CORRESPONDENCE

To the Editor:

The review of Neppe and Close's *Reality Begins With Consciousness: A Paradigm Shift That Works* (RBC) (*JP*, 76, 395–401) by philosopher Michael Potts has significant differences from the perspective we've endeavored to portray. Dr. Potts reviewed the first edition, and over the next four revisions, we have clarified this book greatly. The book is esoteric, and to some is a full undergraduate multidisciplinary course and beyond, and we want to ensure that the statements described are placed in the correct perspective. We quote Dr. Potts (italics) at the start of each of these 22 points and then emphasize our key differences.

The sheer complexity, difficulty, and detail in the encyclopedic first edition (RBC1¹) makes adequate review formidable for anyone. By the fourth edition, April 2013, RBC has 511 pages, with 496 references, 50 chapters, more than 100 key terms, and enough axioms, theorems, lemmas, and hypotheses to test for centuries, and a special 43-page supplement, *Glimpses and Glossary*, aimed at greater comprehensibility. We've carefully revised RBC hundreds of times over 4+ years, refining the ideas into workable science and mathematics and making this, our "life's work," more readable, comprehensible, and meaningful. Yet the fundamental axiom and tenets on which it is based remain unchanged, and we have met every challenge put to us, including the Cabibbo challenge below.

The book has received favorable comments² from many scientists and scholars in different disciplines, such as (USA) neuroscientist Alan Bachers, psychologist Stan Krippner, consciousness researcher Dean Radin, physicist David Stewart, philosopher Helmut Wautischer; UK biologist John Poynton, Australian parapsychologist Lance Storm, and Canadian mathematician and physician Frank Luger. The Israeli expert on dimensional biopsychophysics Adrian Klein, who has studied RBC intensively over 3 years and critiqued each and every chapter, describes RBC as "... a work that will change mankind's future.... The 21st Century's revolutionary paradigm shift ... masterpiece ... monumental ... seismic shift. ... The beginning of the ultimate disclosure about the nature of an all-encompassing reality" (RBC1, p. vi; RBC4, p. vii).

In RBC, we discuss the unique triadic dimensional-distinction vortical paradigm (TDVP). This model generates possibly 600 scientific hypotheses through the key, critically important (a) concepts of triadic space, time and broader "consciousness" (STC) always being tethered together; (b) mathematical and logical "distinctions" of "extent" (measured by "dimensions") of "content" (container of STC) and of "impact" (influences on content and extent); (c) utilization of a higher level structural content of curved movements—yortices"—interfacing across, between, and within dimensions by the process of "indivension"; (d) "paradigms" applied across all the broader sciences—physical, biological, consciousness, and psychological ("metaparadigm"/theory of everything); (e) obedience to the scientific and mathematical laws of nature; (f) unification of the infinite and finite (g) resulting in a philosophical model of unified monism. Yet, Potts does not meaningfully discuss these, largely ignoring (h) the broader sciences; (i) the extensive mathematics; and (j) the validating LFAF ("lower dimensional feasibility, absent falsification") philosophy of science model, which allows for assessing how higher dimensional domains can be explained in 3S-1t (three spatial dimensions; one moment in time).

Inter alia, Potts mischaracterizes TDVP as "metaphysical," "neutral monism," "pantheism," and "illusion." Also, he misinterprets the TDVP perspectives of "guiding reality," "vortices," "tethering," "infinity," "survival," "transcendence," and "consciousness."

We amplify a few responses:

Potts: "Speculative metaphysics." TDVP is primarily a scientific and mathematical model. It is based predominantly on our combined 60+ years' study of solid scientific empiricism and mathematical proofs. Applying LFAF, we extend scientific thinking, sometimes suggesting testable hypotheses. For creative ideas, we use "speculative," "possible," "guesstimate," etc. (e.g., we speculate upon the infinite, but not

¹ E.g., RBC1=First Edition; RBC3+=Third Edition on. See www.brainvoyage.com

² Also "Book of the Year 2012" finalist, Science; https://botya.forewordreviews.com/finalists/2012/science/ (5/8/2013)

metaphysically—"abstract theory or talk with no basis in reality"). We never even mention "metaphysics": Remarkably, we preliminarily report (RBC4) a profound scientific breakthrough: We can justify the mathematical and scientific feasibility of our finite 9-dimensional rotational (vortical spin) TDVP model (Close & Neppe, 2013). TDVP is only secondarily philosophical, and this is a direct consequence of the science and mathematics portrayed.

