POSTSCRIPT #4

# The Participated Universe

## *A Brief Note Concerning a Largely Unexplored Possibility*

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In 1817 the Romantic philosopher and poet, Samuel Taylor Coleridge, presumably perplexed many of his readers when he wrote in what is probably his most widely read book, *Biographia Literaria*:

> The primary Imagination I hold to be the living Power and prime Agent of all human Perception, and as a repetition in the finite mind of the eternal act of creation in the infinite I AM (Coleridge 1962, Chapter 13).

If you are a cognitive scientist today, it is not very likely that you have run into this remark, famous as it may be among those interested in the human imagination. Here I will not fully contextualize the words in the thought of Coleridge (which, if I were capable of doing it, would probably be a worthwhile, if lengthy, undertaking). Rather, I want to ask, "Can it possibly make any sense for us, now, to consider that your and my apprehension of the world is somehow a participation, however partial, in the mindful and creative activity through which (we might suppose) the universe comes into being?" Is this a thought we could possibly want to pursue? Is there any idea that runs more counter to the spirit of the age than this one does today?

And yet there is one way to begin making sense of the idea. It involves an analogy that might at first seem remote from physical reality. What is perhaps startling is how fruitful the analogy becomes when one reflects on it in an unprejudiced way. The analogy has to do with the way we bring a story or novel alive within ourselves by participating in it.

It is not hard to see that when we hear or read a story, we must recreate within our own experience the landscape and events that the story's author has imagined. Every element of the story comes into being for us only to the degree we share in the author's interior activity of imagining it. As an imaginal content, the story is thoroughly mind-dependent. It is not only that it is inside us, taking form within our

conscious imaginations; we might equally well say that it is we who are inside it. In hearing or reading it, we dwell within its landscape and web of events as if they were real.

This “as if” suggests the very real limitation of the analogy. We naturally take the world we live in to be real, whereas we know that the events of the story are not. Of course, if the “story” is a historical narrative, then that distinction more or less disappears. In any case, what we are asking now is whether our conscious interior may be more intimately involved with what we call “material reality” than we are normally inclined to believe.

## Our way of experiencing the world reflects our changing attention

The seemingly insuperable problem we have with the story analogy presents itself with overwhelming force as soon as we look at one of those spectacular images of the heavens associated with powerful space telescopes, or as soon as we picture to ourselves the tiny “particles” we imagine ourselves and everything else to be made of. What does the literary spinning of a fictional tale in the mind of an author or reader have to do with the very real presence of all the mind-independent and substantial things constituting the inescapable world around us?

But this mind-independence is precisely what we are investigating now, so we can’t just arbitrarily assume it. (To insist on assuming it would be to refuse the investigation. Everyone has a right to refuse such investigations, but should be aware that this is to foreclose on a question before it is even asked.) What we don’t so easily notice is the change that has come over us during the last several hundred years, leading to our altered feeling for matter today. Whether we are looking at those galaxies or an earthly mountain or feeling the faint caress of the slightest wisp of air, we find ourselves, unlike our ancestors, confronting cold, alien, insensate otherness. There is only mindless stuff, made of non-qualitative, imperceptible particles. These particles are immune to criticism because they belong to an alien, theoretical realm of which we have no direct experience. They are blank slates that gain their meaning only as we project upon them our inevitable sense of disconnection from their unknown reality.

The particulate realm found its way to the center of our scientific conception of the world by satisfying two criteria. First, its elements were required to be stripped of any reference to the qualities of phenomena — which is to say: stripped of any reference to actual human experience. This experience was felt to be unscientific because irreducibly subjective; that is, it was of an interior and immaterial nature. And, second, these theoretical, particulate constructs had to yield themselves readily to mathematical characterization. That was no problem, of course, since mathematics is just about all that is left once we drain the world of its qualities.

That this denigration of sensible experience conflicted with the post-Medieval thirst for an *empirical* science — a science grounded in experience rather than theology, philosophy, or other Medieval cerebrations — seemed hardly to be noticed. Also little noticed was the fact that a world conceived in almost nothing but its mathematical dimensions was a world reduced as far as possible toward the immateriality of cerebration alone.

