

What can we know?

Knowledge between science and spirituality.

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Let me begin by expressing my thanks to Wilfried Nelles for inviting me to this Congress. And also express my amazement that so many of you got up in time for an 8:30 am lecture!

I am here not as a constellation worker, but as a fellow traveler in a much broader sense. I think that my experiences will be relevant to your work. As a quantum physicist with long-standing philosophical interests, I have found myself situated between science on the one side and spirituality on the other. The “Spannungsfeld” or field between these two has been filled with controversy and misunderstanding. In 1925 the British-American philosopher Alfred North Whitehead wrote:

When we consider what religion is for mankind, and what science is, it is no exaggeration to say that the future course of history depends upon the decision of this generation as to the relations between them. (Atlantic Monthly)

Nor has the tension or importance faded in the 80 years since Whitehead wrote these words. One need only read the recent best-selling books by biologists Richard Dawkins, *The God Delusion* or Francis Collins’s personal testimony, *The Language of God*, to see how passionate and unproductive the debate remains. There is hardly any topic that is more important for us today than finding the right and fruitful relationship between science and spirituality.

The traditional approach has been more like a treaty negotiation between warring countries. It has been variously called Neo-orthodoxy by the Protestant theologian Karl Barth, and NOMA (Non-overlapping magisteria) by Harvard biologist Stephen Jay Gould. In this arrangement, the world is divided in a tidy way between the domains of science and religion. Science uses reason and experiment to unravel nature’s mysteries and discover her laws. Religion, by contrast, adopts the attitude of faith towards that which has been revealed to ancient prophets and evangelists. Morality belongs to religion, technology to science. But is this the way the world is actually arranged. When the Goettingen mathematician Gunther Howe and the physicist Carl Friedrich von Weizsäcker sought to work with Karl Barth on the moral implications of atomic weapons, Barth refused to join the conversation. What, he asked, could scientists have to say about the moral dimensions of the terrible weapons they had produced? President Truman likewise had no patience with the moral scruples of the US atomic scientists who advocated against dropping the bomb on Japan after the surrender of Germany. As Colonel Groves said, the devastation of Hiroshima and Nagasaki was not really intended to end the war but to warn Russia! That two cities were destroyed and 100,000 killed was collateral damage to the message of American military superiority in 1945.

Can we really so neatly divide ourselves and our lives between science and the spiritual or moral? Is not every thought and action already imbued with spirit and dense with moral consequences? From the outside, constellation work seems to be the mere arrangement of people according to functional

relationships. But when viewed from the inside they reveal a universe of moral and spiritual realities. If we reject the division of science and spirit as an oversimplification and anachronism, what new type of relationship between science and spirituality can we imagine and develop?

The Turn Toward Cognitively-oriented Spirituality

Around 1900 the founder of American psychology William James was calling for a “radical empiricism” and sought to extend the reach of empiricism to include the domain of mysticism and spiritual philosophy. In 1909, near the end of his life, he wrote,

"Let empiricism once become associated with religion, as hitherto, through some strange misunderstanding, it has been associated with irreligion, and I believe that a new era of religion as well as of philosophy will be ready to begin" (*A Pluralistic Universe*).

William James was calling for what I have come to term a “**cognitively-oriented spirituality**”, that is to say, a spirituality that is not based entirely on faith but that also seeks to extend human experience and knowing to include the soul-spiritual domains as well. The transcendentalist philosopher Ralph Waldo Emerson called for this in his address entitled Nature.

The foregoing generations beheld God and nature face to face; we, through their eyes. Why should not we also enjoy an original relation to the universe? Why should not we have a poetry and philosophy of insight and not of tradition, and a religion by revelation to us, and not the history of theirs? [Emerson, *Nature*, 1836]

Recall too, while Emerson and James were seeking pathways to the spirit, in Europe you had Goethe’s science which he called a “delicate empiricism” [zarte Empirie], and Rudolf Steiner whose personal explorations of the soul and spirit he sought ceaselessly to unite with science in the spirit of Goethe.

In our own time other scientists and I have been meeting with the Dalai Lama and other Buddhist contemplatives to explore the intersection of Western physics and cognitive science with Buddhist philosophy and meditative experience. Concerning this important work the Dalai Lama has remarked

“Not so long ago many people viewed science’s objective knowledge and the subjective understanding of [Buddhist] inner science as mutually exclusive. But a combination of these two can provide the complete conditions for obtaining real human happiness.”

I am convinced that the Dalai Lama is right when he points to the fruits of combining these two, namely genuine human happiness. The deep sources of suffering arise from delusions which lead to attachments. Genuine insight can offer real relief in as much as they cut through the delusions in which we are bound. This is something known to all of you here at the Constellation Congress. True insight carries with it the possibility of relief from suffering.

