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The Computational Unified Field Theory (CUFT): A Candidate 'Theory of Everything'

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Einstein: "Our experience hitherto justifies us in believing that nature is the realization of the simplest conceivable mathematical ideas... In a certain sense, therefore, I hold it true that pure thought can grasp reality, as the ancients dreamed" (1933)

1. Introduction

Two previous articles (Bentwich, 2012: a & b) have postulated the existence of a new (hypothetical) Computational Unified Field Theory (CUFT) which appears to be capable of bridging the gap between Quantum Mechanics and Relativity Theory within a conceptually higher-ordered ('D2') Universal Computational Principle (' '), thereby representing a potential candidate for a 'Theory of Everything' (TOE) (Brumfiel, 2006; Ellis, 1986; Greene, 2003). The CUFT is based on five basic theoretical postulates which include: a) the discovery of a new computational 'Duality Principle' (Bentwich, 2003: a, b, c, 2004, 2006), e.g., which proves that it is not possible to determine the "existence" or "non-existence" of any particular 'y' element based on any direct or indirect interaction/s with any exhaustive hypothetical series of 'x' factor/s (termed: a 'Self-Referential Ontological Computational System' (SROCS), but only based on a conceptually higher-ordered 'D2' computational framework which can compute the "simultaneous co-occurrences" of any exhaustive hypothetical 'x-y' series. The validity of the Duality Principle has been demonstrated for a series of key scientific (computational SROCS) paradigms, including: Darwin's 'Natural Selection Principle' (and associated 'Genetic Encoding' hypothesis, Neuroscience's Psychophysical Problem (PPP) of human Consciousness as well as to all other (inductive or deductive) 'Gödel-like' SROCS computational paradigms (for which there is a knowable

empirical capacity to determine the values of the 'x' and 'y' elements) (Bentwich, 2012: a & b); the existence of such a higher-ordered 'D2' 'Universal Computational Principle' (termed: 'y', denoted by the Hebrew letter "yud") which carries out an extremely rapid computation (e.g., 'c²/h') of a series of 'Universal Simultaneous Computational Frames' (USCF's) that comprise the entire corpus of spatial pixels in the universe (e.g., computed simultaneously at any minimal Planck's 'h' time interval); c) The existence of three Computational Dimensions: 'Framework' (e.g., 'frame' vs. 'object'), 'Consistency' (e.g., 'consistent' vs. 'inconsistent') and 'Locus' (e.g., 'local', vs. global') whose various combinations gives rise to the four basic 'physical' properties of 'space', 'time', 'energy' and 'mass' (i.e., through the four possible combinations of Framework and Consistency), and to all relativistic effects (e.g., through these four secondary computational 'physical' properties' combinations with Locus' two abovementioned levels); d) The 'Computational Invariance Principle' (e.g., based on 'Ockham's razor'), which proves that since *only the 'Universal Computational Principle' ('y')* exists invariantly – i.e., both as producing and underlying each of the USCF's secondary computational four 'physical' properties (of 'space', 'time', 'energy' and 'mass') and as existing solely (and independently) "in-between" any two subsequent USCF's frames, whereas these *four secondary computational 'physical' properties represent computationally variant* features (e.g., since they are computed based on different computational combinations and only exist "during" the USCF's frames but not "in-between" any two such USCF's frames), then we may only regard the computationally invariant Universal Computational Principle ('y') as "real" whereas the computationally variant four secondary computational 'physical' properties (of 'space', 'time', 'energy' and 'mass') must be viewed as "phenomenal" or "unreal" (i.e., relative to their solely underlying computationally invariant Universal Computational Principle); and e) The 'Universal Consciousness Principle' which proves that since (based on the previous 'Computational Invariance Principle') only the Universal Computational Principle solely exists both "in-between" any two subsequent USCF's and as producing all USCF's four secondary computational 'physical' properties, then it necessarily follows that this (solely existing) Universal Computational Principle must also possess an equivalent 'Universal Consciousness Principle' capacity to *produce-sustain or evolve* all exhaustive (hypothetical) spatial pixels in the universe (i.e., across any two subsequent USCF's)...

The discovery of this new hypothetical CUFT has been accompanied by the identification of specific (empirical) 'critical predictions' for which the CUFT significantly differs from both quantum and relativistic models of the physical reality, e.g., including: 1) embedding of the (known) relativistic "E=Mc²" equation and Quantum 'Uncertainty Principle's complimentary pairs (e.g., of 'space and energy' or of 'time and mass') within a broader (novel) 'Universal Computational Formula':

$$\frac{c^2 x'}{h} = \frac{s x e}{t}$$

2) the CUFT's differential critical prediction regarding the greater number of (consistent) presentations of a more "massive" element (e.g., across a series of USCF's), relative to the number of presentations of a less massive element; and 3) A hypothetical capacity to "reverse the flow of time" based on the measurement of any given object's sequence of spatial electromagnetic values (across a given series of USCF's) and the application of the appropriate electromagnetic modulation values (applied to any of its identified spatial-electromagnetic

pixels across the measured USCF's series) that is necessary in order to attain the reversed spatial-temporal electromagnetic sequence (e.g., comprising that object's reversed spatial-temporal sequence). (Such methodology could also hypothetically lead to the "de-materialization" or "materialization" of any given object or event).

Due to the fact that the current Scientific framework is anchored and based (entirely) upon a Cartesian 'materialistic-reductionistic' assumption wherein it is assumed that any given (or even hypothetical) phenomenon- element- or natural law (represented as: 'y') is reducible to- or can be explained- solely based on a certain number of physical interactions between this 'y' element and any exhaustive hypothetical 'x' factor/s, element/s, phenomenon/a or events etc. – e.g., giving rise to the Duality Principle's (abovementioned) SROCS computational structure; and due to the transcendence of such 'computationally invalid' SROCS structure (Bentwich, 2012:a & b) by the Duality Principle and its embedding within the CUFT's higher-ordered 'D2': Universal Computational/Universal Consciousness Principle theoretical framework; it was previously suggested that to the extent that the CUFT may be validated experimentally (e.g., such as for instance through an empirical validation of one (or more) of its (abovementioned) differential critical predictions – then this may lead to a '*paradigmatic shift*' from the current Cartesian 'materialistic-reductionistic' theoretical framework towards a conceptually higher-ordered singular Universal Computational/Universal Consciousness Principle which explains the physical universe in terms of its apparent production by a singular non-material, a-causal D2 computation which gives rise to all apparent (secondary computational) properties of 'space', 'time', 'energy' and 'mass'.

However, to the extent that the CUFT is corroborated empirically (e.g., especially in terms of the validation of its previously outlined critical empirical predictions), then the possible theoretical ramifications of its signified (potential) scientific paradigmatic shift must be further explored: Hence, the primary aim of the current chapter is to investigate the various potential theoretical ramifications of the CUFT as a candidate 'Theory of Everything' which points at the existence of the singular "reality" of the Universal Computational/Consciousness Principle as underlying all four basic physical properties (of 'space', 'time', 'energy' and 'mass') as well as all other inductive or deductive 'x-y' relationships; and finally also the possible relationship between this Universal Consciousness Principle and our individual human consciousness (e.g., which in fact may lead to a further modification of the CUFT's Universal Computational Formula based on the recognition of the potential gradations of individual human consciousness as embedded within the full expansiveness of the Universal Consciousness)...

2. The universal computational principle's D2 A-causal computation

We therefore (first) aim at fully integrating between the CUFT's Duality Principle proof for the conceptual computational inability to determine the "existence" or "non-existence" of any particular 'y' element based on any exhaustive hypothetical series of interactions with any 'x' factor/s (e.g., constituting a SROCS computational paradigm) – but only based on a conceptually higher-ordered (D2) Universal Computational Principle which computes the "simulta-

neous co-occurrences" of any (empirically computable) exhaustive hypothetical series of 'x-y' pairs; and between the CUFT's Universal Consciousness Principle assertion that that this higher-ordered (singular) Universal Computational Principle is (in fact) the only "real" element that truly exists – both as solely producing all USCF's secondary computational physical properties (of 'space', 'time', 'energy' and 'mass') and as existing solely (and independently of any such USCF's secondary computational properties) "in-between" any two subsequent USCF's: The starting point (to attain this first aim) is the CUFT's Duality Principle proof that all (hypothetical inductive or deductive) scientific SROCS paradigms must be constrained by a conceptually higher-ordered (D2) Universal Computational Principle which alone is capable of computing the "simultaneous co-occurrences" of any exhaustive hypothetical 'x-y' pairs series: Thus, both in the case of the CUFT's unification between quantum and relativistic models of physical reality as well as in the case of all other (hypothetical) inductive or deductive SROCS computational paradigms (e.g., for which there is an empirically known capacity to determine the values of any exhaustive 'y' and 'x' pairs series) the CUFT's Duality Principle has shown that the sole means for computing all of these (exhaustive hypothetical) quantum, relativistic, inductive or deductive 'x-y' relationships is based on the operation of the (conceptually higher-ordered) 'Universal Computational Principle' (") which computes the "simultaneous co-occurrences" of all of these 'x-y' pairs series (e.g., which comprise a series of USCF's frames). Hence, we realize that all physical quantum or relativistic 'x-y' relationships as well as all (hypothetical) inductive (logical or mathematical) or deductive (e.g., including all natural sciences) 'x-y' relationships – are underline by the singular Universal Computational Principle's (") computation of the "simultaneous co-occurrences" of each of these 'x-y' pairs series... But, since according to the CUFT's 'Computational Invariance' and 'Universal Consciousness Principle' theoretical postulates the sole (and singular) *computationally invariant* "reality" that exists both as producing any USCF's series and which also (solely) exists "in-between" any two subsequent USCF's is that Universal Computational Principle which is equated with a Universal Consciousness Principle (e.g., capable of "producing", "retaining" and "evolving" any of the multifarious spatial pixels across subsequent USCF's frames) – whereas all physical properties - quantum or relativistic, or any inductive or deductive 'x-y' relationships may only be as "phenomenal" or "unreal" due to their basic computationally variant properties). We are therefore forced to conclude that the sole production- sustenance- or any evolution- in any physical (quantum or relativistic), inductive or deductive (exhaustive hypothetical) 'x-y' pairs' series is based on the operation of the singular Universal Consciousness Principle which underlies the production of all USCF's frames and also exists independently "in-between" any two such (subsequent) USCF's. Thus, we accomplish our first aim of fully integrating between the CUFT Duality Principle's constraint of all scientific (inductive or deductive) scientific SROCS paradigms, e.g., based on the operation of the singular (conceptually higher-ordered) Universal Computational Principle (") and the CUFT's (Computational Invariance and Universal Consciousness theoretical postulates') assertion regarding the sole "reality" of this Universal Computational/Consciousness Principle (e.g., both as producing all USCF's derived secondary computational physical properties or inductive or deductive 'x-y' relationships): This implies that instead of the existence of any "real" "material-causal" relationship between any quantum or relativistic (or any other exhaustive hypothetical inductive or deductive) 'x'

and 'y' factor/s, elements, events etc. – the sole "reality" is of the existence of the singular 'Universal Consciousness Principle' which produces- sustains- and can evolve- all exhaustive hypothetical physical (quantum or relativistic) or inductive or deductive 'x-y pairs' series, e.g., based on its sole production of the USCF's frames and its independent existence in between any two such USCF's frames...

3. The exhaustiveness of the universal consciousness principle for all natural phenomena

Based on the CUFT's postulation of this singular Universal Computational/Consciousness Principle as comprising the only "real" (computationally invariant) principle which produces- all USCF's (secondary computational) 'physical' properties (e.g., of 'space', time', 'energy' and 'mass'), and which also solely exists "in-between" any two (subsequent) USCF's, it is worthwhile to consider the broader applicability of this Universal Computation/Consciousness Principle ("") as underlying- and constraining- all (empirically knowable) hypothetical inductive or deductive 'x-y' relationship/s; Perhaps the best starting point for the such a comprehensive endeavor is to reexamine the computational SROCS structure underlying Gödel's Incompleteness Theorem (GIT) equivalent computational paradigms: This is because It is hereby hypothesized that an application of the Duality Principle to generalized deductive or inductive computational SROCS paradigms may bear equivalence to a certain aspect of Gödel's Incompleteness Theorem (GIT) – while allowing Science to advance beyond the mathematical constraint imposed by GIT; The basic hypothesis (advanced here) is that *the Duality Principle sets a conceptual computational constraint upon all logical, mathematical or (indeed) scientific SROCS exhaustive relationship/s between any two given 'x' and 'y' elements – for which there exists an empirically known or determinable result (e.g., an empirically known capacity of the specific logical, mathematical, or other scientific computational system's to determine whether a particular given 'y' value or entity etc. "exists" or "doesn't exist")*;

In the general case of all (hypothetical) inductive 'x' and 'y' relationships, the Duality Principle constrains all SROCS paradigms of the form:

SROCS: $CR(x,y) \rightarrow ['y' \text{ or } 'not\ y']/di1\dots din$

In the (generalized) case of all hypothetical deductive SROCS paradigms the Duality Principle constraint may be apply to a specific formalization of any computational system that attempts to determine the 'truth-value' (e.g., true: 't' or false: 'not t') of any hypothetical (exhaustive) Mathematical System ('Sm') based on an (exhaustive hypothetical) series of direct or indirect conceptual relationship/s between that given System and its definition of the 'true' ('t') value of that System, thus:

$CR\{Sm, t\} \rightarrow ['t' \text{ or } 'not\ t']/di1\dots din$

In fact, it is suggested that GIT proof may be equivalent to the Duality Principle's constraint of the (abovementioned) SRONCS special 'negative' computational outcome case:

SRONCS: $CR\{ 'Sm', t \} \rightarrow 'not\ t' / di1...din$

which was proven (by the Duality Principle) to inevitably lead to both 'logical inconsistency' and 'computational indeterminacy', e.g., stemming from the SRONCS logically contradictory assertion wherein the particular 'y' ('t') element both "*exists*" AND "*doesn't exist*" at the same computational level ('di1...din') – which necessarily also leads to such SRONCS structure's conceptual *inability* to determine whether that particular 'y' ('t') value "exists" or "doesn't exist"... But, for all of those logical, mathematical or inductive computational systems for which there exists an *empirical capacity to determine whether any such particular System is "true" ('t') or "false" ('f')* – since this empirical capacity contradicts the (abovementioned) SRONCS's inevitably ensuing 'logical inconsistency' and 'computational indeterminacy', then the Duality Principle asserts that there must exist a conceptually higher-ordered D2 computational framework capable of computing the simultaneous co-occurrences of any exhaustive hypothetical series of $\{ 'Sm', t[1...n] \}$... It is suggested that GIT's logical-mathematical proof may replicate the Duality Principle assertion regarding the inevitable 'logical inconsistency' and 'computational indeterminacy' that ensue from a SRONCS computational structure.

