression.

I am very much concerned by the underlying damnation of the West and the correspondent idealization and romanticizing of 'indigenous' communities and traditional ways of knowing—as expressed in Eco-justice Press criteria 3 and 4 ("Revitalizing the cultural commons", "ecological traditions of earth democracy"). This strand—vilification of modernity, 'Western colonization' and the corresponding romanticizing of traditional and indigenous societies—is very strong in all the

eco-justice material I encountered over the years, and it is deeply steeped in the post-modern fog that I tried to penetrate with Sokal above. *EcoJustice Education*, arguably one of the most important textbooks in the field, now in its second edition, displays this already in the introduction, where we read, for example: "While not "wealthy" by Western standards of material or political status, they were able to feed and shelter their families without external interference." (Martusewicz et al. 2015: 6). This implies that all would be well if modernity wouldn't have happened and interfered. But it goes on: the "Conceptual toolbox" for *EcoJustice Education* (http://cw.routledge.com/textbooks/9780415872515/toolbox.asp, accessed 28 March 2016) offers the following definitions, again clearly negatively connoting modernity and romanticizing indigenous communities and oral traditions of 'knowledge':

> "*Discourses of Modernity*: The specific set of discourses that together create our modern, taken-for-granted *value-hierarchized worldview*, including anthropocentrism, *progress*, individualism, *science/rationalism*, mechanism and so on."
> "*EcoJustice Education*: (…) is challenging the *deep cultural assumptions underlying modern thinking* (...); and the recognition of the need to *restore* the cultural and environmental *commons*."

versus, clearly positively meant:

> "*Indigenous knowledge*: *knowledge* that has been *passed down through generations* regarding how to *live successfully* in a particular place. It is generally *spiritually based* and includes a variety of interrelated dimensions: physical, biological, linguistic, spiritual, social, and economic."
>
> "*Indigenous People*: those peoples who predate any other groups living in a particular region, and who define themselves through a "*spiritual link to the land*".
> "*Oral traditions:* the *Indigenous* practice of passing on *knowledge* and *moral instruction* through verbal modes such as storytelling." (italics added)

There is not a hint of critical reflection here; that on the one hand modernity might also have its advantages, and on the other hand that there might be real issues with "knowledge passed down through generations", with oral "knowledge" and with the "moral instruction" mentioned, in terms of reliability, new insights over time, personal freedom and liberty, and, indeed, truth. This is by no means an exception: In an earlier special issue on "Ecojustice and Education" of the journal *Educational Studies* we find almost on every page statements like: the solution is the "revitalization of the commons (…) through the affirmation of wisdom that these people have had all along", there is a need to "preserve centuries-old knowledge" (Wayne & Gruenewald 2004: 3), the "desire to recognize and preserve traditional knowledge and cultural practices" (ibid.: 4), the "need to conserve cultural traditions" (ibid.: 56), the claim that "where [the West] has found traditional forms of knowledge, it has brought "Reason" and science" (ibid.: 59; note the quotation marks), or: "the vibrant

soil beneath our feet becomes another victim of modern inattentiveness to Creation" (ibid.: 70; note the captial C), and that "the cultivation of these [ethical] qualities (…) will almost certainly require a relinquishment of modern assumption[s]" (ibid.: 91), and finally that being modern forces us "away from ancestral ways of being" and has led to "a devastating loss of the ecology of indigenous language" (ibid.: 124). But this uncritical acceptance of labels, such as "commons", "traditional knowledge" etc., can also be seen in the write-up for the "EcoJustice and Activism Conference", themed "Reclaiming the Commons: Diverse Ways of Being and Knowing", which took place in Michigan in March 2016:

> "We understand the commons as social and political, cultural and ecological, ontological and epistemological including *often-ancient practices*, relationships, *traditions*, *knowledge*, skills, and ways of being—both human and the *more-than-human*." (http://ecojusticeconference.weebly.com/, accessed 27 March 2016; italics added)

The pre-conference program, incidentally, is full of meditation retreats, offering "meditation tools to support our ecojustice efforts (...) including: breathing meditation, mindfulness, mantra practice and contemplative movement meditation" or "Meditation on the *Four Immeasurables*" (http://ecojusticeconference.weebly.com/program.html; italics added); in the program itself we find sessions on "Re-Membering Our *Lack* of *Sacred Cultural Ceremonies* in Modern Times" (poster session) or "The Knowledge of My Mother is My Knowledge" (https://drive.google.com/file/d/0B8CDnY9sPS7BVGlURll0X2tVTVk/view?usp=sharing, accessed 26 March 2016).

