Science, Religion, and Human Identity: Contributions from the Science and Religion Forum

with Finley Lawson, "Science, Religion, and Human Identity: Contributions from the Science and Religion Forum"; Susannah Cornwall, "Transformative Creatures: Theology, Gender Diversity and Human Identity"; Joanna Collicutt, "Religion, Brains, and Persons: The Contribution of Neurology Patients and Clinicians to Understanding Human Faith"; Robert Lewis, "Humans as Interpretive Animals: A Phenomenological Understanding of Why Humans Bear God's Image"; Rebekah Wallace, "The Wholeness of Humanity: Coleridge, Cognition, and Holistic Perception"; James Thieke, "Energies and Personhood: A Christological Perspective on Human Identity"; and Emily Qureshi-Hurst, "Can Sinners Really Change? Understanding Personal Salvation in the Block Universe."

THE WHOLENESS OF HUMANITY: COLERIDGE, COGNITION, AND HOLISTIC PERCEPTION

by Rebekah Wallace

Abstract. Holistic perception is an antidote to the subject–object divide, a divide that leads to a mechanistic understanding of the world and can see human beings only in terms of parts, without a robust articulation of wholeness. In this piece, I argue that philosopher of science Henri Bortoft offers an empirically grounded theory, based on consciousness studies, which recasts the problem of the many and the one, offering insight into just such a holistic perception. I further argue that Samuel Taylor Coleridge's philosophy of unity and multiplicity agrees in many respects with that of Bortoft. However, Coleridge draws further implications of his philosophy for Trinitarian theology. I will argue, in line with Bortoft and Coleridge, that perception is a hinge point in this discussion, allowing the move between the discussion of wholeness, subjectivity, and identity. I conclude that a holistic perceptual shift reconstitutes the human person in a way that is theologically significant, especially with respect to Christian Trinitarian doctrine.

Keywords: anthropology; brain; Christianity; cognition; cognitive science; embodied cognition; embodiment; ontology; perception; personhood

---

Rebekah Wallace is a PhD candidate at the Faculty of Theology and Religion, University of Oxford, Oxford, UK; e-mail: rebekah.wallace@theology.ox.ac.uk.

 ISSN 0591-2385

In a letter sent to Mr. John Thelwall in 1797, the poet Samuel Taylor Coleridge wrote, "all the knowledge [sic], that can be acquired, child's play—the universe itself—what but an immense heap of little things?—I can contemplate nothing but parts, & parts are all little!—My mind feels as if it ached to behold & know something great—something one & indivisible."

The problem that Coleridge poses about knowledge of the one and the many is a problem of content, That is to say, it asks about the natures of the one and the many, and how they are related to (or constituted by) each other. But it is also a problem of method. *How* can we know the whole when we "can contemplate nothing but parts"? I argue that we must rethink both the prevalent, atomistic conception of wholeness and the process by which we come to understand the whole. Bringing together Coleridge's philosophy of unity and multiplicity, out of which he bases his theology of human identity in relation to the Divine, and recent inroads in consciousness studies and the cognitive sciences, I show that cultivating a holistic perception of the world and ourselves has implications for a theology of the human person.

This stands in opposition to what is often considered the dominant, Western atomistic framework in which the world and living beings within it are explained solely on the model of parts with the universe as a machine. Many philosophers have attributed this mechanistic model to the mind and matter split that arose from Descartes' dualist philosophy, leading to a mathematical view of the world with a clear-cut divide between subject and object. However, in Mary Midgley's concise analysis, "Descartes' division of the world between these two superpowers, mind and body, that were scarcely on speaking terms, is most unsatisfactory" (2003, 36). This same dissatisfaction with artificial divides arising from Cartesian dualism motivates philosopher of science and Goethe scholar Henri Bortoft's claim about the subject-object divide, and the relationship of the one to the many. His thinking, which mirrors many of Coleridge's philosophical claims, draws on his background in physics to offer a more robust empirical foundation for a connected approach to human beings and the world.

Coleridge and Bortoft's central concerns surrounding perception, unity and multiplicity, and identity are core concerns of this work that will examine how these various aspects of human life are connected. Ultimately, I argue for a return to organic, holistic ways of thinking about the human person that do not create a Cartesian divide between mind, body, and world. Holistic perception, I contend, is an antidote to the subject-object divide, a divide that leads to a mechanistic understanding of the world and can see human beings only in terms of parts, without a real articulation of wholeness.

A Necessary Project

The sciences and humanities alike have been abuzz with new discoveries in affective science in the last decade. Affect theory, among other more body-grounded approaches, has provided hope of what rightly should be regarded as a step forward in understanding the emotional and subjective nature of human consciousness and thought. Philosophers, scientists, and theologians have been able to inch toward a view of the human person that circumvents the Cartesian dualism that has dominated for several centuries by accounting for the body and bodily processes in our rational thought. According to neuroscientist Antonio Damasio, whose breakthrough studies in neuroscience have been foundational in popularizing the constitutive nature of affect in higher order thinking, "We are not thinking machines that feel, we are feeling machines that think."

However, sometimes a deeper overturning of the dominant order needs to happen before intellectual traditions can be re-grounded. Discussions of affect often, if unintentionally, reinforce rather than breakdown the dualism between mind and matter, thought and feeling. They do this by proposing that something called "thinking" is influenced, enhanced, or augmented by affect and emotion, rather than seeing affect, emotion, and thinking as a constituent part of the broader category of cognition and inherently enmeshed aspects of an organic, rather than mechanistic, living organism.

