

Dependent Origination
A Buddhist Analysis of the Causes and Conditions behind the Climate Crisis
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What can Buddhism contribute to our understanding of the imminent environmental crisis? In this paper I will attempt to briefly consider how the core teaching of the dependent origination can be applied to an understanding of our global predicament.

One of the central axioms of Buddhist thought is the principle of causality. The short formula, occurring in several places is “This being; that exists. Through the arising of this that arises. This not being, that does not exist; through the ceasing of this; that ceases.”

This assertion may seem a truism, hardly worth stating, but taken in the context of ancient Indian philosophical discourse, it is a strong statement. It amounts to a declaration that events and objects in this universe arise due to causes and conditions and not otherwise; i.e., not randomly or through the arbitrary will of a deity, as taught by other schools at that time.

This principle of causality underlies much of the Buddha's own teaching, as well as being a corner-stone of later Buddhist thought. When speaking about some positive or negative factor, the Buddha would often ask, “What is the cause, the condition, for the arising of this? What is the cause, the condition for its cessation?” The logical structure of his expositions was very often based on these chains of causality.

The most well known and commonly cited example is the twelve stages of the dependent origination. These stages are given as an explanation for “how this whole mass of suffering comes to be”—or, in other words, of samsaric existence: this mortal world of birth, death and rebirth. There is no ultimate origin, in Buddhism, for samsara, which is conceived of as beginningless. So it is made clear that the twelve stages are to be seen as a dynamic ongoing process, not as a linear movement through historical time. Briefly stated, the twelve stages are given as ignorance, karmic action, consciousness, body-and-mind, the six senses, contact, feeling, craving, clinging, becoming, birth and finally, old-age-and-death.

It is not my intention here to stray from my topic and discuss this sequence in detail. It is a profound and complex subject that has spawned a vast and sometimes contentious literature involving several possible lines of interpretation. But for the benefit of those who may be new to this doctrine, what follows is a very concise summary explanation based on the most traditional reading.

Because beings are ignorant of ultimate truths, they act in the world in various ways, creating the seeds of karma. When they come to the end of their lifespan, these seeds are still present, needing to be expressed. This results in consciousness again arising in some state of being, for instance a human womb. The consciousness in the womb, conditioned by its old karma, provides the guiding matrix for the unfolding of a new body-mind system. This new organism is equipped with the six senses, the five classical physical ones as well as the mind sense, which takes

thought as an object. These six senses provide the opportunity for the being to make contact with the outer world. The various contacts are felt by the being as pleasant, unpleasant or neutral and this causes him or her to crave more of the pleasant ones, and to escape from the unpleasant ones. This craving is a very primitive impulse but it matures into clinging, wherein the desire starts to become a "project." Plans are made, actions are taken and this culminates in becoming. That is to say, the being recreates himself as the possessor of the desired. This re-creation involves the accumulation of much fresh karmic debt, which again culminates in birth into the world. And birth always results in ageing and death. "Thus this whole mass of suffering comes to be."

One of the applications of this principle of dependent origination is in the explication of the Buddhist teaching of voidness or not-self. No entity or event in the universe can be conceived of as single and independent. Everything exists only by the action of prior and contemporary causes. We may naively conceive ourselves as independent beings, but the atoms of our physical form are constantly exchanged with the outer world and the contents of our minds are filled with ideas and thoughts originating in other minds. There is no real self-substance (svabhava). One way this has been expressed is; "nothing exists from its own side."

Later Buddhist thought elaborated these ideas considerably, particularly in the Mahayana with its great emphasis on the emptiness principle (sunyata). A corollary to the causal principle coined by the philosopher Nagarjuna states that "nothing arises without a cause, and nothing arises from a single cause." The linear form in which the dependent origination was usually presented was supplemented with a multi-dimensional matrix of mutual dependence. The Hua Yen School especially developed this idea. In the Avatamsa Sutra we find the metaphor of Indra's Net used to illustrate the complexity of mutual causation. In the palace of the god Indra there hangs a net, a complex three-dimensional weave. At each crossing of the threads there is a multi-faceted jewel. In each facet of each jewel one can see the whole of the net reflecting, including all the other jewels in an infinite regress.