Why traditional, indigenous or subjective everyday 'knowledge' won't help much

Why would all this be a problem? Despite the allure of simplicity and the yearning for innocent paradise, indigenous peoples or traditional knowledge can in most cases help us only in very limited ways to solve our current problems—if we really try to assess its validity for current issues and the truth value beyond generalizations. It means, however, that we are not fooled by superficial slogans such as "we are all children of Mother Earth" or "valuing the Elders". Fact is that their cosmologies, their attempts to understand the world were not somehow better, more intuitive or more holistic than ours. In retrospect we know that it simply was a very limited way of understanding the complex world around them, severely restricted by the fact that they did not know much about how the world really works and came about. If you probe deeply and critically into their ways of understanding, you start to realize these limitations. Take a look at the way they understood human bodies and health. Talking about meridians, for example, or about chakras etc. is owed to the fact that within these cultures nobody dared to do what Leonardo da Vinci finally dared, namely cut

open corpses to see what was really going on inside a body. As long as you don't do this, you have nothing left but your imagination of what might be. You have no way of checking, of distancing knowledge from the immediate assumptions and intuition at first sight. This leads precisely to the metaphysical explanatory systems, i.e. social constructions of 'meaning', which invent and narrate 'understanding' in the absence of procedures and experimentally tested and testable theories to verify those tales. The people then did not have any tools and scientific instruments at hand to peak beyond their everyday experience and traditional ways of making sense of this dangerous, unpredictable and frightening inside and outside world. I don't in any way want to belittle them for this lack of understanding: they might well have had the best possible explanatory systems at those historic moments in time. But today, if we were to do our homework and really dig into the accumulated knowledge of today's world, we should know better. And there is another point we should not forget: the 'explanatory' tales and sacred, traditional 'knowledge' had often a lot more to do with confirming power structures and social standing of the ones 'in the know' (medicine man, wise woman, elders, bearers of the secret/sacred truth etc.) within those societies than the endeavor to seek the truth.

In other words, rather than being scientifically sound these types of 'knowledge' rely either on dogma (the particular tribe 'knows' since the beginning of time that such-and-such is the truth/wisdom, and you are not allowed to question it, for fear of being expelled from the community—which is why these belief systems often work like sects), or on everyday understanding. But, as Werner Obrecht has made clear, everyday knowledge, our immediate and unreflected experiences, are very rarely suitable for generating sound knowledge:

> "Everyday thinking does not understand itself, is therefore uncritical and, if at all, only partially able to come to true statements. (…) Without critical theory of itself and without a theory of the nervous system everyday thinking (…) believes that it understands the material things in the world directly as they are (naïve realism). (…) Its implicit metatheory is equal to the one in magical and religious worldviews and is source of resistance against the scientific world-view of adults." (Obrecht 2009: 56)

Or, provocatively put: "Every political or ethical argument which is drawn from a specific experience is wrong." (Gilles Deleuze, quoted in Žižek 2016)

Why is this so? Our personal experience and 'knowledge' is so shaped by culture, unreflected belief systems (such as those handed down to us by our parents), myths, taken-for-granted assumptions embedded in our language, the structure of our social and economic reality etc., that assuming it could easily generate something resembling a reliable truth is more than a little naïve. And traditional societies and indigenous communities had not much more at their disposal than a sort of amalgam

of everyday thinking and experiences of their members. They did not have at their disposal what I call the scientific mindset which is crucial and non-negotiable if we are to understand the world we live in. A good indicator that this is the case can be provided by a look into history: more and more of the traditional belief systems and explanations prove to be wrong, the more we advance with scientific understanding (think of 'flat earth', 'earth = center of the universe', 'creator'). This is because they were essentially claims and guesses which slowly but surely are replaced by sound understandings. In other words: they were not explanations but often elaborately narrated markers of our ignorance, i.e. the fact that we simply did not know yet.

Another important point in this context: if you really analyze the ways these in our circles so often romanticized traditional or indigenous communities work you will quickly find that their understanding of human beings, of power, of gender is such that nobody today would freely decide to live in such autocratic, dogmatic, often cruel, sexist and racist communities. As a philosopher and historian I must say that it is no surprise that none of these societies ever produced anything resembling an open, democratic society worthy of that name. This is no wonder: they rest on very rigid belief systems and moral codes which are not open to adaptation or even rejection or dismantling, a fact, of course, which is also true for religious communities (see below).