Theories of Embodied Cognition (EC) are beginning to break down this dualism that leads to a view of the world as constituted primarily by parts. EC sees the mind and its cognitive processes not as a static, information-processing entity, but as an emergent property of the dynamic interplay of body and world. Although EC is making strides in philosophy of mind and the cognitive sciences, dualism often creeps in unnoticed in the way we talk about the world and living beings. No matter how tightly we try to couple them, the fact that affect, emotion, embodiment, and thinking are still often described as parts of a machine necessarily creates a divide between them. To adjust Damasio's phrase, we are not feeling machines, but feeling *beings*, and this makes all the difference.

What is needed is a metaphorical subsoil plow. When a field has a subsoil that is too tightly packed to allow proper permeation, a deeper subsoil plough is used to till up the dirt underneath the topsoil to prepare it for planting. This organic metaphor shows the nature of the task at hand. Not a deconstructive process as one deconstructs an edifice, but a process that is both constructive and deconstructive in the same act. If we continue to build the human person in our thinking along the lines of a host of parts that fit together to make a whole, like a machine, we continue to miss the point, no matter how much emotion, subjectivity, and embodiment are thrown into the mix. Rather than aggregating to create a whole that

is the sum of the parts (an essentially dualist view) organic thinking sees the whole through the parts, which are differentiated out from it. Terrence Deacon calls this "Organic Logic" versus "Engineering Logic". In engineering logic, the parts are put together to make up the whole by "external agency joining together parts to produce a functional whole," whereas in organic logic "the whole precedes the parts" and is "self-organized by part-part interactions." This flips the parts-whole relationship inside out meaning that "parts differentiate from a prior integrated whole" (Deacon 2016, 6:23).

In his book *The Wholeness of Nature: Goethe's Way Toward a Science of Conscious Participation in Nature*, philosopher of science Henri Bortoft suggests that the modern empirical scientific method is based on something like this engineering logic. In other words, it adopts the fundamental presupposition that the world is made up of parts. He argues that to see wholeness, to see things in their proper and necessary relation to each other, *is* to see meaning, and that if we look at the structure of human consciousness, we see this meaning is built into the world that we inhabit not in a contingent way but in a necessary way.

Relational ontologies have burgeoned in recent years, attempting to circumvent the divisions created by atomistic individualism. These show the importance of relationality as a constitutive element in being. In theories of mind this has taken the form of second person perspectives, especially led by EC theory. When applied to the problem of other minds this is sometimes known as Interaction Theory as opposed to Theory Theory or Simulation Theory (Avramides 2020). In theology, this has seen the rise of social Trinitarianism and relational personhood in the likes of John Zizioulas and his major works *Being as Communion* and *Communion and Otherness*. But even these run up against the empirical physicality of the world in which separation is everywhere seen. Therefore, part of the solution must be at the level of the physical. Bortoft's theory is informed by a conception of unity taken from quantum mechanics, and taps into a deeper type of holistic perception, or mode of consciousness, which I argue is a more fundamental redrawing of lines that must happen if we are to eradicate dualism and the separation of mind, body, and world. I will utilize Bortoft's thesis to illustrate two different modes of approach and contend that understanding these modes fundamentally changes the way we see the world and our place in it.

A lecturer in physics and philosophy of science, Bortoft's postgraduate work focused on the foundations of quantum physics under David Bohm, one of the foremost theoretical physicists of the twentieth century, who piqued Bortoft's interest in the question of wholeness in quantum physics. His work on Goethe has been considered "one of the greatest articulations of Goethe's approach to science" (Robinson 2018).

Bortoft, in examining Goethe's science of conscious participation in nature, allows quantum mechanics to speak to Romantic philosophy. Although his work has not seen much engagement in the science and religion debate to date, his work has been said to be "one of the great unheralded works of our time … a harbinger of a new way of engaging with the world that will grow in intensity and significance as the 21st century unfolds" (Seamon 2013, 103). As such, he brings a refreshing perspective to the discussion informed by his interdisciplinary approach.

I will use Bortoft's framework to illustrate that a more radical way of thinking about thought and the world is scientifically founded. I will also make the claim that another Romantic, Samuel Taylor Coleridge, makes a similar proposal in his own philosophy of subject-object relations. Bortoft's interpretation of Goethe proposes a new scientific methodology, whereas Coleridge takes this one step further by drawing implications in theology, connecting holistic perception to our relationship with God and the world. The primacy of mechanistic thinking, which analyzes the world and human beings in terms of parts and pieces, is not simply an interesting philosophical problem. In the thought of Coleridge at least, as Owen Barfield points out, the "problem of the many and the one … was not … a mere philosophical conundrum; it was the practical and moral problem of how to be a human being" (Perry 1999, 19).[1] His philosophy was steeped in the sciences as they were developing at the time, such as David Hartley's Associationism[2], and he was intensely interested in questions of the mind, consciousness, and perception. He tried to articulate the connection between how we see and what we see, the connection between the part and whole, the role of perception and perspective in this search, and what this means for human life. In short, he asks the question of whole and parts, individuality and communion, in light of a theological conception of human identity.

Bortoft bridges the gap between theoretical physics and Romantic philosophy, whereas Coleridge provides a crucial next step in connecting this philosophy with a theological exploration of human selfhood. I will argue, in line with Bortoft, Goethe, and Coleridge, that perception is a hinge point in this discussion, allowing the move between the discussion of wholeness, subjectivity, and identity. I conclude that a holistic perceptual shift reconstitutes the human person in a way that is theologically significant, especially with respect to Christian Trinitarian doctrine.