The principle difference between the Duality Principle's conceptual computational proof and GIT's logical mathematical proof is that whereas GIT focuses on the inevitable 'logical inconsistency' and (subsequent) 'computational indeterminacy' that arise from any SRONCS computational structure – whereas the Duality Principle goes further to investigate the empirical-computational ramifications of *those specific computational systems for which there is a proven empirical capacity to determine whether or not any such (particular) 'y' value "exists" or "doesn't exist"*; which therefore points at the inevitable existence of a conceptually higher-ordered D2 computational framework which can determine the "co-occurrences" of any (hypothetical) [*'S' and 't'/'not t'*] pairs' series... Thus, the Duality Principle's focus only on *those logical, mathematical or scientific Systems for which there exists an empirical evidence for their capacity to determine the "truth" or "false" value of any given proposition or entity etc.* – for which the Duality Principle proves that there exists a conceptually higher-ordered 'D2' computational framework that is capable of determining the "co-existence" of any (exhaustive hypothetical) pairs of 'Sm' and 't' values.

In fact, as has been shown previously (Bentwich, 2011c) since there can only exist one (singular) such conceptually higher-ordered 'D2' computational framework (e.g., as underlying any and all SROCS computational systems) and based on its identification as no other than the Computational Unified Field Theory's singular D2 rapid series of USCF's), then we are led to the inevitable conclusion that all logical, mathematical or scientific (e.g., empirically knowable SROCS) paradigms must be embedded within the CUFT singular D2 rapid series of USCF's....

In order to formally present the exhaustiveness of the Duality Principle (e.g., as embedded within the CUFT's D2 framework) it may be helpful to formalize the conceptual computational constraint imposed by the Duality Principle on all (exhaustive hypothetical) inductive or deductive relationships in this manner:

SROCS[1...z]: $R\{ x, y[1...n] \} \rightarrow ['y' \text{ or } 'not\ y'] / di1...din$

wherein any (exhaustive hypothetical) logical, mathematical, computational or scientific SROCS paradigm/s is one which attempts to determine the "existence" or "non-existence" of any given 'y' element (or particular 'y' value) based on its direct or indirect physical or conceptual relationship/s with an exhaustive series of (hypothetical) 'x' series (e.g., at any single or multiple: 'di1...din' computational levels) – and for which there is a known (or knowable) empirical capacity to determine whether the particular 'y' entity or value "exists" or "doesn't exist".

Interestingly, once the Duality Principle narrows down the computational definition of all those (apparent) logical, mathematical, computational or (any other hypothetical) scientific SROCS paradigms – *to only those computational systems for which there exists an empirical capacity to determine whether any particular 'y' entity "exists" or "doesn't exist"*, then according to the computational Duality Principle it (in effect) compliments (and may transcend) Gödel's Incompleteness Theorem, i.e., through the recognition of a (singular) conceptually higher-ordered 'D2' computational framework which is no other than the Universal Computational Principle's (extremely rapid) computation of a series of Universal Simultaneous Computational Frames (USCF's) – which also determines the simultaneous "co-occurrences" of any (exhaustive hypothetical) series of any 'x' and 'y' factors underlying all of (inductive or deductive) relationships, laws, phenomena (e.g., that can be known)... This is because based on the Duality Principle's narrowed down computational definition of any (exhaustive hypothetical) SROCS (inductive or deductive) scientific paradigm that possesses the general format:

$$PR\{x,y\} \rightarrow ['y' \text{ or 'not } y']/di1...din$$

and for which there exists an empirically known (or knowable) outcome (e.g., 'y' or 'not y'), the Duality Principle's computational proof (shown previously: Bentwich, 2011c & d) indicated that such scientific SROCS paradigms can only be computed by the conceptually higher-ordered 'D2' computational framework (e.g., which was also shown to be equivalent to the abovementioned rapid series of USCF's).

In other words, the generalized format of the Duality Principle – when narrowed down to only those (apparently) computational SROCS paradigms for which there exist an empirical proof for the capacity of any such (inductive or deductive) computational system/s to determine whether any particular 'y' or 'not y' outcome exists (e.g., at any given spatial-temporal point/s) – also necessarily provides us with the Duality Principle's asserted conceptual computational proof for the existence of a singular higher-ordered 'D2' USCF's based computation of the co-occurrences of any exhaustive hypothetical series of (particular) 'x' and 'y' pairs. Indeed, it is suggested that in the particular case of 'Gödel's Incompleteness Theorem' (GIT) which constitutes the state of the art known conceptual mathematical constraint imposed on our capacity to construct any (hypothetical deductive) logical or mathematical System – i.e., as necessarily containing certain mathematical statement/s which either lead to 'logical inconsistency' (e.g., such as in the basic case of the "liar's paradox" - as embedded within GIT), or which cannot be determined from within any such (exhaustive hypothetical) Mathematical System – the generalized form of the Duality Principle provides us with a clear indication that even though the consistency of certain mathematical (SRONCS) statements cannot be deter-

mined *from within any (exhaustive hypothetical) Mathematical System*, their consistency can be determined by the conceptually higher-ordered 'D2' (USCF based) computational framework...

As such, the computational Duality Principle offers us a potentially significant alternative to 'Gödel's Incompleteness Theorem's (GIT) 'negative' constraint set upon the capacity to construct any consistent logical, mathematical (e.g., or indeed scientific – as shown later on) computational System based on the realization that any such (exhaustive hypothetical) logical or mathematical (empirically validated) System can be formulated based on a conceptually higher-ordered 'D2 a-causal' computational framework (Bentwich, 2012: a & b) that is capable of computing the simultaneous "co-occurrences" of any such (exhaustive hypothetical) pairs series of logical or mathematical System and corresponding 't' (truth-value) definition/s; This is due to the fact that based on the (abovementioned) Duality Principle's strict definition of only those mathematical or logical systems for which there is a known (empirical) capacity to compute the "truth" or "false" value of any System (or statement within a given System) – its proof for the conceptual computational inability of any (such) SROCS/SRONCS system to carry out such computation at the same computational level as any direct or indirect (conceptual) interaction between the System and the 'truth value' definition but only at a conceptually higher-ordered 'D2 a-causal' computational framework (Bentwich, 2012a) points at the capacity of any such hypothetical logical or mathematical System to determine the simultaneous "co-occurrences" of any series of 'System' and 'truth-value' definition/s (e.g., at the 'D2 a-causal' computational framework)... In other words, once the (generalized) Duality Principle narrows down the computational definition of any possible logical or mathematical SROCS paradigm (e.g., of the form: $CR\{S,t\} \rightarrow [t \text{ or 'not t'}]$) to only those Systems for which there is a known empirical capacity to determine whether any given System or any given statement/s within a given System), then we necessarily obtain the Duality Principle's conceptual computational proof for the capacity to produce a particular series of logical or mathematical systems that are capable of determining whether they are 'true' or 'false' – based on a conceptually higher-ordered 'D2 a-causal' computational framework. In that sense, this generalized Duality Principle format (e.g., for empirically computable logical or mathematical systems) seems to transcend Gödel's Incompleteness Theorem's strict constraints set on the construction of any logical or mathematical *consistent* systems, e.g., as devoid of any 'logical inconsistency' or 'mathematical indeterminacy' (as also defined previously: Bentwich, 2012a); this is because such generalized Duality Principle format in fact asserts the capacity to construct specific logical or mathematical systems for which we can determine their truth-value based on a conceptually higher-ordered 'D2 a-causal' computational framework which can compute the simultaneous "co-occurrences" of any exhaustive hypothetical pairs series of mathematical system and truth-value (e.g., 't' or 'not t'). Indeed, based on the Duality Principle's previously proven *singularity* of such conceptually higher-ordered 'D2 a-causal' computational framework (e.g., which has been furthermore shown to be synonymous with the Computational Unified Field Theory's rapid series of Universal Simultaneous Computational Frames) – the generalized Duality Principle's proof indicates that for all empirically determinable logical or mathematical systems there necessarily exists only one singular higher-ordered D2 (USCF's) computational framework that is capable of determining any exhaustive hypothetical pairs

(series) of logical or mathematical system and corresponding 'truth-value' (e.g., 't' or 'not t') outcome.

Finally, it is suggested that this generalized format of the Duality Principle offers a constructive computational alternative to GIT's failing of Hilbert's famous 'Mathematical Program' – to base all of Mathematics on the basis of Logic (e.g., and moreover attempt to base the whole of Science upon the foundations of such a logical-mathematical structure); This is because GIT essentially proved that any exhaustive hypothetical (SRONCS) Mathematical System (e.g., of the form: $CR\{S,t\} \rightarrow \text{'not t'}$) necessarily leads to both 'logical inconsistency' and 'mathematical inconsistency' – i.e., as also indicated by the Duality Principle's analysis of any such SRONCS computational structure); As such, GIT evinces – as does the Duality Principle, that such SRONCS computational structure cannot be computed, e.g., from within the confinements of any such SRONCS Mathematical System... However, since GIT does not go further to investigate whether any such specific (apparent SRONCS) computational system *can determine empirically* whether any given statement (found within that System) is 'true' or 'false', then the theoretical assertion made by GIT is that for any given (exhaustive hypothetical) mathematical system there exist certain SRONCS statement/s which cannot be proven from within such system... Hence, the theoretical ramification of GIT was taken to indicate that the whole of Logic and Mathematics cannot be based on any exhaustive hypothetical logical or mathematical system (i.e., regardless of its potential complexity etc.) – which essentially failed Hilbert's 'Mathematical Program' to base the whole of Mathematics (e.g., and by extension potentially also the whole of deductive and inductive Science) upon the foundations of any given logical (or mathematical system)... However, if we are to accept the Duality Principle's (generalized format) proof for the specifically defined logical or mathematical systems – i.e., of the form: $CR\{S,t\} \rightarrow [\text{'t' or 'not t'}]$ for which there exist an empirical capacity to determine whether any given statement found within such system/s is 'true' or 'false', then the Duality Principle in fact proves that for such (empirically determinable) logical or mathematical systems there exists a conceptually higher-ordered computational framework (e.g., 'D2') which can determine the simultaneous "co-occurrences" of any exhaustive hypothetical series of 'statement' and 'true' or 'false' pairs! Thus, the Duality Principle in effect offers a higher-ordered 'hierarchical-dualistic' ('D2') alternative (i.e., for those specific logical or mathematical systems for which there is a known capacity to determine the "true" or "false" value of any given statement) – to GIT's asserted conceptual computational inability to determine the consistency or computability of any mathematical system that can contain a SRONCS statement!

Therefore, it may be said that GIT proved the inevitable 'logical inconsistency' and 'computational indeterminacy' of any given SRONCS statement – and subsequently 'extrapolated' from the existence of such 'logically inconsistent' and 'computationally indeterminable' SRONCS statements that the whole of Logic or Mathematics is "flawed" in that there is no possibility to construct any exhaustive hypothetical logical or mathematical system that will be free of any such logical inconsistencies or computational indeterminacy... In contrast, the (generalized) Duality Principle views the existence of any such SRONCS statement/s – as embedded within the general SROCS/SRONCS scientific computational structure and asserts that for any such scientific (e.g., inductive or deductive) SROCS/SRONCS structure for which there is a capacity

to determine whether any given statement possesses a "true" or "false" value there must exist a conceptually higher-ordered (singular) 'D2' computational framework that is capable of computing the simultaneous "co-occurrences" of any series of pairs of 'statement' and 'true' or 'false'; Hence, the (generalized) Duality Principle evinces the existence of a whole series of (deductive or inductive) scientific SROCS/SRONCS paradigms for which there is an empirically proven capacity to determine the truth value (e.g., "true" or "false") of any given statement/s – which point at the (inevitable) existence of a conceptually higher-ordered (singular) 'D2 a-causal' computational framework that computes any exhaustive hypothetical series of statement and truth value pairs... Therefore, the Duality Principle in fact replaces GIT's strict assertion wherein it is not possible to construct any logically consistent and computationally determinable logical or mathematical system – instead pointing at the existence of a whole series of inductive or deductive (apparently SROCS/SRONCS) computational systems for which there exists an empirically proven capacity to determine whether any given statement is 'true' or 'false' and which is necessarily computed by that singular conceptually higher-ordered 'D2 a-causal' computational framework that can compute the simultaneous "co-occurrences" of any 'statement' and 'true'/'false' value. Hence, the (generalized) Duality Principle points at the existence of a singular conceptually higher-ordered 'D2' computational framework – upon which all of the empirically 'known' (or 'knowable') inductive or deductive relationships has to be based; It is therefore suggested that a new hierarchical-dualistic formalization of (deductive and inductive) Science has to be anchored in- and based upon- this singular conceptually higher-ordered 'D2 a-causal' computational framework, which has been previously shown to be no different than the Computational Unified Field Theory's (CUFT) D2 Universal Computational Principle ("") based rapid series of Universal Simultaneous Computational Frames (USCF's)...

Therefore, the Duality Principle's (generalized) resolution of GIT consists of the precise definition of only those deductive systems or statements possessing the (apparent) SROCS form:

$$CR\{x,y\} \rightarrow ['y' \text{ or } 'not\ y']/di1\dots din; \text{ or}$$

$$CR\{S,t\} \rightarrow ['t' \text{ or } 'not\ t']/di1\dots din$$

which are known empirically to be capable of determining whether any given 'y' element (or value) "exists" or "doesn't exist" or whether a given System or statement possesses a 'true' or 'false' value (e.g., as defined by that System or statement);

Indeed, based on this (narrower) definition of only those deductive (apparent) SROCS paradigms for which there is a capacity to determine the "existence" or "non-existence" of a particular 'y' value or 'truth value' (i.e., 'true' [t] or 'false' [f]) the (generalized) Duality Principle proves that there must exist a conceptually higher-ordered (singular) 'a-causal D2' computational framework which can compute the simultaneous "co-occurrences" of any exhaustive hypothetical pairs of the deductive system's (or statement's) abovementioned 'x' and 'y' factors or of any exhaustive hypothetical pairs of 'S' and 't' values, thus:

$$D2: ([\{S\{1\dots n\}, t\}i \dots \{S\{1\dots n\}, t\}z], \text{ or } [\{x\{1\dots n\}i, yi\} \dots \{x\{1\dots n\}z, yz\}])$$

Note that this particular definition of the (generalized) Duality Principle asserts that for all of those deductive systems (or statements) for which there exists an empirical proof for their capacity to determine the "existence" or "non-existence" of any particular 'y' element/s (or factor/s) or any particular 't' value (e.g., 'true' or 'false') – the Duality Principle proves that there must exist a conceptually higher-ordered 'D2 a-causal' computational framework which can compute the simultaneous "co-occurrences" of any exhaustive hypothetical series of 'S' and 't' pairs or of 'x' and 'y' pairs; This implies that through the narrower definition of only those empirical deductive computational systems (or statements) for which there is a capacity to determine their (particular) 'y' or 'truth value' – the (generalized) Duality Principle is able to go beyond GIT's negative SRONCS' assertion wherein for all logical or mathematical systems there exist specific statements that cannot be determined from (within that system) or which lead to logical inconsistency (of that system), thereby opening the door for a novel 'hierarchical-dualistic' definition of those deductive systems that can be known and which do not lead to any logical inconsistencies...

