Relative non-locality: Theoretical implications in Consciousness Research.

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ABSTRACT

Three core concepts: We argue that "non-local" events require further descriptors for us to understand the *degree* of non-locality, what the *framework* of the observer describing it is, and where we humans are located *relative to* the ostensible non-locality. This suggests three critical factors: *Relative to, from the framework of,* and *a hierarchy of "to what degree?"* "Non-locality" without the prefix "relative" compromises its description by making it an absolute: We must scientifically ensure that, qualitatively, we can describe events that correspond with each other—like with like, and differentiate these events from those that are hierarchically dissimilar. Recognition of these levels of "relative non-locality" is important: Non-locality from "the general framework of" the infinite, or mystic or near-death experient, markedly differs theoretically "relative to our sentient reality in 3S-1t": Specific events may be described "relative to" our living 3S-1t reality, but conceptualized differently from the

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framework of observers in altered states of consciousness experiencing higher dimensions.

Levels: Hierarchical questions to ask would include:

- Is the non-locality "pseudo": simply communication that some but not others detect through extending our usual communications? Or is it still local "subliminal" communications? Or is it undetectable by humans, yet detected by some animals or machines? Or are psychological or brain happenings misinterpreted as non-locality?
- Is the non-locality impacting higher dimensional hidden realities?
- Is it at the countable infinite transfinite—level?
- Or does the non-locality happen at the infinitely continuous reality?
- Or at the highest level of that infinite—the mystical?
- Is it non-locality in Physics: quantal, entanglement or the many other causes? Relative non-locality is physics is likely different from non-locality in Consciousness Research.

Immediacy principle: We also propose that events happening immediately, not even requiring light-speed, are fundamental properties of non-local time involving more dimensions than just 3 dimensions of space in the present moment (3S-1t).

Keywords:

3S-1t, calculus of distinctions, classification, Close-Neppe mathematicologic system, consciousness research, communication, continuous, definition, delta, dimensional, dimension, discrete, distinctions, entanglement, erroneous, framework model, infinite, level, like with like, limitations, metafinite, misinterpretation, mystical, near-death experience, non-local, nonlocal, non-locality, organic, phenomenological, quantum, quantum physics, pseudo, psychological, relative non-locality, relative to, restricted 3S-1t, sentient living beings, space, subliminal, time, transfinite.

THE CONCEPT OF RELATIVE NON-LOCALITY (PART 1)

Introduction

The term, "non-locality" or "nonlocal" is becoming increasingly fashionable ⁴, and with this fashion, an imprecision has developed that may ultimately compromise the two main sciences that use these terms, namely, Physics and Consciousness Research. There may be some usage overlap between disciplines, depending on interpretations of underlying causality: The most common current related phrases are in physics are "quantum non-locality" and "entanglement". However, this paper focuses on

⁴ A Google search (29 May 2014) indicated 66700 hits for *non-locality* and 75,400 for *nonlocality*. For "non-local consciousness" there are 9680, and for "quantum non-locality" there are 64800, "quantum non-locality" involves 37800 hits' "non-local perception" 2930 and "non-local perception" 38,800. It appears therefore that non-locality in any psi sense constitutes less than a third of all uses of "non-local" or "nonlocal". Possibly the hyphen in non-local is more commonly used in psi research and the single word nonlocal in Quantum Physics. For consistency, we use the term non-local throughout, but this also delineates another problem with the term: the requirement to search for both non-local and non-local and then to ensure one is not duplicating terms.

the second discipline at this point, a statistically less common use ^a, namely non-locality in Consciousness Research where terms like "non-local consciousness" and "non-local perception" are sometimes used as preferred synonyms for "psi" or for "extrasensory perception" ¹. There are, indeed, now many who use "non-local" as a prefix to substitute for many different kinds of psi phenomena. ^{2,3} Therefore, "non-locality" could just reflect ways to wrap up the same controversial animal in a fur coat: it could be a different way of describing another term for ESP, or for psi, or for parapsychology, as these latter terms may not currently be in fashion or they may be very different.

In the context of this article, we're using the definition we applied in *Reality Begins with Consciousness: A Paradigm Shift that Works* ⁴ namely:

"In both physics and consciousness research, "non-local" (also "non-local") refers to a distant connection of information, apprehension or perturbation. However, this is always "relative" to the observer's reference frame and perspective, so the term is more correctly 'Relative Non-locality'."

But given the "apprehension" elements (equivalent possibly to *relative non-local perception*) and the "perturbation" components (equivalent possibly to *relative non-local psychokinesis*), this definition does not emphasize the *quantum* non-locality per se.

The quantal use may or may not even be related to "non-local perception or consciousness", with the focus on the space

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combined with time elements not being local—instead, non-locality or "action at a distance" is the direct interaction of two objects that are separated in space with no perceivable intermediate agency or mechanism. As Tressoldi indicates: non-local refers to "…non-local properties… that …may operate beyond the space and time constraints of sensory organs." ¹. We suggest that one application of the term "non-local" has been to move away from materialist reductionism: In the same way as the physicist may regard entanglement as synonymous with or exemplifying non-locality in physics, the consciousness researcher may regard psi as synonymous with or exemplifying non-locality in their discipline.

Why we argue for relative non-locality

Theoretical basis

The purpose here is not to prove existence of the different levels, but to theorize on what might exist. This allows us to conceptualize the possible levels and kinds of non-locality more accurately. We maintain there are different levels. This is based on, inter alia, our extensive work ⁵, and consequently non-locality involves a much more complex concept than simply saying this is "local" and this is "non-local" in absolute terms. For example, is every psi experience and other conceptually related phenomena, such as out-of-body experience, near death experience, or survival after bodily death, happening at the same level? Is the highest level (such as a postulate of the "infinity of infinities" that some would say involves a "divinity") in this model also experiencing non-locality?