The Logic of Solids

In the 1884 novella *Flatland* by Edwin Abbott, a two-dimensional square tries to communicate to a skeptical and disdainful line what it means to have two dimensions. This square is then visited by a sphere that he can only see as a point getting larger and larger or smaller and smaller as it

approaches and recedes, before the sphere sweeps him up into the land of three dimensions. When the square returns and tries to communicate the third dimension, he is imprisoned for his heretical belief and declared insane.

Bortoft uses this analogy to describe what it might be like to have knowledge of a whole that is not the same as the knowledge of parts. In other words, to see the whole as it is, and not as simply another part, or collection of parts, among parts, is like trying to find the language and concepts for a dimension of which there is no experience. The line thinks that the square is insane for talking about a center with is not the stomach of the line, and the square thinks the sphere is insane for speaking of a "top" which is not in his middle. In fact, when the sphere visits the square, hovering over him, the square thinks he is appearing inside of him.

The logic of parts that a human being forms by interacting with the physical world as the brain develops, as Henri Bergson puts it, is "a logic of solids"[3]. It is the intellect that is developed through our interaction with the material world and therefore "our concepts have been formed on the model of solids" (Bergson 2000, vii). When thinking extends this logic of parts and pieces to the logic of wholeness, however, it becomes problematic. For wholeness is not another part among parts. When we assume the divisional way of thinking is the only framework for thought, we tend to organize the world in this way and cannot perceive wholeness. As David Bohm notes:

> … fragmentation is continually being brought about by the almost universal habit of taking the content of our thought for 'a description of the world as it is'. Or we could say that, in this habit, our thought is regarded as in direct correspondence with objective reality. Since our thought is pervaded with differences and distinctions, it follows that such a habit leads us to look on these as real divisions, so that the world is then seen and experienced as actually broken up into fragments. (Bohm 2002, 4)

What is needed, Bortoft argues, is a type of perception that is not based on the knowledge of solid objects only. In the introduction to Quine and Ullian's *The Web of Belief*, they state that "'knowledge unfathomable by our cognition' is simply incoherent" because the word cognition itself means to have knowledge. This is in response to the claim that there are types of knowledge that fall outside the "limits of our logic" (Quine and Ullian 1978, 4–5). Cognition is often used in a way that implies a certain type of logical knowledge only.

In contrast, EC theorist Giovanna Colombetti affirms a broader definition of cognition, one that is not separate from affect. She calls this affect-cognition. In Colombetti's enactive account,[4] there is no life without cognition. Life is fundamentally a position of "non-apathy" toward one's own existence. As such, living beings exist in a value-laden

environment, affectively oriented. This non-apathy, Colombetti argues, is a type of cognition, even for animals without brains or higher order thinking. In this way, she shows the strain on narrow modern categories of cognition and opens its definition. She does not separate it from affect, embodiment, or emotion but sees these as dynamic elements of an organic cognitive system. In her own words, "the mind is enacted or brought forth by the living organism in virtue of its specific organization and its interaction with the world" (Colombetti 2014, xiv).

In arguing for a science of conscious participation in nature, Bortoft is arguing for a shift in consciousness, a change in perception that sees the same world in a different way. To do this, he expands knowledge beyond the logical and linear, and in doing so believes that humans can apprehend the necessary connections between things when we stop seeing in an atomistic rather than a holistic way. It is a focus on the process of cognition itself.

In an analogy taken from the natural world, Bortoft explains an experience of looking at a river while facing downstream. Like the stream of consciousness, the assumption is often that our starting point is given and presupposes that what we are looking at (the object that is the focus of attention downstream) is the outcome of something already constituted coming into our already existent field of vision (Bortoft 2012).

However, if one were to turn around and look up this literal stream of consciousness, one notices that it is taken as a given what had to be constituted *before* being able to look out from it. There is a process of constituting that happens *through* which we then look out, and the goal of phenomenology and "the key to circumventing the parts-whole paradox is a shift of attention from what is experienced to *the experience of* what is experienced" (Seamon 2013, 100).

Three Principles of Wholeness

Bortoft outlines several principles of wholeness of which I will highlight three core principles. The first is that the subject in cognition plays an active role in the creation of perception. This means that how we see affects what we see. Bortoft highlights the importance of different modes of consciousness, and here separates the mind into two modes: the reflective and the constitutive mode.

The reflective mind is usually associated with "mind", and it operates in a way that is analytical/intellectual/logical/linear. It is that through which we look after the constitutive mind has already done its work. And so, as Bortoft says: "the 'self-entity' emerges from the process of cognition [that is the constitutive process] and is not there as such beforehand" (Bortoft 1996, 123). The reflective mind presumes that things are the way they

are without the active role of the perceiver because what it perceives has already been constituted by the constitutive mind.

We are looking through the reflective mind *from* a self and *to* a world that has already been organized. Bortoft describes this as being similar to a rabbit that has been put in a magician's hat. When we cannot see the processes that organize our perceptions of the world, it is as if we have put the rabbit into the hat and then the reflective mind pulls the rabbit out, assuming it has always been there.

If the process of knowing affects what is known, the knower and the known stand in a fundamentally different relationship to each other than Cartesian dualism suggests. Descartes' substance dualism separates mind and matter, subject and object, whereas holistic modes of perception take the subject and the objective world of which they are a part to constitute a whole. The subject and the object are related in a more ontologically fundamental way. In this way, the question of subject-object relations is also a question of wholeness. To change the mode of perception gives access to a type of "nonsensory perception" in which we can see the whole through the parts and see subject and object as part of a greater whole.

