

Imagination Becomes an Organ of Perception

Conversation with Henri Bortoft
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Claus Otto Scharmer¹

Henri Bortoft is the author of *The Wholeness of Nature* (1996), the definitive monograph on Goethe's scientific method. Bortoft did his postgraduate research on the problem of wholeness in quantum physics with physicist David Bohm. When I met him in London, we began our conversation by talking about his views on quantum physics.

I. Two Interpretations Of Quantum Physics

Henri Bortoft: There is a problem with the interpretation of quantum Physics. I would call this problem the two level theory.

C.O. Scharmer: What's that?

Henri Bortoft: Two-level theory means that there are two levels: a microcosmic and a macrocosmic level. The macrocosmic level means that you look at the measurement. Everything comes down to a measurement.

I think that the two-level theory is misleading. Goethe made the distinction between the kind of thinking which begins with the finished product, the object, and the dynamical thinking, which looks, instead at the **coming-into-being** of that object. **The point of quantum physics is not to differentiate into two levels but to look at the coming-into-being of entities.**

People say that quantum physics and the micro-level are based on probability structures, but the mathematics tells you it isn't. The wave function is a complex number. But probability can only be a real number. The quantum physics is not a level of probability. Only when you come down to the measurement can you encounter the phenomenon of probability. The question is, what is before the measurement? Before the measurement is the coming into being of entities. This is a purely dynamical condition.

¹ The conversation with Henri Bortoft took place as part of a global interview project with 25 eminent thinkers on knowledge and leadership. The project was sponsored by McKinsey & Company and the Society for Organizational Learning (formerly the MIT Center for Organizational Learning). The interviews and the summary paper are accessible as free downloads from www.dialogonleadership.org.

COS: Say more.

Henri Bortoft: For example when you look at milk you don't call it cheese, although cheese might be the final stage. You call it milk. The probability part comes at the end. There is no probability in the quantum stage. The problem in quantum physics is that we are dealing with the assumption that "there is a world behind." What Nils Bohr did was new. Nils Bohr said that in quantum physics. There is nothing "behind."

I found that there is a relationship to Goethe. Goethe says, you should study the light as such. Quantum physics is to do exactly that. People might describe quantum physics differently. David Bohm advised me to study Nils Bohr very carefully, because interpretations of Bohr often differ significantly from what he actually said. The notion of wholeness in quantum physics was first introduced by Bohr. Bohr saw this as a limit to our thinking. He was influenced by Kirkegaard and had his pessimism. He said that you cannot include the invisible wholeness directly.

But Bohm thought differently. He thought that you can understand the wholeness. He used the hologram as a model. I found that very illuminating. It shows, the whole is present in its parts.

II. Searching For A Living Perception of Wholeness

In 1972 I came to know Goethe's work just by accident. A friend recommended that I read a book by Ernst Lehrs when we saw it in the window of a bookshop – in fact T.S. Eliot had spoken highly of it. It was called *Man on Matter*. One chapter dealt with Goethe's way of seeing plants. What I found interesting was his notion of the living perception of wholeness. It related to the famous dispute between Goethe and Schiller. Goethe's point was to develop a different kind of seeing, a **seeing that strives from the whole to the parts**. That was very close to Bohm's hologram.

Bohm differentiated between two ways of implicate order. One, the extrinsic, and two, the intrinsic. Goethe shows that there is an intrinsic order of the living plant and that the intrinsic order is accessible to the perception.

COS: But doesn't Goethe start with seeing the particular object?

Henri Bortoft: You start with an object, with the plant that is the finished product. But then comes the cultivation of perception.

COS: "Striving out from the whole to the part."

Henri Bortoft: That is exactly what is to be reached.

COS: What does it take to operate from that level?

III. Exact Sensorial Imagination

Henri Bortoft: We don't learn to make mental pictures intentionally anymore. But Goethe really enhanced his capacity for this kind of seeing. We don't have the idea of doing this anymore.

When I give a talk I realize that old people often don't understand this dimension of perception. But even young people are often unable to do this, at first it takes time. **You have to slow down. You see and you follow every detail in imagination. It is an exact sensorial imagination.** You create the image of what you see in your mind and you do that as precisely as possible. For example, you look at a leaf and you create the shape of the leaf as precisely as possible in your mind. You are moving around the shape of the leaf in your mind and you follow every detail. You are producing that shape. The whole phenomenon works in the mind. The phenomenon becomes an image in your mind. Obviously you cannot do that in five minutes. You cannot do that with the computer. You have to be active with your mind.

There is a huge resistance in ourselves against that. We are too busy. If you want to do this you have to slow down.

COS: You become one with the leaf.

Henri Bortoft: In a way, you do this with one leaf, with another leaf and so on. **Suddenly there is a movement, a dynamic movement, as you begin to see not the individual leaf but the dynamic movement. The plant is the dynamical movement. That is the reality...**

COS: You do it in the context of an unfolding whole.