Finally, it is suggested that based on the equivalence of GIT (deductive) SROCS computational structure to all (previously: Bentwich, 2011d) analyzed (inductive) SROCS scientific paradigms:

$$PR\{x,y\} \rightarrow ['y' \text{ or } 'not\ y']/di1\dots din; \text{ or}$$

$$CR\{x,y\} \rightarrow ['y' \text{ or } 'not\ y']/di1\dots din;$$

Then according to the Duality Principle's computational-empirical proof (Bentwich, 2011c & d), i.e. indicating that it is not possible (in principle) to compute the "existence" or "non-existence" of any such particular 'y' entity (or value) based on its direct (or indirect) physical or conceptual relationship/s with another 'x' entity (e.g., at any 'di1...din' computational level/s) – but rather the empirically proven capacity of specific computational systems to compute the simultaneous "co-occurrences" of any (exhaustive hypothetical) series of pairs of 'x' and 'y' (occurring at any known given spatial-temporal point/s or at any known computational level/s or instance/s). Indeed, based on the (abovementioned) Duality Principle's (generalized) particular definition of any such inductive or deductive SROCS scientific paradigm as possessing both the (above outlined) inductive or deductive SROCS computational structure and the empirical capacity to determine whether any given 'y' element "exists" or "doesn't exist", as well as the Duality Principle's proof for the existence of a conceptually higher-ordered (singular) 'D2 a-causal' (USCF's based) computational framework – then this evinces the fact that all empirically determinable scientific (inductive or deductive) SROCS paradigms must all be computed by this singular conceptually higher-ordered D2 USCF's series computational framework...

Therefore, the next (logical) step may be to consider all of the previously demonstrated scientific SROCS paradigms constrained by the Duality Principle (including: Darwin's Natural Selection Principle, the Genetic Encoding Hypothesis, Neuroscience's (materialistic-reductionistic) Psycho-Physical Problem of human consciousness, as well as Gödel's Incompleteness Theorem's replacement by the generalized Duality Principle's proof for the capacity to determine the simultaneous "co-occurrences" of any 'x' and 'y' (deductive or inductive)

exhaustive hypothetical pairs (e.g., for all those empirical computational systems for which there is a known empirical capacity to determine the "existence" or "non-existence" of any given 'y' element or value/s); Specifically, the next section attempts to fully integrate between all known (any determinable) inductive or deductive scientific SROCS paradigms (e.g., delineated previously: Bentwich, 2012: a & b, and above) as necessarily comprising- and being embedded within- the singular conceptually higher-ordered 'D2 a-causal' computational framework which was already shown to be no other than the CUFT's rapid series of USCF's computed solely by the Universal Computational Principle, ("").

Previously (Bentwich, 2012b) it was shown that each of a series of key scientific SROCS paradigms (including: Darwin's Natural Selection Principle, the Genetic Encoding Hypothesis and Neuroscience's Psycho-Physical Problem) are necessarily constrained by the Duality Principle – indicating that their empirically proven capacity to determine the "existence" or "non-existence" of their (particular) 'y' element *may not be based on any direct or indirect physical interaction between that given 'y' element and any (exhaustive hypothetical) x-series of the form:*

SROCS: $PR\{x,y\} \rightarrow [y \text{ or 'not 'y'\} \setminus di1...din$

Instead, the Duality Principle pointed at the (inevitable) existence of a conceptually higher-ordered 'D2 a-causal' computational framework which is capable of computing the simultaneous "co-occurrences" of any (exhaustive hypothetical) 'x' and 'y' pairs series – as embedded within the Computational Unified Field Theory's singular D2 rapid series of USCF's (which are computed by the Universal Computational Principle, ("")); Thus, for instance, both Darwin's Natural Selection Principle's SROCS and (associated) Genetic Encoding SROCS computational structures were shown to be constrained by the Duality Principle – pointing at an (inevitable) singular conceptually higher-ordered 'D2 a-causal' USCF's (rapid) series which is computed by the Universal Computational Principle and which computes the simultaneous "co-occurrences" of any exhaustive hypothetical series of 'organism' ('o') and 'Environmental Factors' (E(1...n)) or of 'Genetic Factors' and 'Phenotype property', or of Genetic Encoding and Protein Synthesis' etc. Likewise, it was hypothesized that the four computational SROCS levels constituting Neuroscience's (materialistic-reductionistic) Psycho-Physical Problem are also necessarily constrained by the Duality Principle – also pointing at the same singular conceptually higher-ordered 'D2 a-causal' computational framework constituting the rapid USCF's series that is computed by the Universal Computational Principle (""), which also embeds within each of those rapid series of USCF's the simultaneous "co-occurrences" of any (exhaustive hypothetical) 'Psychophysical Stimulus' and (corresponding) 'Neural Activation' pairs; or any 'Neural Activation' and 'Functional Activation' pairs, or any 'Functional Activation' and 'Phenomenological Experience' pairs; or any 'Phenomenological Experience' and 'Self-Consciousness' pairs... In much the same manner, the abovementioned analysis offered by the generalized Duality Principle for Gödel's Incompleteness Theorem (GIT) and subsequent (narrower) definition of all those scientific (inductive or deductive) SROCS paradigms (which can be determined empirically) also pointed at the existence of a singular conceptually higher-ordered 'D2 a-causal' USCF's based computational framework that can compute any (exhaus-

tive hypothetical) 'x' and 'y' pairs series as "co-occurring" simultaneously (e.g., as embedded within any single or multiple USCF's frames).

Thus, an application of one of the key theoretical postulates of the 'Computational Unified Field Theory' (CUFT), namely: the computational 'Duality Principle' to a series of central (inductive or deductive) scientific SROCS paradigms (including: Darwin's Natural Selection Principle, the Genetic Encoding hypothesis, Neuroscience's Psycho-Physical Problem and 'Gödel's Incompleteness Theorem' and broader hierarchical-dualistic reformalization of all determinable deductive apparently SROCS paradigms) pointed at the need to reformulate all such scientific SROCS paradigms based on a singular conceptually higher-ordered 'D2 a-causal' computational framework which was previously shown (Bentwich, 2012: a & b) to be no other than the 'Universal Computational Principle' computed rapid series of USCF's (as delineated by the Computational Unified Field Theory); There are several potentially far reaching theoretical ramifications for this new hypothetical assertion made by the Computational Unified Field Theory (CUFT) and embedded computational 'Duality Principle': First, to the extent that the CUFT and Duality Principle's (abovementioned) applied scientific SROCS paradigms (e.g., including: Darwin's Natural Selection Principle and Genetic Encoding hypothesis, Neuroscience's Psycho-Physical Problem and Gödel's Incompleteness Theorem etc.) may be corroborated, then we must accept that all of these inductive and deductive scientific paradigms must be reformulated based on the recognition of a singular conceptually higher-ordered CUFT's based 'D2 a-causal' USCF's computational framework;

Specifically, the acceptance of the Duality Principle – e.g., as one of the key postulates of the CUFT as well as a basic constraint for each of these major scientific paradigms forces us to *relinquish the current 'material-causal' working assumption* underlying each of these scientific SROCS paradigms (i.e., of the general form: $PR\{x,y\} \rightarrow [y \text{ or 'not } y']$ or $CR\{x,y\} \rightarrow [y \text{ or 'not } y']$ or $PR\{S,t\} \rightarrow [t \text{ or 'not } t']$, as explained above); Thus, instead of Darwin's Natural Selection SROCS paradigm wherein it is assumed that it is the direct physical interaction between an 'organism' and an (exhaustive hypothetical) series of 'Environmental Factors' that materially causes the "existence" or "extinction" (e.g., non-existence) of a given organism – the Duality Principle points at the existence of a conceptually higher-ordered 'D2 a-causal' computational framework which computes the simultaneous "co-occurrences" of any given 'organism' and corresponding 'Environmental Factors' pair/s (e.g., comprising any particular Universal Simultaneous Computational Frame [USCF's] frame); Likewise, instead of the basic 'Genetic Encoding' hypothesis underlying much of modern Genetics and Biology – wherein it is assumed that it is the material-causal (direct or indirect) relationship/s between a given 'Genetic Factors' and particular 'Phenotypic Property' (or properties) which determines whether any such Phenotypic Property shall "exist" or "not exist"; or wherein it is assumed that it is the direct or indirect physical interaction/s between a particular 'Genetic Encoding' process and certain 'Protein Synthesis' process/es that determines whether or not any given protein/s shall be synthesized (e.g., or vice versa) (Bentwich, 2012b) – the Duality Principle asserts that it is not possible in principle to determine the "existence" or "non-existence" of any such (particular) 'y' entity (e.g., 'Phenotypic Property' or 'Protein Synthesis' etc.) based on its direct or indirect physical interaction with any exhaustive hypothetical series of 'x factors'; Instead,

the Duality Principle (once again) points at the existence of a conceptually higher-ordered 'D2 a-causal' USCF's based computation of the simultaneous "co-occurrences" of any exhaustive hypothetical pairs series of any such 'Genetic Factors' and (particular) 'Phenotypic Property', or of any 'Genetic Encoding' and 'Protein Synthesis' etc. – all computed simultaneously by the singular conceptually higher-ordered 'D2 a-causal' Universal Computational Principle ("") which are embedded within its series of rapidly computed USCF's... In much the same manner, the Duality Principle challenges the currently 'materialistic-reductionistic' working hypothesis underlying Neuroscience's assumption whereby any of the (four level) Psycho-Physical Problem's SROCS paradigms asserting that any of the four levels of human Consciousness is necessarily caused by a (direct or indirect) material interaction/s between a certain stimulus and corresponding neural activation pattern (e.g., essentially replicating the above- and previous mentioned SROCS computational structure: Bentwich 2012b); Instead, the Duality Principle evinces that any of these (four leveled SROCS) 'x-y' pairs relating to various aspects of the human Consciousness is computed simultaneously as "co-occurring" pairs by the singular conceptually higher-ordered 'D2 a-causal' Universal Computational Principle as embedded within the rapid series of USCF's frames... Finally, it was suggested (above) that Gödel's Incompleteness Theorem (GIT) may also replicate the SROCS computational structure and therefore may need to give way to the Duality Principle's (generalized) assertion that for all of those deductive paradigms (or statement/s or instances) for which there is a known empirical capability to determine the "existence" or "non-existence" of any given 'y' entity (or value) or of any given 'truth-value' definition ("t": 'true' or 'false'), there must exist a conceptually higher-ordered (singular) 'D2 a-causal' computational framework which is synonymous to the Universal Computational Principle's that is capable of determining the simultaneous "co-occurrences" of any exhaustive hypothetical series of such deductive 'x' and 'y', or 'S' and 't' pairs which are necessarily embedded within the rapid series of USCF's). Therefore, the acceptance of the Duality Principle as embedded within the CUFT's rapid series of ('Universal Computational Principle' produced) USCF's and as constraining any of the (abovementioned) scientific SROCS paradigms necessarily calls for the reformulation of each and every one of these SROCS paradigms based on the existence of the CUFT's asserted singular conceptually higher-ordered Universal Computational Principle's 'D2 a-causal' computed rapid series of USCF's (e.g., instead of these scientific SROCS' current asserted 'material-causal' determination of any particular 'y' factor based on its direct or indirect physical interaction/s with another exhaustive hypothetical series of 'x' factors)...

Second, based on the Duality Principle's conceptual computational proof for the *singularity* of the 'D2 a-causal' computational framework – i.e., as necessarily computing all apparent SROCS paradigms' 'x' and 'y' (direct or indirect) relationship/s, and as embedded within the Universal Computational Principle's rapid computation of the series of USCF's, we must accept the notion wherein all of the abovementioned scientific SROCS paradigms must be computed simultaneously as "co-occurring" (particular) 'x' and 'y' (inductive or deductive) pairs by the Universal Computational Principle ("") through its computation of the rapid series of USCF's... Indeed, if we were to assemble all of the Duality Principle's (earlier proven: Bentwich, 2012: a & b) SROCS' conceptually higher-ordered 'D2' computational levels which were shown to (alone) be capable of computing the "co-occurrences" of any (particular) 'x' and 'y' factors we

would obtain a series of SROCS scientific paradigms that are all shown (by the Duality Principle) to be computed by the conceptually higher-ordered (singular) D2 'a-causal' computational framework:

N.S.:D2: $[\{E\{1...n\}, o\}_{st1}; \{E\{1...n\}, o\}_{st2}... \{E\{1...n\}, o\}_{stn}]$.

G.F – P.S.:D2: $[\{G\{1...n\}, 'phi(o)'\}_{st1}; \{G\{1...n\}, 'phj(o)'\}_{sti}; ... \{G\{1...n\}, 'phn(o)'\}_{stn}]$.

G.E. – P.S.:D2: $[\{Ge\{1...n\}, pi-synth(o-phi)\}_{st1}; Ge\{1...n\}, pj-synth(o-phi)\}_{sti}... ; Ge\{1...n\}, pn-synth(o-phi)\}_{stn}]$

Psychophysical:D2: $[\{N(1...n)_{st-i}, Cs-pp_{st-i}\}; ... \{N(1...n)_{st-i+n}, Cs-pp_{st-i+n}\}]$

Functional: D2: $[\{Cs(pp)f_i, Na(spp)fi\}_{st-i}; ... \{Cs(pp)f_{(i+n)}, Na(spp)f_{(i+n)}\}_{st-(i+n)}]$

Phen.: D2: $[\{Cs(pp-fi)-Ph_i, Na(spp-fi)-Ph_i\}_{st-i}; ... \{Cs(pp-fi)-Ph_{(i+n)}, Na(spp-fi)-Ph_{(i+n)}\}_{st-(i+n)}]$

Self: D2: $[\{Cs(pp-fi)Ph-Si, Na(pp-fi)Ph-S_i\}_{st-i}; ... \{Cs(pp-fi)Ph-S_{(i+n)}, Na(pp-fi)Ph-S_{(i+n)}\}_{st-(i+n)}]$

GIT:D2: $([\{S\{1...n\}, t\}_i ... \{S\{1...n\}, t\}_z], \text{ or } [\{x\{1...n\}, y\}_i ... \{x\{1...n\}, y\}_z])$

But, since it was already proven by the Duality Principle that this singular conceptually higher-ordered 'D2 a-causal' computation *cannot be reduced to any direct or indirect material interaction/s* between any (particular) exhaustive series of 'x' factor/s and any 'y' entity (or between any exhaustive series of logical or mathematical Systems or statement/s and any of their specific 'truth-value' definitions (Bentwich, 2012: a & b); and since the Computational Unified Field Theory (CUFT) evinced the existence of a rapid series of Universal Simultaneous Computational Frames (USCF's) which was postulated to be computed (e.g., at an extremely rapid rate: 'c²/h') by the singular Universal Computational Principle ("') – i.e., with no "material" entity existing "in-between" any two subsequent USCF's (frames); then it follows that all of the abovementioned scientific SROCS paradigms must be computed based on the CUFT's singular conceptually higher-ordered 'D2 a-causal' Universal Computational/Consciousness Principle ("') as part of its (rapid) computation of the USCF's series – *with no material entity, 'mass', 'energy', 'space' or 'time' object/s or event/s, factor/s or process/es etc. existing "in-between" any USCF's frames...*

4. The universal computational principle's paradigmatic shift: Transcending cartesian dualism

Based on the above demonstration of the basic constraint imposed by the (singular) Universal Computational/Consciousness Principle ("') upon the computation of any hypothetical (empirically knowable) 'x-y' relationship (or phenomenon), the next logical question would be: what may be the possible relationship between this conceptually higher-ordered, singular Universal Consciousness Principle and out individual human Consciousness? (Interestingly enough, as we be shown below, posing such a question may have significant theoretical ramifications with regards to some of the most basic tenets underlying modern Cartesian Science, i.e., including the basic tacit assumption wherein the "objective" physical reality may

be separated from the "subjective" Consciousness observing or measuring such objective phenomenon...);

A natural starting point for exploring this important question may be related to the Duality Principle's (previous) analysis of Neuroscience's current SROCS computational Psychophysical Problem (PPP) of human Consciousness (Bentwich, 2012b): This is because the above analysis of Neuroscience's PPP indicated that all four computational levels of Neuroscience's SROCS PPP computational structure are constrained by the same (basic) Duality Principle, thereby pointing at the (singular) Universal Computational Principle as computing the "simultaneous co-occurrences" of all of these multifarious (e.g., Psychophysical, Functional, Phenomenal, Self) 'x-y' pairs. It was moreover shown (above and previously) that the Universal Computational/Consciousness Principle is responsible for the simultaneous computation of all "co-occurring" PPP, (quantum and relativistic) physical relationships, as well as all (empirically knowable) inductive and deductive 'x-y' pairs; We thus arrive at the inevitable conclusion that all (quantum and relativistic) 'x-y' physical relationships, all exhaustive hypothetical inductive or deductive 'x-y' relationships, as well as all human Consciousness Psychophysical 'x-y' relationships must be solely produced- sustained- and evolved- by this (singular) Universal Computation/Consciousness Principle, and moreover that this Universal Consciousness Principle comprises the sole "reality" underlying all such (secondary computational) phenomenal relationships...