It could have been observed after the Newtonian revolution (although I'm not sure it ever was) that even the fundamental scientific concept of force is inseparable from full-bodied human experience. It seems rather obvious that we could have no concept of, say, gravitational or magnetic force without our having learned to exert pushes and pulls on objects and having *experienced* pushes and pulls exerted on us. In the absence of such experiences, the concept of force would be unavailable to us — an absolute blank. This might have led us to ask: "What, in general, is the relation between our inner being and the various concepts of science?"

Actually, without qualities nothing is even there; nothing of nature is left to present itself to us because qualities alone give us the expressive presence of the world's material content (Talbott 2026). (Try to imagine any material scene at all without its qualities, and see what is left.) If the stripping away of qualities has been the persistent aim of a science determined to remove all human, "subjective" content from our picture of the world, then it is hardly a surprise that we now end up feeling no connection between "in here" and "out there".

Of course, we can't really get rid of the world's qualities, because we can't make the world wholly disappear. But we can fail to attend to the qualities. And that is why there is nothing in what we vaguely think of as the world's particulate *matter* that we can penetrate with any kind of sympathy or sense of kinship.

So we can also hardly be surprised to find that, despite their quantitative rigor, it is virtually impossible to find among materialist physicists today any coherent definition of "matter" or "material" — and not many even half-hearted attempts at a definition. As some have noticed, "matter" and not "spirit" is the truly obscure and experientially ungrounded term of this materialist age. Whatever the brain's role in enabling us to have thoughts, we all know that thoughts themselves, as we are immediately acquainted with them "from inside", are not material things. But as for "particles" of matter, we have hardly a clue to the nature of what we are talking about.

## Is the world independent of mind?

For the materialist, the statement from Coleridge with which we began sounds merely absurd. And yet, as every student of human cognition knows, the world manifests itself — and could conceivably manifest itself — only in terms of our interior capacities, such as our perception and thinking, both of which occur on the stage of our consciousness (Talbott 2025b). This truth is available not only to scientists studying cognition, but also to anyone who reflects for a few moments upon his own *awareness* of the world.

There have been notable physicists who have not proved allergic to the the obvious facts of experience. In 2005 the Johns Hopkins University astrophysicist, Richard Conn Henry, published an article in *Nature* titled "The Mental Universe" with this lead sentence: "The only reality is mind and observations, but observations are not of things" (Henry 2005). The twentieth-century British physicist and president of the Royal Astronomical Society, Sir James Jeans, declared in his book, *The Mysterious Universe*, that "The Universe begins to look more like a great thought than like a great

machine. Mind no longer appears to be an accidental intruder into the realm of matter; we are beginning to suspect that we ought rather to hail it as the creator and governor of the realm of matter" (Jeans 1937, pp 186-87). And another great British physicist, Sir Arthur Eddington, remarked that "It is difficult for the matter-of-fact physicist to accept the view that the substratum of everything is of mental character. But no one can deny that mind is the first and most direct thing in our experience, and all else is remote inference" (Eddington 1929, p. 281).

The situation is simple and undeniable. And its significance may run deeper than we think. Yes, we might choose to believe that somewhere "out there", beyond the appearances and our own awareness, lies a reality quite independent of our consciousness. But no one acts in daily life as if this were true. Rather, in our actual behavior we take things at face value, just as they are given to us by our interior capacities.

Our choices are radical. Either we conclude that we know absolutely nothing about the world we live in, that we have no right to say anything about it, and that all our science is vacuous, or we grant that at least some aspects of reality are contents of our consciousness and, further, that these aspects reveal all we know about reality, and are sufficient to ground our many scientific disiplines. And since both our immediate experience and our science seem to describe an interwoven unity without evident ruptures or gaps, it's difficult to believe that "real reality" is inaccessible to our conscious understanding. In any case, we possess nothing we could call positive evidence for a hidden reality — and if we did, we could hardly call it "evidence" without being conscious of it as at least a partial revelation of what is then no longer hidden.

In other words, if we could know it to be true that there is a world wholly beyond consciousness, it would therefore, and paradoxically, not be true, because our knowing would already testify to our being somehow conscious of it. We seem invited to recognize that truth — which is to say reality — is, in its own essence, inseparable from consciousness. At least we must say this much: we have full, cognitional access to reality only through consciousness, and any knowable reality is, like the story or novel of our analogy, a reality capable of presenting itself in one way or another as a content of consciousness. We are, in other words, stuck with the fact that material reality and consciousness are thoroughly intertwined.