According to Bortoft, Goethe says this is possible through training what he calls the "sensorial imagination" (Bortoft 1996, 66–67). The sensorial imagination is a way of experiencing the world through visualization of a thing as it is, instead of an image of it in our heads. Although it is sometimes unclear in Bortoft's writing precisely what this looks like[5], he claims that, for Goethe, this scientific method of experiencing the phenomena makes a similar move to meditation in which the verbal-intellectual (i.e., reflective) mind is quieted in order to redirect attention to the phenomena themselves.[6] Our experience of phenomena normally, according to this reading, is composed of generalizations of the world. That is, our awareness is an abstraction based on the categories of the reflective mind. This is because we "usually classify verbally and experience just a vague generality" (Bortoft 1996, 67).

However, in a process similar to that of meditation, it is first necessary to bring awareness, through an immersion of the senses in the phenomena themselves, to the variety, rather than unity, of life such that we focus on the "active seeing instead of the passive reception of visual impressions" (Bortoft 1996, 66). This is because, unlike the world that has been generalized by the verbal-intellectual mind, "… the world of sensory experience is nonuniform and endlessly varied and rich in diversity" (Bortoft 1996, 66).

But this process is only a precursor to the sensorial imagination. This shift in awareness is part of a two-step process, the second of which is that after "investing attention in the sensory [which] inevitably promotes deautomatization from the uniformity of the intellectual mind" Goethe urges an "attempt to think the phenomenon in imagination, and not to think

about it" (Bortoft 1996, 66). This, according to Bortoft's interpretation, is "sensory not intellectual, concrete not abstract" (Bortoft 1996, 66). Redirecting attention to the variety of sensory experience can help bring about holistic perception through deautomatization, whereas training the sensorial imagination is a constructive exercise that "actively promotes the restructuring of consciousness into an organ of holistic perception" (Bortoft 1996, 66). This is because "knowledge is not achieved by the senses alone. There is always a nonsensory element in knowledge, and this must be so whether this element is verbal-intellectual or intuitive" (Bortoft 1996, 68).

Imagination, then, plays an active role as an organ of perception, and through it we can see the inherent relatedness that gives rise to meaning (think of the meaning of a text) instead of extending the logic of the senses that sees in parts to the "inside" of the phenomena. However, this leads to a particular problem. For, "once it has been recognized that the unity of the phenomenon is not given in sensory experience, the question arises naturally: Is this unity simply imposed on the experience of the senses by the mind, or is it there in the phenomenon itself, with the mind functioning as an organ of nonsensory perception?" (Bortoft 1996, 57). In this way, it follows that another principle of wholeness is a specific type of unity. It is not unification in which the parts add up to the whole, but a unity in which the whole is seen through the parts. This is the difference between what Bortoft calls unity and unification.

One of Bortoft's potent images is of the difference between a hologram and a photograph. With a photograph if you cut it up into pieces you get parts of the whole. But the way a holographic plate works is that if you cut it up into pieces you still get the entire image in each part. This shows an interesting interdependence of the part and whole such that in one respect it remains an individual part, physically separate from the others, while being at the same time a complete manifestation of the whole. Part and whole are equally dependent on each other such that neither precedes the other.

Unification, on the one hand, is a type of intellectual conglomeration of things into a whole and "according to the understanding of the intellectual mind, the unity of experience is produced by unification, that is, unity *is* unification" (Bortoft 1996, 58). However, this "is the synthetic unity of an organization synthesis," whereas unity without unification is a type of insight into the inherent connection of things through "consciously experiencing" the world (Bortoft 1996, 59).

The other side of the reflective or intellectual mind is the constitutive mind. The constitutive mind is more constructive. This aspect of the cognitive process sees things intuitively. It gives a more comprehensive, experiential sense of wholeness, rather than parts and pieces. This mode of consciousness sees phenomena not just in a logical way, but in a way that grasps their mode of relating in much the same way that a text has

meaning only in view of the whole text. The meaning of a text is not the object of perception, but it exists because of the entirety of the text, through the individual words, letters, and sentences.[7]

When confronted with the whole, "the difference between these two experiences is a difference in the mode of consciousness, from which it will emerge that 'unity without unification' is the unity of the intuitive mind instead of the unity of the intellectual mind" (Bortoft 1996, 60). And so, to understand even physical phenomena, these objects as phenomena are "only partially visible to the senses. The complete phenomenon is visible only when there is a coalescence of sensory outsight with intuitive insight" (Bortoft 1996, 60).

Seeing a different aspect of the object in this way *is* seeing the whole because we are grasping the part with our reflective mind while apprehending the whole with our intuitive mind; "… what is merely particular to the senses, and the mode of thought which corresponds to them [i.e. the reflective mode] is simultaneously universal to an intuitive way of seeing which is associated with a different mode of consciousness" (Bortoft 1996, 79). Bortoft thinks of this as a sort of concrete universal, reversing our habitual categories of concrete as particular and universal as abstract and general.

Part of the restriction of the intellectual mode is that the way it is constituted means it is looking for a "thing". But wholeness, while not nothing, says Bortoft, is no-thing, per se. What we are trying to perceive by training the holistic mode of consciousness is that "when this dimension of the phenomenon is seen, the elements are the same as in the sensory phenomenon—the difference is in the way they are related" (Bortoft 1996, 71). This is a change in their, as he calls it, "mode of togetherness" returning to the idea of unity versus unification.

This is the third principle of wholeness, which is that what is perceived with the intuitive mind is not something different but seeing the same thing in a different way. This is something noted by Iain McGilchrist in his book *The Master and His Emissary*. He equates these two modes of consciousness with left and right brain modes of thinking.