To my mind, we really have to own up to the fact that there is no alternative to the open, transparent, (self-) critical approach of scientific understanding which is the exact opposite of 'belief' of any kind (which denies criticism and doubt, thereby making true understanding and learning impossible). There is not a single field of scientific knowledge today which can be encapsulated in a single book which then 'stays true'. Yet traditional, indigenous and religious/spiritual belief systems (so positively evoked in the eco-justice quotations above) often rely on a single text or foundational myth—in indigenous contexts often claimed to be 32'000-year-old wisdom. With just a little knowledge about evolution, history and the change of individuals over their lifetime and societies over time, or paradigm changes in knowledge systems, we know that it is simply impossible that they can hold much truth about us today. Scientific knowledge is precisely replacing with new understandings what we long thought to be 'true'.

The self-critical openness to being proven wrong (i.e. learning): the scientific approach

But what do I mean exactly by a scientific approach? Let me quote Popper:

> "But science is one of the very few human activities—perhaps the only one—in which errors are systematically criticized and fairly often, in time, corrected. This is why we can say that, in science, we often learn from our mistakes, and why we can speak clearly and sensibly about making progress there." (Popper 1963)

> "When I speak of reason or rationalism, all I mean is the conviction that we can learn through criticism of our mistakes and errors, especially through criticism by others, and eventually also through self-criticism." (Popper 2001)

> "The game of science is, in principle, without end. He who decides one day that scientific statements do not call for any further test, and that they can be regarded as finally verified, retires from the game." (Popper 2004)

When I talk about the scientific mindset I talk about this open approach which will never accept any dogma, any claim by the powerful, the elites, tradition or anybody else at face value. It always wants proof, explanation, evidence, and always independent of the person that tries to impose a certain truth. Only if insights are replicable independently, if they work outside a specific community is there a chance that we are onto something which is beyond the illusions, the traditional 'this is what we always believed' and the self-justifications of individuals, communities and groups with vested interests: "It's this demonstrability and repeatability that makes science unique: it requires no indoctrination to accept." (Spadafino 2016) This approach is the only one which allows us to liberate ourselves from the crutches of fear, of ignorance, of 'eternal truth' being forced upon us. Or to quote Kant again: we need to emerge "from [our] self-imposed immaturity" (Kant 1784). True to its enlightenment origins, we should not underestimate or willfully neglect the liberating power of science:

> "Science flings open the narrow window through which we are accustomed to viewing the spectrum of possibilities. We are liberated by calculation and reason to visit regions of possibility that had once seemed out of bounds or inhabited by dragons." (Dawkins 2007: 418)

Of course, there is an arrogance and destructive side to knowledge as well, when science forgets Popper's humble insight that "the game of science is, in principle, without end", when it abuses knowledge for the gain of economic and political power. But still, this game is the only game we can play to guarantee not just freedom, but also justice, understanding and the protection from those who want to force us to believe things without any attempt, let alone the ability, to prove what they claim. So the science game, however prone to abuse and imperfections it may be, is the only game in town.

Have we, truly, lived up to these insights in the eco-justice movement? Have we truly focused the same sharp criticism that we levelled against modernity, progress and rationalism onto our own favorites such as 'inter-generationally renewed traditions' or 'spirituality'? Unless we start to shed all sorts of myths, half-truths and historically, sociologically and economically unjustifiable illusions and idealizations about 'the commons' or about traditional and indigenous 'knowledge' we will be caught in

an inability to understand what is really going on and what is needed. Or—with a view to climate change or creationism—it doesn't matter in any way what we belief or which opinion we hold. It only matters what today can collectively, and independently, be established as truth: "science is not there for you to cherry pick" (Neil deGrasse Tyson in Weathers 2014).

… and then there is religion...

But wait, we are not done yet. There is an even bigger problem we have in the eco-justice movement, connected to the biggest taboo we have worldwide in the face of moving towards a proper understanding of the three dimensions of power indicated by Horkheimer and Adorno, and towards truth in general: religion.