It seems indisputable that nature, having possessed the remarkable capacity to gift us with our human consciousness, then reveals to us the secrets of her own being in the terms of that consciousness, and it is hardly conceivable that there are any other terms by which we *could* know nature. Knowing is a function of interior being and seems to be specifically "allowed for" by the world. The thoughts and qualities of our own interiors turn out to be the thoughts and qualities by which we know the natural world. Yet, despite all this, we seem strongly inclined to ignore the truth of our interior intimacy with nature.

Coleridge summarized our oddly contradictory stance this way: man is compelled "by an obscure sensation which he is unable to resist or to comprehend ... to contemplate as without and independent of himself what yet he could not contemplate at all, were it not a modification of his own being" (Coleridge 1969, vol. 1, p. 509). Or, we might say: "... were it not an *expression* of his own being".

## Do we really believe in an *empirical* science?

In our conventional experience we are, then, up against a disturbing negation of the empirical spirit — a revulsion against the experiential ground of scientific investigation that was felt to be so important by the founders of modern science. If our Medieval forebears were inclined toward empirically ungrounded speculations, our current feeling for matter is determined, not from our immediate experience of galaxies, mountains, and air, but rather from our imaginations of qualitatively evacuated theoretical constructs — imperceptible "particles" that, as the sensible things we falsely picture to ourselves, do little more than substitute for the supposed medieval angels dancing on the head of a pin.

But it is instructive that our false imagination of these particles so insistently takes the form of sensible experience — if not imaginary dancing angels, then imaginary little "billiard balls". As the philologist, Owen Barfield summarized the situation, the fantasized "very objects themselves" turn out to be suspiciously like the "objects as experienced" (Barfield 1971, pp. 211-12, fn. 16). We never really manage to escape the fact that science must always be based on qualitative experience, even if this means, pathologically, that we must invent that experience, and then project our inventions into a particulate realm beyond experience.

The insightful British physicist, George Burnett-Stuart, has remarked how "extraordinarily tenacious" is "the idea that Matter is a 'something' that is able to look after itself" — that matter is, in other words, "self-sufficient" as mind-independent substance. Speaking of the period since Descartes and Newton, he elaborates:

> The Dream of Autonomous [mind-independent] Matter has lived on through the centuries and even to the present day. It *has* only ever been a dream, an idea: there is no scientific evidence for it. What would an experiment that proved the autonomy of Matter look like? … As the experimenter arranges his apparatus, his actions are guided by non-material considerations — very likely, he is trying out an "idea" (Burnett-Stuart, p. 11).

It's true that *something* is "down there" in the microworld, but not that it is *a thing* — not that the particles have somehow condensed from the terms of theory, model, and statistical possibility to the qualitatively sensible terms of our human (and the world's) story.

The falsely concretized picture of the microworld caused physicists no end of trouble in the twentieth century. We learned that what we think of as "the domain of particles" is more like a realm of potentiality than actuality. We are given no sensible substance and no direct appearance in that realm. We certainly can recognize structure down there, but we cannot say what the structure is a structure *of* — not, at least, until we arrive at direct experience of sensible phenomena. With ourselves as observers of our instruments, we have indeed been finding ways to actualize some potentials — certainly not as solid particles of the sort commonly imagined, but, for example, as minuscule flashes of light on a properly sensitive screen, or as graphs of patterns of instrumentally measurable forces made (by well-meaning technicians) to look like a distribution of tiny, solid balls ("atoms"), which they definitely are not.[1]

How easy it is to forget that our modern invention of a mind-independent world is historically recent. Before the Renaissance and Scientific Revolution our present convictions about a cold and mechanistic world would have seemed as unbelievable as the older experience now seems to us. Do we understand this earlier experience well enough flatly to dismiss it with hardly a thought?

It is also easy to lose sight of the fact that how we experience and think about the world today is not only contradicted by our current knowledge, but is brought into further question by the vast tracts of our ignorance. I have already mentioned the difficulty faced today by any materialistically minded physicist who tries to explain with reasonable confidence and specificity what matter is. But the same problem afflicts our thinking about all the most fundamental concepts of our science. “We have no knowledge of what energy *is*,” according to Richard Feynman, one of the pre-eminent physicists of the twentieth century (Feynman, Leighton, and Sands 1963, p. 4-2). Other basic terms of our science such as *mass*, *force*, *time*, and *field* are also rather hopelessly obscure when interpreted in terms of our preferred notions of “Autonomous Matter”. This remains true even when we embed these words in precise mathematical formulae, where their meanings, as opposed to certain quantitative measures, function as unknowns of a sort.

