

Conversations with the Dalai Lama / Arthur Zajonc

Beginning in 1987, The Mind and Life Institute initiated and supported a series of dialogues on Buddhism and the sciences. As part of this series, Arthur Zajonc, Ph.D., professor of quantum physics at Amherst College, Amherst, MA, and general secretary of the Anthroposophical Society in North America, coordinated a two-part dialogue ("The New Physics and Cosmology") with the Dalai Lama over eight days in October 1997 and June 1998. The first meeting took place at His Holiness' private residence in Dharmasala, India, and the second at the quantum physics laboratories of professor Anton Zeilinger, Innsbruck, Austria.

Threshold: *What is he like?*

Arthur Zajonc: We usually see Asians as being otherworldly and disembodied. He is anything but that. He is fully incarnated and fully engaged. When you are working across from him, it is more like a wrestling match in the gymnastic old Greek sense, where you are locked in each other's argument. There is a lot of bodily movement back and forth with grunts, "Hmms" or "mmms" or a laugh or funny comment. A lot of intense attention and interaction.

He is a vigorous debater. None of this saying "Oh, that's very interesting." In his rigorous academic Tibetan Buddhist upbringing and training, he studied debate for 25 years. So he does not roll over and play dead. He is right back at you with lots of hard questions. It can be exhausting. But it was also gratifying to see how he could hold his own in dialogues sitting across from six professors of science and philosophy, some of them quite famous, from Harvard and Princeton. Everyone felt how impressive and sophisticated Buddhist philosophy is, and how under-appreciated it is in the West among scientists and philosophers.

Threshold: *Did you get any sense of personal contact with him?*

Arthur Zajonc: Yes. He pays attention to people in an amazing way. When he comes into or leaves the room, he greets everyone individually, and he notices if someone is missing. His sense of people is very natural and gracious, and, at the same

time, you sense the strength of his enormous discipline and self-control. It is a strange combination of being completely unsentimental and yet compassionate at the same time.

Threshold: *The most obvious question is—where does his interest in physics come from?*

Arthur Zajonc: It was there already as a child. He was the only one in his community with an erector set, and later, with an automobile. He still takes apart watches to relax, and he loves gadgets. Even in a civilization where there were no gadgets, he was looking for another world of experience which existed somewhere at a distance. Traditional Tibetan Buddhists, in my experience, have no particular interest in Western science. The Dalai Lama is the exception, with a few others. The traditional monastic community had a perfect worldview, in their own thinking. It is part of his destiny to bring his people into relationship with the West. That is why he is occupying himself with Western science, and why he is gradually bringing it into the monasteries that he controls in India. He is including some neuroscience, physics, and modern psychology. That is why the conservatives of the Buddhist community are against him. They don't want it.

Threshold: *What do you mean "against him"?*

Arthur Zajonc: His compound where we visited him in Dharmasala is very heavily guarded by both Indian police and army and Tibetan police because of threats on his life, not only from the Chinese, as one would expect, but from dissidents within the Tibetan Buddhist community who feel he has gone too far in his openness to the West. In fact, not long before we arrived, two of his personal teachers were assassinated—stabbed to death. We were searched meticulously, every pen, every book.

Threshold: *I still need a clearer idea of the link between His Holiness' interest in gadgets and his interest in quantum physics. Let me hazard a guess. Looking in my old copy of Fritjof Capra's*

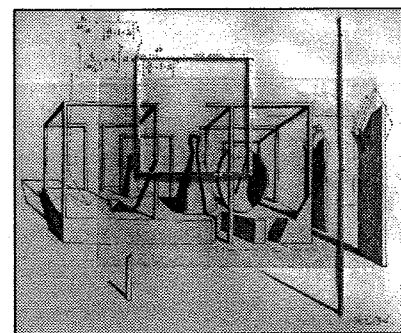
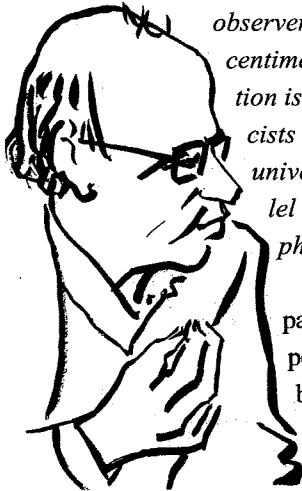


Illustration: "Fundamental Cosmological Parameters," Michael Burke.