This complex and holistic vision of reality is in stark contrast to the way in which much of Western thought has, until recently, viewed the world. Modern science, beginning in the seventeenth century, has made great progress in understanding the world. It has done this largely by using a reductionist methodology of studying the various components of this world as independent, self-contained units. A process of intellectual analysis has broken down organisms into cells, and cells into organic molecules. Likewise in the physical sciences, the thrust of research has always been toward identifying and classifying more and more fundamental particles of matter.

This reductionist habit of thought has, without dispute, proved to be a powerful tool. But it is, in the last analysis, not an expression of reality but only a model of reality, useful in many contexts but misleading in others. The habit of reductionism, of missing the forest for the trees, is deeply ingrained in Western thought after four hundred years. It is not without significance that the one field of scientific inquiry which has had to transcend this habit, from the outset, is ecology which seeks to understand the interplay of living and non-living systems on both a local and a planetary scale. A powerful recent example of this holistic approach is the Gaia hypothesis of James Lovelock, which seeks to understand the Earth's climate as a self-regulating system with complex

feedback loops between the organic and inorganic components,

This reductionism is, I would suggest, an intellectual handicap in trying to find solutions to the climate crisis. Many of the proposed solutions are thought to be helpful only if they are considered in a limited reductionist way, and may even be harmful when a more holistic, inter-dependent view is taken. A prime example is the use of bio-fuels derived from Indian corn and other crops. Considered locally, they appear very positive. The carbon is recycled through a fast-growing plant; next year's corn takes up this year's exhaust. The long-cycle carbon bound up in petro-chemicals can be left in the ground.

However, when the full picture of the production of the crops, the transportation of the raw grain, the processing of the alcohol and so on is taken into account, it is found that there is actually a huge net increase in energy consumption. What is more, with current agricultural practices even the use of fossil fuel is increased because the chemical inputs are largely derived from petro-chemicals. And all of this is in addition to the food crisis that is already beginning as more and more crop-land is diverted to bio-fuel production. This diversion has even resulted in the clearing of rain-forest in Indonesia and elsewhere in order to cash in on the bio-fuel boom. Considered with all its causes and conditions, bio-fuels, far from being a solution, are an unmitigated environmental disaster.

Turning to the real theme of this paper, what can Buddhism tell us about the causes and conditions of environmental degradation, which in the Buddha's time was not even considered as a problem? For example, there is a passage in early Buddhist literature that compares the qualities of the Dhamma to those of the "Great Ocean" and states that the Dhamma is incorruptible, just as the Great Ocean: no matter what manner of rubbish is thrown into the ocean, it is too vast to be defiled. We would no longer consider this to be true. Our capacity for generating rubbish exceeds that of the ancient Indians by several orders of magnitude.

Although it would be vain to search for an explanation of climate change in terms of dependent origination, we can make a reasonable extrapolation by considering a parallel case. Here the Buddha deals with another human problem that was known already in his time and from which we still suffer today, the problem of war. In the Mahadukkhakkhanda Sutta the Buddha says that "men strap on armor and shield and hack one another with swords, just for sensual desire." Thus, the desire to please the senses is said to be the underlying cause and condition of warfare. Put in modern terms, this would mean the Buddha was proposing a theory of economic causation for international conflict. This is a view that is hard to refute; all—or at least almost all—cases of warfare can be explained in terms of struggle for resources such as land, water or oil. That is, resources which we use to produce commodities which serve to satisfy our sense desires.

I would suggest the same ultimate cause underlies our environmental problems. In the language of the dependent origination; because we desire the pleasant feelings arising from sense contact we produce and consume products made from petro-chemicals and produce carbon dioxide as a by-product. Or—to state it in a way more in line with the traditional formula—because of sense-desire there arises consumerism, because of consumerism there arises commodity production, because of commodity production, there arises resource extraction, because of

resource extraction there arises green-house gas release, and because of green-house gas release there arises climate change. And thus this whole mass of suffering comes to be, “on account of sense-desire, just because of sense-desire.”