Henri Bortoft: Yes, it is just seeing. It is exact sensorial imagination.

IV. Imagination Becomes An Organ Of Perception

Then, this **imagination becomes an organ of perception. You can develop it. I get the sense that when you do it you are moving in another space, an imaginal realm. It is a movement. And it seems more real than the outer world. I think it is more real because you are doing it. You are active.** Goethe had an enormous ability in that regard. The same is true for Picasso. The way he painted. When you look at his pictures you see the metamorphoses.

The fact that you are active is important to understand why it is so real. You have to make a certain effort. I think that it is harder for people today because of TV. Watching TV is something passive. Listening to a radio was more active. You needed imagination.

COS: Where is the locus of that space? Where are you when you are creating, co-creating this imagination? Is the space within ourselves or not? Probably one could not apply the distinction of inside vs. outside.

Henri Bortoft: You are right: you don't make that distinction. There is neither subject nor object. Not under that framework. **This seeing is prior to the subject-object separation. The focus is on working on the imagination.** The distinction between subject and object belongs on a more outward level, it belongs in the world of bodies. Subject and object in its own form is an outer distinction.

V. Inversion Of Container And Content

COS: In your book you talk about the inversion of container and content. Conventional science considers theory the container and facts the content of the phenomenon. For Goethe, in contrast, the sensory facts are the container that give rise to encountering the real phenomenon ("theory"). You write

"This transformation from an analytical to a holistic mode of consciousness brings with it a reversal between the container and the content. In the case of positivism, the theory is considered to be only the container for the facts. Now, if the theory, in Goethe's sense, is the real content of the phenomenon, then it can be said that in the moment of intuitive insight we are *seeing inside* the phenomenon."

Henri Bortoft: Yes, the unfolding of nature in itself is an epistemological reversal. The source of the idea is the phenomenon itself. That relates to Aristotle's idea of perception, which has been taken up in an astonishing way in our own time by Gadamer.

COS: When you practice the Goethean way of cognition would you go through a sequence where you experience this reversal?

Henri Bortoft: You see the metamorphosis. **The plant is a dynamical movement.** You see its leaves as traces that embody and manifest certain snapshots of this movement. That becomes so strong when you see it. That is the intuitive seeing from inside of the phenomenon. **The dynamic movement is the reality.**

COS: What you see are the traces that are left behind. Reality is the movement.

Henri Bortoft: I would call it dynamical.

VI. Archetypes And Self-difference

COS: What are the archetypes, what is the Urphänomen?

Henri Bortoft: Archetypes are difficult to describe. Archetypes are different modes of unity, of a dynamical unity. There is a multiplicity in the unity. We don't fragment the unity. The idea of self-difference is something that is very important. Self-difference means that something becomes different from itself. Instead of asking for what different things have in common, what is the same in them, **self-difference means that you look at what differences emerge from the unity.** For me, this idea was the fundamental motivation. The idea of self-difference is so important. Goethe was a carrier-wave for this. That is the new way of cognition.

The Greek god Proteus appeared in different forms. It is like the hologram. It is a unity, and yet it is different. You find that idea in a lot of mythologies, for example in native American or native African cultures.

VII. All Is Self-Manifestation

Look at hermeneutics: You read a text or watch a play or listen to music or look at a painting. It always appears differently, and yet it is not. It is the same and it is different. Gadamer calls the "same and different" **self-manifestation.** That is actually real, not a representation in the subjective noun.

COS: Did Gadamer coin the term self-manifestation?

Henri Bortoft: Yes, he did. I met Gadamer in 1987. He was very impressive. He was 87 by then and attended a conference in Oxford. He listened to every single presentation and from his questions you could see that he was not criticizing the presenters, but was listening to their intention. He was trying to help them in their way of self-manifestation. Gadamer talks about this in his books. I use the term now more and more. When you read his magnum opus "Truth and Method" you ask yourself why do I have to go through the whole history of German art and so on. **But then you realize what he is doing is to listen to the self manifestation of an evolving intent.**

Gadamer's first and last insight is that all being is self-manifestation and understanding is an event. It is an event of self-manifestation. That is exactly what Goethe is talking about.

In most cases we confuse unity with uniformity. Take Newton, for example. You have the apple that falls to the ground, the moon going around the earth. This way of perception makes everything look the same. While doing so we lose the flexibility. That is what is happening today in our societies. Computer technology plays an important role in that. I think that it is a terrifying situation when you lose the flexibility.

But I am talking about another kind of unity. An organic or living unity. There is a dynamic unity of self difference. I call that the counter-enlightenment. This

kind of unity removes a restriction in our cultural thinking. Organic diversity includes unity and organic unity includes diversity.

COS: Could you apply that to the social world?

Henri Bortoft: Stephen Toulmin's book *Cosmopolis* outlines how universalism came from the mathematical approach in science. In the 17th century you see a reaction to the Renaissance. Modern science is a result of that.