Though some of the theories of everything (TOEs) Potts cites are metaphysical, TDVP is not: We compare 24 different TOEs applying detailed, appropriate metrics (general, specific, special): TDVP scores perfectly (39/39), our previous Neppe and Close models >20/39, all others score <20/39!

Potts: "[A]pparently they hold ... a form of 'neutral monism'... being a version of neutral monism, is ontologically parsimonious." Although in the philosophical model of TDVP, unified monism results from scientific empiricism and mathematical modeling, we discuss philosophy extensively: Potts's comment is incorrect. In neutral monism, both the mental and the physical are reduced to a third neutral substance. Both matter and mind are properties of this unknown substance—two sides of the same coin. Similarly, Potts: "vague pantheism of the universal consciousness view is not clearly defined or defended." Unified monism doesn't imply neutral monism, pantheism (one God substance), or panentheism (God in all). But TDVP's "distinctions of impact" allow for many interventions, including guidance. Unified monism developed philosophically from TDVP, with separate but always tethered space/time/consciousness substrates and the finite contained in infinity.

Potts: "Yet the best they can do to describe tethering is through the analogy of 'bubbles' in the universal space/time/consciousness." This is a significant misrepresentation: "Bubbles" are not even mentioned: Metaphoric multidimensional balloons are mentioned, but they, too, may mislead. Tethering necessarily involves a relative nonlocality of time, space and consciousness always being together. Previously Minkowski (1908) represented time and space as inseparable; the TDVP axiom argues that time, space and consciousness are inseparable (RBC1): Tethering is far more than multidimensional linkage, implying travel: There's no travel; tethering is just there. We conceptualize this and other difficult concepts in our supplement to RBC, Glimpses and Glossary. Therefore, in TDVP, space, time, and consciousness substrates always remain profoundly tethered to varying degrees across, between, and within all dimensions (so there is a measure of "extent").

Potts: "Vortex' is defined in its usual spatial sense." This is incorrect. In TDVP, a vortex is not just spatial. "Vortex" is a fundamental multidimensional concept involving STC. It is a dynamic moving curvilinear manifold multidimensional distinction of any open or closed form, including spherical, ovoid, helical, or spiral forms (adjective: vortical).

Potts: "... but it is unclear precisely how vortices function in nature and in conscious experience." TDVP's important model of "vortical indivension" creates a multidimensional communication model, a metalevel above field theories. We discuss the concept of vortical indivension in several chapters. Indivension is a process involving fluctuating dimensions of STC—mainly C-substrate domains of "zillions" of individual-units. These portray unique or common transdimensional (often transfinite) relative experiential realities. Indivension occurs through the interaction of vortical distinctions (new term derivation: individual-units; dimensions).

Potts: "The authors' precluding supernaturalism or a creator God reveals a metaphysical naïveté ... natural laws are contingent, requiring a necessary being. ..." Egregiously incorrect. We do not exclude God (RBC1 mentioned God 56 times), "infinity of the infinities" (8 mentions), "primary receptor" (40), and guided variants (42)! However, we avoid attributing man-made qualities to these terms: Natural law is fundamental to TDVP. This includes the infinite and guided reality. In our limited 3S-1t reality, we interpret "supernatural" or "miracles," but at higher dimensional and infinite levels these are not outside nature: Even the incomprehensible, unknown infinite obeys natural laws.

Potts: "Consciousness" is notoriously difficult to define [but Thomas Nagel says that] fundamentally an organism has conscious mental states if and only if there is something that it is to be that organism...."TDVP carefully describes the C-substrate and delineates different kinds of consciousness. Nagel's is not the ultimate definition for consciousness. We conceptualize different subgroups of consciousness. We refer to C-substrate to properly portray the complexity and unification of consciousness. We devote several clarifying chapters to this topic, particularly from the second edition on, amplifying with each subsequent version. To us, "consciousness" is a broad, general term describing both infinite conscious meaningful information and

finite awareness and responsiveness. These range from the discrete finite physical meaning at inanimate levels and extend to transfinite continuous interactions, modulated in sentient beings in the brain. Quantal (qualit), psychological, neurological, transfinite, and metaconscious levels are pertinent to TDVP, plus philosophical aspects.