The Tao of Physics, I found the John Wheeler quotation: "Nothing is more important about the quantum principle than this, that it destroys the concept of the world as 'sitting out there,' with the observer safely separated from it by a 20-centimeter slab of plate glass." So my question is: have at least some quantum physicists accepted that knowing exists in the universe, and did you cover some parallel understanding in Buddhist philosophy in your conversations.



Arthur Zajonc: It was very much a part of them. Heisenberg and Wheeler pointed to a kind of participation we now believe takes place between the observer or knower and the observed or known—and yes, many scientists now accept a qualified realism, rather than a robust realism, as was the case in the past. That qualified realism accepts that phenomena arise, in a sense, through interaction between the knower and the known.

That is also part of Buddhist philosophy. As students, Buddhists first learn a realist position, what Rudolf Steiner calls the *naïve realist* viewpoint, which says that the world is out there and you find out about it basically through straightforward inquiry. Once they master that, students are taught a *mind-only* viewpoint similar to the idealism of Bishop Berkeley, which thoroughly undermines the realist position and leads to a kind of dismal nihilism and relativism of a sort that we are familiar with. But the Dalai Lama is of a centrist or Middle Way School, called Madhyamika, which holds that there are two levels of existence. It says that if you analyze things or the self or the mind as to their ultimate existence or nature, then you find that they are empty in an ultimate sense. But, as opposed to slipping into nihilism, they say that this form of analysis should not be understood to undermine the normal phenomenological domain of experience, which is given to us in consciousness and through scientific inquiry or Buddhist contemplative inquiry.

Steiner also is very hard on the classical Kantian notion that behind our sense experience there is a

world out there unlike the world we see, but whose nature we can infer with our experiments. He calls that view *metaphysical realism* and says it has to be given up. That is very much what Madhyamika Buddhism does. It says, if you perform an ultimate analysis, you find there is no ground underneath producing the phenomenal world. It *doesn't* mean that you can't extend the phenomenal world through contemplative practice or scientific methods, but it means that you will never get to an ultimate *thing in itself* that exists in the absence of participation by the knower—because there is none.

These sorts of issues did weave through our talks, especially through his contributions. But where scientists are led to their conclusions by doing experiments in the physics lab, the Buddhists (and Steiner) take these similar positions from a strong philosophical analysis of cognition, consciousness and experience.

Threshold: *What other parallels between Buddhism and quantum physics?*

Arthur Zajonc: Einstein spoke of space-time, and there are physicists who are looking at a quantum space-time, bringing together quantum mechanics and relativity into a quantum space-time. The Dalai Lama is quite interested in this, because in Buddhism there is a notion of space-time particles that refers to the smallest or quickest phenomenological entities. Evidently it includes the notion that time is not a continuous flow, but is broken up into experiential moments. Through analysis of contemplative practice and careful awareness of consciousness, they believe that, at a very deep level, something like such particles may underlie existence or be part of existence.

Their notion is that, no matter how far you go back in time, you will always find an antecedent, even if that antecedent may be an unmanifested state of latency or space-time particles. They would argue for an oscillating universe mode or multiple universes, with other universes with other sentient beings. And these may be in different stages of development. He

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was quite interested to know if that was consistent with contemporary Western cosmology.

Threshold: *How did he take to some of the more radical New Physics notions?*

Arthur Zajonc: The idea of objective randomness, that not everything is caused, was quite unsettling to him. For example, regarding radioactive decay, quantum physics says we can make predictions about its rate in general, but *not* about whether a particular atomic nucleus will decay at a particular moment—not from lack of knowledge, but because of the nature of the world. He was reluctant to accept that, although he made room for it, provisionally accepting the possibility that it might turn out to be the case.

Non-locality is another example. In quantum mechanics, our conventional notions of objects in one place with well-defined attributes often break down. This is very problematic for our consciousness, but was less so for his. An essential part of quantum mechanics is that you have an *entangled* state in which the computer and the lamp on my desk interact and have a collective identity. Because of this interaction, new kinds of effects or phenomena arise in the laboratory, revealing an emerging reality that is holistic. New kinds of computers and technologies, which capitalize on that new domain of holistic reality, are being developed. Within the Buddhist framework, this is still conventional existence, another phenomenal domain. From the anthroposophical perspective, I think it would be something like the *etheric* realm, the world of formative forces, or a reflection of it in some way. The phenomena have a different kind of identity; they don't work within the old paradigm.

