



Why Can't Wishes Be Scientific?

By JOHN BICKART, Ph.D. | **Science Education and Spiritual Transformation** / Chapter 8: Fire and Desire

Wishes in a Science Class?

Why can't things like wishes be included in a science class? Of course, I know the quick answer, "Wishes are not physical. You cannot measure them in the natural world." But, on the other hand, wouldn't it be great if science could include the non-physical? There are so many great, mysterious, and humanly important topics it



could entertain! Imagine going to school and talking about - or *actually studying* - topics like

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- the science of what happens when you have a *deep yearning* for something, or
- the effects of many people having the same *conscious intention*, or
- the relationship between *fire and desire*.

School would instantly become much more fun, and perhaps more relevant to emotional and social problems. I know, I know, we talk about such things in counseling and social studies. But, the study of scientific, physical results from the world of non-physical causes could also be a part of a science class; perhaps it should even be the social responsibility of a science class. After all, are we robots?

Don't we live and breathe, thinking all of the time about our moods and desires? Aren't the main things on our minds often full of feelings? Well then, let's study and learn how to handle them!

The Ancient Importance of Fire

Did I sell the idea of wishes in a science class? If so, then come down the road a little farther with me. You know, the ancients spoke of things like **fire** in both physical and spiritual terms. They spoke of fire as a living thing. They attributed a much more causal role of what we experience to things like fire - things that could not always be measured in physical terms. Pierre Teilhard de Chardin is credited with saying that "We are not human beings having a spiritual experience. We are spiritual beings having a human experience."

While teaching in Shanghai, China, I took a weekend excursion to the Huangshan (yellow mountain). This celebrated mountain is known for its incredibly beautiful cloud covered, granite peaks and ravines, as well as the more than 60,000 large granite steps that have been carved out of the mountain. It is also the home of the huangshan pine, that is frequently depicted in famous Chinese paintings. The craggiest huangshan pines are most revered. The paintings often show them jutting out like flames among swirling clouds on the steep rocky slopes, almost as if the whole mountain were on fire. You have probably seen paintings of Huangshan mountain and these pines in a Chinese restaurant.

It was in the Huangshan region, on my way back to the Shanghai International Studies University, that I visited a museum. There I fell in love with and then purchased a most exquisite woodcarving of Quanyin. Quanyin is a

revered bodhisatva (one who is on the path of awakening), or sometimes, "The Goddess of Compassion". She is purported to have descended from India, as an avatar (an earthly body) of the androgenous Avalokiteśvara, the bodhisatva who embodies the compassion of all Buddhas.

Upon careful inspection of the woodcarving of Quanyin, you can find how the ancients respected, and quite frankly, were obsessed with fire. Much like the Chinese paintings of the Huangshan mountain, they allow shapes to suggest fire and flame. Above her head are carved the spiritual flames of inspiration. Below her is the dragon, signifying that she is even more important than the emperor. The emperor-dragon has flame shapes protruding from his neck. The landscape of the carving in which Quanyin is set is complete with clouds, water, plants and rocks. Remarkably, the clouds have flame-like points as does the water. The plants flare out like fire and even the rocks jut upward as if their flame forms were frozen for posterity. If I am lecturing near my home, I bring this wonderful carving of Quanyin with me in person, to emphasize how the ancients seem to be saying, "Fire is a causative of the physical world."

The Relationship Between Fire and Desire

So, how about the study of fire's physical and non-physical attributes? If this new science class we are imagining allows for non-physical entities to be studied in their effect on the physical world, then let's study fire in all its forms. Let's blend the science of fire with the inspirational ideas that fire engenders in so many cultures.

I know that there is a rule that science cannot include the supernatural. And I guess things like wishes or desires or

prayers are supernatural. But isn't science a place where truth matters? And doesn't the scientific method consist of showing things that truly happen in repeated demonstrations? And, further, isn't science supposed to show what causes what? Well, what if wishes got in there as one of the causes? What if we were to use the scientific method to experiment with things like wishes, intentions, observations, or consciousness as a possible causal agent in the physical world? Science has, for more than a century, begun to investigate such possibilities in relativity and quantum physics (Einstein, 1920/2010, 1950/2011; Schrodinger, 1944/1992). Neils Bohr (author of the atom and the concept of complementarity), in a discussion with Einstein, called for a new inclusive version of science.

