

The Best of Both Worlds: How Buddhist Philosophy can Humanize Science

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Why the status quo isn't working:

Humans are subject to the same basic biological patterns as any other species. Like other animals, we have a carrying capacity and are subject to population crashes. The difference is that we are *aware* that the earth cannot support an infinite number of us and that we are consuming the earth's resources at an unsustainable rate. In fact, we have observed the effects of the overexploitation of resources in current populations and in historical societies (Wright 2004). An increasing number of studies indicate that we will soon exceed the earth's carrying capacity, causing irreversible damage leading to human misery, yet we have done very little to stop it (Ripple et al. 2017).

This is happening in part because of a huge disconnect between science and the public. A recent survey from Yale University showed that only 49% of Americans believe in human-induced climate change (Yale School of Forestry and Environmental Science 2018). This is likely due to the misunderstanding and mistrust of the scientific process by non-scientists. Empiricism is important for separating fact from biased human subjectivity and providing quantitative evidence that can be widely agreed upon. However, in the process of quantifying natural phenomena, science runs the risk of losing sight of the larger context. In *Buddhist Biology*, Barash claims that science has become disconnected from humanity, it has forgotten the "intimate nature of the physical world" and become "dry, inhuman, and downright dangerous" (Barash 2014, pp. 28, 27). Without emphasis on the fact that humanity is a part of nature, people will continue to underappreciate and disrespect it. As Barash puts it, science needs to be a "love story between man and nature" that is full of empiricism, of course, but also enchantment, intimacy, and beauty (Barash 2014, p. 27). Humanity needs to undergo a paradigm shift from viewing nature as a commodity to viewing it as something with intrinsic value that is as much a part of us as we are a part of it. In this essay, I will argue that contemporary Buddhist philosophy "humanizes" science and provides a way to combine scientific truths and human experience to cultivate respect for others and the environment, foster a more interconnected worldview, and promote sustainable behavior.

Overcoming our selfish instincts:

Contemporary Buddhist philosophy provides a way to fight against the basic biological drives that stem from our evolutionary history. The instincts that historically helped us survive as a species and push our genes forward into future generations are often selfish and harmful to others. Natural selection, after all, is not a process concerned with the wellbeing of our friends and neighbors. Our instinct for greed helped our ancestors accumulate resources and prepare for future shortages. Our instinct for aggression was adaptive in competitive environments. Even our capacity for altruism can be explained as a selfish adaptation to increase the fitness of closely related individuals or gain the benefits of living in a group. Evolutionary biologist Richard Dawkins bluntly explains, “we are survival machines – robots blindly programmed to preserve the selfish molecules known as genes” (Dawkins 1976). We are, ultimately, just animals aiming to survive and reproduce.

However, there is one thing that makes us different from our relatives in the animal kingdom: our consciousness. We struggle to answer fundamental scientific and philosophical questions: why are we here? Where did we come from? What is the purpose of all this? The capacity to ask why has been the driver of progress and innovation for our species. The human race has learned how to grow food, build houses, cure diseases, build machines, synthesize drugs, and travel to outer space. It is this consciousness that has brought our species from a sparse population of hunter-gatherers to a massive population taking over the planet. However, as Ronald Wright stated in the *Surviving Progress* documentary, “we are running on 21st century software, our knowledge, on hardware that hasn’t been updated for 50,000 years, and this lies at the core of many of our problems” (Wright 2011). The fact is that we are still gene-houses with the same selfish instincts that drove our hunter-gatherer ancestors. These instincts combined with our “advanced intellect” cause many of the problems that we experience today, “notably nuclear weapons but not excluding anthropogenic climate change, habitat destruction, shortsighted resource exploitation, and many others” (Barash 2014, p. 175).

There is a disconnect between our societal moral and ethical values and the selfish nature of our genes. Many of our genetic inclinations promote behaviors that are not only selfish and unethical, but also cause suffering. As Barash eloquently puts it, “success may be achieved in terms of fitness, while costs accumulate in terms of unhappiness or immorality” (Barash 2014, pp. 177). Greed, for instance, was historically beneficial to accumulate resources but in our 21st century consumerist society, greed causes people to be “stuck in a never-ending cycle of attempting to meet a ‘need’ that cannot be satisfied” (Barash 2014, p. 175). The things that many people find fulfilling: love, sacrifice, and selflessness, are just not part of the agenda of our genes.