Threshold: *Help me out a bit, if you can.*

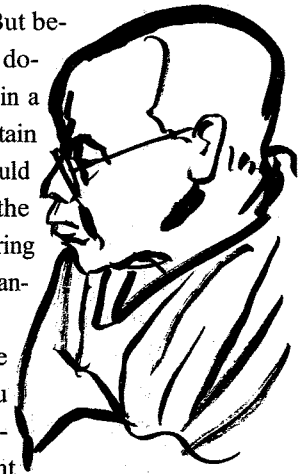
Arthur Zajonc: These new quantum objects can only sustain their existence if you don't ask the old questions. If I ask—where is that lamp or particle—then it will pop up somewhere. That is called *collapse of the wave function*. So you suspend the old questions and stick to the ones that preserve the ambiguity. You have to ask questions holistically. That's how you do quantum computation. You prepare a holistic state and you step it through a series of

transformations, which metamorphose, to a new state. When you collapse it at the end, it has given you the result. You sustain a holism and let it evolve for a time, but as in parliamentary procedure, at a certain point you call the question. But because you have brought it out of its domain into yours, it can only come out in a statistical or probabilistic form. Certain types of mathematical questions that would take all the conventional computers in the world billions of year to solve, like factoring large numbers, these can be solved by quantum computers in seconds.

This is interesting to me because it shows that even technologically you can implement a form of "knowing" predicated on ambiguities that cuts right across the old form of knowing, but with enormous power. I personally think that that is the same kind of thing which is being asked of human beings in contemplative modalities of cognition. You come to a domain of phenomena through meditation where, if you bring the old questions, then you collapse the meditation prematurely into a particular; whereas if you can find in yourself the place of holistic questioning—an ability to sustain the answers holistically without collapsing,—then you enter into what Steiner called imaginative cognition. That cognition is basically holistic, as opposed to isolated and fragmented. So this is a *threshold*, your magazine name, which quantum physics is moving towards.

Threshold: *The questions raised by non-locality and such—as long as they remain questions without a moral aspect to them—won't really shake the world—don't you agree? Is there some milestone in knowledge potentially around the corner that you can imagine that would change that—bring science and spirit back into more palpable relationship?*

Arthur Zajonc: That is a good point. Quantum computers can be used to solve bombing projects just like any other computer. While, at least in physics, but increasingly in biology and other sciences, I think we have discovered a new and



more subtle domain where the world is organized differently. This does not really solve the deep problem, which is the joining of science to a moral and spiritual perspective on life. I pressed this in my conversation with the Dalai Lama and tried to look at the relationship between experience and these more theoretical notions in contemporary physics.

There are a few things you can say. In the Buddhist framework, the most authentic category of valid cognition is direct experience—you just see it and get it; you are in the presence of it. For a conventional scientist that is already subversive, because it is subjective. Direct experience involves the subject; it involves me, the knower. For Buddhist philosophers this is the highest form of knowing, and it can be contemplative or sensory in character. They also allow a secondary category of valid inference (I infer the existence of sanitation men because the trash has been taken), and a tertiary one of authority that ranges from dogma to provisional acceptance of statements by revered individuals.

I asked him if you can convert all of these secondary and tertiary forms of cognition back to direct cognition, no matter how extraordinary the inference might be. He laughed and said, 'Yes, but it may require long preparation and special capacities, but in the end, everything is open to direct experience.'

Now, in my view, that is important if you are trying to create a connection to the moral. The Buddhists say that Buddha had the capacity to see into the past and future karma of all beings, which means that there is a realm of moral perception open to direct experience, to moral insight. Of course, you can also take moral precepts, like the Ten Commandments, to be valid based on either inference or authority. And it may be difficult for you to have the same kind of perceptions as a highly developed adept. So I think that the shift that is required to go from the new thinking of quantum mechanics to a holistic science that is both moral and knowledgeable—one where values and facts are brought together—will require a re-connection to experience, the full phenomenological style of inquiry. By that I mean, not just connecting outward to sensory phe-

nomena, but also inwardly to the contemplative domain—the domain of phenomena that opens through contemplative forms of attention. It implies what Goethe called *perceptive judgment*.