> … the whole is not captured by trying to list the parts ('quick-tempered', 'lively', etc.); it has at least something to do with the embodied person … it resists general terms; it has to be experienced; and the knowledge depends on betweenness (an encounter). These are all, in fact, aspects of the world 'according to' the right hemisphere. This kind of knowledge derives from a coming together of one being or thing as a whole with another. But there is another kind of knowledge, a knowledge that comes from putting things together from bits. It is the knowledge of what we call facts. (McGilchrist 2012, 95)

The left-brain mode of thinking, in this account, separates the world into discrete entities. However, it is a mere illusion, according to Bohm, that

these entities actually exist. It is, at the level of quantum mechanics, a sort of trompe l'oeil of the mind.

Although our modern way of thinking has, of course, changed a great deal relative to the ancient one, the two have had one key feature in common: i.e. they are both generally 'blinkered' by the notion that theories give true knowledge about 'reality as it is'. Thus, both are led to confuse the forms and shapes induced in our perceptions by theoretical insight with a reality independent of our thought and our way of looking. This confusion is of crucial significance, since it leads us to approach nature, society, and the individual in terms of more or less fixed and limited forms of thought, and thus, apparently, to keep on confirming the limitations of these forms of thought in experience. (Bohm [1980] 2002, 8)

Bohm's theory of implicate order tries to explain at the level of theoretical physics how everything consists of continuity in the physical order at the most basic level. Consciousness even, is in continuity with the physical world.

> … the idea of a separately and independently existent particle is seen to be, at best, an abstraction furnishing a valid approximation only in a certain limited domain. Ultimately, the entire universe (with all its 'particles', including those constituting human beings, their laboratories, observing instruments, etc.) has to be understood as a single undivided whole, in which analysis into separately and independently existent parts has no fundamental status. (Bohm [1980] 2002, 221)

Some possible conclusions of this are that, first, it seems a perceiving subject is necessary in the creation of meaning and in bridging the gap between the part and the whole. Secondly, it follows from this that "If 'being known' is a higher stage of the phenomenon itself, than the phenomenon should not be imagined as being complete until it is known" (Bortoft 1996, 108). Furthermore, this notion of wholeness can be applied to the knower and the known. And so, Bortoft says, "This is the ontological significance of intuitive knowledge… for the intuitive knowledge of nature … we have the ontological condition that the knower and the known [i.e. subject and object] constitute an invisible whole" (Bortoft 1996, 109).

There seems to be some evidence in this from the field of Developmental Psychology. "Developmental psychology now offers considerable support for this notion that the whole is 'nothing' to our ordinary awareness, as well as for the notion that we can develop a sensitivity to the whole as an 'active absence.' Psychologists have discovered that there are two major modes of organization for a human being: the action mode and the receptive mode" (Bortoft 1996, 15). The action mode interacts with the physical world, but the receptive mode, much like Bortoft's constitutive mind, receives information intuitively.

This way of seeing the world is an organic model. It does not look at the world as a series of discrete parts, like bricks, that can be put together

to build something. Rather, it has the complexity of a living organism in which all the parts need to work together to make something that cannot be divided and still be what it is. Bohm claims that this is supported by quantum mechanics itself:

> … key features of the quantum theory … clearly show the inadequacy of mechanistic notions. Thus, if all actions are in the form of discrete quanta, the interactions between different entities (e.g., electrons) constitute a single structure of indivisible links, so that the entire universe has to be thought of as an unbroken whole. In this whole, each element that we can abstract in thought shows basic properties (wave or particle, etc.) that depend on its overall environment, in a way that is much more reminiscent of how the organs constituting living beings are related, than it is of how parts of a machine interact. (Bohm [1980] 2002, 222–23)

This applies to thought itself. As Mary Midgley in her characteristically concise imagery illustrates, thought is not some independent "thing". Rather, "the trouble is that thought and culture … do not have a granular structure for the same reason that ocean currents do not have one—namely, because they are not stuffs, but patterns" (2003, 57).

It is in the Romantic period, with Goethe and others, that there begins to be a push back against mechanistic models of thinking, a reason why Goethe is so helpful in looking at these questions that Bortoft, from the world of quantum physics, can still engage with today. As such, it allows Bortoft to dialogue with other interesting writers and philosophers of the time with the appropriate counterweight of modern physics. Coleridge is one such thinker from the English Romantic Period, who was himself influenced by the writings of German Romantics, and who tied these questions to questions of human identity and theology.

Coleridge, Cognition, and Identity

John Beer said of Coleridge that he had the "gift for double perception" (Perry 1999, 4) and we can see quite a few resonances in the thought of Coleridge and that of Bortoft. Coleridge, like Bortoft, identifies two different faculties of human cognition. These different faculties serve different functions. The two labels that Coleridge puts to them are "reason" and "understanding". For Coleridge, reason is the faculty that apprehends the noumenal realm, whereas understanding is the faculty that comprehends the phenomenal realm. Therefore, it is understanding that can grasp the "immense heap of little things" that Coleridge saw (and loved) in the realm of nature. Yet he still, as he said, yearned for "something one and indivisible."

Even so, it was impossible for him, looking at the diversity and beauty of the world around him, to reconcile himself with Kant's theory that there was no way of getting between the noumenal and the phenomenal, the

realm of ideas and the realm of the senses. There had to be, to Coleridge the naturalist, the theologian, the poet, and the philosopher, a way of reconciling these two worlds. Poetry and symbol were one method, but Coleridge also grasped at a philosophy and a theology that would somehow connect the multitudinous sea of phenomena with the universal oneness of the noumenal (though not the dominating, systematizing, individual-effacing universal of the systems that Coleridge eschewed).