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Non-locality is sometimes understood as only "beyond" space and time. In a sense it is, in that it goes beyond the space and time constraints the observer is used to so it is relatively "beyond". But more correctly, it would be a higher level where one could hypothesize that at that "higher level" the observer could experience everything relatively locally at that level and below. Some complex math derivations support the existence of a hierarchy. This implies levels of discrete dimensions: The highest of these is the so-called "transfinite" —this is Cantor's "countable infinity" 6: It therefore remains "discrete"—the transfinite is in quanta, it's in pieces, "bits" like in computers, or pixels as in screens. But this highest level of the "discrete" —the transfinite— may be contained—embedded—in a broader continuous infinite reality. At the final level would be that higher "infinity of infinities" as Georg Cantor ⁶ mathematically conceptualized it. And below these very high levels, there appear to be different levels of nonlocality. This includes even non-locality in some of the first 9 dimensions ⁸⁻¹¹, at least 5 of which are hidden. This means that an "observer" experiencing events at each of these levels, effectively is observing space and time "top-down", and what is below that dimensional level is "local". It's like observing a box from outside the box—directly experiencing many dimensions below. Conversely, "non-locality" would be described for any higher level than that experience. Given that the observer would be experiencing reality from the framework of his own locality, all these experiences would be from the framework of the observer.

We argue that we need to have a theoretical model for such events. This paper provides the theoretical model. Sometimes, there

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is empirical supporting data for these ideas: Our conceptualization of nine dimensions, based on mathematical derivation ^{5, 7-9}, illustrates one level of that.

Because of these factors, this paper describes:

- Two related terms "relative to" and "from the framework of".
- It also utilizes a hierarchy of non-localities. It is outside the scope of this paper to justify each level. But the book *Reality Begins with Consciousness* does so.

In this paper, we're using the term "non-locality" in the context of "Consciousness Research". This merits comparison with the many varieties of "non-locality" in physics, but this is outside the scope of this paper.

Practical pertinence of non-locality

Our day-to-day experience is one of experiencing our physical reality—the length, breadth, and height of objects. These three dimensions of Space change with every new moment in Time. These features reflect the first four dimensions (3S-1t). But that reflects just our overt experience of reality, not all of the covert components of reality that might exist (such as higher dimensions, the transfinite and the infinite). This may be one reason why the term "non-locality" is used—to describe what appears to us to be "non-local". Something is missing when trying to explain the well-documented so-called strange Einsteinian

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"spooky action at a distance" 12, 13, 14, 15. Einstein was describing a phenomenon that likely was what became "entanglement" in physics, where quantum state particle pairs or groups interact such that the quantum state of each particle cannot be described independently but must be given for the system as a whole—metaphorically they "talk" to each other at great distances ¹⁶⁻¹⁸. Similarly, we should certainly try to understand psi phenomena—so-called extrasensory perception and psychokinesis and even more extremely, the possibility of survival after bodily death. We argue that the easiest way to explain these is by accepting the existence of higher dimensions (such as the 9 finite dimensions we have derived by mathematical proofs 4, 8-11). We add to this an even higher "countable infinity". This is also called the "transfinite" and like these finite 9-dimensions, it still has discrete pieces like miniscule pixels on a television. Furthermore, this discrete transfinite is further embedded in an "infinite" which extends without end in space, time and consciousness, and is like never-ending continuous unbounded reality in many directions. We therefore call this the "continuous infinite".

When we speak of non-locality, we traditionally are referring to it from the "framework of 3S-1t". If that experience in 3S-1t were all there was to our reality, we would not need to look at what could be interpreted as "non-local events" from any other framework. But we know there are other frameworks: From what framework does someone subjectively experience an out-of-body experience (OBE)? That individual having the out of body experience is not experiencing his subjective happening as "non-local". From his "framework", it is "local"; and it may be that we humans, in 3S-1t, are "non-local"! From our 3S-1t

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experience, we would describe that OBE as "non-local", just as we describe many so-called psi phenomena such as extrasensory perception as non-local. But if we understand that OBE to be non-local, at what level of non-locality is it occurring? We could postulate that that OBE could be understood to be occurring beyond 3S-1t, and possibly within some of the higher dimensional levels of existing finite reality (as opposed to the "transfinite" or even the "infinite" levels) So this is the degree of "relative nonlocality" of that specific person with an OBE relative to our 3S-1t fully conscious reality. On the other hand, the term, "framework" in this context refers to the dimensional domain within which the individual is located, and it is from that level that he will interpret his reality. When some experiences or aspects of consciousness or awareness are not located in his space and time and awareness, he *might* experience this as "relative non-locality". This is his interpretation of what is non-local from that observer's specific framework: If the awareness was at a higher dimensional level it would certainly be non-local to that observer; but if it is dimensionally "below" him—where he observes the "box" below from that location above, it may be that he experiences that box as "local". However, theoretically, not all may be observed: this means some aspects below would still be "relatively non-local" because not everything below the observer might be directly observable.

Demonstrable basis of ostensible non-local phenomena

The postulation of different levels of non-locality is not idle speculation: Much of our actual reality is hidden from us—unavailable to our limited senses. Briefly, when applying what can be referred to as the Close-Neppe mathematical derivation,

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we can demonstrate the solution to some of the most remarkable mysteries¹ in physics. This includes elucidating the Cabibbo angle and intrinsic spin. The Cabibbo angle, a measure of the probability of a certain kind of particle decay, had been found to persist at a very strange angle (13.04 degrees). The reason why it was that specific size could not be explained by the Standard Model of Particle Physics, and consequently, it had remained unsolved for 50 years since its discovery by Nicola Cabibbo in 1963: It could *only* be solved by mathematically applying the correct number of spinning dimensions (namely 9) ¹⁰. This proved mathematically that our finite reality specifically contains nine dimensions. ^{7,8,19} This finding was not unexpected: It had been hypothesized by a paradigm shift that we had proposed called the Neppe-Close TDVP model. ^{9,11,5}. However, although mathematically there cannot be 4 or 5 or 8 or 10 or 11 or 26 or any other low number of dimensions because the calculation would not work, we cannot rule out exponents or harmonics of 9 such as 81 or 729 dimensions.

Approaching non-local phenomena based on this data:

The concept of extra dimensions introduces a new way of approaching reality and non-local phenomena. Let's apply the analogy of a MRI of the head for example: Specific cuts are taken through any part of the head. We can do an infinite number of cuts through these planes (2 dimensions) producing an infinite number of parallel lines. Ultimately, this produces pictures in the three spatial dimensions of length, breadth and height: looking down from the framework of that third dimension there are an infinite number of two dimensional planes and even more so a further infinite number of parallel lines along those 2 dimensions. Further

⁵ TDVP is a much easier and convenient abbreviation for "Triadic Dimensional Distinction Vortical Paradigm".