Potts: "They are correct that psi operates nonlocally." Almost but not quite. In TDVP, psi involves relative non-locality not absolute nonlocality. We conceptualize "relative nonlocality" (RBC3+). In consciousness research, "nonlocal"—a distant connection of information, apprehension, or perturbation—is always relative to the observer's perspective. There are five different levels of relative nonlocality (restricted, dimensional, transfinite, continuous, mystical). Additionally, the nonlocal must express itself relative to the observer, but ultimately it is registered locally (e.g., in consciousness or the brain), hence another reason for the suffix "relative."

Potts: "But 'ordropy' refers only to a tendency toward order—what is ultimately behind the order in living things?" Ordropy is a necessary component of the infinite elements of reality. It reflects spatial, temporal, or other meaningful multidimensional order and patterns, in finite and infinite subrealities, including, but not limited to, negative entropy: Ordropy links closely with our special life model (particularly in RBC2+).

Potts: "But why assume that consciousness, even if defined in terms of some kind of extended information field, operates through some kind of particle?" Potts takes a largely unintelligible quotation out of context, not indicating what came before to make it coherent. He starts in the midsentence, ignoring the previous header. This sentence was revised; then in RBC4, it's completely eliminated. Instead we wrote a new comprehensible Chapter 1 (thank you, Dr. Potts, we listened!), requesting numerous intelligent laypersons to read it, and made it available (at http://www.brainvoyage.com/RBC/excerpts_ch01.php). We simply mention, en passant, a speculative "conscit" model to balance space and time. TDVP does not assume that "consciousness" is necessarily a "particle": It is a remote theoretical speculation. More pertinent is "DICTU," the prioritizing description now in RBC4: dimensions, infinity, consciousness, tethering of STC, unification of the infinite and the finite.

With respect to terminology and neologisms, for example, Potts refers to "meta" [meaning] "beyond." We use "meta" differently, as a prefix implying a broader, higher level of order (e.g., metaparadigm), also in infinite unextended concepts such as metatime, metaspace, metaconsciousness, metainformation and metalife, following on, inter alia, Gödel's metamathematics and Devereux's metafamiliarity. Neologisms, all carefully conceptually defined, are necessary linguistically in new multidisciplinary sciences, and particularly in any groundbreaking work.

Potts refers critically to "Individual-units." Systems theory, which is incorporated within TDVP, is an important, specialized area (e.g., Laszlo). Our applications of compound lengthy words profoundly illustrate such concept unification. We define an individual-unit as a distinct "conscious" finite biological unit across dimensions and also the infinite. Multiple levels manifest together, linked to *group*, though especially in individuals, and in familial, ethnic, cultural, social, and species contexts.

Potts: "Appealing to a mathematical method, such as Neppe's co-author Close's 'Calculus of Distinctions,' will not determine which of two or more theories is correct." This represents an incorrect view of the mathematical representation of reality. Mathematics is not separate from reality. The calculus of distinctions (CoD) is a fundamental mathematical technique which applies mathematicologic. It is no more just a "mathematical method" than is Newton's calculus. CoD models the processes of the conscious drawing of distinctions, the basis of all perception, conception, and understanding. CoD reflects the logical processes that govern the universe. Its logic therefore applies to any and all conceptual distinctions, including theories. The more a theory conforms to logic, the more likely it is to be correct. The logical structure of a theory has a great deal to "do with" how likely it is to be correct. Using CoD and dimensional extrapolation (RBC1+), we are able to derive from theory results consistent with experimental findings unexplained by the standard physical model. This brings TDVP out of the realm of philosophical speculation into the realm of practical science.

Potts: "In the first place, Close's calculus should be vouched for in peer-reviewed journals in mathematics and/or logic. If this occurs, it remains the case that mathematical consistency is the mark of many empirically equivalent theories." We agree. Consequently, every part of every edition of RBC has been peer reviewed, frequently not

just by two reviewers but at times by tens. Every revision has also been peer-reviewed. We have continued to consider each and every comment received from readers, including Potts's. Dr. Close's work has been reviewed by other competent mathematicians and peer reviewed. Components are published in appropriate journals or being submitted.

Potts: "The authors' notion of 'infinity' is vague ... infinite mind ... Where does Neppe and Close's concept of infinity fit? It is difficult to tell." There are several chapters on infinity and models for it, and RBC3 and RBC4 amplify infinity even more. We discuss the transfinite, the finite discrete and the infinite continuum. We also refer to Gödel and Cantor mathematics. We discuss in great detail the transfinite as opposed to the infinite and the concepts of continuum versus discrete. It's a very complex area, even for mathematicians. The infinite is conceptualized necessarily in terms of a continuum and continuity the finite, in terms of the discrete. These are key features that are clear and not vague. We don't use "infinite mind" or "mind."

