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The Dalai Lama on Emptiness, Relativity and Quantum Physics ›

by [Professor Allan Marett](#)

In Oppenheimer I draw a parallel between an old priest who becomes a fox in the story of Baizhang/Hyakujo and the fox, and Oppenheimer's becoming a tormented ghost. Both transformations result from a fundamental mistake having been made about the law of cause and effect. In the case of the old man, he misled one of his students. In the case of Oppenheimer he created a weapon that destroyed hundreds of thousands of people. In the play I suggest that just as the old priest was dazzled by emptiness and misunderstood its relationship to the world of conventional reality and causality, so too was Oppenheimer dazzled by the beauty of the sub-atomic world and that this somehow led to his misconstruing its relationship to the world of conventional physics where causality operates 'normally'.

I am not, however, equipped to understand all that quantum mechanics has to say about causality, so my drawing of a parallel between the world of emptiness and the world of quantum physics is essentially a poetic conceit. But I am comforted that I am not the only one who sees potential parallels there, parallels that continue to be explored in dialogues between scientists and Buddhists, and in particular the Dalai Lama.

In 2009 the Dalai Lama compared the apparent gulf that exists between quantum mechanics and classical physics with the apparent gulf that exists between what the great Indian philosopher Nagarjuna (150–250 CE) called 'ultimate' and 'conventional' truth (sometimes known as 'the two truths'). Here is what he has to say about the law of cause and effect within these domains (<http://www.neurohackers.com/index.php/fr/menu-top-neurotheque/68-cat-nh-spirituality/95-emptiness-relativity-a-quantum-physics-dalai-lama>):

"On the conventional level, we can speak of a pluralistic world of things and events with distinct identities and causation. This is the realm where we can also expect the laws of cause and effect, and the laws of logic such as the principles of identity, contradiction, and the law of the excluded middle—to operate without violation. This world of empirical experience is not an illusion, nor is it unreal. It is real in that we experience it. A grain of barley does produce a barley sprout, which can eventually yield a barley crop. Taking a poison can cause one's death and, similarly, taking a medication can cure an illness. However, from the perspective of the ultimate truth, things and events do not possess discrete, independent realities. Their ultimate ontological status is "empty" in that nothing possesses any kind of essence or intrinsic being."

He also suggested that Buddhist philosophy might have something to offer to physics with regard to this apparent gulf between conventional physics and quantum mechanics.

"The Buddhist solution to this seeming epistemological contradiction involves understanding reality in terms of the theory of two truths. Physics needs to develop an epistemology that will help resolve the seemingly unbridgeable gulf between the picture of reality in classical physics and everyday experience and that in their quantum mechanics counterpart."

Oppenheimer himself had something to say about quantum physics and Buddhism :

"If we ask, for instance, whether the position of the electron remains the same, we must say 'no;' if we ask whether the electron's position changes with time, we must say 'no;' if we ask whether the electron is at rest, we must say 'no;' if we ask whether it is in motion, we must say 'no.' The Buddha has given such answers when interrogated as to the conditions of man's self after his death; but they are not familiar answers for the tradition of seventeenth and eighteenth-century science." (J. R. Oppenheimer, *Science and the Common Understanding*, (Oxford University Press, 1954) pp 8–9).

Then in 2013 the Dalai Lama reported this exchange with the 'father' of the Indian nuclear bomb (<http://www.dalailama.com/news/post/905-quantum-physics---his-holiness-the-dalai-lama-participates-in-the-26th-mind--life-meeting-at-drepung---day-2>):

"This reminds me of an occasion in Delhi a number of years ago when Raja Raman, father of the Indian nuclear bomb, told me he'd been reading the works of the Buddhist master Nagarjuna in which he'd found an implicit account of Quantum Theory. It filled him with pride to think that an Indian had been pondering these ideas two thousand years ago.

"According to Nagarjuna's Madhyamaka presentation, an object exists, but if we search for it we can't find it. If we investigate the object itself, we find its very existence is due to other factors, so we can't say it doesn't exist; only that it exists in relational terms; in terms of designation.

"Broadly speaking, although there are some differences, I think Buddhist philosophy and Quantum Mechanics can shake hands on their view of the world. We can see in these great examples the fruits

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The Oppenheimer Noh Project focuses on the creation and performance of a new English-language Noh play, *Oppenheimer*, in the Music Workshop Theatre at 6.00pm on Wednesday 30 September and Thursday 1 October 2015.

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of human thinking. Regardless of the admiration we feel for these great thinkers, we should not lose sight of the fact that they were human beings just as we are.”

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