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Wholth as Sustaining Dynamic of Health and Wealth

Cognitive dynamics sustaining the meta-pattern that connects

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Introduction

A sense of "togetherness" is valued in many forms. At its simplest it is recognized through the phrase "getting one's act together". Initiatives are appreciated as "having got it together". The subtlety of such recognition is readily associated with "health", whether of individuals or collective initiatives, and consequently as conducive to "wealth" -- however either of these are to be understood.

The following argument explores the nature of each from a cognitive perspective, especially in terms of their dynamics, separately and together. It follows from an earlier speculation (*El-Attractor -- Timeless Complex Dynamic: Health, Wealth, Stealth / Youth, Couth, Truth*, 2007).

The concern here, in a time of increasing chaos, is the possibility that whatever is implied by the elusive sense of "togetherness" and "getting one's act together", these call for "new thinking" -- and the recognition of the value of deprecated "old thinking". It is increasingly clear that authoritative coherence is not to be expected, and when it is offered it tends to be part of the problem. As previously argued it would appear that authorities have "nothing" meaningful to offer (*Going Nowhere through Not-knowing Where to Go*, 2013) The increasing importance of nothing would seem to merit "new thinking", given the contrasting aspirations to whole-system thinking and to holiness, despite the ever increasing depths of "financial holes". Hence the exploration here of "wholth" as a cognitive device to enable engagement with a fundamental meta-patterning process.

There is clearly a need for individuals to get by through by a new style of "muddling through" (Charles E. Lindblom, *The Science of "Muddling Through"*, *Public Administration Review*, 19, 1959). Helpful authoritative expertise is not to be expected -- as so dramatically illustrated by the levels of youth unemployment and the cynical complacency of those responsible for it (*Stieglitz from WEF in Davos: Complacency in a Leaderless World*, *cii.co*, 13 February 2013). People have to work with what they can "pick up" and comprehend, however questionable this may appear to those with greater insight -- but unable to "deliver it" effectively (*Towards the Dynamic Art of Partial Comprehension*, 2012).

The effort here is then one of "talking up" ways of enabling and engaging with such coherence -- beyond the constraints of those who claim to do so within particular frameworks.

Varieties of integrative thinking

This exploration could be framed by the usual terms for integrative understanding (unity, interdisciplinarity, etc). Some 633 such terms were profiled in the *Integrative Knowledge and Transdisciplinarity Project* (1976) which comments on this variety and its implications. Another selection is presented separately (*Interweaving fundamental patterning approaches to transformation*, 2012).

Holon: As a term which might be preferred in relation to integrative thinking, "holon" has been variously explored, notably by Jeffrey Stamps (*Holonomy: a human systems theory*, 1980) and further developed with Asking Questions Jessica Lipnack (*Virtual Teams: people working across boundaries with technology*, 2008).

As coined by Arthur Koestler in his book *The Ghost in the Machine* (1967, p. 48), a holon is something that is simultaneously a whole and a part. Koestler argues that holons are autonomous, self-reliant units that possess a degree of independence and handle contingencies without asking higher authorities for instructions. They are simultaneously subject to control from one or more of these higher authorities. The first property ensures that holons are stable forms that are able to withstand disturbances, while the latter property signifies that they are intermediate forms, providing a context for the proper functionality for the larger whole. Koestler defines a **holarchy** as a hierarchy of self-regulating holons that function first as autonomous wholes in supra-ordination to their parts, secondly as dependent parts in sub-ordination to controls on higher levels, and thirdly in coordination with their local environment.

The term has been related to the dynamics of **holomovement**, central to interpretation of **quantum mechanics** by David Bohm and to his overall worldview (*Wholeness and the Implicate Order*, 1980)

Integral: Use of "integral" is associated in a variety of ways with exploration of insights of larger scope and implying larger degrees of integration. In mathematics **integral** has particular significance. It has various connotations in philosophy and spirituality, as noted by *Wikipedia*:

- **Integral humanism (India)**, political philosophy in Hindu nationalism
- **Integral (spirituality)**, inclusive philosophy, spirituality, or practice, inspired by the writings of Sri Aurobindo, Jean Gebser, Ken Wilber, and/or others
- **Integral Theory**, an area of discourse emanating from Ken Wilber's thought on spiritual evolution, methodology and ontology, central to an "Integral Movement"
- **Integral traditionalism**, Perennialist esotericism taught by René Guénon, Frithjof Schuon and others
- **Integral Culture**, transmodern subculture referred to by sociologist Paul H. Ray

An emphasis may be placed on integrative research. This may take the form of "integrative studies" ([Association for Interdisciplinary Studies](#)). Emphasis may also be placed on **integration of the personality**, and on integral awareness, according to a variety of psychotherapeutic and spiritual traditions, notably through a process which has been termed individuation.

Interdisciplinarity: Various efforts have been made to articulate interdisciplinarity, cross-disciplinarity, multi-disciplinarity, and transdisciplinarity -- and to distinguish fruitfully between them (*Varieties of Disciplinarity, Interdisciplinarity and Transdisciplinarity*, 1998; *Transdisciplinarity-3 as the Emergence of Patterned Experience: transcending duality as the conceptual equivalent of learning to walk*, 1994).