But, if indeed the sole "reality" underlying all physical, inductive, deductive and individual Consciousness (Psychophysical) 'x-y' phenomenal relationships is the Universal Consciousness Principle, then this means that in reality there is only a singular Universal Consciousness Principle which produces all apparent physical, inductive, deductive or individual human Consciousness (secondary computational) phenomena (e.g., comprising of all exhaustive hypothetical empirically knowable 'x-y' pairs); In this respect, the singular Universal Consciousness Principle becomes the sole "reality" which supersedes- (entirely) constrains- all apparent (quantum or relativistic) phenomenal 'x-y' relationships, or indeed any inductive or deductive or any individual human Consciousness 'x-y' relationships... Obviously, such a profound realization signifies a major 'paradigmatic shift' in Cartesian Science's (contemporary) theoretical framework which assumes that all natural phenomena are reducible to the analysis of fundamental (SROCS) 'x-y' relationships, wherein the "existence" or "non-existence" of any given 'y' element, value, phenomenon or process etc. can be determined solely based on its direct or indirect physical interactions with another (exhaustive hypothetical) series of 'x' factor/s; Instead, the acceptance of the CUFT's assertion regarding the sole existence of a singular Universal Computational/Consciousness Principle ('') that is (solely) responsible for the production- sustenance- and possible evolution- of all quantum and relativistic physical relationships, all inductive or deductive (empirically knowable) relationships and all individual human Consciousness (psychophysical) relationships – represents a basic shift from a purely 'materialistic-reductionistic' Cartesian approach to the realization that the sole "reality" underlying all phenomenal physical, inductive, deductive or individual human consciousness relationships is only this singular Universal Computational/Consciousness Principle...

However, in order to fully appreciate the potential theoretical significance of this Universal Computation/Consciousness Principle paradigmatic shift, let's focus our attention on the "mechanics" of this Universal Consciousness Principle's production- sustenance- and evolution- of all (abovementioned) quantum and relativistic physical relationships, inductive or deductive relationships or individual human Consciousness relationships; If we were to take a closer look at the operation of this Universal Computational/Consciousness Principle (") and its production- sustenance- and (possible) evolution- of any of these physical, inductive, deductive or individual human Consciousness 'x-y' relationships we would realize a few important points:

- a. Based on the CUFT's delineation of the operation of this (singular) Universal Computational/Consciousness Principle (alongside the Duality Principle's assertion regarding the Universal Computational/Consciousness Principle's computation of the "simultaneous co-occurrences" of all physical, inductive or deductive 'x-y' pairs) we realize that all exhaustive hypothetical physical, inductive, deductive or individual human Consciousness psychophysical 'x-y' pairs must be computed simultaneously by the same Universal Computational/Consciousness Principle – e.g., as embedded within single or multiple USCF's frame/s; As noted above (and previously), such a conceptually higher-ordered (singular) Universal Computational/Consciousness Principle's 'A-Causal D2' computation negates the possibility of any real "material-causal" relationship/s existing between any of these 'x→y' pairs series (but instead advocates the Universal Computational/Consciousness Principle's sole computation of any singular or multiple USCF's "simultaneous co-occurrences" of an exhaustive hypothetical series of 'x-y' pairs...) Again, as indicated previously, this implies that for instance instead of the Darwin's Natural Selection Principle's postulation of the existence of a 'material-causal' relationship existing between a given organism's Environmental Factors and their determination of that organism's "existence" or "extinction" based on their direct (or indirect) physical interactions with that organism, the Universal Computational/Consciousness Principle indicates that in "reality" there cannot be any "material-causal" relationships between the organism and its Environmental Factors but instead only the Universal Computational/Consciousness Principle's computation of the "simultaneous co-occurrences" of a series of such (particular) 'organism' and Environmental Factors (e.g., as embedded within a series of USCF's). Indeed, based on the (generalized) Duality Principle proof for all inductive or deductive ('Gödel-like' SROCS) computational paradigms, it becomes clear that there cannot exist any "real" "material-causal" relationships between any exhaustive hypothetical (physical quantum or relativistic, inductive or deductive) 'x-y' entities, but only the conceptually higher-ordered Universal Computational/Consciousness Principle's computation of the "simultaneous co-occurrences" of such pairs across a series of USCF's.

The CUFT's 'Computational Invariance Principle' and 'Universal Consciousness Principle' theoretical postulates which prove that only the 'computationally invariant' Universal Computational Principle (') may be regarded as "real" whereas the 'computationally variant' (secondary computational) physical properties of 'space', 'time', 'energy' and 'mass' must be regarded as "illusory"; and that since only this singular Universal Com-

putational Principle exists both "in-between" any two (subsequent) USCF's and (solely) produces any of these "illusory" (secondary computational) physical properties – then this Universal Computational Principle must also possess the 'Universal Consciousness Principle' functions of being capable of producing- sustaining-/retaining- and evolving- any of the numerous spatial pixels properties across any series of USCF frame;

- b. Therefore, the CUFT's Universal Consciousness Principle (e.g., augmented by the CUFT's 'Computational Invariance' postulate) asserts that the sole existence of any phenomenal (secondary computational) physical property (of any given object or event) is in truth entirely produced- retained- and evolved- solely and singularly based on the "reality" of this singular Universal Consciousness which solely "exists" both "in-between" any (two subsequent) USCF's and solely produces any of these (secondary computational) physical properties; Note that since none of the 'physical' properties (of 'space', 'time', 'energy' or 'mass') exist "in-between" any (two subsequent) USCF's (e.g., but only the Universal Consciousness Principle which both produces- all of these USCF's secondary computational properties as well as exists "in-between" any two subsequent USCF's), then the sole "reality" that exists both as producing the USCF's and "in-between" any two such USCF's is that Universal Consciousness Principle. Likewise, since according to this Universal Consciousness Principle all four 'physical' properties of 'space', 'time', 'energy' and 'mass' "exist" – only as 'phenomenal' secondary computational properties of the "real" Universal Computational Principle's production of the (rapid series of) USCF's (but "vanish" in between any two such subsequent USCF's), then it is also obvious that no "real" 'material-causal' relationship can exist between any physical property of an object or an event (e.g., found in a particular USCF frame) and any physical property in any subsequent USCF frame/s... Therefore, we reach the inevitable conclusion that it is only the (singular) Universal Consciousness Principle which truly "exists" and is solely responsible for the production- retention- and evolution- of any of the four (secondary computational) 'physical' properties (e.g., of 'space', 'time', 'energy' and 'mass').
- c. Hence, the paradigmatic shift portrayed by the CUFT is that instead of current Cartesian 'materialistic-reductionistic' Science's basic (implicit) assumption wherein any hypothetical (inductive or deductive) element, entity, phenomenon or process {'y'} can be determined solely based on its direct or indirect physical interaction/s with another exhaustive hypothetical 'x' series (e.g., comprising a SROCS computational structure negated by the CUFT's Duality Principle for all empirically knowable 'x-y' relationships); the CUFT proves the existence of a singular (conceptually higher-ordered) Universal Consciousness (and Computational) Principle which constitutes the sole "reality" that both produces- retains- and evolves- the (extremely rapid) series of USCF's giving rise to all four (secondary computational) phenomenal 'physical' properties (e.g., of 'space', 'time', 'energy' and 'mass') and also solely exists "in-between" any (two such) USCF's; Thus, the acceptance of the CUFT's Universal Consciousness Principle overturns the current Cartesian 'material-sitic-reductionistic' scientific paradigm which assumes that the reality is "physical" (e.g., represented by a basic SROCS computational structure) – in favor of a "non-material, a-causal" (singular) 'Universal Consciousness Principle' which is the sole "reality" underlying-

ing the phenomenal universe (e.g., including all hypothetical quantum and relativistic physical, inductive or deductive 'x-y' relationships), as well exists "independently" of any such secondary computational SROCS derived 'physical phenomenal' properties of the universe...

5. The CUFT's sixth postulate: 'Ontological relativism'

But, if indeed we accept the CUFT's (fifth) 'Universal Consciousness Principle' theoretical postulate's assertion regarding the sole "reality" of this 'Universal Consciousness Principle' as (solely) producing- retaining- and evolving- all secondary computational (apparent phenomenal) 'physical' properties (of 'space', 'time', 'energy' and 'mass'), then this may lead to the recognition of a sixth (hypothetical) theoretical postulate of "Ontological Relativism" – i.e., *the realization that since the only "valid" principle underlying the phenomenal physical universe is that Universal Consciousness Principle, then our scientific ontological knowledge of the singular "reality" must be based solely on the Universal Consciousness Principle: i.e., specifically on our perception of that Universal Consciousness Principle through our own individual human Consciousness' three states of human Consciousness!*

Formally presented, this sixth CUFT's 'Ontological Relativism' postulate appears through a modification of the (previously presented) Universal Computational Formula as the 'Universal Consciousness Formula' thus:

$${}_{h\ t\ m}^{\prime} = \left\{ (i) \left(w(1 \dots \infty) : \underline{c}^2 = \underline{s} \times \underline{e} \right), d, s \right\}$$

wherein our sole knowledge of the singular "reality" of the 'Universal Consciousness Principle' (') is gained through our individual human Consciousness which comprises three states of individual human Consciousness (i), namely: "waking" {'w'} (e.g., solely in which we experience the four abovementioned secondary computational 'physical' properties of 'space', 'time', 'energy' and 'mass'), "dream" {'d'} (in which we experience quite a similar 'dream-physical' universe – also produced solely by the singular Universal Consciousness Principle), and "deep sleep" {'S'} (e.g., in which we only experience solely this singular 'Universal Consciousness Principle' – independently of any of its produced secondary computational 'physical' USCF's derivatives of 'space', 'time', 'energy' and 'mass')... Furthermore, it is hypothesized that the ontological knowledge represented by the 'waking' state of (individual) human Consciousness spans between "1" (e.g., representing our normal individual human Consciousness sensory perception and cognitive ideation) and "∞" (e.g., representing an 'infinitely' expanded individual human Consciousness state which in fact is hypothesized to be identical with the 'pure' Universal Consciousness Principle ("') existing "in-between" any two subsequent USCF's, see further discussion below).

Indeed, the gist of the CUFT's (sixth) 'Ontological Relativism' postulate is the recognition that given that all four 'physical' properties (of 'space', 'time', 'energy' and 'mass') merely represent

'computationally variant' (secondary computational) properties that are hence deemed as 'phenomenal' (or even 'illusory') relative to the 'computationally invariant' 'Universal Consciousness Principle' ('') which solely produces- sustains- and evolves- these apparent phenomenal 'physical' properties (as secondary computational derivatives of the USCF's series) and which also solely exists "in-between" any two such subsequent USCF's; and that our sole knowledge of this singular "reality" of the 'Universal Consciousness Principle' ('') may only be derived through the three states of (individual) human Consciousness (e.g., 'waking', 'dream' and 'deep sleep'); then there does not exist any "objective" means for preferring the "waking" human Consciousness state (i.e., solely in which there appear those secondary computational phenomenal 'physical' properties of 'space', 'time', 'energy' and 'mass') – upon the two other states of human Consciousness, e.g., "dream" and "deep sleep"! Thus, all three states of (individual) human Consciousness are solely produced by the singular "reality" of the 'Universal Consciousness Principle' ('') and therefore their corresponding 'ontological knowledge' possesses the same relative ontological validity – i.e., it represents an apparent ontological phenomenology which is "unreal" relative to the sole reality of their underlying 'Universal Consciousness Principle'...

Hence, the above formal presentation of the (broader) Universal Consciousness Principle's delineation of the Universal Computational Formula indicates that our sole knowledge of the singular "reality" of the Universal Consciousness Principle ('') may be derived through the 'Ontological Relativism' of the three states of (individual) human Consciousness (e.g., which are all deemed as 'phenomenal' or "unreal" relative to the singularity of the Universal Consciousness Principle)... Therefore, note that a subset of this '*Universal Consciousness Principle's Formula*' constitutes the previously presented special case of the Universal Computational Formula – e.g., which delineates the production of the (four secondary computational) 'physical' properties of 'space', 'time', 'energy' and 'mass':

$$\gamma = \left\{ (i) \left(w(1\infty) : \underline{c}^2 = \underline{s} \times \underline{e} \right) d, s \right\}$$

h t m

However, in addition to the (individual) 'waking' state of human Consciousness (which was previously presented in the Universal Computational Principle), the more *generalized Universal Consciousness Formula* also incorporates two other individual human Consciousness' (corresponding) forms of ontological knowledge of the sole "reality" of the Universal Consciousness Principle– e.g., which possess the same (relative) ontological validity (namely: the ontological knowledge of the Universal Consciousness Principle arising from the 'dream' and 'deep sleep' states).

The potential significance of this generalized formalization of the Universal Consciousness Principle may be threefold:

- a. It fully delineates the various (three) states of our individual human Consciousness' ontological knowledge of the sole "reality" of the (singular) 'Universal Consciousness Principle' (''), thereby providing an exhaustive portrayal of this (newly discovered) higher-ordered "reality" underlying the phenomenal universe and beyond it.

- b. It identifies specific empirical instances of our individual human Consciousness which can validate the Universal Consciousness Principle's (abovementioned) "mechanics" – i.e., as producing- sustaining- or evolving- all four secondary computational 'physical' properties in the 'waking' state of individual human Consciousness; as solely existing independently of any such 'physical' properties "in-between" any two USCF's frames; and as also exemplified in the deep sleep state of individual human Consciousness; ; and as producing an equivalent 'ontological relativistic' phenomena universe in the dream state.
- c. It identifies particular novel empirical predictions stemming from the possibility of manipulating individual human Consciousness states – i.e., such as for instance in the case of successful meditative states that may 'expand' the individual human Consciousness from its 'standard' 'waking' ($i=1$) through a spectrum of expanded individual human Consciousness and up to an infinitely expanded individual human Consciousness state ($i=\infty$) which is hypothesized to be identical with the 'pure' Universal Consciousness Principle ("") which also exists "in-between" any two subsequent USCF's frames... (This potential individual human Consciousness' expanded spectrum state will be further delineated below.)