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along these lines are an infinite number of points. When we observe from the 1D line, we might sometimes see the points. Yet, along the plane we can see that they're continuous. Additionally, there may appear to be points in those planes because any wave or object that is not straight with the cut will appear discontinuous. But if it were in all three dimensions, we might see this as a continuous graph. To the lower dimensions, the points may be disconnected when they are actually continuous.

This analogy can be applied to a single higher dimension or series of dimensions (dimensional domains). Importantly, events that seem impossible because they're discontinuous and apparently unconnected, may be connected when observed from higher dimensions ("top-down") from higher dimensions. We could say from the lower dimensions that there is a disconnection in space (e.g., as in "remote viewing"), time (e.g., as in "precognition" or "retrocognition") or both (e.g. precognitive remote viewing). In every instance, this is modulated through some kind of consciousness, and in the living person, the endpoint expression (the brain, or for that matter, the autonomic nervous system as it may simply be registered) is a "local" organ.

Discontinuous and continuous is relative.

Effectively, events might appear discontinuous in lower dimensions, and yet be connected in higher dimensions. They may not lose their impacts over time and space. In higher dimensions, certain features observed in 3S-1t may or may not apply: What would appear to be communications with immediate disconnectedness even at great distances, might sometimes be understood

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as "connected" from the framework of other higher dimensions. At that level, there may be actually be connectivity, and the immediacy may occur because it is part of the same multidimensional event. It might not require even light speed to transfer information because there is no transfer —the connectedness, even at thousands of miles distance in lower dimensions, could be there as part of a single structure at a higher dimension, just as a circle in two dimensions may be part of a sphere in three dimensions. In that way, the concepts of lower spatial dimensions may distort an obvious observation for an observer in a different higher dimensional framework. Of course, it might require many dimensions or levels higher for the observer to understand this linkage: That is why we talk of "relative non-locality". Effectively, these findings may not apply from the framework of a specific dimensional domain because the analogous parallel cuts on the MRI may be much higher dimensionally. In other words, the dimensions remain relative. We could distinguish connections: These distinctions might be quite false at a lower dimensional level. Examining ostensibly non-local data will vary depending on the general framework of the dimensional domains we're examining. At some point, at certain higher dimensional domain levels, any connections may be obvious, like connecting the dots that are continuous there, but they appear separated in space, time and consciousness at the lower levels. Because our consciousness as physical beings is usually limited to 3S-1t, we will look at these different specific non-locality examples as *relative to our 3S-1t domain*, but there may be different kinds of non-locality.

THE LEVELS OF RELATIVE NON-LOCALITY (PART 2)

The various levels of non-locality in reality.

"Non-local" requires the prefix "relative" because it is meaningful only relative to specific parameters. The differentiation is beyond academic: It allows us to appreciate the depth of reality. Space, Time and Consciousness are all terms that have meaning only relative to specific parameters. These terms are not absolutes when we describe finite reality.

We examine relative non-locality *from the framework of* our common sentient living experience consisting of 3 dimensions of space (length, breadth and height) embedded in a moment in time (the present)—3S-1t. This is our conventional scientific reality because this is the consensual basis of what, we, as living sentient beings experience. However, we subjectively only can experience only part of even that 3S-1t. Our 3S-1t experiences are *"restricted"* by limitations that can be measured using instruments (like X-Rays and MRIs). So this is actually "restricted 3S-1t". On the other hand, some of these events may be detected by animals and other forms of life (such as echolocation in dolphins, or profound olfaction in dogs). This means that even at this 3S-1t level, we can interpret phenomena as "non-local" when other animals or even humans would realize it was just *"subliminal"* for us. The small case "1t" is the "present" moment in time, and that, too, is part of the restriction. We therefore live conscious only of a "restricted 3S-1t".

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We can see how these ideas promote other examples of different levels of non-locality or apparent non-locality. We can regard a phenomenon as non-local and be mistaken, misinterpreting reality or even find such a perception was due to brain impairments. The ostensible non-locality would be "pseudo". We could argue our "consciousness" is sometimes a little more than just what is produced by the brain: Then we talk of 3S-1t-1+C because using that model our living sentient being reality always includes some meaningful consciousness. So, our experiential reality is 3S-1t plus 1 "Consciousness" dimensions.

The second important principle is "relative non-locality is relative". Yet, it has been completely neglected by almost everyone, when despite being critically important. Clearly relative to is related to "from the framework of". As live beings in clear consciousness, we make our interpretations always from the framework of the same restricted 3S-1t domain. Yet, we can apply different levels for how relative the non-locality is. In restricted 3S-1t, we might find a certain consistency, but clearly non-locality in the transfinite, or relative to the infinite, or the mystical infinite reflect very different levels. This becomes particularly important when describing whether an even is non-local for an expert meditator, for example. The "framework" for such interpretations would change relative to the observer.

In *Reality Begins with Consciousness*, we recognized the need for levels of non-locality and for it to be relative. We described, motivated and referenced five levels of non-locality ⁴. Now, in this more detailed analysis, we increase this number substantially.

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We present eight specific levels of non-locality, and two more broader ones in which the eight may be contained, and we simplify by labeling the multiple different non-localities in Physics into one header, even though there may be several.

Table 1 lists the 11 levels of relative non-locality. This extends from the 5 levels of non-locality that we previously postulated. 4

Table 1: Different Levels of Relative Non-locality (RNL).

(Abbr. = Abbreviation; NL is non-local, RNL = Relative non-locality)

Title	Pertinent Level	Example	Abbr.
Relative pseudo non-locality	Appears non-local but is not.	Organic cerebral, psychological,	RPNL
		misinterpretation	
Relative local non-locality	Carpenter's First Sight ²⁰ psi	Precedes regular speech communication	RLNL
	model		
Relative subliminal non-	Not non-locality	Subliminal stimuli not psi	RSNL
locality ⁴			
Relative (one dimensional)	3S-1T±1C	Pre- or retro-cognition, presentiment;	R1NL
time non-locality		involves RNL of past, present, and future.	