More than half the websites which come up if you search for eco-justice marry it with religion[1]. Often, these sites use an image which marries ecology, justice and faith (see http://ecojusticenow.org/page20/page20.html). And you can read sentences like these, which make you wonder in which century we are living: "Science, by its very nature, cannot offer enough guidance for the challenges of contemporary environmental policy." (Holmes Rolston III, http://ecojusticenow.org/resources/Eco-Justice-Ethics/HLPR-Saving-Creation.pdf, accessed 28 March 2016). Even more worryingly, the term eco-justice itself seems to come from a religious context: "To foster converging commitments to ecology and justice, American Baptist leaders Richard Jones and Owen Owens introduced the term eco-justice." (Hessel 2007) Hessel claims that from these beginnings "within two decades, a significant body of writings emerged that emphasize respect for every kind and show intersecting concern for ecology, justice and faith" (ibid.). His "Environmental Justice Annotated Bibliography" offers a key insight into how strongly the development of eco-justice has been influenced by religious environmentalists. This seriously means that we are in dire straits. It truly is, even in the days of Baghdad, Paris, Tripoli and Brussels, still a total taboo to point the finger at possibly *the* most influential source of unreason and *the* prime example of a blatant disregard for truth worldwide, far more influential and damaging than the intellectual fog that postmodernism, multiculturalism and relativism pulled over our eyes. Unless we acknowledge this and take issue with all sorts of religious beliefs and belief-residues also in the environmental and eco-justice movement, we have simply

1 _____ For example Eco-Justice Ministries (http://www.eco-justice.org/), The Forum on Religion and Ecology at Yale (http://fore.yale.edu/disciplines/ethics/eco-justice/), http://www.episcopalchurch.org/page/eco-justice, Racine Dominican Eco-justice Center: "Commitment to truth in the light of the Gospel" (http://www.racinedominicans.org/eco-j.cfm), eco-justice camp, sponsored by the Unitarian Universalist Church of Palo Alto (UUCPA) (http://ecojusticecamp.com), EcoJusticeNow (http://ecojusticenow.org/page20/page20.html), World Council of Churches (https://www.oikoumene.org/en/what-we-do/eco-justice), National Council of Churches of Christ Eco-Justice Programs "justice for God's planet and God's people" (https://ecojustice.wordpress.com/), Interreligious Eco-Justice Network (http://irejn.org/), all accessed 15 March 2016).

no chance in hell to ever get to an open, humane, democratic and just society which respects the limits of the biosphere.

This is the kind of toughness in arguments which we need to relearn, according to Žižek, even if—as likely in this case—we are hurting people's feelings. But: "Their concern, their pain is no measure for the truth." (Žižek 2016) Speaking as a historian again, it is difficult to name a force in history which has been and still is more destructive than religion (with the possible exception of its bed-fellow capitalism); it is impossible to name a historical force that is more responsible for the spread of ignorance than religion (just look at Catholicism and its dogmas on sexual relationships, contraception and abortion, for instance); it is impossible to name a force in history which has done more harm to women and their standing in society than religion; the list could go on and on. And on top of all that, there is good scientific evidence that religious people, when it comes down to how they behave rather than how they *think* they behave, are more opinionated, less altruistic, less peaceful, more prone to violence, to exorcising others from their group etc.; in other words that they have a very screwed-up morality which would wreak havoc to any modern sense of justice and morality (see Dawkins 2007: 258-348; Dawkins' book is in any case a wonderful wholesale debunking of every myths about religion you ever believed in).

And, of course, religious world-views, their understanding of the human being, of evolution, of how the universe works have nothing whatever to do with what we know today about these issues—quite apart from the fact that religion, historically, has always been what Marx claimed, namely "opium for the masses", i.e. a wonderful tool of oppression for the powerful: "Religion is excellent stuff for keeping common people quiet" (Napoleon, quoted in Dawkins 2007: 313). So there is little more to say than what Albert Einstein and Salman Rushdie have stated:

> "The word God is for me nothing more than the expression and product of human weakness, the Bible a collection of honorable, but still purely primitive, legends which are nevertheless pretty childish. No interpretation, no matter how subtle, can change this for me. For me the Jewish religion like all other religions is an incarnation of the most childish superstition." (Einstein 1954)
>
> "Religion [is] a medieval form of unreason." (Salman Rushdie in: The Guardian 2015)

Superstition and unreason: This is what Latouche means by "auto-immunization" of religion (2011: 192): you can only believe in religious dogma by "building up irrational attitudes of submission to authority" (Chomsky 1992). Religious belief can never withstand the test of independent, external, objective or inter-subjective scrutiny. And more and more of these religious "yes, but how do you explain ..." fall by the wayside with the advances of our understanding of the universe: Christopher Hitchens, in *The Portable Atheist*, collects a couple of essays from leading scientists who

show that modern Physics has no need any more for an external creator to explain the coming into being and existence of our world (see Victor Stenger [311–327], Steven Weinberg [366–379] in Hitchens 2007). And Capra/Luisi have beautifully shown that we don't need any 'external help' to explain life on Earth: all you need is an understanding of the processes of emergence and self-organization (Capra/Luisi 2014: 180-181, 226-261). As Castoriadis says in the motto of this essay and Kant urges us in his challenge to "emerge from [our] self-imposed immaturity", it takes a bit of courage to understand and acknowledge that there is no plan, no aim, no teleology to nature and evolution; life is the product of pure chance. Once this is understood the fear which drives every religion and superstition just falls away. Yet, we do not even seem to try to acquire this understanding. Dawkins rightly says that "one of the truly bad effects of religion is that it teaches us that it is a virtue to be satisfied with not understanding" (quoted in Hitchens 2007: 297).