6. The seventh postulate: "Universal Consciousness Spectrum (UCS)"

Finally, a sixth theoretical postulate is hereby added to the CUFT, namely: the '*Universal Consciousness Spectrum*' postulate, which hypothesizes that the Universal Consciousness Principle (") is capable of expressing a whole spectrum of (individual) human Consciousness (degrees), including (but not limited to) the three (abovementioned) states of individual human Consciousness (e.g., 'waking', 'dream' and 'deep sleep') as well as a myriad of different degrees of "expansiveness" of that individual human Consciousness in the 'waking' state, represented (above) in the Universal Consciousness Formula thus:

$$'=\left\{ \left(i \right) \left(w(1..\infty):c^2=sxe \right) ds \right\}$$

h t m

The potential significance of the empirical verification of this sixth 'Universal Consciousness Spectrum' postulate is that it would indeed enable us to demonstrate that our individual human Consciousness ('i') forms a particular subset of the 'Universal Consciousness Principle' (") – i.e., which ordinarily conforms to our 'standard' ('i' = 1') (sensory and cognitive) perceptions of the 'waking' state of Consciousness, but which nevertheless has the potential of experiencing the two "non-waking" states of individual human Consciousness (e.g., daily: as the 'dream' and 'deep sleep' states) as well as a whole spectrum of (different degrees of) "expansiveness" of the 'waking' state of individual human Consciousness;

The basic assumption postulated by this 'Universal Consciousness Spectrum' is hence that whereas the Universal Consciousness Principle (") forms the sole "reality" underling all phenomenal (inductive or deductive), physical or (individual) human Consciousness 'x-y'

relationships, the individual human Consciousness ('i') possesses the potential of experiencing the full range of this exhaustive Universal Consciousness Principle ("") including: the three 'standard' states of individual human Consciousness (e.g., 'waking', 'dream' and 'deep sleep'), as well as the multifarious degrees of "expansiveness" of this individual human Consciousness in the 'waking' state: Specifically, it is hypothesized that the varying degrees of individual human Consciousness "expansiveness" (e.g., in the 'waking' state of Consciousness) correspond to its 'inclusiveness' of an increasing number of 'spatial pixels' comprising any single or multiple USCF frame/s (wherein the 'inclusiveness' of all exhaustive spatial pixels comprising such USCF's – represents its "infinite expansiveness", which is precisely equivalent to the Universal Consciousness production- sustenance- and evolution- of the phenomenal physical universe through its series of USCF's)...

Once again, it is suggested that our capacity to verify (e.g., empirically) this (sixth) 'Universal Consciousness Spectrum' theoretical postulate may both validate the complete structure of the CUFT (e.g., as it would demonstrate the fact that the production- sustenance- and evolution- of the phenomenal 'physical' universe is entirely produced by the Universal Consciousness Principle, "" – to which we have "access" through varying degrees of our individual human Consciousness "expansiveness"); as well as open new theoretical "vistas" for exploring the potential effects of modulating our individual human Consciousness on the 'physical' properties of the world. Hence, what follows is a delineation of a (partial) list of specific empirical predictions made by the 'Universal Consciousness Spectrum' postulate:

7. Critical Predictions of the 'Universal Consciousness Spectrum'

We last come to delineating a (partial) list of some of the critical empirical predictions of the 'Universal Consciousness Spectrum' postulate, which may (specifically) validate this Universal Consciousness Spectrum postulate, as well as (more generally) validate the complete structure of the 'Computational Unified Field Theory':

- a. It may be possible to affect certain (secondary computational) 'physical' properties (e.g., of 'space', 'time', 'energy' or mass') of a human being whose individual Consciousness is being modulated in such a manner as to manipulate that human being's body's 'mass', 'time', 'energy', or 'spatial' values: Essentially, this critical empirical prediction asserts that since according to the above Universal Consciousness Formula the individual human Consciousness (i) is capable of experiencing the full spectrum the 'Universal Consciousness Principle's ("" 'waking' state "expansiveness" – i.e., being inclusive of varying degrees of the Universal Consciousness Principle's generated USCF's spatial pixels; and since all four (secondary computational) 'physical' properties (of 'space', 'time', 'energy' and 'mass' are solely produced- retained- or evolved- by the Universal Consciousness Principle (""); then it should be possible for a human being to modulate his or her individual Consciousness' "expansiveness" in such a manner as to affect that person's physical body's 'mass', 'time', 'energy' or 'space' values; Empirically, this prediction refers to the potential capacity of qualified "meditators" (e.g., who possess the capacity to modulate their

individual Consciousness "expansiveness" spectrum) to affect their body's various (four) 'physical' properties (through their manipulation of their individual Consciousness spectrum).

- b. Based on these (same) two 'Universal Consciousness Formula' and 'Universal Consciousness Spectrum' tenets it is also predicted that such a qualified "meditator" could also affect their individual Consciousness spectrum "expansiveness" – regarding other spatial pixels that are not associated with their own body, e.g., such as the four 'physical' properties of various objects and events 'external' to their body; Thus, it should be possible (at least in principle) for such a qualified "meditator" to alter any given object's 'spatial', 'temporal', 'mass' or 'energy' values based on their alteration of their individual Consciousness "expansiveness" as it relates to the Universal Consciousness Principle's computation of that object's USCF's physical properties.
- c. Finally, since the Universal Consciousness Principle is solely responsible for the production- retention- and evolution- of any physical object or event (across the relevant series of USCF's); and since this *Universal Consciousness Principle* is exhaustively responsible for this *production- sustenance- and evolution of all the spatial pixels* in the physical universe – i.e., in the "past", "present" and "future"; and since according to the 'Universal Consciousness Spectrum' postulate all of these exhaustive spatial pixels comprising all USCF's pixels comprising the entire physical universe are "accessible" to the individual human Consciousness "expansiveness" degree; then it should be possible (at least in principle), for highly qualified "meditators" to manipulate the physical properties of any physical object or event, e.g., throughout the exhaustive pool of USCF's frames comprising the physical universe in the "past" and "present", and perhaps even in the "future"...

8. The scientific implications of the CUFT's universal consciousness principle

We finally arrive at considering some of the potential theoretical ramifications of the CUFT's Universal Consciousness Principle, the Universal Consciousness Formula and the Universal Consciousness Spectrum tenets explored in this chapter (as well as their implications for the generality of the Computational Unified Field Theory and Science in general);

Hence, the current manuscript traces the potential theoretical ramifications of:

- a. An 'a-causal' computational framework of the (CUFT's) singular Universal Consciousness Principle's ("") responsible for the (higher-ordered) computation of all exhaustive hypothetical (e.g., empirically knowable) inductive or deductive 'x-y' pairs series – which leads to the discovery of a-causal 'Universal Consciousness Principle Computational Program'.
- b. An exploration of the CUFT's Universal Consciousness Principle's ("") and Duality Principle's (Bentwich, 2003c, 2004, 2006) reformalization of all (apparent inductive or deductive) major SROCS computational paradigms (e.g., including: Darwin's 'Natural Selection Principle' (Darwin, 1859) and associated Genetic Encoding hypothesis, Neuro-

science's Psychophysical Problem of human Consciousness and all inductive and deductive Gödel-like SROCS paradigms).

c. Theoretical Ramifications of the Universal Consciousness Principle.

8.1. A singular 'A-causal' universal consciousness principle computation of all inductive and deductive 'X-Y' relationships

We thus begin with an exploration of three potential theoretical ramifications of the CUFT's description of the operation of the (singular) Universal Consciousness Principle ("") which has been shown to compute an extremely rapid series of Universal Simultaneous Computational Frames (USCF's);

The Universal Computational/Consciousness Principle was (previously) shown to encapsulate a singular higher-ordered 'D2' computation of an 'a-causal' computation of the "simultaneous co-occurrences" of all exhaustive hypothetical inductive or deductive (e.g., empirically knowable) 'x-y' pairs series; Therefore, the acceptance of the CUFT's description of the Universal Consciousness Principle necessarily implies that throughout the various (inductive or deductive) disciplines of Science we need to shift from the current basic (Cartesian) "material-causal" scientific theoretical towards a singular (higher-ordered 'D2') '*Universal Consciousness Principle's a-causal computation*':

This means that the current (Cartesian) 'material-causal' scientific framework assumes that any given 'y' element (or value) can be explained as a result of its (direct or indirect) 'causal' interaction/s with another (exhaustive hypothetical inductive or deductive) series of 'x' factor/s – which determines whether that 'y' element (or value) "exists" or "doesn't exist", thereby comprising a 'Self-Referential Ontological Computational System' (SROCS) (Bentwich, 2012: a & b).

SROCS: $PR\{x,y\} \rightarrow [y \text{ or 'not } y'] / di1 \dots din.$

But, since it was previously shown that such SROCS computational structure inevitably leads to both 'logical inconsistency' and 'computational indeterminacy' that were shown to be contradicted by robust empirical findings indicating the capacity of the major scientific SROCS paradigms to be capable of determining the "existence" or "non-existence" of the particular 'y' element, see Bentwich 2012b) – then the CUFT's 'Duality Principle' asserted the existence of the singular 'Universal Consciousness Principle' ("") which is capable of computing the "simultaneous co-occurrences" of any particular (exhaustive hypothetical) 'x-y' pairs series which are embedded within the Universal Computational/Consciousness Principle's rapid series of USCF's.

What this means is that both specifically for each of the (previously identified) key scientific SROCS paradigms as well as more generally for any hypothetical ('empirically knowable') inductive or deductive ('x-y') phenomenon, we must reformulate our scientific understanding in such a way which will allow us to present any such 'x-y' relationship/s as being computed by the singular Universal Consciousness Principle (e.g., as the computation of an exhaustive-hypothetical "co-occurring" 'x-y' pairs' series); In that respect, this (novel) 'Universal Con-

sciousness Principle's' scientific framework shifts Science from its current basic (Cartesian) assumption wherein all natural phenomena can be described as 'material-causal' (' $x \rightarrow y$ ') relationships (e.g., comprising the apparent SROCS computational structure contradicted by the computational Duality Principle) – to an 'a-causal' singular Universal Consciousness Principle which computes the simultaneous "co-occurrences" of any inductive or deductive 'x-y' pairs series comprising the various 'pixels' of the USCF's frames (e.g., produced by this Universal Consciousness Principle).

Finally, it should be noted that a key principle underlying this shift from the current 'material-causal' (Cartesian) scientific framework towards the CUFT's (proven) higher-ordered singular Universal Consciousness Principle's ("") 'a-causal' theoretical framework is the acceptance of the impossibility of the existence of any such 'material-causal' ('x-y') relationship/s – i.e., due to the impossibility of any 'physical' entity, attribute (or property) being transferred across any (two subsequent) 'USCF's frames: Thus, apart from the (previously shown) conceptual computational proof of the 'Duality Principle' wherein due to the inevitable 'logical inconsistency' and 'computational indeterminacy' arising from the SROCS computational structure (which is contradicted by empirical evidence indicating the capacity of these key scientific SROCS paradigms to compute the "existence" or "non-existence" of any particular 'y' element or value) – pointing at the existence of the higher-ordered (singular) 'Universal Computational/Consciousness Principle that computes the "simultaneous co-occurrences" of any (exhaustive-hypothetical) 'x-y' pairs' series; it is suggested that the inclusion of this computational Duality Principle as one of the (seven) theoretical postulates of the CUFT (e.g., specifically alongside the CUFT's 'Computational Invariance' and 'Universal Consciousness' postulates) unequivocally asserts that there cannot (in principle) exist any 'material-causal' effect/s (or relationship/s) being transferred across any (two subsequent) USCF's frames! This is because the CUFT's very definition of all four 'physical' properties of 'space', 'time', 'energy' and 'mass' – as secondary computational by-products of the (singular) Universal Computational Consciousness' computation of (an extremely rapid series of) 'Universal Simultaneous Computational Frames' (USCF's); and moreover the CUFT's 'Computational Invariance' postulate indication that due to the 'computational variance' of these four (secondary computational) 'physical' properties (e.g., as existing only "during" the appearance of the USCF frames but 'non-existence' "in-between" any two such subsequent frames, see Bentwich, 2012:a & b) as opposed to the 'computational invariance' of the 'Universal Consciousness Principle' (""), we need to regard only this singular (computationally invariant) 'Universal Consciousness Principle' as "real" whereas all four (secondary computationally variant) 'physical' properties must be regarded as merely 'phenomenal' (i.e., as being comprised in reality only from the singular Universal Consciousness Principle); Therefore, the CUFT's 'Universal Consciousness Principle' advocated that none of these four (secondary computationally variant) 'physical' properties (e.g., of 'space', 'time', 'energy' or 'mass') "really" exists – but rather that there is only this one singular Universal Consciousness Principle which exists (solely) "in-between" any (two subsequent) USCF's frames and also solely produces each of these USCF's derived four 'phenomenal physical' properties; Hence, it was evinced (by the CUFT's Universal Consciousness Principle) that there cannot be any 'transference' of any hypothetical 'material' or 'physical' entity, effect, or property across any (two subsequent) USCF's frames! We therefore reach the

inevitable theoretical conclusion that the current scientific (Cartesian) 'material-causality' basic assumption underlying all key scientific SROCS paradigms as well as all (empirically knowable) 'Gödel-like' (inductive or deductive) SROCS 'x-y' relationships, wherein there exists a 'material-causal' effect/s (or relationship/s) between any given 'x' element and any (exhaustive hypothetical) 'y' series which determines the "existence" or "non-existence" of that (particular) 'y' element (or value) – is untenable! Instead, we must accept the CUFT's assertion that there can only exist one singular 'Universal Consciousness Principle' ("") which both (solely) produces- all (apparent) secondary computational 'physical' properties (of 'space', 'time', 'energy' and 'mass'), as well as computes the "simultaneous co-occurrences" of any (particular) exhaustive-hypothetical inductive or deductive 'x-y' pairs series (e.g., comprising the exhaustive USCF's frames).

8.2. The "universal consciousness principle's computational program"

Therefore, it follows that based on the recognition of the singularity of the Universal Consciousness Principle's 'a-causal' computation of the "simultaneous co-occurrences" of all (inductive or deductive) 'x-y' pairs' series (as comprising the exhaustive USCF's frames) – we need to be able to reformulate all of the previously mentioned key scientific SROCS paradigms (Bentwich, 2012: a-b), including: Darwin's 'Natural Selection Principle' and associated 'Genetic Encoding' hypothesis, Neuroscience's Psychophysical Problem of human Consciousness, as well as all (exhaustive hypothetical) 'Gödel-like' (apparent) inductive or deductive SROCS computational paradigms based on this singular (higher-ordered) Universal Consciousness Principle's ("") 'a-causal' USCF's computation;

Hence, what follows is a description of the principle theoretical ramifications of reformulating each of these key scientific (apparent) SROCS computational paradigms, as well as a more generalized description of a tentative 'Universal Consciousness Principle Program' (e.g., which may offer a successful alternative for 'Hilbert's Mathematical Program' to base all of our human scientific knowledge upon the foundations of the operation of the singular Universal Consciousness Principle). First, it may be worthwhile to rearticulate the reformalization of each of these key scientific (apparent) SROCS paradigms in terms of the operation of the singular Universal Consciousness Principle (as previously outlined: Bentwich, 2012b):

N.S.:D2: $[\{E\{1...n\}, o\}_{st1}; \{E\{1...n\}, o\}_{st2}... \{E\{1...n\}, o\}_{stn}]$.