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Relative dimensional non-	NL relative to 9-D or	Near-death experience, out of body	RDNL
locality ⁴	multidimensional	experience	
Relative transfinite non-	NL highest discrete	Discrete mystical experience	RTNL
locality ⁴			
Relative <i>infinite</i> non-locality ⁴	NL continuous infinite	Continuous infinity? survival after death	RINL
Relative <i>mystical</i> non-locality ⁴	NL infinity of the infinities	Divinity? All levels of the infinite	RMNL
Relative higher non-locality	Specifically RNL but level	Not pseudo, local or subliminal	RHNL
	unclear		
Relative delta non-locality	Ostensibly RNL	All of the above; includes pseudo, local	RDNL
		or subliminal	
Relative quantal non-locality	Quantum physics extension	Several models including	RQNL
		"entanglement".	

We clarify these "relative non-localities" as they may be difficult to comprehend and appear esoteric, namely:

"Relative 3S-1T non-locality" (R1TNL) is relative to 3S-1T±1C: it is the first level—the "non-local" extension of our usual

experience. The large T here implies a linear dimension of Time extending beyond this moment (the present small "t") so precognition or retrocognition or presentiment would fit *R1TNL* and could be examples of *R1TNL* but could be associated with other higher relative non-local phenomena too—for example, multidimensional time is very different from one single forward moving linear time dimension. This might be the level, when precognition (foreknowledge) occurs. It becomes a *1 linear time dimension* form of non-locality.

The ± 1 C in 3S-1T ± 1 C implies that there could be an extension of our Consciousness beyond just the brain's neurological and psychological functioning: This may or may not be true so, but, based on our model, we see it as a serious hypothesis). ⁶

At the next level, we have "relative dimensional non-locality" (RDNL). In this instance, we are conceptualizing beyond 3S-1t. It may be that no living animal or human being, as we know them, could perceive this directly because we experience only parts of those first four dimensions (the 3S-1t). Because there are nine demonstrable finite dimensions ⁷, most of that reality is hidden ^{4,8},

⁶ We mathematically define "dimensions" very carefully: Dimensions have "extent"; this involves measurable real, imaginary or complex numerical values; they range from zero; they are discrete values to infinity, and they apply interval or ordinal measures. They can be quantized as discrete measures in the finite or transfinite) or infinite (reflecting a continuous infinity). Dimensions are technically <u>no</u>n-congruent, non-parallel extensions measurable in terms of variables of extent. Dimensional Biopsychophysics (DBP) is the new multidisciplinary term that impacts across many different major areas of study. This includes dimensions, the finite and infinite, and consciousness. DBP integrates the broader scientific biological, psychological and physical disciplines with Consciousness (as we're doing here) and includes mathematics. ^{4, 21, 22}

⁷ We are not here discussing the complex topic of the composition of these 9 dimensions. We have good but not proven data that they consist of dimensions of space, time and consciousness. This is discussed elsewhere. ^{4 8 7}

^{10, 11}. We categorize *RDNL* as relative non-locality involving the finite dimensional domains: These have discrete points that we can mathematically delineate. We can conceptualize and interpret these points but not perceive them directly through our physical senses. We regard the demonstrable nine dimensions 8 as partly hidden, and because, as with the MRI of the brain analogy, we can conceptualize an infinite number of options in every dimension below the one we're examining, we can, "see the whole box from outside the box". From that top-down framework, this is not relative non-locality at all, but to us live humans living in that box and unable to directly see outside, it certainly is! Relative non-locality is relative to the framework of the beholder. Consequently, our concept of reality is a simplification because it is incomplete. Clearly, there can be different relative dimensional levels of non-locality, but for simplicity, we combine those into one.

Mathematically, this next level of the multidimensional paradigm is based on our extended geometrical dimensional work. 4 We have derived and therefore demonstrated a nine-dimensional paradigmatic level ^{8,99}. However, we can only postulate the exact composition of the 9 dimensions and argue that it includes "Consciousness". 10

The important element here is that communications between two distant objects and events may appear simultaneous. ¹¹We

⁸ We are not *speculating* about the existence of 9 dimensions. 9 dimensional spin has been *definitively mathematically derived* from calculating the Cabibbo mixing angle size. ^{8,9} and recently this has been amplified even more by a "thought experiment" replication. ¹¹ for more detailed discussions see other sources. ¹²

In Importantly one of the most Einsteinian findings was that events separated in space that are registered as simultaneous by one observer will not be simultaneous to another observer moving with respect to the rest frame of the first observer. ¹⁴ So simultaneity is relative even in 3S-1t observations.

postulate that this "immediacy" is the factor that characterizes the necessary element of the non-local paradigm. It does not even require speed of light communications: It is immediate. For the 3S-1t observer, this appears to be anomalous. But it would be more comprehensible if we understood that there are higher dimensions. From the framework of our 3S-1t experience, simultaneous connections of events may make them appear "non-local". But, if we were dealing with covert dimensions we do not fully understand, that same 3S-1t simultaneity may be perceived differently. If we were able to conceptualize together or simultaneously a single Time dimensions of a linear, past, present and future then suddenly that immediacy makes sense and this would be one level of non-locality (Relative [one dimensional] Time Non-locality). Our conceptualization of relative non-locality from the framework of our living existence, restricted 3S-1t, begins at this first multidimensional level, because it is at this level that events separated in space may appear to be "immediate" or "simultaneous".

Let us now jump in our relative non-locality classification and clarify what the "continuous infinite" means: This is the idea of *RINL*: In a broad-spectrum paradigmatic model we have developed¹², we describe the infinite as limitless, unbounded and continuous. It is without end in the Space, Time and Consciousness (C-) Substrates. The infinite is conceptualized as a continuous domain within which all the finite dimensions embedded. We can appreciate that there is a concept of "relative continuous non-locality" (RCNL) though we can only conceive of that gestalt, not the detail which may be incomprehensible to us conceptually. Infinity then is a continuous subreality that obeys the laws of nature, but because we can usually only

¹². TDVP: This is detailed in our 500 page E-book, with 50 chapters and elaborations across many endeavors. ⁴

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conceptualize the gestalt—the whole—the total content of what is within that infinity is almost completely unknown from our 3S-1t-1C framework.