This identification of the cause points the way to the only possible solution. Most of the solutions so far proposed or implemented fall short or are, like bio-fuels, actually counter-productive. This is because they do not address the underlying cause. There is a widespread search for ways and means to satisfy our sensual desires without damage to the environment. This is ultimately a hopeless endeavor. The problem is not in this or that detail of our economy but in its very basis. Modern society is absolutely profligate in its use of resources primarily because our value system is based on finding happiness through pleasing the senses. Our economists are still fixated upon generating growth, on the production of more and better commodities designed to satisfy human sense desires.

The underlying problem is not the way we produce things, it is in the sheer volume of things we produce above and beyond what is needed to sustain physical health and well-being. The solution will not be found in seeking a different way of doing the same things, but in finding ways to do with less. For this to have any hope of working, it would require a radical change in our value system. We need to find ways to happiness that are not based on consuming resources. It may be here that religious and especially monastic traditions can make a contribution. Buddhism often speaks about finding our real happiness within. The Buddha praised jhana (meditative absorption) as “the blameless happiness divorced from the senses.” Likewise, one of the virtues to be cultivated is santutthi, or contentment with little. Serving as an example of a life-style which offers fulfillment without frenzied consumption may be one of the most useful services that monastic communities, whatever their tradition, may be able to provide the world at this time of crisis.

Buddhism identifies three primal roots of all ill; greed, hatred and delusion. If we can agree that greed for material objects to please the senses is the primary root of climate change, I think we can also identify delusion as a major secondary cause. One form this takes is the widespread denial of the problem. This late in the day governments everywhere are debating carbon emission targets that the climate scientists say are, even if they were implemented, far too little far too late. Targets which would actually save the planet from catastrophe are dismissed as politically unrealistic, so the politicians pick numbers more to their liking out of thin air and news commentators earnestly debate them. Something is wrong with this picture.

Among the causes and conditions of this denial we can certainly identify wishful thinking and the short-sightedness dictated by four or five year election cycles. But I think there is something a little more fundamental at work as well. Our technological society has allowed us to become insulated and therefore alienated from the natural world. For the city-dweller in the developed world, electricity comes out of a wall socket, water comes out of a tap, heating fuel is piped in, and bodily wastes are flushed neatly away. Where any of this material comes from or goes to remains an abstraction. When you are required to pump your water by hand, and carry it in buckets, you are naturally less inclined to be wasteful of it.

Most of humanity now lives in cities, and in an urban environment it is probably neither possible nor desirable to pursue a technological reversion. Medieval cities were loathsome, unhealthy places. We cannot do without our complex infrastructure. This said, urban planning for the future ought to reverse some of the trends of the last century and build cities for people and not for automobiles. And do we really need to consume huge amounts of electricity to try and turn night into day? During the big East Coast black-out of 2003, many young adult city dwellers saw the Milky Way for the first time in their lives. I wonder about the spiritual effect of blotting out the stars. However, the amount that can be done towards overcoming our alienation from nature by physical changes is limited. Here too, the fundamental shift must be a spiritual one.

So, besides becoming less greedy, people need to somehow become more in tune with their place in the natural world, to reconnect with the interdependent web of which they are inescapably a part. Both of these movements would reverse several centuries of development. The whole thrust of our culture and technology has been to insulate us from the discomforts and deprivations of nature and to provide us with more and better artificial amusements. These trends go back at least to the Enlightenment, and it is hard to see how they can be reversed with anything short of a spiritual revolution. Or perhaps we should say, a counter-revolution, a return to the ethos of a simpler time.

Our civilization has, without dispute, made a brilliant career during these last four or five centuries. We have conquered space and time, the infirmities of the body, and the vagaries of nature to an extent unknown before. But it has not been without a cost, and it seems the bill is coming due. Our material enrichment has been bought at the cost of a spiritual impoverishment. The materialist and reductionist habits of mind which have made science and technology possible have also alienated us from the natural world and from our own deepest nature. As a culture, we have lost touch with both the organic and the numinous. These powerful forces cannot be denied forever.

For all these reasons, I would suggest that we ought to be very skeptical of any technological fix to our problem. The manifestation of the problem may be technological, but the underlying causes and conditions are a spiritual malaise, and until that is addressed, the problem will not go away.