G.F – P.S.:D2: $[\{G\{1...n\}, 'phi(o)'\}_{st1}; \{G\{1...n\}, 'phj(o)'\}_{sti}; ... \{G\{1...n\}, 'phn(o)'\}_{stn}]$.

G.E. – P.S.:D2: $[\{Ge\{1...n\}, pi-synth(o-phi)\}_{st1}; Ge\{1...n\}, pj-synth(o-phi)\}_{sti}; ... ; Ge\{1...n\}, pn-synth(o-phi)\}_{stn}]$

Psychophysical:D2: $[\{N(1...n)_{st-i}, Cs-pp_{st-i}\}; ... \{N(1...n)_{st-i+n}, Cs-pp_{st-i+n}\}]$

Functional: D2: $[\{Cs(pp)f_i, Na(spp)fi\}_{st-i}; ... \{Cs(pp)f_{(i+n)}, Na(spp)f_{(i+n)}\}_{st(i+n)}]$

Phen.: D2: $[\{Cs(pp-fi)-Ph_i, Na(spp-fi)-Ph_i\}_{st-i}; ... \{Cs(pp-fi)-Ph_{(i+n)}, Na(spp-fi)-Ph_{(i+n)}\}_{st(i+n)}]$

Self: D2: $[\{Cs(pp-fi)Ph-Si, Na(pp-fi)Ph-Si\}_{st-i}; ... \{Cs(pp-fi)Ph-S(i+n), Na(pp-fi)Ph-S(i+n)\}_{st(i+n)}]$

GIT:D2: $([\{S\{1...n\}, ti\} ... \{S\{1...n\}, tz\}], \text{ or } [\{x\{1...n\}i, yi\} ... \{x\{1...n\}z, yz\}])$

Indeed, what may be seen from this singular description of all of these key scientific SROCS paradigms, is that it recognizes the fact that all of these major (apparent) SROCS paradigms are computed simultaneously as different "co-occurring" 'x-y' pairs embedded within the same (single or multiple) USCF frame that is produced by the singular Universal Consciousness Principle (""); What this means is that the recognition of the singularity of this Universal Consciousness Principle as the sole "reality" which computes the "simultaneous co-occurrences" of all of these (particular) exhaustive hypothetical 'x-y' pairs series, and which also exists (solely) "in-between" any two such USCF's – forces us to transcend the 'narrow constraints' of the (current) Cartesian 'material-causal' theoretical framework (e.g., which assumes that any given 'y' entity (or phenomenon) is "caused" by its (direct or indirect) physical interaction/s with (an exhaustive hypothetical 'x' series); Instead, this singular Universal Consciousness Principle 'a-causal' computation asserts that it is the same singular Universal Consciousness Principle which computes- produces- retains- and evolves- all of these particular scientific (apparent) SROCS 'x-y' pairs series across a series of USCF's...

In other words, instead of the existence of any "real" material-causal relationship between any of these (particular SROCS) 'x→y' entities (e.g., Darwin's Natural Selection Principle's assumed 'material-causal' relationship between an organism's Environmental Factors, 'x', and own traits or behavior 'y'; or between any exhaustive hypothetical Genetic Factors and any given phenotypic behavior; or between Neuroscience's Psychophysical Problem of Human Consciousness' psychophysical stimulation, 'x', and Neural Activation, 'y'; or in fact between any hypothetical inductive or deductive Gödel-like SROCS 'x-y' factors); the CUFT's Universal Consciousness Principle offers an alternative singular (higher-ordered) computational mechanism which computes the "simultaneous co-occurrences" of any of these (exhaustive hypothetical) 'x-y' pairs' series – which are all produced- and embedded- within the Universal Consciousness Principle's computed USCF's frames... Indeed, the shift from the current 'material-causal' (Cartesian) scientific framework towards the Universal Consciousness Principle's singular computation of the "simultaneous co-occurrences" of all exhaustive hypothetical (inductive or deductive) 'x-y' pairs' series may lead the way for reformulating all of these key scientific SROCS paradigms (as well as any other hypothetical inductive or deductive 'x-y' series) within a basic "Universal Consciousness Principle Computational Program";

Essentially, such a '*Universal Consciousness Principle's Computational Program*' is based upon the foundations of the CUFT's (abovementioned) three postulates of the 'Duality Principle', the 'Computational Invariance' principle and the 'Universal Consciousness Principle' – all pointing at the fact that all empirically computable (inductive or deductive) 'x-y' relationships must necessarily be based upon the singular (conceptually higher-ordered) Universal Consciousness Principle which is solely responsible for the computation of the "simultaneous co-occurrences" of all such (exhaustive hypothetical) inductive or deductive 'x-y' pairs series comprising the totality of the USCF's (single or multiple) frames.... Moreover, this singular Universal Consciousness Principle ("") was also shown to exist independently of any (secondary computational) 'physical properties' (e.g., of 'space', 'time', 'energy' and 'mass') and therefore constitute the only "reality" that exists invariantly (i.e., both as giving rise to the four

'phenomenal' physical properties and as existing solely "in-between" any two such subsequent USCF's frames).

In order to appreciate the full (potential) theoretical significance of such a 'Universal Consciousness Principle Computational Program' it may be worthwhile to reexamine Hilbert's famous 'Mathematical Program' to base Mathematics upon the foundations of Logic (e.g., and by extension also all of Science upon the foundations of Mathematics and Logic), and more specifically, to revisit 'Gödel's Incompleteness Theorem' (GIT) which delivered a critical blow to Hilbert's 'Mathematical Program'; It is a well-known that Hilbert's Mathematical Program sought to base Mathematics (e.g., and by extension also the rest of inductive and deductive Science) upon a logical foundation (e.g., of certain axiomatic definitions); It is also well known that Gödel's Incompleteness Theorem (GIT) has failed Hilbert's Mathematical Program due to its proof that there exists certain 'self-referential' logical-mathematical statements that cannot be determined as "true" or "false" (e.g., or logically 'consistent' or 'inconsistent') from within any hypothetical axiomatic logical-mathematical system... Previously (Bentwich, 2012: a & b) it was suggested that perhaps scientific Gödel-like SROCS computational systems may in fact be constrained by the Duality Principle's (generalized) format, thus:

- i. SROCS: $PR\{x,y\} \rightarrow [y \text{ or 'not } y'] / di1 \dots di n$
- ii. SROCS $CR\{S,t\} \rightarrow [t \text{ or 'not } t'] / di1 \dots di n$

wherein it was shown that both inductive (i) and deductive (ii) SROCS scientific computational systems are necessarily constrained by the Duality Principle (e.g., as part of the broader CUFT). In other words, the Duality Principle's (generalized format) was shown to constrain all (exhaustive hypothetical) Gödel-like (inductive or deductive) scientific SROCS paradigms, thereby pointing at the existence of a singular (higher-ordered) Universal Consciousness Principle (") which is solely capable of computing the "simultaneous co-occurrences" of any (exhaustive hypothetical) 'x-y' pairs series. It is important to note, however, that the conceptual computational constraint imposed upon all (Gödel-like) inductive or deductive scientific SROCS paradigms was shown to apply for all of those inductive or deductive (apparent) scientific SROCS paradigms – for which there is an empirically known (or 'knowable') 'x-y' pairs series results!

This latter assertion of the Duality Principle's (generalized proof) may be significant as it both narrows- and emphasized- the scope of the '*scientifically knowable domain*'; In other words, instead of the current 'materialistic-reductionistic' scientific framework which is anchored in a basic (inductive or deductive) SROCS computational format (see above) which inevitably leads to both 'logical inconsistency' and 'computational indeterminacy' that are contradicted by robust empirical findings (e.g., pertaining to the key scientific SROCS paradigms); The Duality Principle (e.g., as one of the postulates within the broader CUFT) proves that the only means for computing the "simultaneous co-occurrences" of any (exhaustive hypothetical) 'x-y' pairs series is carried out by the singular (higher-ordered) Universal Consciousness Principle (")... Moreover, the (generalized format of the) Duality Principle goes farther to state that for all other (exhaustive hypothetical) inductive or deductive computational SROCS paradigms – *for which there exists a proven empirical capacity to determine the values of any particular 'x-y' pairs*

(e.g., empirically "known" or "knowable" 'x-y' pairs results)- any of these (hypothetical) scientific SROCS computations must be carried out by the CUFT's identified singular Universal Consciousness Principle ("")!

The (potential) significance of this generalized assertion made by the Computational Unified Field Theory's (CUFT): 'Duality Principle', 'Computational Invariance' principle and Universal Consciousness Principle ("") is twofold:

- a. First, it narrows down the scope of (inductive or deductive) determinable scientific phenomena – to only those (inductive or deductive) 'x-y' relationships for which there is an empirical capacity to determine their "simultaneously co-occurring" values; essentially the 'Universal Consciousness Principle's Computational Program' anchors itself in the Duality Principle's focus on only those inductive or deductive 'x-y' relationship/s or phenomenon for which there is an empirically 'known' or 'knowable' capacity to determine these 'x-y' pairs values. It is perhaps important to note (in this context) that all of the 'other' inductive or deductive 'x-y' relationship/s which cannot be (empirically) known – "naturally" lie outside the scope of our human (scientific) knowledge (and therefore should not be included, anyway within the scope of Science)... Nevertheless, the strict limitation imposed by the 'Universal Consciousness Principle Computational Program' – may indeed be significant, as it clearly defines the boundaries of "admissible scientific knowledge" to only that scientific knowledge which is based on empirically known or knowable results pertaining to the "simultaneous co-occurrences" of any 'x-y' relationship or phenomenon; (Needless to say that the strict insistence of the Universal Consciousness Computational Program upon dealing only with
- b. Second, based on this strict definition of Science as dealing solely with 'empirical knowable' (simultaneously co-occurring) 'x-y' relationship/s or phenomenon – the 'Universal Consciousness Computational Program' may in fact offer a broader alternative to GIT (failing of Hilbert's 'Mathematical Program'); This is because once we accept the Universal Consciousness Principle's Computational Program's (above) strict 'empirical constraints', we are led to the Duality Principle's (generalized) conceptual computational proof that any (exhaustive hypothetical) inductive or deductive scientific SROCS' 'x-y' relationship must be determined by the singular Universal Consciousness Principle ("") computation of the "simultaneous co-occurrences" of any (exhaustive hypothetical) 'x-y' pairs series; then this means that instead of GIT assertion that it is not possible (in principle) to construct a consistent Logical-Mathematical System which will be capable of computing any mathematical (or scientific) claim or theorem, the Universal Consciousness Computational Program asserts that based on a strict definition of Science as dealing solely with empirically knowable 'x-y' relationship/s or phenomenon, we obtain a singular (higher-ordered) Universal Consciousness Principle which is solely responsible for computing the "simultaneous co-occurrences" of any (exhaustive hypothetical) inductive or deductive 'x-y' pairs series (e.g., which were shown by the CUFT to comprise the totality of any single or multiple USCF's frames that are solely produced by this Universal Consciousness Principle). In that sense, it may be said that the Universal Consciousness Principle Computational Program points at the existence of the singular (higher-ordered) Universal

Consciousness Principle as constraining- and producing- all inductive or deductive scientific relationship/s or phenomena (e.g., which was also shown earlier and previously to constitute the only "reality" which both produces all USCF's derived secondary computational 'physical' properties and also solely exists "in-between" any two such USCF's).

9. Theoretical ramifications of the universal consciousness principle

The discovery of the singular Universal Consciousness Principle (alongside its 'Universal Consciousness Computational Program') may bear a few significant theoretical ramifications:

- a. The Sole "Reality" of the Universal Consciousness Principle: As shown above, all scientific (inductive and deductive) disciplines need to be reformulated based on the recognition that there exists only a singular (higher-ordered) Universal Consciousness Principle ("") which solely produces- sustains- evolves (and constrains) all (apparent) SROCS (inductive or deductive) 'x-y' relationships; Moreover, this Universal Consciousness Principle is recognized as the sole "reality" that both produces- sustains- and evolves- any of the apparent (four) 'physical' properties of 'space', 'time', 'energy' and 'mass', as well as exists independently of any such 'physical' properties – and is therefore recognized as the only singular "reality", whereas these apparent 'physical' properties are seen as merely 'phenomenal' (secondary computational) manifestations of this singular (higher-ordered) Universal Consciousness Principle "reality".
- b. The Transcendence of 'Material-Causality' by the Universal Consciousness Principle 'A-Causal' Computation: As shown (above), the acceptance of the Universal Consciousness Principle ("") as the sole "reality" which both produces- (sustains- and evolves-) all USCF's (secondary computational) 'physical' properties, as well as exists independently "in-between" any (two subsequent) USCF's; (Alongside the Duality Principle's negation of any apparent SROCS' 'causal' relationships and the 'Computational Invariance' principle indication that only the 'computationally invariant' 'Universal Consciousness Principle' "really" exists whereas the secondary 'computationally variant' physical properties are only 'phenomenal') – point at the negation of any "real" material-causal ('x-y') relationships, but instead indicate that there can only exist a singular (higher-ordered) Universal Consciousness Principle 'a-causal' computation of the "simultaneous co-occurrences" of any exhaustive hypothetical inductive or deductive 'x-y' pairs' series... (As shown earlier, the strict negation of the existence of any "real" 'material-causal' 'x→y' relationships was evinced by the simple fact that according to the CUFT's model there cannot exist any "real" computationally variant 'physical' or 'material' property that can "pass" across any two subsequent USCF's, but only the computationally invariant "real" Universal Consciousness Principle which exists singularly – as solely producing all apparent secondary computational 'physical' properties as well as existing independently "in-between" any two such subsequent USCF's frames.) Indeed, the need to replace all apparent 'material-causal' 'x-y' SROCS relationships by a singular (higher-ordered) Universal Consciousness

Principle computation of the 'simultaneous co-occurrences' of all possible inductive or deductive 'x-y' pairs series was shown to apply to all of the key (apparent) scientific SROCS paradigms (including: Darwin's Natural Selection Principle and associated Genetic Encoding hypothesis, Neuroscience's Psychophysical Problem of human Consciousness as well as to all Gödel-like hypothetical inductive or deductive SROCS paradigms; what this implies is that for all of these apparent SROCS scientific paradigms the sole "reality" of the Universal Consciousness Principle forces us to transcend each of the (particular) 'material-causal' x-y relationships in favor of the Universal Consciousness Principle's singular computation of all (exhaustive hypothetical) 'x-y' pairs series; Thus, for example, instead of Darwin's current 'Natural Selection Principle' SROCS material-causality thesis, which assumes that it is the direct (or indirect) physical interaction between the organism and its Environmental Factors that causes that organism to 'survive' or be 'extinct', the adoption of the Universal Consciousness Principle (and Duality Principle) postulates brings about a recognition that there is only a singular (Universal Consciousness based) conceptually higher-ordered 'a-causal' computation of the "simultaneous co-occurrences" of an exhaustive hypothetical pairs series of 'organism' and 'Environmental Factors' (e.g., which are computed as part of the Universal Consciousness Principle's production of the series of USCF's frames).