We cannot appreciate the full continuous nature of the infinite directly: This continuous infinite can only be conceived of within the fabric of a mirror of pixels—we use the term quantized — that is the discrete units of the finite and transfinite. This idea appears simple, but it is also profound: We live in this "metafinite" reality (finite plus transfinite) only. Our reality is always experienced as discrete, quantized and pixilated, like in a movie but the parts move so fast they appear continuous. ¹³

To clarify, within this continuous infinite subreality is embedded this metafinite: this consists of discrete, quantized, pixilated realities that therefore can be measurable by interval or ordinal measures. This is our mirror for conceptualizing the infinite. The metafinite is a composite term for the transfinite—the "countable but discrete" infinity (as conceptualized by the mathematician Georg Cantor ⁶). The actual finite dimensional extent—which we have demonstrated is a 9 dimensional reality ⁸which is spinning. ⁷

Therefore, our finite and infinite existence obey the model of laws universally applicable to all reality and events or objects that may appear "supernatural" or "miraculous" in our restricted 3S-1t reality experience, still conform to the laws of nature at higher

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¹³ The metafinite is a term we developed out of necessity: It includes the 9 dimensional finite and the 10th plus transfinite dimensions. ⁴

dimensional and infinite levels—there are no limitations to the infinite. 4, 5, 8, 11

We move to an even higher level of the continuous infinite. We've used the term "mystical" in RMNL. It implies the whole level of infinity including the highest level that embeds all other levels of infinity. Georg Cantor, in the late nineteenth and early twentieth century, conceptualized this as the *infinity of infinities*. ⁶ At this highest most complete level is the "Relative mystical" non-locality" (RMNL). This reflects the ineffable, the true continuity of everything without an end, the continuous infinity. This whole reflects the mystical continuous all-embracing infinite reality. This is the magisterium of the theologian. He may refer to this relative mystical non-locality as the Creator, or the Divinity or God. Whereas the living human might attribute characteristics to the Creator such as omnipresent, omnipotent, omniscient, omnificent or omnibenevolent, these characteristics enter the realm of theology and impose man-made conceptions on a concept that may be beyond man's limited corporeal understanding. Applying a scientific model, we can only appreciate the unending vastness of this continuous infinite reality, again using human terms of higher levels of the infinite and conceiving of a mystical infinite of the infinite, whereas theology postulates we have a creator and Divinity.

In our model, we do not comment on the theological, per se. We do not attribute any qualities, but just describe an existence.

This RMNL reflects the level of the "infinity of infinities". It may be akin to Georg Cantor's very controversial original use of

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this phrase "infinity of infinities" ⁶, but it may be conceptually different.

The infinite must necessarily encompass everything in the discrete finite, as the discrete reflects singularities, or planes or volumes or possibly fundamental dimensional descriptive units beyond that. The Infinite necessarily must encompass Space, Time and Consciousness. This would be a space beyond extension, and without beginning and without end. There is no origin in infinite Time and that is conceptually without beginning or end: It is truly eternal, and yet to us, living humans, it is timeless and we again talk about it as non-local when it is RMNL, the highest level of non-locality. And it is a consciousness that incorporates the unending reservoir of information.

We postulate that all the components of the various dimensional domains of the finite are embedded in this continuous infinity. But these finite elements may exist at various levels: We experience them directly as physically living beings, but we've also conceptualized existence of other hidden kinds of consciousness with Space or Time. In our model, all meaning is necessarily imbued within all of Time and Space and these are taken together as a whole reflecting mass-energy always imbued with meaning. We may be possibly only approaching this level in mystical peak religious experiences and it is likely that for most human beings it is never even closely attained. It is far beyond even particular consciousness dimension combinations like the deeper transfinite qualities, such as love, valor and determination. ⁴

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We can now more easily categorize "Relative transfinite non-locality" (RTNL). This is relative to the 10th-plus dimensional transfinite. We have postulated that above the 9 finite spinning dimensions is the discrete technically countable transfinite—this is what we call the 10th -plus series of dimensions. Unlike 3S-1t where we need seek out any kind of "consciousness" outside the brain if it even occurs, the 10th plus transfinite dimensions predominantly contain C-substrate qualities so it is predominantly made up of Consciousness though the Space and Time substrates are still linked to this C-, they (S, and T) 14 are totally embedded (contained) in the C-.

The term "plus" as used in "10th plus dimensions", but mathematically, this is more than a plus (+). "Plus" usually implies an arithmetical addition, but "10th plus dimensions" reflects expansion of greater awareness and recognizes a broader, discrete reality. Technically, the transfinite incorporates (embeds) the 9 finite dimensions. ¹⁵ So we can further analyze "non-locality" from the framework of any of these "dimensional domains"—any combination of these 9 dimensions (like the 6th to 8th dimensions) and the transfinite dimensions (and these may not be all of the "transfinite" but components).

In this "relative transfinite non-locality", RTNL, a level up from the dimensional RDNL, the transfinite reflects the countable

We call this linkage, which always exists, "tethering".
 We apply a mathematical process for higher dimensions called Dimensional Extrapolation. This mathematics simply runs out of numerical representation when going beyond 9finite dimensions to the 10th plus, as it contains everything beyond those dimensions but also contains the 9 finite dimensions, plus the transfinite. This combination of finite (9D) and transfinite is what we're calling the "metafinite". 4

infinity and this is equivalent, we postulate, to the hypercomplex numbers of mathematics, just the way the field of real numbers (integers, rational and irrational numbers) relate to space and imaginary numbers relate to time. ⁴ In Consciousness contexts, we speculate it may be equivalent to the higher qualities of consciousness with whatever Space and Time exists at that level being completely embedded in this consciousness. It may be similar to a dream in this regard. SO, RTNL might allow for peak experiences in meditation or altered states, and it may allow for appreciating the deeper aspects of such concepts as love, valor and determination. Yet, it still embeds all the "lower" dimensions, such as the postulated three each of STC (3S-3T-3C).

The more esoteric kinds of "relative non-locality".

We now describe several other important but more esoteric kinds of *relative* non-locality. We provide them here to complete the picture of relative non-locality:

• "Relative pseudo non-locality" (RPNL). This would be postulated to be non-local, or appear so, but is purely contained in and relative to 3S-1t. It could be associated with cerebral or psychological causes or precipitators. Alternatively, it may also be due to misinterpretations or erroneous conclusions about our reality. Or it may not be non-local at all. This would be so as "pseudo" could be further subdivided into such areas as psychotic, or organic brain syndrome, or error. We could even descriptively prefix before the non-locality is pseudo- or sub-classifications like psychotic-, organic-, or misinterpreted- (or "erroneous").