Buddhist philosophy can help us transcend these genetic instincts and minimize suffering for ourselves and others. Our consciousness gives us the ability to go “against eons of evolutionary history” and “act in accord with our enlightened self-interest” (Barash 2014, p. 185). Not our self-interest from a biological perspective, but from a Buddhist perspective: self-interest in terms of our own happiness and the happiness of others. Mindfulness is defined as “taking note of what is going on within ourselves and outside in the world, without shying away from information or feelings that we do not like” (Wamsler et al. 2016). Mindfulness has been shown to increase empathy and decrease stress, depression, and physical pain, feelings that can make it difficult to be engaged with sustainability issues or other societal problems (Wamsler et al. 2016). Using mindfulness to understand the biases of our selfish genes and then making a conscious effort to “struggle against this attempted tyranny”, we can actively minimize the harm we cause in the world (Barash 2014, p. 171). This struggle against our genetic instincts through mindfulness can give us a purpose, one where we are “empowered with a measure of free will, but also encouraged how to engage our lives: on behalf of the rest of life, to which we are inextricably connected” (Barash 2014, p. 171).

Finding meaning and value in our interconnectedness:

Biology teaches us the importance of the living parts that make up a system, but Buddhism “humanizes” science by teaching us the importance of our connection to these systems as well as the

unquantifiable value of our interconnectedness. Science is the process by which we analyze and quantify systems and living things. We turn organisms into data points, genes into a string of letters, and dynamic systems into diagrams. Biological sciences teach us about nutrient cycling, food webs, microbial communities, and how these systems are connected to one another, but the careful studying and quantification of these processes can distance us from them. We remove ourselves from the equation, and we forget that we are inextricably connected with these natural phenomena. As Buddhist philosopher Thich Nhat Hanh describes it, “to be is to inner-be. You cannot just be by yourselves alone. You have to inner-be with every other living thing. The sheet of paper is, because everything else is” (qtd. in Barash 2014, p. 37). A sheet of paper exists because the tree exists. The tree exists because of the sun and the soil and the nutrients in the ground, as well as the fact that some plant species evolved vascular tissue to grow tall. Just like the tree exists because of and is made up of extrinsic elements, we are made up of the sun, the food that we eat, and the nutrients that make up our food, which all come from nature. Satish Kumar says in his interview with Richard Dawkins, “scientists go to a very particular reduced element and they work only on their specialist aspect and I think there science goes wrong” (Kumar 2013). Because scientists often have highly specific research topics, they can lose the importance and the larger context. The Buddhist concepts of *anatman* (non-self) and *pratitya-samutpada* (connectedness) can help us see the context, understand our connection to it, and be mindful of the ways in which all of our actions affect others. Then, we can expand our compassion into ever-widening circles.

Science is all about quantifying systems and evaluating the robustness of evidence, but there are unquantifiable aspects of humanity and the natural world that are necessary to understand in order to have a fully holistic worldview. Satish Kumar deftly explains this concept: “human beings have body, sense, organs, all the things we have which anybody can understand, but there is a quality of a human being which is very unique to each and every human being ...quality cannot be defined, it’s something you feel...you cannot measure how much friendship I have, or how much respect I have” (Kumar

2013). These emotions have a scientific basis but they cannot be quantified, and yet they determine so much of how we (including scientists) see and experience the world. We can answer Richard Dawkins' question "why bother [with Buddhism], why not just go straight for the science?" (qtd. in Barash 2014). Buddhist philosophy gives us a way to utilize these qualities to improve our lives and the lives of others: "see the vast happiness that is available...put your hands on the earth. Face the difficulties and grow new happiness (Nhat Hanh 1998).

Because of our consciousness and our ability to ask why, humans have a fundamental need to feel like their life has meaning. Science tells us that we are just gene-housing machines, programmed to project our genes into the next generation, only to die and be forgotten except through our genetic material. However, this cold hard truth is an unsatisfying answer for many people, and does not fulfill the need for meaning that is "biologically guaranteed" by our genetic capacity for consciousness (Barash 2014, p. 181). Buddhism can give us tools to strive against this purposelessness and create meaning for ourselves through mindfulness, meditation, and compassion. Buddhist philosophy can help us be what Barash calls "existential heroes" by giving us the tools to accept the suffering, the pain, and the void of purposelessness and still "grow new happiness" (Barash 2014, p. 181; Nhat Hanh 1998). Science can teach us so much about the world and how it works, but Buddhist philosophy can help connect science to our human experience, expand our compassion to the rest of the world to which we are inextricably connected, and create meaning through a deliberate effort to spread compassion and love.