The one thing we can say, and say emphatically, about our science is that it works. This is its very real glory, which reflects the simple fact that working is a central criterion of our scientific method. (As it happens, working is also a central criterion of purely trial-and-error approaches to discovery.) But this working is far too often claimed as evidence for our *understanding*. It surely *is* evidence for a kind of utilitarian understanding. But that is a very limited sort of understanding, and omits from consideration our deepest questions, such as *What is matter?* and *What is our relation, as perceivers and knowers, to the material world?*

Our contented unawareness of how fundamental is our ignorance may represent the greatest failure of science education today.

## Our eyes are not cameras

A participative view of our relation to the world encourages us to reject all representational theories of perception — theories that suggest we are given unknowably deceptive representations of a world inaccessible to us, rather than the full-fleshed presence of the world itself. These theories seem to reflect our experience with cameras. Cameras have no interior awareness of the world whose features they selectively record, and so, by a radically unfitting analogy, we have come to think of our eyes as taking “snapshots” of a world wholly independent of the interior activity of consciousness through which we perceive it.

It is, however, possible to think of our organs of perception, not as conveying to us images or representations of the world’s furniture, but rather participating in the very constitution of this furniture as the inner-outer reality it is.

But changing our “camera’s-eye” construal of perception is not easy in our day. It requires us to

see the truth in philosopher Henri Bergson's claim that "external objects are perceived by me where they are, in themselves"[2] (Bergson 1988, p. 57). Bergson certainly recognized that perception is associated with internal brain processes in each of us. But the point for our present purposes has to do with the overall functioning of our capacity for perception. We can easily see the huge difference between a camera that gives us representations of the world, on one hand, and a set of sensory organs that give us the world itself, on the other. A photograph of a tree does not allow me to carve my initials in the tree's bark — not in a way that affects the future growth of that part of the tree, or that provides shelter for insects.

Taking all our senses together, there is nothing in any of our behavior around that tree or our investigation of it — our spraying it for pests, our digging down to inspect its roots, our fertilizing it, our smelling its leaves or needles, our interaction with the comings and goings and songs of birds — nothing at all to suggest the slightest gap between what is presented to our senses and the fullness of the reality thus presented, nothing of the differences we are immediately aware of between, say, a photograph or map of the city block where we reside and our lived, sensory experiences of the block. We do not find ourselves being cumbersomely guided by anything like a photograph or other secondary representation as we explore a tree outdoors. We have immediate access to the tree itself.

I doubt we have yet even begun to reckon with the difference between representations of a supposedly unknowable world and the full availability of things themselves to our experience and understanding. Things do not withhold themselves from us, but rather yield themselves to our perception, our consciousness, and our understanding with remarkable generosity, and without holding anything back.

One of our difficulties with perception lies in the conviction that our consciousness is a brain state shut up in our individual heads, instead of participating in the wider and deeper consciousness through which the world has its being. But, as Barfield has somewhere remarked, "there is only one interiority".

If you think about consciousness for a while, I suspect you will realize that consciousnesses cannot be multiplied like discrete objects, and neither can we subdivide any consciousness in order to make distinct and separate consciousnesses from it. There is something integral, whole, and universal about any manifestation of consciousness, which necessarily lacks delimiting or definitive, thing-like boundaries. Any fragment of consciousness, by its very nature, is already open to just about everything. Among humans, it seems clear enough that every individual's mind is impossible to cleanly separate from the collective consciousness of the wider culture. Similarly with a son's or daughter's consciousness in relation to the parents. And the same is true of our relation to the meanings expressed in the material world around us. Further, as some of our best scientists have realized contrary to our usual way of thinking, even material things refuse to be neatly divided from one another.

This similarity between materiality and consciousness brings us to Coleridge's point that we gain our human consciousness, including our self-awareness, only in relation to the perceived world. We do this by making an object of the world, whereby we discover ourselves as subjects.

Object and subject here do not make for a radical dualism because each can exist only in conjunction with and by means of the other. Barfield [puts it this way: the mutual determination of object and subject can culminate, at the extreme, "only in a combination of [quoting Coleridge] 'the most perfect detachment with the greatest possible union'; only in 'things without us' at the one pole and 'us', self-conscious, at the other; yet with the two so related that the one extreme is 'identical and one and the same thing' with the other" (Barfield 1971, p. 67).