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- "Relative local non-locality" (RLNL) This ostensible non-locality from the framework of 3S-1t is entirely contained in 3S-1t. Yet, it involves postulated non-local experiences as a routine part of part of our living experience in regular communication. One model would be Carpenter's First Sight model where psi occurs prior to the communication and involves possibly an extended "present time" involving psi as a regular phenomenon). ²⁰ Because of this, we call it relative local non-locality. This may possibly be the most difficult form of relative non-locality to comprehend as it is occurring routinely and locally and, again, it raises the specter of the accuracy of the term "non-local" in space.
- "Relative subliminal non-locality" (RSNL). This is one level up form RPNL and RLNL. This would incorporate skills relative to 3S-1t as accentuated skills. The best prefix here would be *subliminal* because we could easily interpret such phenomena as anomalous but not necessarily psi. Similarly, there may be other indications of perceiving such experiences in humans such as heat that is detectable by our senses, and the advent of machinery has allowed us to broaden our perspectives on what was previously non-local. Of course, many would not regard this as "non-local" at all, which is why we're being careful to conceptually classify the extent of each phenomenon.

Finally, in physics we could use a global term such as:

• "Relative quantum non-locality" (RQNL) (relative to 3S-1t framework, but not categorized or categorizable in psi terms.) Importantly, as discussed below, it is unlikely that there is only one RQNL, because there are several different

theoretical models.

To these 9 main sub-classifications of "relative non-locality" we add two more all-embracing descriptions:

- "Relative delta non-locality" (RDNL) (relative to 3S-1t framework, but not categorized or categorizable) (delta; STC). The term "delta" in this context is not new ²³: Neppe suggested that terms like extrasensory perception (ESP) were radical. He argued that they may be perceived as expressing the viewpoint that such phenomena are outside the senses and not allowing for alternative explanations such as physiologically based sensory mechanisms. He perceived this is judgmental in that it implies a form of communication, unconscious information transfer, or perception as opposed to other examples of cognition. He suggested the term "delta". "Delta apprehension" became the nonprejudicial term for ESP-like phenomena pertaining to apprehension and awareness of objects or events without using conventional physical senses. On the efferent (outgoing) side, he suggested delta-efferentation for psychokinesis. ²³ "Delta" does not reject the data on psi, it just allows us to suspend judgment as to any specific example, if we're uncertain. So "Relative delta non-locality" (RDNL) allows us to describe something without applying premature causal interpretations.
- Sometimes we can conceive of relative non-locality but don't know at what level. So this is more specific than delta and incorporates what we sometimes call "psi" when that is not well delineated. "*Relative higher non-locality*" (*RHNL*) relative to 3S-1t framework, it is categorized as involving levels of higher Space, Time and Consciousness (and therefore not being

categorized in the Quantum non-locality area). RHNL goes beyond the restrictions of 3S-1t but not interpreting this as dimensional, or transfinite, or continuous infinite, or mystical. We would anticipate this use being very common non-prejudicial application of relative non-locality.

These subdivisions lead to a discussion on what is relative and what is non-local.

'From the framework of'

Our discussion thus far has emphasized how information and meaning, space and time are *non-local relative to the framework of our experience—our sentient living reality of restricted 3S-1t.* There is a subtle difference between "relative to" and "from the framework of". "Relative to" is usually a perception of non-locality <u>specifically</u> relative to our perspective (usually 3S-1t); "from the framework of" may also be 3S-1t if we were describing something from our perspective; but it could also be described from a different level for an observer having, for example, a near-death experience, or an intense meditative experience. This might produce different subjective experiences relative to non-locality. "From the framework of" therefore refers to the general location of the observer. For example, someone having an out of body experience may be experiencing reality from a different dimensional-domain perspective to someone in full physical consciousness (who is in 3S-1t). "From the framework of" is similar to "relative to" only when referring to 3S-1t, referring to our perspective of what would constitute non-locality. We

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perceive a non-local event relative to our experience which is 3S-1t, but that is not the only option available. That is simply our framework of broader general observation.

Even more so, theoretically, the event might not be non-local relative to the framework of the consciousness of someone in a possibly very different state, such as surviving bodily death, or from the framework of a divinity, or during meditation. Whereas this differentiation may be speculative, it points to the need to differentiate <u>different specific relative</u> levels of experience. The differentiation may be pertinent:

A mystical infinite event may be relatively non-local for both a near-death experient framework and someone in clear (physical 3S-1t) consciousness. But a postulated Creator observing from the "framework of the mystical" may not experience any events in the hierarchy, such as Space, Time and Consciousness occurring within the 9 dimensional substrates, or even infinity, as non-locality; by contrast, specific living individuals in clear consciousness would regard that same event as non-local relative to themselves. In summary, something is relatively non-local less in the hierarchy as one ascends higher. And the property linked with it, immediacy of information, of space and of time, still reflects relative non-locality: Even when a meditator experiences subjectively no time or place, it does not mean Time and Space does not exist in a higher dimension. Under that circumstance, the meditator might subjectively experience information, space and time as "beyond" or "non-existent". But we in clear living

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consciousness cannot generally also experience higher dimensions, the transcendent, or the mystical. But a so-called "psychic" may experience an immediate access to a vision thousands of miles away and in the future. Time and space for them would be meaningless as well, though still existing in their covert reality.

Let's apply a non-prejudicial creative approach: We're not trying to prove, just illustrate. What is non-local from our living human framework may not be non-local for someone who was deceased. That decedent might be experiencing existence from the *framework of* different dimensional domain levels. Furthermore, it might be that that each decedent even has a framework of reference different from another deceased individual—each could be experiencing potentially even different transfinite or dimensional domains to other "discarnate entities" as well as from the physically living. These dimensional domains may be more fluid, fluctuating in state and trait depending possibly on developmental level. It would not make their experience any wiser, just different. They are still limited to appreciating finite dimensional or transfinite domains *relative to their framework as specific kinds of observers, and* not experiencing the whole infinite.

What about near-death experients (NDE)? Their framework might be very different, too, They may be using a different reference source: Perhaps even what to us are regular 3S-1t events are now relatively non-local from their framework. They cannot, for example, communicate by regular speech during their NDE. "Relative to" becomes different because their reference

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framework has changed.

Similarly, this is why someone having an out of body experience may result in a very different framework, as may the many different altered states of consciousness, be they hallucinogen induced, dreams or meditative, for example. The key point is "non-locality" is not only relative to one's experience but perceived, conceptualized and interpreted by distinguishing what one recognizes as genuine for oneself: We apply frameworks that differ dramatically potentially depending on our state (like meditation) and trait conditions (like survival after death). The relationship of such experiences to 3S-1t, and the additional domains demonstrated mathematically by our TDVP model is beyond the scope of this paper, but remains an important area for further research.