Much like Bortoft's assertion that our reflective consciousness, rather than our intuitive consciousness, sees the world as divided, Coleridge believed that the subject-object consciousness belongs to the faculty of understanding. There is, however, a faculty that can bridge these two. This faculty was the faculty of imagination. The imagination can generate symbols that translate between reason and understanding. This was the almost vocational purpose, for example, of poetry.

Although understanding grasps the physical world with the input of the senses, it does not play an *active* role in the creation of perception. Understanding as a faculty is the subject-object consciousness that sees things in the way that Goethe's intellectual cognition sees them, as separate parts. This, however, instead of being consciousness itself, as we have come to see it in our modern, scientific understanding of the world through our narrow view of rational understanding, is rather only the subject-object consciousness.

Opposed to this, in Coleridge's theory, reason sees the universal. This universal for Coleridge is a vital and living principle because it is tied to the divine principle. The faculty of reason is active in the creation of meaning because it uses the imagination to create symbols that combine the infinite and the finite in a real way. But Coleridge cannot separate his metaphysics from his theology. Even as he indicates an agreement with Bortoft's philosophy of science he brings this conclusion a step farther by understanding this principle in the framework of Christian theology.

The Theology of Relation

For Coleridge, the perichoretic unity of the Trinity is the model for the type of unity that is relational while neither effacing the individual nor the whole. Coleridge converted to Trinitarianism in 1805 (having been a Unitarian in his youth) and so much of his theology is steeped in carefully considered Trinitarian doctrine. The question of the one and the many in the Trinitarian three-in-one, and the structure of this relationship, is at the same time for Coleridge connected with the structure of the self and its relationship to itself, God, and the world. Therefore, it is equally a question of human identity. "The Trinitarian concept … to Coleridge … is derived from the basic character of self-consciousness. The affirmation 'I am' involves a Trinitarian structure of selfhood because in saying 'I am'

one distinguishes oneself as subject from oneself as object while at the same time asserting the identity of the two" (Clayton 1990, 221).

As such, as Jeffrey Hipolito notes, consciousness more generally is inherently linked to what Coleridge calls "self-consentience". This is because "all knowledge involves a relation between knower and known, and 'to know something in its relation to myself in and with the act of knowing myself as acted upon by something" leads him to "proceed to prove the dependence of all consciousness on self-consciousness" (Hipolito 2004, 472). In this framework, knowledge of ourselves emerges as knowledge of the world and our relation to it and vice versa.

Relational theories of identity have increased in popularity with the realization that we and the world are relationally constituted not least because we are embodied. EC has affirmed this in the field of cognitive science. As Léon Turner notes, "until relatively recently, the idea that people are constituted, at least in part, by their relations with others has made little impact upon the natural sciences. With the advent of theories of embodied cognition … that is beginning to change" (Turner 2013, 813).

In other fields, the developmental psychologist and linguist Michael Tomasello and philosopher Charles Taylor have pointed out how even the development of language and consciousness itself may prioritize relation versus individual as the foundation of identity. As Taylor says, "The goalposts *ought to be* moved … there are good reasons to go the whole way, and invert the traditional priority of self over intersubjectivity." There is a primacy of communication over and above the single language user that can be seen in things like joint attention for language learning. When learning language, a child's interactions with the parent and the world makes it so that when attention is focused "it has become an object 'for us' and not just for you and for me" (Taylor 2016, 56).

According to Tomasello, this is called "'joint attentional frames', or 'referential triangle', where two speakers share the same reference." Taylor uses this as proof that "these are not the product of a deeper 'theory' of mind; they are the source out of which any such theory might be drawn" (Taylor 2016, 108). In a modern construction, "thought and hence language is first of all monological," but this reflects an implicit Lockean reification of the mind.

Additionally, if knowledge of the other is fundamental to knowledge of ourselves, at the same time knowledge of ourselves seems to be in some way necessary to our knowledge of the other. They co-create each other. Breakthroughs in more relation-focused methods in fields such as Gestalt therapy have shown that the full experience of ourselves and our emotions vis à vis another leads us ultimately to healing and wholeness.

> …as human development progresses, psychological and spiritual maturity become inseparable. They both involve the same accomplishments of deep-

> ened contact with oneself and others, emotional resilience, and authenticity. The advanced stages of psychological and spiritual maturity both arrive at a radical openness to experience that is felt as a continuity or oneness between oneself and one's environment. This sense of continuity is based on the realization (or the laying bare) of nondual consciousness. (Blackstone 2007, 1)

Theologians such as John Zizioulas, for example, have tried to answer these questions of relation, individuality, otherness, and communion in relation to the Divine, but ultimately he concludes that the ontological gap between humankind and God means that we are fundamentally unable to know God through knowing ourselves. "This problem is due to the Christian view of the Fall. Whatever we may wish to mean by the Fall, the fact remains that there is something which can be called 'sin', and which gives rise to the question: is man that which we know and experience as 'man'?" (Zizioulas 1975, 401). This leads Zizioulas to ask the question, "are we as theologians to draw our concept of human personhood from the study of the human person or from God?"

However, Coleridge would disagree. Self-knowledge is not separate from knowledge of the other, but both co-create each other in a reciprocal relationship. This applies even to God, but in a special way. To ground his argument, he uses precisely the question of relationship of parts to whole anchoring this to the paradox of the perichoretic union of the Trinity. Coleridge's theory of subject-object relations thinks in parallel to Francisco Varela's version of EC known as autopoietic enactivism. "Read through the lens of autopoietic enaction, Coleridge provides an alternative philosophical model for thinking about how we orient ourselves toward the world we inhabit that can provide a corrective to the pernicious effects of Cartesianism on the way human beings relate to the natural world" (Roberston 2019, 121).