Potts: "[I]ndividuality is an illusion? And if "a finite subreality" is pervaded ... "how does the infinite not totally obliterate the finite? If the infinite reality transcends the finite reality, then there is reintroduced a dualism which Neppe and Close wish to avoid." Important question: TDVP recognizes reality and does not regard any component as an illusion. Subjectivity is important, so is objectivity. Individuality is not an illusion. We talk about "transcendence" but not "infinity transcending": The many chapters on the topic clarify one reality: the infinite "containing" the finite. Every finite action is part of the whole infinite reality. There is no dualism, as there is no separation. TDVP defines "infinite" as limitless, unbounded, continuous, without end subreality in space, time, and consciousness (C-)substrates; although largely unknown, it obeys the laws of nature and interfaces with the discrete finite.

Potts: "... put it outside the scope of physics and into the scope of metaphysics." Contrarily, this is possibly the most multidisciplinary book ever written! TDVP is far broader than just the specific discipline of physics. TDVP is likely the single most multidisciplinary scientific and mathematical model ever proposed.

Potts: "What kind of existence do those who survive death have in metaspace? How does time flow for them in metatime? How is the individuality of their consciousness preserved in their world of metaconsciousness? They would require intentionality to be capable of seeking communication with the living. Yet if they are part of metaconsciousness, their individuation as finite beings is difficult to justify." Good question. This is discussed in detail in RBC2 and amplified in RBC4. TDVP draws some speculative conclusions linking the finite and the infinite. This includes survival hypotheses.

Potts: "... the more promising of which is James Carpenter's 'first sight' theory of psi." By RBC3, we had incorporated the First Sight model into the "distinctions of impact." This is the major mechanism of deliberate or automatic psi influence, but other impacts include electrochemical neurological elements, psychological deliberation with regular conscious or unconscious communications, higher guided consciousness, bidirectional transfinite and infinite reality elements plus quantal impacts.

Potts: "... by two physicists." A minor clarification: TDVP was written by two scientists in different disciplines who complimented each other professionally. Pairing what was pertinent from our backgrounds facilitated communication of the multidisciplinary needs of the TDVP model. This is relevant as to how seriously one can take our ideas.

Vernon Neppe, MD, PhD, FRSSAf, DFAPA, BN&NP, is a uniquely qualified and peer-recognized medical scientist in several disciplines (e.g., the only USA physician ever listed in the peer-selected *America's Top Doctors* in any five different subspecialites, in this instance neuropsychiatry, behavioral neurology, psychopharmacology, psychiatry, and forensics). He is also internationally peer-recognized in neuroscience, epileptology, phenomenology, consciousness research, dimensional biopsychophysics, and parapsychology. (a) As a national, high profile forensic expert on consciousness states and a pioneering phenomenologist in both consciousness research and neuroscience, he conceptualized a key feature of the TDVP paradigm as a unified "consciousness" manifesting at every level. With Ed Close, he also (b) introduced the concepts of a tethered unified triad of space, time, and "consciousness"; (c) proposed the ubiquity of vortical communications across dimensions; and (d) conceptualized the "continuous infinite" containing a "discrete finite," (e) resulting in the philosophical model of unified monism. But Neppe is not formally a physicist or mathematician, though working in the area for the past decade because of his vertical dimensional models. Edward Close, PhD, PE, a physicist, mathematician, engineer and cosmologist, used special mathematics used in TDVP, including: (f) Fermat's last theorem applied to vortices and asymmetry,

but the solution to this theorem had, in addition, puzzled mathematicians for 4+ centuries and Close was also the first to solve that (Close, 1977); and (g) pioneered the modeling of equations of consciousness and mathematics in *Transcendental Physics* (Close, 2000) to TDVP. With varying assists from Neppe, he developed, inter alia, (h) "dimensional extrapolation," a major technique extending geometry to "dimensionometry," and allowing communications across dimensions; (i) a solution to the Cabibbo angle, which had puzzled physicists for 50 years and consequently the critically important demonstration of the 9-dimensional finite spin model of reality; (j) the calculus of distinctions, which is the most fundamental of all mathematical methods, because distinctions are applied before any other technique, and (k) introduced the concepts of Euclidean and non-Euclidean mathematics in space, time, and consciousness. All these applications of both authors are reflected in the carefully considered mathematics and conceptualizations of TDVP, plus their applying the available empirical data.