Buddhist philosophy as a call to action:

When scientific evidence fails to affect people's behavior, Buddhist philosophy can give us a moral call to action. We have known about climate change for decades, yet "humanity has failed to make sufficient progress in generally solving these foreseen environmental challenges, and alarmingly, most of them are getting far worse" (Ripple et al. 2017). Scientific evidence alone is clearly not enough to change our behavior, and this is where science falls short. Scientific evidence describes the problem,

but Buddhist philosophy gives us a way to address and implement the behavioral changes that need to be made. Wamsler et al. (2016) reviews the potential benefits of mindfulness to promote sustainable behavior and provides evidence that mindfulness can help increase individual awareness of “the underlying emotions, thoughts, values, and experiences that contribute to unsustainable actions”, which can lead to “increased social activism and justice”. They argue that “people tend to experience the world through cognitive filters of habitual, self-centered, and prior-conditioned nature” and mindfulness can increase the awareness of these biases and foster increased self-regulation and increased empathy for others and the environment (Wamsler et al. 2016). In accordance, Thich Nhat Hanh explains that “we must be aware of the real problems of the world. Then, with mindfulness, we will know what to do and what not to do to be of help” (Nhat Hanh qtd. in ReShiel 2018).

The Buddhist philosophy of interconnectedness (*pratitya-samutpada*) can help us understand how societal issues are connected to one another. Satish Kumar argues that “why we have in the world today so much trouble is because we forget the context, and we just take one issue, and we tackle that single issue as if everything else is irrelevant” (Satish Kumar 2013). Environmental issues are deeply connected so we cannot take this isolated approach. Agriculture and industry have transformed the land, changing the structure and functioning of ecosystems, and subsequently the way they interact with nutrient cycling, the atmosphere, and surrounding land (Vitousek et al. 1997). These land transformations are also intimately linked with climate change, economics, and politics. We tend to try to tackle climate change or poverty or deforestation as though those issues aren’t deeply connected, but if we see the larger context we will have a greater understanding of the issues, our connection to them, and the ways in which we contribute.

Scientific research has provided evidence illustrating our widespread impacts on the environment, but this information can elicit fear because the problem is so severe. This fear leads to internal fear controls such as apathy and denial, which decrease engagement with the issue (O’Neill 2009). Buddhist philosophy provides an effective motivator for sustainability by framing it as a moral

imperative. Satish Kumar describes, “if you have a spiritual attitude toward the universe then you take care of the earth not because of the end of the world or the end of civilization but because of a kind of love and respect for the earth” (Satish Kumar 2013). The paradigm shift in the way we think about and treat the earth needs to occur around this idea that the earth deserves our respect and stewardship because it has intrinsic value. Buddhist philosophy teaches us that compassion “happens in the same way that your heart beats or your lungs breathe. It is altogether natural, if we only have enough insight into our connection to what is mistakenly called others” (Barash 2014, p. 127). Understanding our connectedness to and fostering respect for the earth will fundamentally change our actions because we have an innate genetic capacity for altruism. Humans have evolved as social creatures and we have a natural ability to make decisions that are best for the community as a whole rather than just ourselves. Understanding our connectedness will expand our circle of compassion beyond our immediate surroundings and make our decisions around sustainability instinctive. We need to utilize “the energy of understanding and compassion” because “only understanding and compassion on a collective level can liberate us” (Nhat Hanh qtd. in Confino 2010).

Buddhism and science: the best of both worlds?

The environmental problems we face have reached a high level of complexity, severity and scale. Consequently, it is understandable that people turn to denial or place blame on external factors rather than take responsibility. If we are to make real and lasting change, we cannot keep treating the environment as if it is there to serve us rather than a dynamic, living system that has intrinsic value and deserves our respect. We need to begin loving and respecting the environment as something that is an inextricable part of us. Then we need to incorporate mindfulness into our actions and utilize our compassion to minimize suffering. Science educates us on the issues we face and how our actions impact the environment, but Buddhism makes it personal, providing the ideas and motivation we need to change how we interact with nature. Buddhist philosophy gives us tools to use our intelligence,

consciousness, and natural capacity for compassion to fight against our selfish biological instincts, understand our connection to nature, and strive to honor this connection.

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