Threshold: *Do you see an exchange of gifts here? Something the East has to offer the West and vice versa?*

Arthur Zajonc: You might say that. I don't think the Buddhists will make a substantial contribution to physics, but they could make one to the philosophy of physics or, more likely, original contributions to the mind

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sciences, such as consciousness studies or psychology. They have explored the mind through the efforts of many thousands of individuals. Over several centuries, about thirty percent of the best and the brightest of the male population have been in monasteries. It was a huge commitment, not only to meditation on a hillside, you might say, but towards scholarship. With extraordinary discipline and focus they directed their attention towards the interior, towards those aspects of our own nature—the psychological aspects—which cause suffering. And they developed a remarkable subtlety of analysis with regard to afflictive emotions, kinds of cognition, and forms of discourse and reason.

Threshold: *You bring up suffering. What do we have to learn about from the Tibetan Buddhist attitude toward it?*

Arthur Zajonc: In their view, suffering is due to delusion. And delusion results in attachments to aspects of the world, which from a certain standpoint are not really there and ultimately are not real. If one can get clear about those delusions, one can have insight and knowledge about the nature of the world, about one's relationship to it and one's own nature. If that is true, then that knowledge is part of the path to enlightenment, and knowing is part of the spiritual path. In some branches of Buddhism you neglect that dimension, but in Tibetan Buddhism you have it in a very powerful form.

Threshold: *Any role for faith?*



Arthur Zajonc: There is no Deity in Buddhism. The Dalai Lama gave credence to the notion that Buddhism is more a philosophy than a religion. It emphasizes open inquiry and is therefore closer to a philosophy of life or to a science than to a religion in the western sense. But Buddhist philosophy has a different motivation than western philosophy. There is no idle curiosity or desire for knowledge to gain power or to manipulate. It is really about the perfectibility of the human being and the release from suffering for oneself and all sentient beings.

Threshold: *Quite different from us.*

Arthur Zajonc: Yes. Like Steiner, the Dalai Lama asserts that you can have a knowledge, a science of the spirit. For almost everyone in the Western world, that's almost a heresy. Spiritual and moral matters are given to faith traditions, and faith is *not* science. There is a very strong division between these two forms of engaging the world.

Threshold: *The psychical is either banished or explained away as a trivial byproduct of the physical. What is the Dalai Lama getting from the West?*

Arthur Zajonc: From an anthroposophic viewpoint, I would say that traditional Tibetan Buddhist culture represents essentially the intellectual soul period [747 BC – 1413 AD]. They are *amazing* and brilliant in their argumentation, debate and dialogue. It is like being with Aquinas—for a scientist or academician, it is heaven. But, with the exception of the Dalai Lama, the monastic scholars often seem locked into that period.

He, on the other hand, is a truly modern individuality who respects freedom, who is bringing his own community out of worshipping him as a form of deity to democracy, to valuing the rights of women and secular education. And I see him as trying to do this synthesis in himself. Rudolf Steiner talked about a spiritual law stating that something must first be accomplished by the most advanced soul within a community. Then it becomes possible, a resource for everyone—the 100th monkey phenomenon.

I experience him as going through that. For 25 years, with enormous patience, he has been bringing ideas of the West into relationship with his own

complete and consummate understanding and commitment to Buddhism. He is looking for a true synthesis, a kind of spiritual science that can fully honor both. I think he feels that, if he can do it in himself, if he can put his own thinking and his own being into that nexus, then that will be a model and gift for his people.

That is a consciousness soul [since 1413 AD] task, bringing that community into the consciousness soul without losing the heritage they have. It's not unlike what Steiner had to do, taking the whole esoteric tradition of the West and bringing it into relationship with the dragon of natural science. A similar kind of task.

Threshold: *A final question. Did His Holiness speak at all about the Chinese and the plight of his own people? About how destiny seems to have pried them out of their mountain retreat towards the modern world?*

Arthur Zajonc: Yes. He is preeminently aware that change is necessary, but sees that it can come about in different ways. It does not have to happen through torturing Tibetan nuns. That is bestiality and brutality, pure and simple. In a reminiscence that, I think, spoke tellingly about *his* task, he spoke once of his memories of the period just preceding his exile in 1959 when the Chinese army was attacking Tibetans and razing their temples using the rhetoric of "liberation." He said, "All this that they are trying to bring about is something I would have done anyway, but in a different manner."