"In fact, it is only the mutual exclusion of any two experimental procedures, permitting the unambiguous definition of complementary physical quantities, which provides room for new physical laws, the coexistence of which might at first sight appear irreconcilable with the basic principles of science. It is just this entirely new situation as regards the description of physical phenomena that the notion of complementarity aims at characterizing." (Bohr, 1949)

This exciting blend might encourage students to push the boundaries of science to new, exciting, and hopeful areas. So, I put it to you. Could it be that events that start in the non-physical world ... cause things in the physical world?

Biology, Chemistry, Physics, and Fire

When people make a wish or a prayer, they sometimes light a candle. Why? Maybe fire is something that touches

us in a deep way. Maybe we feel, somewhere deep inside of us, that the lit candle can carry a wish.

The biology and chemistry and physics of fire is quite well known. Fire is a chemical reaction of combustion where a substance combines with oxygen. If this reaction occurs quickly enough it produces light, heat, and flame. But do we really know what fire is? Many children believe fire is ALIVE. Did you when you were young? After all, a candle flame moves - in a way it grows - and it breathes just like us, taking in oxygen and breathing out carbon dioxide. But most adults dismiss the thought that fire could be alive as a childish notion. Any research into the characteristics of what science currently considers alive will reveal that a living entity must have cell structure and it must reproduce. Therefore, it will conclude that fire cannot be alive. But does this completely wipe out the notion that fire is special and often accompanies a feeling of reverence and hope?

Ancients and children have believed that many parts of nature are alive. Could it be that they knew something that we have lost the ability to know? For instance, could your childhood have been in some form of communication with the consciousness of entities that we consider inert or non-living?

My Story

I loved and questioned these ideas so much that I often offered provocative notions like these to my students for over half a century as a science teacher. The result was keen student interest and increases in critical observations and thinking. I often said, "How do you know

that the fire and rocks are *not* alive?" My students would research definitions of life and then delineate characteristics of inorganic matter. Then they would ask who decided that the lines between *natural* and *supernatural* should be drawn. The ensuing discussions were always lively and fruitful.

More importantly, my provoking questions put my students in touch with the way they looked at the world when they were children. This is what I am trying to do to you. I believe this always yields fruit! It not only helps you to get in touch with your early idealism, it also opens your view of science. We should not settle on narrower ideas because it makes them easy to explain. Broadening ideas is usually better.

I was so in love with these ideas that I went to get a Ph.D. as I was turning 60, so that I could study **the ancient and the child** and compare their views. I also studied how and why the history of scientific investigation has seen a slow movement away from them until a very recent shift. My conclusion is not that we outgrew childhood, but instead, I think we simply LOST abilities to see things we used to see - and we now wish to regain this early wisdom. Here is an excerpt from my Ph.D. dissertation, where I studied Piaget's excellent body of child interviews.

"Moreover, we shall see in studying child artificialism that to a child almost all bodies are born and grow; the sun and moon "are born and grow (poussent)," mountains, stones, iron "grow" etc. The facts clearly prove that the origin and growth of things cannot serve the child as criteria for distinguishing the living from the inert. From this point of view there is perfect continuity between all natural objects." (Piaget, 1929/2007, p. 229)

I re-analyzed many of Piaget's mid-1900s interviews, highlighting that children, like many ancients, may know more than we formerly thought. I cautioned education not to be dismissive of early childhood. I urged support for what comes 'out of the mouths of babes'.

"This is treating the child with deficit model thinking: Piaget has only noticed how the child did not see the logical answer. Re-analysis of this child interview would say that the child believes both paradoxical ideas, because to the child, things can be both inert *and* alive in some sense that does not fit some adults' common sense positivist definition of life." (Bickart, 2013, p. 57)

So, maybe fire is alive and maybe it isn't. Anyway, it's very cool (or hot).

I'll leave you with this thought ...

Perhaps wishes DO cause physical changes. Since fire exemplifies - among other things - the transfer of a solid candle or solid wood, to a vaporous state, perhaps it represents our desire to get back to the spiritual.

So, to further science while building our human character, perhaps we could investigate just how ideas and intentions might become physical realities. At the very least that could be fun - and perhaps even helpful! If the scientific method were to include wishes, intentions and prayers, perhaps we could conduct experiments with large numbers of us to see if we can repeatedly cause some results. What do you think might happen if enough of us

wish - desire - believe in the cliché hope of peace on earth?

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