COS: Did you ever see an archetype?

VIII. Archetypes are Dynamic Forms

Henri Bortoft: I never saw one. Archetypes are dynamic forms. That is what an archetype is. An archetype is a movement which is here and yet becomes different – at the same time. It is the same in itself and it is different in itself. You have to go through the opposite sides to see that things are the same. You have to bring the opposite sides together, then you see the differences.

COS: What is the role of a participatory science in a world of evolving self-manifestation?

Henri Bortoft: I wish we had more time for contemplating this question. What do you think?

COS: One of the themes we are currently wrestling with is how to rethink our fundamental notion of cognition. From many experiences in our work in organizations and communities we have come to believe that there is another way and another source of knowing that can be accessed. This other way of knowing is related to heart intelligence rather than to head intelligence.

Henri Bortoft: Yes, this is absolutely right on. I believe that these are foreshadows of something that will come.

IX. Reflection: Two Types Of Wholeness

Bortoft distinguishes between two types of wholeness: the counterfeit and the authentic whole. Both notions of wholeness are based on different faculties of cognition. The counterfeit whole is based on the intellectual mind abstracting from concrete sensual perception. That is, the mind is **moving away from the concrete part** to get an overview. The result leads to an abstract and non-dynamic notion of the whole. In contrast, the authentic whole is based on a different cognitive capacity, the intuitive mind that is based on opening some higher organs of perception. The intuitive mind is **moving right into the concrete parts** in order to encounter the

whole. This encounter leads to perceiving the dynamic and living multiplicity of the whole.

The distinctions between the two types of whole (the *counterfeit* and the *authentic*) correspond to two cognitive capacities (the *intellectual* mind and the *intuitive* mind) and to two notions of generalization (the abstracting general versus the concretizing universal) which are at the heart of Bortoft's work.

Says Bortoft (1998, 285): "We cannot know the whole in the way in which we know things because we cannot recognize the whole as a thing. ... The whole would be outside its parts in the same way that each part is outside all the other parts. **But the whole comes into presence within its parts**, and we cannot encounter the whole in the same way that we encounter the parts. We should not think of the whole as if it were a thing."²

Bortoft claims that we can not know the whole in the way in which we know a thing, because the whole is not a thing. Thus, the challenge is to encounter the whole as it *comes to presence* in the parts. Says Bortoft (1998, 284):

"If the whole presences within its parts, then a part is a place for the presencing of the whole. ... a part is special and not accidental, since it must be such as to let the whole come into presence. This specialty of the part is particularly important because it shows us the way to the whole. It clearly indicates **that the way to the whole is into and through the parts**. It is not to be encountered by stepping back to take an overview, for it is not over and above the parts, as if it were some superior all-encompassing entity. The whole is to be encountered by stepping right into the parts. This is how we enter into the nesting of the whole, and thus move into the whole as we pass through the parts."³

This process of presencing the authentic whole leads to **an inversion of container and content**. For Bortoft and Goethe the sensory facts are the container that give rise to encountering the real phenomenon ("theory"). Bortoft (1996): "This transformation from an analytical to a holistic mode of consciousness brings with it a reversal between the container and the content. In the case of positivism, the theory is considered to be only the container for the facts. Now, if the theory, in Goethe's sense, is the real content of the phenomenon, then it can be said that in the moment of intuitive insight we are **seeing inside the phenomenon**."

Bortoft explains: "These examples can each demonstrate the reversal that comes in turning from awareness of an object into the encounter with the whole. This turning around, from grasping to being receptive, from awareness of an object to letting an

² Italics in original; bold, COS.

³ Bold, COS

absence be active, is a reversal that is the practical consequence of choosing the path that assents to the whole as no-thing, and not mere nothing.”⁴

At the root of this reversal is a profound self-transcending experience. The experience is about encountering the dynamic unity of self and world. Goethe expressed this deep principle as follows:

“Man knows himself only to the extent that he knows the world; he becomes aware of himself only within the world, and aware of the world only within himself. Every object, well contemplated, opens up a new organ within us.”⁵

X. Bio

Henri Bortoft is an independent researcher in the philosophy of science. He did postgraduate research on the problem of wholeness in quantum physics with David Bohm and Basil Hiley at Birkbeck College. Subsequently he worked with J.G. Bennett at the Institute for the Comparative Study of History, Philosophy, and the Sciences, on the problem of language and the perception of wholeness. His Institute for Cultural Research monograph, "Goethe's Scientific Consciousness"(1986,second edition 1998), has been published in German (1995) and French (2001)translations. Author of a comprehensive book on the philosophy of Goethe's science, "The Wholeness of Nature"(1996), he has given many seminars, workshops, and courses, on Goethe's way of science and the evolution of scientific consciousness, both in the UK and in the USA. He also contributes to the MSc in Holistic Science at Schumacher College.

⁴ Bortoft, 1998

⁵ Goethe 1823, quoted from Crotell 1998

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