That last principle of polarity and identity is where we moderns tend to lose Coleridge altogether. I might well say the same of myself if it were not for a single, isolated experience a good number of years ago. In the very early morning, before there were any glimmerings of dawn, I headed out for a walk through the local, rural landscape. It must have been a cloudy and moonless night. Since I could see nothing at all to the left or right, my thoughts turned inward and I looked down in order to keep my feet on the road. And so I drifted along, perhaps in something slightly like a dream world, and time passed without my being particularly aware of it.

But then I happened to look up and was greeted by the vivid morning landscape. It was a momentarily jolting experience, if only because I was not expecting it. But what matters in the present context is that I immediately felt my interior thought-world becoming attached to the surroundings, locating me materially within those surroundings, and — so it seemed — *through that very act of awareness* (as opposed to "wherever" my consciousness was a moment before) I woke up to myself. I knew myself to be a self because I had these objects of the world around me as *my* objects. I have felt ever since that my "private", waking self-consciousness is inextricably linked to my awareness of the "outer world" and I have at times actually noticed the connection.

This, I could easily imagine, was part of why Coleridge understood evolving life as "a subject with an inherent tendency to produce an object, wherein and whereby to *find* itself" (quoted in Barfield 1971, p. 67). So it is that "in every act of conscious perception, we at once identify our being with that of the world without us, and yet place ourselves in contra-distinction to that world" (Coleridge 1969, vol. 1, p. 497). In other words, our sense of the "outness" of the world is "one and the same thing with our own immediate self consciousness" (Coleridge 1962, Chapter 12). We objectify the world and set it apart from ourselves and thus experience ourselves distinctly as onlookers in the same act. Each of us has his own particular viewpoint upon the world. Animals in general seem to lack any similarly sharp sense of having their their own point of view.

When you and I behold a mountain, it is not hard to sense how its substance and solidity, its settled strength, the majesty and transcendence of its "outlook" upon its surroundings are qualities that have their roots in our interiors. That is the only place where we can *know* or *recognize* them in the outer world. And then we might want to wrestle with the question whether aspects of our interiors are ultimately one with the world's interior, and whether that unity gives us the ultimate basis and confidence for placing "out there" the material things we can only *know* "in here". Somehow and somewhere we seem to know without having to think about it that "out there" *is* in some sense "in here" — and also that the multiple perceptual reports of countless individuals are in fact reports of a single, unified world that we all participate in.

## The difficulty of letting our minds embrace the world

When I referred in my subtitle to "a largely unexplored possibility," I was understating the fact of the matter, not exaggerating it. Our present experience of living in a mind-independent world may be a historical novelty, but it seems impossible for us now to imagine things differently. That's why philosopher David Chalmers, in a survey of ways to think about "strong emergence" (through which the existence of consciousness is commonly explained), finds it easy to take for granted that consciousness must, in one way or another, "arise from" (emerge from) the physical world (Chalmers 2006). The possibility that the physical world might arise from a creative consciousness, or imagination, doesn't even present itself.

The conviction that we confront a mind-independent world has become all but universal in western thought today. It underlies nearly all work in the philosophy of mind, is the basis for the felt need to "naturalize" biological agency and various human capacities, and belongs to the common ground uniting conventional biologists and intelligent design theorists. Get rid of the mind-independent notion and you would have a global reset of cognitive science and biology — and, in fact, nearly the whole of contemporary culture, with its widespread sense of alienation. It seems worth considering whether we really had good reason to end up where we are today.

I should add that the point of the analogy between our experience of the world and our experience of a story is not to suggest that the world's substantiality is *really* just the insubstantiality of whatever we conceive the human "interior" or mind to be. That criticism could only arise from a materialistic standpoint that doesn't know what to do with mind relative to matter. No, the point is that the world's substantiality and solidity is, so far as we can know, always *perceived* solidity — the real solidity, just as we experience it, of a massive tree trunk, or rock, or a body of water, or even that caress of air that we can *feel*, or even again the visible flame of a candle; but not the qualitatively dessicated and falsely imagined autonomy of theoretical constructs such as particles.

(And, by the way, theoretical constructs, simply by being theoretical constructs, are the last things that could truly be called "mind-independent".)