The applications of non-locality in physics

Let's very briefly revisit the physics side of non-locality. Interestingly, Isaac Newton regarded action-at-a-distance as "so great an Absurdity that I believe no Man who has in philosophical Matters a competent Faculty of thinking can ever fall into it". ²⁴ But times changed clearly:

John Bell coined the term non-locality in physics ²⁵. In physics, *non-locality* is regarded as action at a distance: It is the direct

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interaction of two objects that are separated in space with no perceivable intermediate agency or mechanism. This concept was referred to as "spooky action at a distance" by Albert Einstein ^{14, 15}. Quantum non-locality ²⁶ refers to quantum mechanical predictions of many-system measurement correlations that cannot be simulated by any local hidden variable theory. ²⁴ These refer to the main Physics use of non-locality, namely entanglement ^{16, 27-29} seen as synonymous with "quantum non-locality". Sometimes, consciousness researchers refer to "entanglement" as supporting the "relative delta non-locality" we've proposed. But this is a different concept: entangled quantum states produce such correlations when measured ^{16, 27-30}, as demonstrated by Bell's theorem ^{25, 31, 32}. But Bell, in fact, recognized that there may be a further commonality in non-localities. "Perhaps experimental parameters and experimental results are both consequences, or partially so, of some common hidden mechanism. Then the apparent non-locality could be simulated." ²⁵

Non-locality is applied in many physics contexts. The sheer wealth of theories, models or data on non-locality in physics, attests to its possible complexity and the likelihood that one is not dealing with a singular phenomenon. Here are a few examples:

- Likely, the most well-known examples of non-locality in physics derive from the *quantal* concepts of *entanglement* ¹⁶⁻¹⁸. In Quantum Physics, this is the linkage of ostensibly separated energy packets, particles or photons in time and space manifesting at the 3S-1t level. ⁴
- The "Non-local Aharonov-Bohm effect" is a quantum mechanical phenomenon in which an electrically charged particle is Neppe and Close Relative Non-locality 31 October 14, 2014 N Explore

affected by an electromagnetic field, even though the field is zero in the region concerned. ³³

- The "Non-local Lagrangian" is a mathematical Lagrangian that contains terms that are non-local in the fields. ³⁴
- The "Non-local generalization of the London's equation" includes now the non-local kernel proposed by Pippard. 35, 36
- Other areas for physicists such as Field Theory ³⁷ ³⁸, ³⁹, links with Wheeler's Quantum foam ⁴⁰⁻⁴⁴ ³⁷ and Emergence of the Universe ⁴⁵, ⁴⁶ ⁴⁷, ⁴⁸ ⁴⁹, Stapp ⁵⁰⁻⁵² and Bohm's work ⁵³ and applications of elements of Einsteinian special relativity ⁴⁰⁻⁴², ⁵⁴ are examples of other ways in which non-local phenomena can be at least partially explained, but these are outside the scope of this discussion of Non-local Consciousness.

As for theoretical models, Kafatos in his "Conscious Universe" ^{55, 56} has divided non-locality in Physics into three elements ^{55, 56}: Type I is spatial non-locality; Type 2 is temporal non-locality; and Type 3 non-locality is both spatial and temporal. This differentiation into three is logical from the 3S-1t physical framework.

Using this classification, we could introduce consciousness into many of these concepts. For example, if we apply Kafatos's concept into the psi model, we could argue that remote viewing in the present is Type 1 (in Physics possibly entanglement would be); precognition would be Type 2; and precognitive remote viewing would be Type 3.

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One or more of these may or may not turn out to be the same relative non-locality that has pertinence in psi. But these ideas in physics are not our focus here. This is particularly so, as these concepts might turn out to be very different from "non-locality" in consciousness research, but they show that even in physics, "non-locality" is not a singular term with consistent meaning, and is not regarded by different theorists as arising from the same phenomena or causes.

NONLOCALITY: IMMEDIACY, HIERARCHIES AND TERMINOLOGY (PART 3)

The principle of higher dimensional immediacy.

We can here propose what may be an important principle. We suggest that the commonality of higher levels of relative non-locality beyond 3S-1t is the immediacy of the phenomenon. This has been the difficulty with interpreting the ostensible standard physics paradox that we call "entanglement". It is immediate. It does not even require light speed. This is one indicator that we postulate must necessarily involve higher dimensions. However, even if this is so, that we're dealing with what from the framework of 3S-1t are relatively non-local phenomena, it does not imply that the cause is the same as quantum entanglement and that psi in its many guises is related. Herbert ⁵⁷ and following that Dossey ⁵⁸ have used similar nomenclature: to us the definitive element is the immediacy—"instantaneous connectivity" of objects, substances or events. One could speculate on

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Herbert's idea that non-locality is necessarily "unmediated" (with no connecting signal involved), and "unmitigated" (where the strength of the correlations do not fade with increasing distance). If these are pertinent, they would still be relative to our experiences. 57

This may be so, but if so, it needs some empirical support. The equivalent of unmediated and unmitigated data in parapsychology has been very difficult to interpret. 16 4

Entanglement relates primarily to measurement of discrete phenomena: These are the endpoint measurable particles and waves as calculated by extent in 3S-1t; when measured they're discrete, but these measures may miss part of the picture: the higher dimensional components.

But phenomena, we postulate, continue into dimensions that we are not directly able to measure. We cannot measure much of the hidden parts of 3S-1t, we cannot measure the hidden aspects of components of a 9 dimensional domains—9D spin does not imply all 9 dimensions are active, but some might be; we cannot measure except ordinally the transfinite; and we recognize in the infinity the Cantorial infinity of infinities. ⁶

Mathematically, there are an infinite number of lines in a 3-D object and when we extend this to higher dimensions, there are always an infinite number of dimensional domains containing objects one dimension below, and this continues creating its own infinity of the infinities but this time in a quantized, discrete reality. 4 This is why we propose this principle of higher

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¹⁶ Technically, the studies on so-called inverse square data in psi– lesser effect versus distance are difficult. It may be supported but complicated by emotionality. ⁴

dimensional immediacy, because mathematically applying dimensional measurements it works, producing a comprehensive explanatory framework for non-locality.