- c. Possible Resolution of Physical Conundrums: It is suggested that certain key Physical (and Mathematical) Conundrums including: Physics' "dark energy", "dark matter" and "arrow of time" enigmas may be potentially resolved through the application of this singular 'Universal Consciousness Principle'; this is because according to the CUFT, all (four) 'physical' properties of 'space', 'time', 'energy' and 'mass' are (in reality) solely produced by the Universal Consciousness Principle (e.g., as secondary computational 'phenomenal' properties); Hence, the key enigma of "dark energy" and "dark matter" (e.g., the fact that based on the calculation of the totality of 'mass' and 'energy' in the observable cosmos the expansion of the universe should not be as rapid as is observed – which is currently interpreted as indicating that approximately 70-90% of the "energy" and "mass" in the universe in "dark", that is not yet observable) – may be explainable based on the CUFT's delineation of the Universal Consciousness Principle's (extremely rapid) computation of the series of USCF's. This is due to the fact that according to the Universal Consciousness Principle's (previously discovered: Bentwich, 2012a) 'Universal Computational Formula' the production of any "mass" or "energy" ("space" or "time") 'physical' properties – are entirely (and solely) produced through the Universal Consciousness Principle's computation of the degree of 'Consistency' (e.g., 'consistent' or 'inconsistent') across two other Computational Dimensions, i.e., 'Framework' ('frame' vs. 'object') and 'Locus' ('global' vs. 'local'): Thus, for instance it was shown that any "mass" measurement of any object in the universe is computed by the Universal Consciousness Principle (") as the degree of 'consistent-object' measurement (of that particular) object across a series of USCF frames.

Hence, by extension, the totality of the "mass" measured across the entire physical universe should be a measure of the degree of consistent-object/s values across a series of USCF's! Note,

however, that based on the abovementioned recognition that in "reality" – only the Universal Consciousness Principle ("") "exists" (e.g., both as producing any of the USCF's derived four secondary computational 'physical' properties as well as existing independently "in-between" any two such USCF's frames), and therefore that only this Universal Consciousness Principle "really" produces all of the (apparent) "mass" and "energy" in the 'physical' universe (e.g., rather than the "energy" and "mass" in the 'physical' universe being "caused" by the "material" objects in the cosmos)... Hence, also all of the "energy" in the physical universe is solely produced by this (singular) Universal Consciousness Principle, e.g., as a measure of the degree of 'inconsistent-frame' (changes) of all of the objects (in the universe) across a series of USCF's frames. Therefore, according to the CUFT, the explanation of all of the "mass" and "energy" values observed in the 'physical' universe – should be solely attributed to the operation of the Universal Computational Principle, i.e., through its (extremely rapid) computation of the rapid series of USCF's (respective secondary computational measures of the abovementioned degree of 'consistent-object': "mass", or 'inconsistent-frame': "energy"). We therefore obtain that the (accelerated) rate of expansion of the physical universe – should be explained (according to the CUFT) based on the Universal Consciousness (extremely rapid) computation of the USCF's (e.g., which gives rise to the apparent secondary computational 'physical' measures of 'consistent-object': "mass" or 'inconsistent-frame': "energy"), rather than arise from any 'material-causal' effects of any (strictly hypothetical) "dark mass" or "dark energy"... (Once again, it may be worth pointing at the abovementioned conceptual computational proof that there cannot be any transference of any "physical" property entity or effect etc. across any two subsequent USCF's frames, but only the retention- or evolution- of all of the spatial pixels' "physical" properties by the singular Universal Consciousness Principle across the series of USCF's – which therefore also precludes the possibility of any "real" "material" effects exerted by any "dark" mass or energy on the expansion of the 'physical' universe across a series of USCF frames.)

Similarly, the "arrow of time" conundrum in modern Physics essentially points at the fact that according to the laws of Physics, there should not be any difference between the physical pathways of say the "breaking of a glass cup into a (thousand) small glass' pieces" and the "re-integration of these thousand glass' pieces into a unitary glass cup"! In other words, according to the strict laws of Physics, there should not be any preference for us seeing "glasses" break into a thousand pieces – over our seeing of the thousand pieces become "reintegrated" into whole glass cups (again), which is obviously contradicted by our (everyday) phenomenal experiences (as well as by our empirical scientific observations)... Hence, according to the current state of (quantum and relativistic) models of Physical reality – there is no reasonable explanation for this "arrow of time" apparent empirical "preference" for the "glass breaking into pieces" scenario over the "reintegration of the glass pieces" scenario...

However, it is suggested that according to one of the CUFT critical empirical predictions (previously outlined: Bentwich, 2012b) this "arrow of time" Physical conundrum may be resolved: This is because one (of three) critical empirical predictions of the CUFT assert the possibility of reversing any spatial-temporal sequence associated with any given 'electromagnetic spatial pixel' through the appropriate manipulation of that object's (or event's) electro-

magnetic spatial pixel values (across a series of USCF's): It was thus indicated that if we were to accurately record the spatial electromagnetic pixels' values of any particular object (e.g., such as an amoeba or any other living organism for instance) across a series of USCF's frames (e.g., or even through a certain sampling from a series of USCF's), and to the extent that we could appropriately manipulate these various electromagnetic spatial pixels' values in such a manner which allows us to reproduce that objects' electromagnetic spatial pixels' values (across the measured series of USCF's) – in the reversed spatial-temporal sequence, then it may be possible to reverse the "flow of time" (e.g., spatial-temporal electromagnetic pixels' sequence). In this way it should be possible (according to one of the critical predictions of the CUFT) to actually "reverse" the "arrow of time" (e.g., at least for particular object/s or event/s: such as for instance, bring about a situation in which a "broken glass cup may in fact be reintegrated"...)

10. The CUFT's eighth postulate: The 'universal consciousness reality'

A final (potential) culmination of the CUFT may be given by its seventh (and final) theoretical postulate of the 'Universal Consciousness Reality' – which essentially postulates that there exists only one (and singular) Universal Consciousness Reality which consists of the Universal Consciousness Principle's sole production of the four (secondary computational) 'physical' properties (of 'space', 'time', 'energy' and 'mass'), mass; that exists invariantly both as producing- maintaining- and evolving- any spatial pixel in the physical universe (through its production of the extremely rapid series of USCF's) as well as exists independently "in-between" any (two) subsequent USCF's; and that this singular "Universal Consciousness Reality" also pervades- produces- evolves- and alternates- any of the three states of individual human Consciousness (e.g., or even 'four' as will be shown below), thereby constituting the only "real" Universal Consciousness Reality underlying the totality of the physical cosmos, all of our scientific (inductive or deductive) ontological knowledge as well as our own three (or four) individual states of human Consciousness... It is suggested that this final CUFT postulate is a direct continuation of the CUFT's latter theoretical postulates of 'Universal Consciousness', 'Ontological Relativism' and the 'Universal Consciousness Principle Spectrum': This is because the Universal Consciousness Principle asserted that the sole and single "reality" underlying the four 'physical' properties (e.g., of 'space', 'time', 'energy' and 'mass') is only the (singular) Universal Consciousness Principle; that our sole scientific (ontological) knowledge of this singular Universal Consciousness Principle "reality" may only be gained through the three states of individual human Consciousness (e.g., 'waking', 'dream' and 'deep-sleep' – and a fourth potential 'non-dual' state of Consciousness which will be discussed below), and that the ontological validity of these three states of individual human Consciousness is equal (e.g., all being produced- maintained- evolved- and alternated- solely by the Universal Consciousness Principle singular "reality"); Next, the CUFT advanced the 'Universal Consciousness Principle Spectrum' theoretical postulate which hypothesized that individual human Consciousness possesses the potential of 'expanding' to encapsulate all of the Universal Consciousness Principle's produced spatial pixels (e.g., comprising the exhaustive series of pixels comprising any single or multiple USCF's – in the waking state of Consciousness).

Based on these (latter) CUFT theoretical postulates, the Universal Consciousness Reality (final) postulate fully combines these advanced theoretical understandings together with the discovery of the "non-existence" of any real "independent" existence of the individual human Consciousness separately from the sole existence of the Universal Consciousness (Principle) Reality, thereby fully integrating our whole scientific (ontological) knowledge of the physical universe (and all hypothetical inductive or deductive scientific knowledge) into the singular Universal Consciousness Reality (proposed by the CUFT).

In order to arrive at this (potentially far reaching) theoretical conclusion, it is necessary to retrace some of the key theoretical postulates of the CUFT – i.e., specifically, those of the Computational Invariance Principle, the Universal Consciousness Principle, Ontological Relativism and the Universal Consciousness Principle's Spectrum postulate; According to the CUFT's Universal Consciousness Principle (""), there must exist a singular conceptually higher-ordered Universal Computational Principle which solely exists – both as producing the (extremely rapid) series of USCF's (e.g., and all of their secondary computational 'phenomenal physical' properties of 'space', 'time', 'energy' and 'mass'), as well as existing independently of any such secondary computational 'physical' properties "in-between" any two such subsequent USCF's. Moreover, based on this Universal Consciousness Principle the Universal Computational Principle must (indeed) possess the basic functions of a Universal Consciousness – i.e., retention, production and evolution of any spatial pixel comprising the entirety of all of the USCFs' multifarious spatial pixels (due to the fact that there is no "material" or "physical" property, element or factor that can "pass" across any two subsequent USCF's – based on the CUFT's previous Duality Principle, Universal Computational Principle and Computational Invariance theoretical postulates); Thus, according to the Universal Consciousness Principle, the sole and singular "reality" that comprises- produces- sustains- and evolves- any spatial pixel in the physical universe (and which also importantly exists "in-between" any two subsequent USCF's) is only that "immaterial" Universal Consciousness Principle ("")!

Next, based on the CUFT's realization that there cannot exist any "physical reality" – but only that singular (and sole) reality of the Universal Consciousness Principle ("") it was also recognized that our sole access- (and knowledge-) of this singular Universal Consciousness Principle ("") may only be gained through the three states of individual human Consciousness, e.g., those of 'waking', 'dream' and 'deep sleep'. Moreover, since (based on these abovementioned CUFT latter theoretical postulates) there does not exist any "real" 'physical reality' (e.g., but only its 'phenomenal' appearance as secondary computational 'physical' properties arising from the production of the extremely rapid series of USCF's by this singular higher-ordered Universal Consciousness Principle), then CUFT (final) 'Ontological Relativism' postulate was given which states that there does not exist any "superiority" of the 'waking' state of individual human Consciousness over any of the other (two) states of individual human Consciousness (e.g., 'dream' or 'deep sleep'); Hence, based on the Universal Consciousness Principle (e.g., alongside the other latter CUFT theoretical postulates) there exists only one singular "reality" comprising the entirety of the physical universe (e.g., through its production- maintenance- and evolution- of all USCF's secondary computational 'physical' properties of 'space', 'time', 'energy' and 'mass') and since our sole knowledge of this singular Universal Consciousness

Principle "reality" is only through our own three states of individual human Consciousness (e.g., consisting of: the waking state which comprises the previously outlined (Bentwich, 2012b) Universal Computational Principle's extremely rapid production of the series of USCF's and their four secondary computational 'physical' properties); and based on the abovementioned (CUFT final) 'Ontological Relativism' theoretical postulate we must reach the inevitable conclusion whereby – not only the ontological contents of these three states of individual human Consciousness are equal (based on the Ontological Relativism postulate), but also these three states of individual human Consciousness must be underlie- comprised- sustained- and evolved- solely based on the singular "Reality" of the Universal Consciousness Principle!

Moreover, based on the (previous mentioned) Universal Consciousness Principle's proof for the sole existence of that sole and singular Universal Consciousness as the only "reality" underlying all secondary computational 'phenomenal physical' properties (e.g., of the USCF's series), as well as of what exists "in-between" any two such subsequent USCF's, then the CUFT's Ontological Relativism theoretical postulate also essentially asserts the fact that each of these three states of individual human Consciousness – is not "different" or "separate" from the singularity of the Universal Consciousness Principle.

Based on these (latter) theoretical postulates – e.g., of 'Computational Invariance', 'Universal Consciousness' and 'Ontological Relativism' – the 'Universal Consciousness Principle Spectrum' (UCPS) postulate was obtained; This UCPS theoretical postulate essentially claims that since (based on the abovementioned CUFT's latter theoretical postulates), there exists only one singular "reality" of the Universal Consciousness Principle ("") which both produces all of the USCF's secondary computational 'physical' properties (e.g., of 'space', 'time', 'energy' and 'mass'), and also exists (solely) "in-between" any two subsequent USCF's; since our only "access" to this singular (higher-ordered) Universal Consciousness Principle – is through the three states of individual human Consciousness (e.g., 'waking', 'dream', and 'deep-sleep'); since (according to the 'Ontological Relativism' postulate), the ontological validity of the 'waking state' (of individual human Consciousness) is equivalent to the ontological validity of the two other states (e.g., 'dream' and 'deep-sleep') – as they are all underlie- constrained- produced- maintained- and evolved- by the singularity of the Universal Consciousness Principle ("") which was shown to constitute the sole "reality" underlying all 'physical' as well as individual human Consciousness phenomena; Therefore, the Universal Consciousness Principle Spectrum (UCPS) theoretical postulate goes further to assert that, in reality, there cannot exist any difference between the phenomenal experiences gained through our individual human Consciousness and that Universal Consciousness Principle ("") which produces- maintains and evolves- any "spatial pixel" (e.g., as well as the four phenomenal 'physical' properties of 'space', 'time', 'energy' and 'mass') comprising any USCF frame/s; In other words, in contrast to our basic phenomenal experience - i.e., at least in the 'waking' state (and also in the 'dream') of individual human Consciousness: in which we experience our sensory-motor-intellectual (and other individual Consciousness functions, see Bentwich 2012b) as constrained to only a limited body and sensory-physiological functions, the Universal Consciousness Principle Spectrum (UCPS) theoretical postulate actually expands (e.g., 'infinitely') the potential capacity of our individual human Consciousness – to engulf the (unlimited) Universal Consciousness

Principle ("") which has been shown previously to produce- comprise- sustain- and evolve any and all spatial pixels in the phenomenal universe (as comprising particular single or multiple USCF's)...