Coleridge was "interested in how individuals acquire knowledge of and understand themselves as part of the whole they comprise" (Roberston 2019, 121). Dissatisfied with the theories of his day, his *Theory of Life* "provides an ontological basis for the relationship between the subject, the object and the absolute by conceiving of the eternal (God, the absolute) and the transient (nature, human beings) as existing in a recursive, mutually constitutive relationship" (Roberston 2019, 119).

In his view, human cognition is not separate from the moral nature of the human being. Rather, for Coleridge, "conscience proceeds and gives rise to Consciousness" (Hipolito 2004, 471). We are aware from the outset of our inherent relationship to others out of which can arise our consciousness of moral obligation. Hipolito cites *Aids to Reflection* where Coleridge says, "A Consciousness properly human … with the sense of moral responsibility presupposes the Conscience, as its antecedent condition and ground" (Hipolito 2004, 470–71). Coleridge's reason for this is a bit

ambiguous. He tries to connect the internal Law, Logos, Reason, Love, and Will in a way that, as Hipolito says, is "rather sketchy" in his work (Hipolito 2004, 472) and which are often so closely coupled as to be almost indistinguishable from one another.

The most important takeaway for the purpose of the discussion at hand is that self-consciousness requires the interaction of the two faculties of reason and understanding because this self-consciousness is a type of self-dialogue. But from a theological perspective the Logos *is* reason, and as such it has a special place in the human person. It is both divine and human, universal and particular. "'Reason… we cannot [sic] otherwise define than as the capability … of beholding, or being conscious of, the divine light. But this very capability is that light … as a being which we may call ours, but which I cannot call mine.' … This much is a Logos concept in the sense of a transcendent though indwelling universal selfhood, equally and inseparably divine and human" (Clayton 1990, 217).

This sounds very much like Bortoft's concrete universal. It is something that breaks the mold of our habitual thinking of universal and particular, the universal as something abstract and disembodied, and the particular as something concrete and distinct. The holistic perception that enables us to apprehend this type of relationship is itself the proper balance between the human faculties whose dialogue leads to foundational self-consciousness. It comes about when the understanding is not the dominant way of thinking but rather works with reason just as the traditional Trinitarian concept of will and reason work together in the persons of the Trinity. And so, as James Clayton says, "… the 'revealed' doctrine of the Trinity–God as love, conceptualized as the union of will (Father) and reason (Son)–corresponds exactly, for Coleridge, with what is apprehended in Christian religious experience as the ultimate core of human selfhood …" (Clayton 1990, 219).

He further uses this to show the connection between human perception and the Trinity. "In the 'Essay on Faith' Coleridge expresses–as he often does–this dynamic or organic character of reason in conjunction with the idea of the association of reason and will. By doing so he can relate reason in the human mind directly to the structure of the Trinity" (Clayton 1990, 218). Reason and will, just like Father and Son, work together to give birth to this I, thou, it, relationship out of which arises consciousness of the world and therefore self-consciousness.

But as reason *is* Christ in us, Clayton says," … human selfhood cannot be adequately described without describing a relationship between the self and a divine reality that is a dimension of the self's own being" (Clayton 1990, 222). To end with a quote that ties all of this together:

> 'The man of healthful and undivided intellect' is one whose consciousness of the world is grounded in a self-consciousness that is enlightened from within by the infinite self-consciousness of the Trinitarian God who is com-

> munal love. Such a mind sees the external world, beneath the corruptions produced by an understanding-dominated civilization, as reflective of the divine love or Reason within the self… he speaks of 'that undivided reason, neither merely speculative or merely practical, but both in one'—a perfect statement of his concept that fully truthful cognition and moral wholeness are inseparable. (Clayton 1990, 229)

To see holistically, then, is to see by the light of the Logos, or Christ that is in us. It is to exercise both the universal and the particular faculties within ourselves, to see the plurality in unity of a world united in the love of a Trinitarian perichoretic union. In this way, holistic consciousness, accurate perception, identity, and the love of God, are not at all separate and discreet areas of inquiry. Rather, they are connected to each other through a particular way in which we see the world as connected. It is, in a sense, a view from the inside, versus a view from the outside. A missing piece of this argument up till now has been that of cognitive studies. Bortoft offers scientific evidence that we do in fact see the world in this divided way, but that it is by no means necessary. We are capable of changes in modes of consciousness, not just gaining knowledge within a particular mode.

In addition, quantum mechanics offers a viable alternative to dualist interpretations of the world from the perspective of the physical sciences. This offers a physics of nonduality in which consciousness is not separate from the material universe. Theories of mind such as EC theory equally open the possibility of a mind embodied in the interaction of human beings with their environment in a way that does not create an ontological and epistemic divide.

In bringing the person and world into relation in this way, a theology of relation is more scientifically comprehensible, and it offers a foundation for understanding how we can enter into communion without losing individuality. Coleridge takes this one step further by looking at the philosophical question of wholeness as one in which we understand the structure of our own consciousness to be a reflection of the one and the many of the Holy Trinity.