Maybe Salman Rushdie put it most clearly, in his beautiful "Letter to the Six Billionth World Citizen", entitled "Imagine There's No Heaven":

> "To choose unbelief is to choose mind over dogma, to trust in our humanity instead of all these dangerous divinities. So, how did we get here? Don't look for the answer in 'sacred' storybooks. (...) The ancient wisdoms are modern nonsenses. Live in your own time, use what we know, and as you grow up, perhaps the human race will finally grow up with you and put aside childish things. (...) Once and for all, we could put the stories back into the books, put the books back on the shelves, and see the world undogmatized and plain. Imagine there's no heaven, my dear Six Billionth, and at once the sky's the limit." (quoted in Hitchens 2007: 382–383)

Conclusion: do we walk the talk? Do we firefight where the fire is?

All this should give us plenty of reason for self-criticism: Have we, in the eco-justice movements around the world, self-critically evaluated our beliefs and mental models to check if they are demystified and open to reasoning, sound knowledge and self-criticism? Have we really, truly moved beyond religion, beyond superstition and unreason, finally arriving in the reality of a secular 21st century? (But then again, this is a difficult one: since ideology and religion truly are forms of unreason, believers are rarely ever open to reasoned arguments. Therefore, they usually try to shoot the messengers so that they don't have to deal with the message.)

But even if you cannot follow me on this debunking of religion, let's just look at our own actions:

> "The experience that we have of our lives from within, the story we tell ourselves about ourselves in order to account for what we are doing, is fundamentally a lie—the truth lies outside, in what we do." (Žižek 2008: 47)

Another important aspect of religion, ideology and non-scientific explanatory systems is that they focus very much on what one believes, or—in Žižek's words—the stories we tell ourselves about who we are, what is right and wrong etc. The point today, in times of climate change and non-sustainability, is that this is almost irrelevant. These narratives are, by and large, excuses and lies, since it only matters what real-world impact we have on the biosphere. Only our actions count, however we might explain or justify them. As Niko Paech, one of the foremost post-growth economists in Germany, put it: "The time for excuses is over" (Paech 2014), meaning: we have more than enough knowledge, tried and tested social models, technologies and tools at our disposal to live sustainably. The only reason why we don't do it, is because we always find stories and narratives and excuses to *not* live the eco-justice option. Hand on heart: how many of us who claim to be truly convinced eco-justice fighters, are actually living an eco-just life? How many of us have ditched flying? How many have sold our car? How many live exclusively off renewable energy? How many of us are only feeding ourselves from locally grown, organic food? And how many of us are really fighting Chris Hedges' fights?

There is all the scientific evidence needed out there to show us that we can only move towards an eco-just, non-exploitative future by reducing our impact on planet earth dramatically. This unfortunately means: we have to actually *do* it! It doesn't matter how we justify and explain it: if our daily actions are not sustainable, even if we *think* they are, it doesn't help.

To summarize: given the immense and complex problems of power, wealth, exploitation and oppression, we need the best, most accurate knowledge there is to solve them, from a wide range of disciplines. What we most often tend to do in our circles, though, is to give in to the craving to wish us back into a pre-modern simplicity where wishful thinking was thought to help. No: let us firmly arrive in the 21st century. Or, in other words: if we want eco-justice to succeed we need five things:

- we need to remember Horkheimer and Adorno and fight oppression on all levels: within ourselves, between us and as exploitation of nature;
- we need to take Kant seriously and truly have the courage to use our own mind "without guidance from others";
- we need to be absolutely sure that our arguments are scientifically sound and watertight, and don't rest on superstition, unreason or belief;
- we need to be the role models in everything we *do*; the preaching to others we can leave to our brothers stuck in medieval mindsets;
- we need to be sure that we pick the right friends (science rather than unreason) and the right enemies (corporations, power, wealth rather than science, modernity and the enlightenment).

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