But what is the nature and character of the new relationship between science and spirituality that is called for by the Dalai Lama and which is suited to the 21st century? I believe that it will build on the pioneering work of such giants as Emerson, James, Goethe and Steiner, but will increasingly also include the new understandings we have of ourselves and our universe at the hand of cognitive science and the new physics. When combined with the recent work of individuals like Otto Scharmer and Peter Senge, then the proper joining of science and spirituality will lead to dramatic social changes suited to the challenges of the coming decades.

From an Epistemology of Violence to an Epistemology of Love

The American educator and author Parker Palmer has drawn attention to the deep relationship between our ways of knowing and our ways of living, saying that “every way of knowing becomes a way of living, and every epistemology becomes an ethic.” The ways of knowing of science have been amazingly successful and have brought much of real value into the world. But we must also recognize the imbalance and the dangers of this single way of knowing. Parker Palmer argues persuasively that, “We are driven to unethical acts by an epistemology that has fundamentally deformed our relation to each other and our relation to the world.” And moreover that science’s “mythology of objectivism is more about control over the world, or over each other, more a mythology of power than a real epistemology that reflects how real knowing proceeds.”

Indeed, how does *real* knowing proceed? Does scientific discovery itself not depend on a flash of insight, what exactly did Newton see when he saw the motion of the falling apple to be identical with the motions of the moon overhead? And when a geometrical proof is judged true, on what inner faculty of judgment are we relying? When you experience an insight in constellation work, are you not also relying on human capacities that enable you to see within and through the phenomena to social realities? If our conventional epistemology is, as Parker Palmer says more about power than real knowing, how can we move from an epistemology of violence to an epistemology of love? In the remainder of my talk and in my workshop I would like to explore with you the key elements of such an epistemology of love and its associated method.

I would like to begin with two quotations from Goethe’s *Maximen und Reflexionen*, first in German and then in English.

“Es gibt eine zarte Empirie, die sich mit dem Gegenstand innigst identisch macht und dadurch zur eigentlichen Theorie wird. Diese Steigerung des geistigen Vermögens aber gehört einer hoch gebildeten Zeit an.”

“Jeder neue Gegenstand, wohl beschaut, schließt ein neues Organ in uns auf.”

“There is a delicate empiricism that makes itself utterly identical with the object, thereby becoming true theory. But this enhancement of our mental powers belongs to a highly evolved age.”

“Every new object, well-contemplated, creates an organ of perception in us.”

These lines capture what for me has gradually emerged as eight essential characteristics of an epistemology of love.

- **Respect** – When approaching the object of our contemplative attention, we do so with respect and restraint. Concerning the relationship to the beloved, Rilke insisted that “love consists in this, that two solitudes protect and border and salute each other” In German, “...der Liebe, die darin besteht, daß zwei Einsamkeiten einander schützen, grenzen und grüßen.” Likewise, I feel that the first stage is to respect the integrity of the other, to stand guard over its nature, over its solitude, whether the *other* is a poem, a novel, a phenomenon of nature, or the people standing before you. We need to allow them to speak their truth without our projection or correction.
- **Gentleness** – An epistemology of love is gentle or delicate. This is Goethe’s “gentle empiricism (*zarte Empirie*)”. If we wish to approach the object of our attention without distorting it, then we must be gentle. By contrast, the empiricism of Francis Bacon spoke of extracting nature’s secrets under extreme conditions, of putting her to the rack.
- **Intimacy** – Conventional science distances itself from nature and, to use Erwin Schrödinger’s term, *objectifies* nature. Science disengages itself from phenomena for the sake of objectivity. An epistemology of love, by contrast, approaches the phenomenon, delicately and respectfully, but it does nonetheless seek to become intimate with that to which it attends. One can still retain clarity and balanced judgment close-up, if we remember to exercise restraint and gentleness.
- **Vulnerability** – In order to know, we must open ourselves to the other. In order to move with and be influenced, we must be confident enough to be vulnerable, secure enough to resign ourselves to the course of things. A dominating arrogance will not serve. We must learn to be comfortable with *not* knowing, with ambiguity and uncertainty. Only from what may appear to be weakness and ignorance can the new and unknown arise.
- **Participation** – Gentle and vulnerable intimacy leads to participation by the “delicate empiricist” in the unfolding phenomenon before one. Outer characteristics invite us to go deeper. We move and feel with the natural phenomenon, text, painting, or persons before us; living out of ourselves and into the others. Respectfully and delicately, we join with the others, while maintaining full awareness and clarity of mind. In other words, an epistemology of love is experientially centered in the other, not in ourselves. Our usual preoccupations, fears, and cravings work against authentic participation.
- **Transformation** – The last two characteristics, participation and vulnerability, lead to a patterning of ourselves on the other. What was outside us is now internalized. Inwardly we assume the shape, dynamic,

and meaning of the contemplative object. We are, in a word, transformed by the intimate experience in accord with the object of our contemplation.