This should be something that can bring the sciences and theology together. It is an example of how the way we understand who (and how) we are in the world affects our understanding of the world, ourselves, and our place in it. As Zizioulas says, "When scientists and theologians agree that being is at all levels relational, they do not tell us only something about God and the world. They throw light also on our ordinary everyday life as human beings. If we live in a relational universe, not as external visitors to it but as parts of it, any individualistic approach to existence is bound to contradict not only the will of God but also the truth of our own being" (Zizioulas 2010, 156).

Notes

1. Quoted in Seamus Perry's *Coleridge and the Uses of Division*, 19, from Owen Barfield's *What Coleridge Thought*.
2. Which examined the "neurophysiological mechanism" of human working. See C.U.M Smith's "Brain and Mind in the 'Long' Eighteenth Century" in *Brain, Mind and Medicine: Essays in Eighteenth-century Neuroscience*.
3. Bortoft uses this Bergson analogy to describe his "reflective" mind.
4. This is based on Francisco Varela's form of Embodied Cognition known as autopoietic enactivism. See Varela, Thompson, and Rosch (2016), *The Embodied Mind*.
5. Bortoft does not articulate more on this or what it looks like at a physical level. I will argue in a forthcoming work that one way in which Bortoft's thought can be enhanced is by looking at what this means at the level of the body. Enactive and embodied cognition are now making strides in the cognitive sciences against representational thinking altogether, instead favoring an approach that sees the mind as emerging from the body in its interaction with the environment.
6. Bortoft here quotes from Arthur Deikman's "Bimodal Consciousness" and "Deautomatization and the Mystic Experience" that suggest a more psychologically grounded approach to these questions, making the connection with meditation.
7. Bortoft here uses Gadamer's theory of hermeneutics.

REFERENCES

Avramides, Anita. 2020. "Other Minds." In *The Stanford Encyclopedia of Philosophy*, edited by Edward N. Zalta. https://plato.stanford.edu/archives/win2020/entries/other-minds/

Bergson, Henri. 2000. *Creative Evolution*. London: Electric Book Company.

Blackstone, Judith. 2007. *The Empathic Ground: Intersubjectivity and Nonduality in the Psychotherapeutic Process*. Albany, NY: State University of New York Press.

Bohm, David. 2002. *Wholeness and the Implicate Order*. London: Routledge.

Bortoft, Henri. 1996. *The Wholeness of Nature: Goethe's Way toward a Science of Conscious Participation in Nature*. New York: Lindisfarne Press.

———. 2012. *Taking Appearance Seriously: The Dynamic Way of Seeing in Goethe and European Thought*. Edinburgh: Floris.

Clayton, James. 1990. "Coleridge and the Logos: The Trinitarian Unity of Consciousness and Culture." *The Journal of Religion* 70 (2): 213–40

Colombetti, Giovanna. 2014. *The Feeling Body: Affective Science Meets the Enactive Mind*. Cambridge, MA: MIT Press.

Deacon, Terrence. 2016. "Neither Nature nor Nurture: The Semiotic Basis of Language Universals." *YouTube lecture*, 6:23 to 9:05. https://www.youtube.com/watch?v=a5JNG45bfFI&t=676s.

Hipolito, Jeffery. 2004. "Conscience the Ground of Consciousness': The Moral Epistemology of Coleridge's 'Aids to Reflection." *Journal of the History of Ideas* 65 (3): 455–74.

McGilchrist, Iain. 2012. *The Master and His Emissary*. New Haven, CT: Yale University Press.

Midgley, Mary. 2003. *Myths We Live By*. Florence: Taylor & Francis.

Perry, Seamus. 1999. *Coleridge and the Uses of Division*. Oxford English Monographs. Oxford: Oxford University Press.

Quine, Willard, and Joseph Silbert Ullian. 1978. *The Web of Belief*. New York: McGraw-Hill.

Robertson, Lisa Ann. 2019. "Enacting the Absolute: Subject-Object Relations in Samuel Taylor Coleridge's Theory of Knowledge." In *Distributed Cognition in Enlightenment and Romantic Culture*. Miranda Anderson, George Rousseau and Michael Wheeler, 118–138. Edinburgh: Edinburgh University Press.

Robinson, Simon. 2018. "The Henri Bortoft Lectures: An Introduction." *Simon Robinson* (blog), December 2. https://srerobinson.medium.com/the-henri-bortoft-lectures-an-introduction-af286ca94505.

Seamon, David. 2013. "Encountering the Whole: Remembering Henri Bortoft (1938–2012)." *Phenomenology and Practice* 7 (2): 100–7.

Taylor, Charles. 2016. *The Language Animal: The Full Shape of the Human Linguistic Capacity*. Cambridge, MA: The Belknap Press of Harvard University Press.

Turner, Léon. 2013. "Individuality in Theological Anthropology and Theories of Embodied Cognition." *Zygon: Journal of Religion and Science* 48 (3): 808–31.
Varela, Francisco J., Evan Thompson, and Eleanor Rosch. 2016. *The Embodied Mind: Cognitive Science and Human Experience*. Revised ed. Ebook Central.
Smith, Christopher Upham Murray. 2007. "Brain and Mind in the 'Long' Eighteenth Century." *Brain, Mind and Medicine: Essays in Eighteenth-Century Neuroscience*. Harry A. Whitaker, Christopher Upham Murray Smith and Stanley Finger, 15–28. New York: Springer.
Zizioulas, John. 2010. "Relational Ontology: Insights from Patristic Thought." In *The Trinity and an Entangled World: Relationality in Physical Science and Theology*, edited by John Polkinghorne. 146–156. Grand Rapids, MI: Wm. B. Eerdmans Publishing Company.
———. 1975. "Human Capacity and Incapacity." *Scottish Journal of Theology* 28:397–416.