The tortured attempt to reconcile our actual experience of material things with a common way of thinking about particles is what gives us statements like this from a popularizer of science:

> The baseball and the bat are mostly empty space. Their solidity is an illusion created by the electromagnetic force field that binds their atoms together … We credit the home run to the batter, but the fundamental force responsible is electromagnetism (Ferris 1985).

So the solidity of the bat we are familiar with is really just an illusion, and the bat's apparent solidity is really the effect of a force field holding atoms together. And those atoms really consist mostly of vast tracts of empty space — space whose emptiness is demonstrated by contrast with the *supposed solidity* of small but discrete and thing-like particles constituting the substance of the atoms. So in this picture the "illusory" solidity we can actually experience in the bat is transferred to falsely imagined particles we do not experience, with the auxiliary help of a vaguely conceived electromagnetic field.

This confusion was why Coleridge, when confronted with the charge that he was an idealist — presumably one who, unlike the actual Coleridge, failed to acknowledge the world's materiality and solidity — responded by referring to the appearance-versus-reality framework of his day, which was much the same as in our day. He wondered how it could be called "realistic". Is it realism, he asked (perhaps with Kant in mind), when people are told that "there exists a something without them, what, or how, or where they know not, which occasions the objects of their perception?" Not at all, he answers. It is "the table itself" that the true realist believes himself to see, "not the phantom of a table, from which he may argumentatively deduce the reality of a table, which he does not see":

> If to destroy the reality of all, that we actually behold, be idealism, what can be more egregiously so, than the system of modern metaphysics, which banishes us to a land of shadows, surrounds us with apparitions, and distinguishes truth from illusion only by the majority of those who dream the same dream (Coleridge 1962, chapter 12).

## Conclusion

In historical terms, it was not so long ago when the world's substance was thought to lie first of all in its embodied meanings, rather as speech is still today experienced as embodied meaning. It is remarkable that in our day virtually all convinced materialists should so routinely participate, as lecturers, hearers, and readers, in the processes of speech — processes wherein the physical artifacts of speech and writing are naturally and freely accepted as bearers of a mind-dependent meaning that cannot at all be explained in terms of the normally conceived physical lawfulness of those artifacts.

This is true, not only of physical artifacts relating to human communication, but also to the many communications of animals. Is there good reason why we should not construe all the material phenomena of the world as meaningful speech of a sort? Did anything *require* us to develop a scientific explanatory apparatus from which we strove mightily to eliminate every last trace of the qualitative — that is, every last trace of a meaningful and actually appearing material world (Talbott 2026)? What about thunder and lightning, roaring ocean waves and the music of a creek, sunrises and sunsets, the smell of the seacoast or of the earth after a rain, the taste of honey, the beauty of a crystal, the wonders of the night sky, and so on throughout the material realm. We would not be able to distinguish between a willow tree and an oak, between different rivers or different mountains, if their forms and patterns were absolutely meaningless — if they did not speak in some way to us, declaring their separate, individual natures. And then there is the conceptual content we articulate as laws of physics, which look very much like thoughtful speech.

It seems to have become a matter of almost total forgetfulness for us: whenever we want to understand something in the world, we immediately set about *explaining* it — that is, finding words whose *meanings* enable us to get inside the phenomenon (or take the phenomenon into ourselves) so that we can know it as intimately as possible. As Tom Stoppard has said through one of his characters in the play *Rosencrantz and Guildenstern Are Dead*: "Words, words. They're all we have to go on." Apparently, that's rather a lot.

Our science consists of nothing if not the meanings of words and the stories built into them. That's why we try as best we can to put our observations into words and why we read scientific papers and textbooks, write lab notes, and pursue classroom conversations. Some things, it appears, are just so intimately a part of our experience — are so close to us — that we have difficulty focusing on them in a relevant way. Language is one of those things. If the nature of language so usefully reflects the nature of the world story — well, perhaps we should pay some attention to how that could be so.

At least we can say this: if our science gives us any reasonable understanding of reality, then that reality must stand in an intimate relation with words and thought. But it is hard to see how thought can be illuminatingly fitted to any things at all — including material objects — if those things are not themselves thought-like. This is presumably why philosopher David Bentley Hart has said that material reality is "a kind of phase, so to speak, of mind ... a concrete state or crystallization ... the way ice is a phase and state and crystallization of water" (ellipses in original; Hart 2024, p.86).