- **Bildung – Education as formation.** The individual develops, or we could say is sculpted through such practice. In German you have both the words *Erziehung* and *Bildung* for education. The latter stems from the root *bilden* meaning “to form.” The lineage of education as formation dates back at least as far as the Greeks. In his book *What is Ancient Philosophy?*, the French philosopher Pierre Hadot writes of the ancient philosopher, “the goal was to develop a *habitus*, or new capacity to judge or criticize, and to transform—that is, to change people’s way of living and seeing the world”. Simplicius asked, “What place shall the philosopher occupy in the city? That of a sculptor of men”. Or as Merleau-Ponty put it, we need to relearn how to see the world. Remember, Goethe declared that, “every object well-contemplated creates an organ of perception in us”.
- **Insight** – The ultimate result of engagement as outlined here is organ formation, which leads to insight born of an intimate participation in the course of things. In Buddhist epistemology this was called “direct perception,” among the Greeks it was called *episteme*, and was contrasted to inferential reasoning or *dianoia*. Knowing of this type is experienced as a kind of seeing, beholding, or direct apprehension, rather than as intellectual reasoning to a result.

Our ability to reason from data is highly developed, but the other pole of human cognition, Imagination-Insight, is underdeveloped.

- *Dianoia, valid inference, Verstand, ratiocination, ...*
 - *Well-developed*
- *Episteme, direct perception, Vernunft, insight, imagination*
 - *Underdeveloped*

I have been much helped by remembering that the Greek word for theory, *theoria*, meant “to behold”. Goethe knew this and meant exactly this when speaking of “becoming true theory” in the previous quotation. And Goethe is again reminding us that theory is already before us in the phenomena if we only can learn to see them fully.

“The highest thing would be to comprehend that everything factual is already theory. The blue of the heavens reveals to us the fundamental law of chromatics. One should only not see anything further behind the phenomena: they themselves are the theory.”

“Das Höchste wäre, zu begreifen, dass alles Faktische schon Theorie ist. Die Bläue des Himmels offenbart uns das Grundgesetz der Chromatik. Man suche nur nichts hinter den Phänomenen: Sie selbst sind die Lehre.”

The connection to the spiritual

We might still ask, in what ways does an epistemology of love connect us to the spiritual? One important part of the answer for me is the connection of it with the contemplative traditions of all cultures, ancient and modern. Whether one is considering the practices of Buddhism or of Steiner's Anthroposophy, they all seek to follow the eight-fold path of the epistemology of love.

They all begin by committing themselves to an ethical foundation (sila) through the cultivation of humility and reverence. Second, they recognize that when we first sit on the cushion, or place ourselves before a phenomenon, we are easily distracted by inner and outer factors. We must first train to stabilize the mind and balance the heart. Think of this as soul care or mental hygiene. But once we have accomplished this in some small measure, we can bring our highest humanity to the phenomena or people before us in a single-minded and focused manner. We give them our full and patient attention. But if we only concentrate on them we will come to nothing new. As the French philosopher Simone Weil writes in *Gravity and Grace*, "Grace fills empty spaces, and it can only enter where there is a void to receive it... To love truth means to endure the Void." And so we must also practice letting go in order to "let come" as Francisco Varela expressed it.

I call this a "cognitive breathing" process and diagram it with a lemniscate or figure-eight. The phenomenon or object of contemplation is the object of our full undivided attention. We unite ourselves with it fully, participate it, allow it to shape and mold us. Having fully given ourselves into the phenomenon or situation, we release and open our attention as fully as possible. In the Void, as Simone Weil called it, we may (or may not) discover an emerging grace or insight.

There still remains the essential and difficult matter of integration of insight into life. What does one say, how does one act, in order for what seems to be important may take root in life? This requires social tact and sensitivity, the ethical foundations with which we began need to endure to the close. And as with all contemplative traditions one ends with a selfless expression of gratitude and the dedication of one's work to others.

I consider this method to be a form of inquiry or research and call it now "contemplative inquiry." Through it we are strengthening and nurturing those processes of "Bildung" or formation that will shape in us the organs needed for insight. Having "contemplated well" [wohl beschaut], an organ opens in us, as Goethe put it. With it we can behold a new world. The French painter Cezanne new this when he wrote to his colleague Emil Bernard urging him to get to the heart of what was before him, to move beyond the surface.

"Get to the heart of what is before you... In order to make progress, there is only nature, and the eye is trained through contact with her. It becomes concentric through looking and working."

Like Goethe he recognized that through looking and working our eccentricities are transformed, the inner eye is trained and so becomes concentric to what is before us. We learn to see, experience truth as direct perception, not as object but as epiphany.

In my view, when we practice contemplative inquiry in this way, we are enacting an epistemology of love. Through this practice we are brought to the threshold between the world of the senses and the world of the spirit. We live then with our full humanity, partaking of both worlds, and in doing so can be of greater service of others. This is not only the place of knowing between science and spirit, but the place of the human being as well.

Thank you.