It is important to note that despite the fact that this latter assertion made by this 'Universal Consciousness Principle Spectrum' (UCPS) theoretical postulate may seem quite "counter-intuitive", it is directly supported also by an application of one of the previous theoretical postulates of the CUFT, namely: through an application of the 'Computational Invariance' principle – i.e., when applied towards the examination of the three states of human Consciousness; Essentially, the 'Computational Invariance' principle asserted that when we contrast between the 'computational invariance' of the Universal Computation/Consciousness Principle (e.g., which both produces- sustains- and evolves- all USCF's secondary computational 'physical' properties, and also exists solely and independently "in-between" any two subsequent USCF's) and the 'computational variance' of the USCF's derived secondary computational 'physical' properties (e.g., of 'space', 'time', 'energy' and 'mass') – based on the basic scientific tenet of 'Ockham's Razor' which states that Science seeks to find the most parsimonious theoretical account for any given phenomenon (or phenomena), the CUFT's Computational Invariance postulate points at the Universal Computational Principle as the only "real" principle that remains invariant – i.e., by both producing- sustaining- and evolving- all USCF's derived secondary computational 'physical' properties (of 'space', 'time', 'energy' and 'mass'), as well as existing independently (of these four basic physical properties) "in-between" any two subsequent USCF's. It is suggested that in much the same manner, an application of the Computational Invariance Principle towards the Universal Consciousness Principle and the Universal Consciousness Principle Spectrum theoretical postulates may point (unequivocally) at the existence of a singular Universal Consciousness Principle "reality" – which solely underlies- comprises- and produces- all three states of individual human Consciousness (e.g., and therefore proves the complete equivalence of individual human Consciousness with the Universal Consciousness Principle – at least in terms of the potential capacity of individual human Consciousness to "expand" or "experience" the full spectrum of the Universal Consciousness Principle)...

Well, it is hereby hypothesized that a further application of the same Computational Invariance Principle in the case of the three states of (individual) human Consciousness – may indeed prove that underlying the three states of individual human Consciousness there can only exist the singular Universal Consciousness Principle (""), which is therefore proven to be necessarily equivalent to the three states of individual human Consciousness, e.g., as well as transcend them – thereby comprising the sole and singular "reality" underlying both the entirety of the physical cosmos, as well as constitute the three states of individual human Consciousness...

This is because it is suggested that when we apply the (same) Computational Invariance principle to the 'computationally variant' three states of (individual) human Consciousness – i.e., *visa vis* the 'computationally invariant' Universal Consciousness Principle (""); we obtain (once again) that whereas the three states of (individual) human Consciousness are solely produced by the singularity of the Universal Consciousness Principle (e.g., and are constantly alternating), the Universal Consciousness Principle (itself) remains unaltered and exists

uniformly throughout the three states of individual human Consciousness (and also produces the entirety of the 'physical' cosmos in the waking state of individual human Consciousness). Once again – as in the application of the Computational Invariance Principle to the 'computationally variant' USCF's derived secondary computational 'physical' properties of 'space', 'time', 'energy' and 'mass', e.g., in which it was shown that the when we contrast between the computationally invariance of the Universal Consciousness Principle with the computational variance of the USCF's derived (secondary computational) 'physical' properties (of 'space', 'time', 'energy' and 'mass') we reach the inevitable conclusion whereby the singular computationally invariant Universal Consciousness Principle ("") must be recognized as the sole "reality", whereas the three states of individual human Consciousness are seen as only 'phenomenal' properties of this singular Universal Consciousness Principle... In other words, based on the fact that the three states of individual human Consciousness were already shown to be necessarily produced- sustained- evolved- (and constrained) by the singularity of the Universal Consciousness Principle (e.g., based on the CUFT's previous Universal Consciousness Principle which indicated that the sole and singular "reality" which exists "in-between" any two subsequent USCF's and also produces- and evolves- any USCF derived secondary computational 'physical' property is the singular Universal Consciousness Principle, and based on the 'Ontological Relativism' theoretical postulate which indicated that our sole access to this singular Universal Consciousness Principle can be gained solely through the three states of individual human Consciousness which possess the same ontological validity); a further application of the 'Computational Invariance Principle' (to the three states of individual human Consciousness) points at the fact that whereas there exists a singular (e.g., computationally invariant) Universal Consciousness Principle which produces- sustains- evolves- and alternates- the three states of individual human Consciousness, there are three (computationally variant) individual consciousness states (e.g., of 'waking', 'dream' and 'deep-sleep') which are produced, sustained and evolved etc. by this singular Universal Consciousness Principle; Therefore, an application of the Computational Invariance Principle to the case of the three states of individual human Consciousness points at the only 'phenomenal' stance of each of these three states of (apparent) individual human Consciousness – which are hence seen as "phenomenal" relative to the singular "reality" of the (computationally invariant) 'Universal Consciousness (Principle) Reality' which is recognized as the sole and singular "reality" that produces- sustains- evolves- all (four) waking state's phenomenal secondary computational 'physical' properties (e.g., of 'space', 'time', 'energy' and 'mass'), as well as the three phenomenal states of individual human Consciousness...

Thus, our analysis of the CUFT's (latter) 'Computational Invariance', 'Universal Consciousness Principle', 'Ontological Relativism' and 'Universal Consciousness Principle Spectrum' theoretical postulates has led us to recognize the existence of a singular 'Universal Consciousness Reality' which is solely responsible for the production- maintenance- and evolution- of all USCF's secondary derived computational 'physical' properties (of 'space', 'time', 'energy' and 'mass'), which exists independently of any of these secondary USCF's computational 'physical' properties (e.g., "in-between" any two subsequent frames), and which is also entirely underlies- sustains- evolves- and alternates- any of the three (or four) individual human Consciousness states (of 'waking', 'dream', 'deep-sleep' or the "non-dual" state which will be further described

below); The emphasis of the Universal Consciousness Reality (postulate) is that in "reality" there does not exist any "real" (separate) existence – of either our 'individual' human Consciousness (e.g., comprising the three or four abovementioned states of individual Consciousness), or of the 'phenomenal' physical cosmos (which merely represents the apparent secondary computational properties of 'space', 'time', 'energy' or 'mass' of the Universal Computational Principle's production of the three previously mentioned computationally variant Computational Dimensions). Therefore, it may be said that the culmination of the CUFT may be encapsulated by its seventh 'Universal Consciousness Reality' which highlights the fact that there can only exist one (singular) 'Universal Consciousness Reality' that solely produces- sustains- evolves- (and alternates-) all four (apparent secondary computational) 'physical' properties (of 'space', 'time', 'energy' and 'mass'), as well as all three (or four) individual states of human Consciousness. Needless to say that this latter (potential) equivalence of our individual human Consciousness with the singular Universal Consciousness (Principle) Reality also calls for further scientific exploration of the means for realizing this potential equivalence. Suffice to state (at this point) that some of these potential theoretical ramifications include the (previously stated Universal Consciousness Spectrum postulate's) possibility of modulating human Consciousness in such a manner which enables it to "expand" its scope to encapsulate broader USCF's 'spatial pixels' (than those identified by a particular "person" at a particular 'spatial-temporal' point/s appearing at a single or multiple USCF's frames), thereby potentially affecting any spatial, temporal, mass or energy properties associated with any particular region/s in a given single or multiple USCF's frames...

We've begun this chapter by noting that the discovery of the CUFT's Universal Consciousness Principle (") may signify a basic "paradigmatic shift" from the current Cartesian "materialistic-reductionistic" theoretical framework which assumes that any (hypothetical) 'y' element, phenomenon or process etc. can be determined strictly based on its direct or indirect physical interactions with an exhaustive set of 'x' factors (e.g., comprising a SROCS computational structure which was negated by the CUFT's Duality Principle for all empirically knowable 'x-y' relationships) – to a conceptually higher-ordered (singular) Universal Computational/Consciousness Principle that is solely responsible for the production- sustenance- or evolution- of all 'phenomenal' (secondary computational four 'physical' properties of 'space', 'time', 'energy' or 'mass', or indeed of all (exhaustive hypothetical) inductive or deductive 'x-y' pairs series embedded within any given series of USCF's... We've then emphasized the conceptually higher-ordered ('D2') 'non-material', 'a-causal' computational nature of this singular Universal Computational/Consciousness Principle which computes the "simultaneous co-occurrences" of any exhaustive hypothetical inductive or deductive 'x-y' pairs' series, thereby negating the possibility of any "real" 'material-causal' relationships existing between any of these exhaustive hypothetical (quantum or relativistic physical, inductive or deductive) 'x-y' pairs;

Indeed, the application of a generalized format of the Duality Principle has proven that all hypothetical inductive or deductive 'x-y' pairs comprising a basic ('Gödel-like') SROCS computational structure must be constrained by the CUFT's Duality Principle which therefore precludes the existence of any "real" 'causal-material' relationship between the 'x' and 'y' elements, instead pointing at their sole contingency upon the singular (conceptually higher-

ordered) Universal Computational/Consciousness Principle (') which computes the "simultaneous co-occurrences" of any of these exhaustive hypothetical inductive or deductive 'x-y' pairs series comprising a series of USCF's; Moreover, based on the (previous) discovery of the Computational Invariance Principle and Universal Consciousness Principle theoretical postulates and the current chapters delineation of the Universal Consciousness Principle's sole and singular production- sustenance- and (potential) evolution of all the spatial pixels comprising the USCF's portrayal of the physical universe, it was realized that only this Universal Consciousness Principle may be regarded as "real" whereas all of the secondary computational 'physical' properties (e.g., of 'space', 'time', 'energy' or 'mass') as well as all other hypothetical inductive or deductive or any human Consciousness (psychophysical) 'x-y' relationships (or phenomena) must be regarded as (at best) as representing 'phenomenal' (or even "illusory") properties... Likewise, based on the 'Computational Invariance Principle' and the 'Universal Consciousness Principle' which (jointly) indicated that only the Universal Consciousness Principle (") exists permanently and invariantly both as producing- sustaining- and evolving- any of the (secondary computational) USCF's is "real", whereas all (secondary computational) 'physical' properties (of 'space', 'time', 'energy' and 'mass') are 'phenomenal' or "illusory", it was proven that there cannot be any "real" 'material-causal' effects between any (exhaustive hypothetical) 'x' and 'y' (physical, inductive or deductive) factors that can "pass" across two (or more) USCF's frames, thereby nulling the possibility of any real 'material-causal' 'x-y' relationship (e.g., but instead pointing at the abovementioned higher-ordered Universal Consciousness Principle computed 'a-causal' "simultaneous co-occurrences" of any exhaustive hypothetical 'x-y' pairs series).

Indeed, the recognition that only the (singular) Universal Consciousness Principle may be regarded as "real" whereas all of the (secondary computational) 'physical' properties must be seen as 'phenomenal' (e.g., "unreal" relative to their sole production- sustenance- and evolution- by the singular conceptually higher-ordered Universal Consciousness Principle) – has led to the identification of the sixth theoretical postulate of 'Ontological Relativism': i.e., the realization that accepting the Universal Consciousness Principle (") as the sole and singular "reality" which produces- retains- and evolves- all (phenomenal) 'physical' properties (of 'space', 'time', 'energy' and 'mass') implies that our ontological knowledge of that Universal Consciousness Principle is constrained by three different states of individual human Consciousness (e.g., 'waking', 'dream' and 'deep sleep') whose ontological validity is equivalent... In other words, the 'Ontological Relativism' postulate indicates that there is no longer any "advantage" (or "superiority") for the 'waking' state of individual human Consciousness upon the two other (e.g., 'dream' or 'deep sleep') states – as they are all equivalent in terms of their portrayal of the same singular "reality" of the Universal Consciousness Principle.

Thus, based on this (sixth) 'Ontological Relativism' postulate we arrived at a more comprehensive 'Universal Consciousness Principle Formula' which incorporated the CUFT's (original) 'Universal Computational Formula' within the broader conceptual understanding of (the CUFT's sixth) 'Ontological Relativism' postulate as well as its associated (CUFT's seventh) 'Universal Consciousness Spectrum' postulate; Hence, the broader 'Universal Consciousness Formula' delineated the Universal Consciousness Principle's inclusiveness of the three states

of (individual) human Consciousness as well as the (new hypothetical) seventh theoretical postulate of the 'Universal Consciousness Spectrum'; Jointly, these two new tenets of the CUFT indicated that over and beyond the individual human Consciousness comprising of three separate states (whose ontological validity is equivalent relative to the "reality" of the singular Universal Consciousness Principle), the individual human Consciousness possesses a full spectrum of 'waking' state "expansiveness" (e.g., spanning from "1 to infinity") which differ in the degree of their "expansiveness" of the number of spatial pixels being included in any given individual human Consciousness portrayal of their perception of the "reality"...

In terms of some of the potential (broader) Scientific implications that may stem from this broader formalization of the CUFT's Universal Consciousness Principle, Universal Consciousness Formula, and 'Universal Consciousness Spectrum' postulates (e.g., as well as from the entirety of the Universal Consciousness Principle based more comprehensive formalization of the CUFT; it is suggested that (first), based on the CUFT (generalized) Duality Principle and Universal Consciousness Principle postulate – e.g., pointing at the computational "invalidity" of any inductive or deductive or indeed any quantum or relativistic physical SROCS' 'x-y' (materialistic-reductionistic) relationships, Science must accept the need to formalize any such physical – quantum or relativistic, inductive or deductive 'x-y' relationships based on the conceptually higher-ordered (singular) Universal Consciousness 'a-causal' computation of the "simultaneous co-occurrence" of an (exhaustive hypothetical) series of 'x-y' pairs (comprising a segment of a certain USCF/s frame/s); This would also include the reformalization of the (previously and abovementioned) key scientific SROCS paradigms, including: Darwin's Natural Selection Principle and associated genetic encoding hypothesis, Neuroscience's Psychophysical Problem of human Consciousness (and others) based on the sole operation of the singular "reality" of the Universal Consciousness Principle...

Second, the acceptance of the sole "reality" of the singular Universal Consciousness Principle, e.g., visa vis. the realization that all (secondary computational) 'physical' properties (of 'space', 'time', 'energy' and 'mass') are merely 'phenomenal' (or "unreal" – relative to this singular Universal Consciousness Principle which produces- retains- and evolves- all such secondary computational 'physical' properties); And moreover based on the recognition of the (inevitably ensuing) 'Ontological Relativism' which highlights the lack of any "objective-physical" criteria by which to evaluate the ontological validity of any of the three (abovementioned) states of individual human Consciousness (e.g., instead asserting that each of the three states of our individual human Consciousness' is equivalent in terms of its ontological validity relative to the singular "reality" of the Universal Consciousness Principle) – necessitates a basic paradigmatic shift from the (current) Cartesian 'materialistic-reductionistic' (SROCS) computational paradigms towards the realization that there exist only one singular "reality" of the Universal Consciousness Principle which produces- sustains- and evolves- any of the apparent 'phenomenal' (secondary computational) 'physical' properties of any spatial pixel comprising the (rapid series of) USCF's.

Finally, even above and beyond the (abovementioned) potentially far reaching theoretical ramifications of accepting the sole "reality" of this (singular higher-ordered) Universal Consciousness Principle (e.g., as opposed to the currently accepted Cartesian 'materialistic-

reductionistic' scientific framework), the discovery of the (broader) 'Universal Consciousness Formula' and 'Universal Consciousness Spectrum' tenets brings about a potentially profound shift in our basic conception of the role of (individual) human Consciousness in modulating the 'physical' properties of 'space', 'time', 'energy' or 'mass', and opens the door for further (important) scientific research regarding the true nature of our individual human Consciousness and its precise relationship to the singular "reality" of the 'Universal Consciousness Principle' (and the phenomenal 'physical' properties).

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