Thus we argue certain rules can be elicited and propose an important one:

Immediacy is indicative of higher dimensionality. It is not in any way delayed. But this immediacy is *relative to the specific* dimensional domain being examined and in the framework of being analyzed in restricted 3S-1t. The immediacy may also be relative and not found to be so at higher dimensional levels.

The limitations of the term non-locality: Local versus non-local

"Local" is sometimes used more broadly than just describing a locality in space (a place); similarly, when we talk about "spaces, or space-like domain descriptors" as in String Theory, we're not necessarily referring only to Space as we experience it in 3S-1t, but may include other parameters, such as Time, rotation, spin, quantum state, and content, such as the mass and energy in particles.

We use "locality" sometimes for time and consciousness, too, particularly when we apply it in the negative such as "non-local"

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More recently, the term has been latched onto by some parapsychological researchers. But we've explained why that may be inappropriate when used without the prefix "relative". Specifically, for example, Neppe has repetitively emphasized the need for "like must be compared with like" ⁵⁹⁻⁶¹ and therefore clumping all components together into one classification is inappropriate.

In psi, researchers use the term "non-locality" differently from physics and even in psi, recognize its ubiquitous applications: Invariably, the non-local has consciousness elements, and it may involve a certain simultaneity in time as well as distance in space. ⁶²

It may be that these consciousness research terms overlap with the terminology of physics, but even in physics there are several uses of non-local, as referenced above.. ⁵⁹⁻⁶¹ It's like putting a good portion of mathematics or the English language or for that matter parapsychology, into one word and using it specifically as if all components are the same. We have to be precise.

These limitations lead to questions about alternative terms: This psi-linked non-locality involves space, time and consciousness; and it may be different from that in physics but may overlap, at times.

Non-locality in sentient beings in 3S-1t eventually becomes "local" and so does not remain non-local all the time: What was "non-local" still expresses itself by measurement or in the brain—a very local measure: It is a discrete phenomenon where wave

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and particles can be measured and that measurement at that level is local. So "Non-local" is in every instance relative to the observer, but also the non-local is registered locally in the consciousness including specific brain or brains, implying, again, "Relative non-locality with endpoint of locality."

So non-local is non-local and local and a misnomer.

There are also problems with the "negation" of "non". This is not necessarily a positive expression. A science in its early stages should say what it does, not what it does not do.

We prefer terms that are specific: This is why we suggested an extensive list of terms that make up *relative non-locality*. Non-locality becomes meaningless unless it is relative to a specific base such as 3S-1t, and seen from a specific framework. Failing that we will conceptualize correspondences when they do not exist; we will classify like with unlike, and not just like with like. In Table 1, we illustrate how some of the subgroups that might be thought of as "relative non-locality" are not really "non-local" e.g. pseudo/ latent/ "local". Clearly, "relative distinctions" (last column) is more accurate and easier to conceptualize not only mathematically but also based on phenomenological analyses of Devereux ⁶³ and then Neppe ⁶⁴. But the discussion of "distinctions" is complex and outside the scope of this particular paper.

We return to an earlier paper of one of the authors. Neppe ⁶⁴ accentuated the different levels of familiarity of George Devereux.

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⁶³ He proposed that there are different levels of familiarity:

Neppe ⁶⁴ pointed out that this ranges from "chance" phenomena, to "quasi" phenomena involving brain dysfunction either organically or psychologically. Then it could be the latent phenomena where one's breadth of awareness is heightened. The next level would be "parafamiliarity" where effectively one was experiencing or demonstrating a level of psi that involves heightened perception of phenomena ^{63, 64}, but still could be explained within the modification of the laws of current physics, to the "metafamiliar" levels at the transcendent and transfinite levels and also the various levels of infinity. ^{59-61, 64-66} This changed thought from a "minimalistic parapsychological" approach to a "radical parapsychological" perspective where survival after bodily death is incorporated into the theoretical model. ⁶⁷ And when uncertain we used the term "delta" ²³ as in "delta-familiarity". We could use the term "distinction" and apply a complex mathematical format "calculus of distinctions" but replacing non-locality with "distinction" ⁶⁸, is also beyond the scope of this paper.

Perspective

Where do we go from here? First, we have described a hierarchy of levels of non-locality: We need to carefully analyze and define what we're describing. We need to recognize that, at times, all one is doing is a distinguishing what is relatively non-local but not stipulating the level of the non-locality: We don't know how many of the non-local findings are manifesting—each instance could be different, such as three dimensional or higher, and if so we can just use the term "delta" as a non-specific

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catch-all. For example, we might interpret the event being analyzed as a 'presentiment', but may be unsure that this may not have been a statistical or methodological aberration so are calling this 'delta' at this point, but if we were portraying it as "relatively non-local" not an aberration, it would Relative Higher Non-locality (RHNL). We recognize that there are multiple different and distinct and critically important levels of "non-locality". These are experienced from the framework of the observer and the different relative levels are important to phenomenologically differentiate.

Second, we have emphasized the key distinguishing feature of this Higher Non-locality namely we have postulated that the key feature is the immediacy. This takes us out of the 3S-1t level allowing for the one critical element of non-locality. Effectively, this may be an important theoretical application namely "immediacy implies higher dimensionality".

Third, we have emphasized how the prefix "relative to" describing a specific event, and "from the framework of" describing the general level of the observer is important: We need to always qualify phenomenological information, with statements like: "This is from the framework of living sentient beings in clear consciousness. The experiences are conceptualized from that framework as 'relatively dimensionally non-local'". This way we make distinctions between our subjective interpretations of the experiences and in this instance, the possible 9-dimensional reality.

Essentially, non-locality is not an explanation: When used without amplifiers—meaningful descriptive adjectives—it is simply

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an ambiguous non-specific attempt at phenomenological description and without further definitions such as "relative to" and "from the framework of" it becomes a rationalization of irrelevance.

And fourthly, we recognize that there are semantic problems with the term "non-local" including its different use in physics and psi leading to ambiguity, the negation of "non", the locality (brain) of the endpoint of non-locality in living humans, and the potential for "like events and phenomena to not necessarily be classified with other such occurrences at the same conceptual level". And we have suggested further exploring other terms. One logical descriptor, because there is mathematical support, would be "relative distinctions" but such alternative terminology is a further topic for discussion.

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