The thought-like character of material things is why we must recognize that the world is not mind-independent. But to recognize that the world is mind-like is to lose the main reason for objecting to Coleridge's definition of the primary imagination as the "living power and prime agent" of our perception of the natural world and as a creative participation in the world's existence. To summarize several points of our discussion:

• The cultural transition to a conception of material reality as mind-independent is historically recent, and can never be satisfactorily completed. The mind-independent "matter" of this new, materialistic conception remains for science a baffling mystery.

• We have arrived at this mind-independent view of the world only by concertedly stripping from our scientific concepts everything qualitative — that is, everything relating to our interior, mindful experience. This was not so much a *discovery* of mind-independence as a willful *insistence* upon it.

• Nevertheless, our knowledge of the world occurs on the stage of consciousness. It occurs, for example, by means of our perceiving and thinking. This is the only way we can even *conceive* of gaining access to, or understanding, the world.

• We have, almost from the beginning, been abandoning the empirical (experiential) ideal of the Scientific Revolution. Experience was spurned as irreducibly qualitative and subjective, and therefore as *interior* in nature.

• To remove all qualities from the world (if we could actually achieve it) would be to make the world disappear from all conscious manifestation. It would, as far as we could ever know, make the world cease to exist. Nothing would *be there* for us. Apparently qualities belong to the essential, inner/outer reality of the world.

• We have no reason to doubt that our senses give us the world itself, not camera-like or other representations of the world.

• We should remember that it is the world that first bestowed consciousness upon us, and since then

has shared with us, via that consciousness, the secrets of its own nature.

• This is not a view that overlooks material solidity (or attributes it falsely to theoretical constructs lacking an experiential foundation). Rather, it accepts solidity exactly in the terms of our experience of it. And these terms have an inescapably interior, experiential, and qualitative aspect.

Finally, Coleridge, like David Bentley Hart, had his own phrase for mind-like materiality, a phrase he adopted from earlier writers: matter, he said, is “coagulated spirit”.

I am not suggesting that throwing out a perplexing phrase like “coagulated spirit” solves our problems. But such locutions do give us a direction in which to look, and can more or less usefully suggest what sort of reality we are looking for. It may be that the main thing remaining is the progressive clarification of some such phrase. (No small task!) And so, at this point we might want to ask: *Despite our not knowing exactly how to interpret a concept so unwelcome to the materialistic mindset, might it be that something like Coleridge’s “coagulated spirit” is the primary mystery separating our analogy of the non-materialized but participated novel from the materialized world-story we are collectively participating in?*

Actually, maybe the problem isn’t as thorny as we first imagined it. If coagulated spirit is what we call the material substance of reality, then we might say that it is simply the stuff of the world we experience around us — that is, the stuff we *experience*, without the addition of imaginary stuff we cannot experience and cannot even conceive since it lies altogether outside our experience. So coagulated spirit would be precisely what lies within our experience and in fact its definition would already be given by the terms of that experience. What makes this so difficult for us now is our lack of an experience-based science. Re-formulating science in terms of the experiential ideal of the pioneers of the Scientific Revolution may be all that is needed in order for the concept of coagulated spirit to become perfectly natural for us.

**Further resources.** On the evolution of human consciousness and the correlative evolution of the cosmos (which we might see as “coagulated spirit”), see Owen Barfield’s *Saving the Appearances*. For an epistemological understanding consistent with the present note, see “How We Make Sense of the World” by philosopher Ronald Brady. Also see the author’s *Organisms and Their Evolution: Agency and Meaning in the Drama of Life*, especially chapters 12, 13, 23, and 24. Chapter 12 (“Is a Qualitative Biology Possible?”) offers examples of an experience-based biology, and Chapter 13 (“All Science Must Be Rooted in Experience”) discusses the problem of experience generally. Regarding Coleridge, see Barfield’s *What Coleridge Thought*. All these works are listed in the bibliography.

## Notes

1. These pictures certainly *correspond* to the forces and potentials we are in the habit of calling “atoms”, but the last thing we have evidence for in the microworld is tiny, solid balls at an atomic scale. And forces and potentials are not material *things*.

2. Bergson adds the words, “and not in me”, which one might wish he had not. But I think he was controverting the view that perception is a *merely subjective* feature of our lives. His emphasis was on what we might call the “objective outness” of perception.

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