In summary, understanding the repetitively updated, multidisciplinary *Reality Begins with Consciousness* E-book is necessarily nontrivial, because unadorned reality-as-it-is is vast and hypercomplex: Any metaparadigm modeled on reality must be equally so. RBC, containing the TOE of TDVP, endeavors to explain unadorned reality.

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To the Editor:

I appreciate the correspondence of Vernon Neppe and Edward Close in response to my review of their book, *Reality Begins With Consciousness*. They have put a great deal of effort and research into developing their paradigm and into answering my review, and that speaks for their confidence in the value of their work. In my response I begin by noting the points of agreement I have with the authors. First, I stand corrected in my using the term "bubbles" instead of "metaphoric multidimensional balloons." I still wonder about the meaning of "tethering" described in that way. Neppe and Close state that "Neologisms work with a whole new area of multidisciplinary sciences, particularly with any groundbreaking work, all carefully conceptually defined." This is certainly correct—neologisms are important in science when science discovers previously unknown phenomena or needs to develop new theoretical terms. Neologisms must be carefully defined, and ideally they should be used to clarify rather than obfuscate.

I also agree with the authors' claim that mathematics and reality cannot be wholly separated, a position that dates back to Aristotle. I would note, however, that mathematical and logical consistency may be present in a future competing theory with similar explanatory power to Neppe and Close's. I stand by

my claim that their theories are underdetermined by the evidence, and this includes mathematical, logical, and empirical evidence.

I am more clear on the authors' definition of "consciousness," and I appreciate the clarification. I also grant that as a philosopher who is not trained in the special sciences that I cannot evaluate the mathematical elements of the theory—that is a task for others. It is also true that no review can do full justice to a project as large as Neppe and Close's—but that does not mean that a review is not helpful in explicating some of the conceptual problems with the theory.

Now to my major points of continued disagreement with Neppe and Close: First, I strongly object to their description of "metaphysics" as "abstract theory or thought with no basis in reality." One would have thought that such positivism died with the failure of the logical positivist program of eliminating metaphysics during the first few decades of the twentieth century. All attempts to eliminate metaphysics from human discourse presuppose it—and it is not thought "with no basis in reality." Metaphysics has been variously defined in the history of philosophy, but most would agree that metaphysics has to do with the proper interpretation of reality as a whole. Alfred North Whitehead (1929/1978, p. 3) defined "speculative philosophy" (that is, "metaphysics," M. P.) as "the endeavour to frame a coherent, logical, necessary system of general ideas in terms of which every element of our experience can be interpreted." Rather than being pure speculation without regard to rational consistency and empirical evidence, speculative philosophy or metaphysics must be tested by reason and experience; it must be both logically coherent and "applicable" and "adequate" to experience, to use Whitehead's terminology (p. 3). Given that both metaphysics and science must be rationally coherent and empirically adequate, at the level of fundamental theories of reality, science cannot be separated from metaphysics. Karl Popper (1958/1985) has argued for the criticizability of metaphysical positions. One method is to point out consequences of a metaphysical position and show that they are inadequate—Hume's atomistic theory of sensation, for example, cannot take adequate account of our perception of wholes. Thus, even if, as I have claimed, Neppe and Close's system has elements of a metaphysical research program, this would not imply it is irrational, a mere guess, or untrue to experience.

Neppe and Close's view on science seems similar to "scientism." This view is also characteristic of some parapsychologists who believe that unless a theory is "scientific" in a narrow sense it cannot be informative of reality, a view most philosophers abandoned long ago but which hangs on in some scientific circles. A research program that cannot be adequately tested for hundreds of years and makes such large-scale claims as Neppe and Close cannot fail to have some metaphysical elements—and that is not a criticism of their theory.

I still fail to see how unified monism would be compatible with the theism of the great monotheistic religions, particularly the doctrine of creation from nothing. That may not, according to Neppe and Close, be a weakness of the theory, but when large scale claims are made about reality as a whole, they do have metaphysical implications regarding the existence and nature of a deity.

Neppe and Close's system that unifies reality and consciousness gives much food for thought. I am grateful for the authors' work and for the chance to review it and to respond to their letter.

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