General systems research: Inspired by recognition of the **isomorphism** between a wide variety of systems, whether in nature or in society, the **Society for General Systems Research** (1954-1988) provided an early focus for much creative exploration, as evident from the papers in *General Systems*. It was renamed as the present **International Society for the Systems Sciences**. Curiously dissociated from a "systems" perspective is that of "cybernetics". Although traditionally indifferent to cognitive and existential issues, these have however emerged more recently (cf. *Cybernetics and Human Knowing: a Journal of Second Order Cybernetics, Autopoiesis and Cyber-Semiotics; European Society for the Study of Cognitive Systems*). The early assertion of John Casti that "*behaviorist/cognitive debates are vacuous at the system-theoretic level*" seems to have been indicative of later preoccupations (*Connectivity, Complexity, and Catastrophe in Large-Scale Systems*, 1979, p. 86). Ironically, "vacuous" may turn out to be an essential prerequisite for further understanding.

Unity: Various disciplines and initiatives have long aspired to unity through a process of "unification" based on a "unified" approach. These include politics, mathematics, science (notably as **unified science**), and the religions, whether individually (as a characteristic of deity and comprehension thereof), or collectively (through interfaith initiatives). Such efforts towards some form of unity -- and "speaking with one voice" -- are a characteristic of many international and global initiatives.

Wholeness: The word invites a variety of interpretations, notably including understandings of **integrity**. From a psychological perspective, **wholeness** suggests both the encompassing of all potentials, as well as the mental and emotional acceptance of that understanding. Distinctions may be made from uses of wholism in contrast with holism.

Wholth: Wholth is not a neologism, but it is very rarely used. In a discussion of constraints on morphological processes, Andrew McIntyr (*Introduction to English Linguistics* Lecture Notes Version 3, 2010) even suggests that the formation of "wholth" as a word is unproductive. The *Chambers's Twentieth Century Dictionary* offers as synonyms: wholeness, soundness and health. Other dictionaries offer no reference to it.

Some examples of contexts in which wholth has been used in past decades include:

- "Health" still conjures up a negative image of hygiene, of handwashing rather than handshaking and "wholth"; and "welfare" suggests amateur do-gooding or efficient and professional case study! (Hugh W. Maw, *Counselling in teacher education, Learning for Living*, 12, 1973, 3)
- ... a compromise of attitude must be granted by each side of the equation to the other's status and especial utility within the framework of the general advancement of health - a word really meaning "wholth", a wholeness ... (*Shall we Nationalize Medicine? British Medical Journal*, 1945,1:610.2)
- ... would have enforced the need of cooperation, not so much by the more evident eye and hand and foot as by the hidden internal secretions, elaborated in obscure tissues, thrown into the general blood stream, carried to all parts of the body, and so needful that "wholth" or health... (David A. Stewart, *The Internal Secretions of the Sanatorium, Transactions of the American Clinical and Climatological Association*, 41, 1925)

Of far greater relevance to this argument, than such incidental use, is the dissertation of John Samples (*Wholth: a philosophy of religious education*, 1972) developing the insights on "wholth" as articulated through the philosophy of [Lewis Joseph Sherrill](#) (1892-1957), whom he considered to be the originator of this word (*The Gift of Power*, 1955, p. 22). Sherrill was an ordained Presbyterian minister who, by the use of experiential theology and depth psychology, formed a theory of Christian education that focused on the development of Christian selfhood.

This theory encouraged a relationship between God and persons rather than a transmission of doctrinal statements about God. Samples develops his argument within sections on: "*Wholth*", and its implications for education and salvation; Sherrill writes about "*wholth*"; and "*Wholth*", its implications for the Christian ministry. Samples found no studies related in any way to Sherrill's concept.

Samples concludes:

"Wholth" incorporates not only health - the concept of self coinciding with the real person - but also total growth and not just in outward conduct. Even though the concept of "wholth" arose from the study of self it applies to the total community, for the community is only a sum total of its individuals.

As applied to the church, Samples' primary concern, he notes:

The concept of "wholth", properly understood and applied can lead us into a renewal of the church in the areas of group fellowship, family units and personal mental health. The minimizing of categories and departmentalizing in church structure will result in less polarization of people into the camps of activism and pietism.

Elusive nature of the pattern that connects

Unsayings regarding the nature of a meta-pattern: The various terms cited above are but a selection from a much larger set. All of them suggest a degree of understanding, possibly an intuition, of the possibility of a higher, or more fundamental, order of integration. Each is necessarily subject to criticism as being inadequate from another perspective. This recalls the case made in [apophatic theology](#) regarding the capacity to say only what deity is not -- and developed elsewhere with respect to the individual (*Being What You Want problematic: kataphatic identity vs. potential of apophatic identity?* 2008). .

There is the a case for a process of unsaying with reference to the elusive quality of the "pattern that connects" (Michael A. Sells, *Mystical Languages of Unsaying*, 1994). The phrase comes from [Gregory Bateson's](#) recognition of a meta-pattern:

The pattern which connects is a meta-pattern. It is a pattern of patterns. It is that meta-pattern which defines the vast generalization that, indeed, it is patterns which connect. (*Mind and Nature: a necessary unity*, 1979)

And it is from this perspective that Bateson warns: *Break the pattern which connects the items of learning and you necessarily destroy all quality* (1979, pp. 8-11).

Comparative integrative thinking: The question is then how to discuss the nature of integration without being entrapped by categories variously preferred and challenged from different perspectives -- and necessarily fragmented, if not schismatic. The point is well made by Nicholas Rescher (*The Strife of Systems: an essay on the grounds and implications of philosophical diversity*, 1985):

For centuries, most philosophers who have reflected on the matter have been intimidated by the strife of systems. But the time has come to put this behind us -- not the strife, that is, which is ineliminable, but the felt need to somehow end it rather than simply accept it and take it in stride.

It is intriguing how few are the efforts to look at integrative thinking comparatively whilst capable of being dissociated from an attempt to advocate a particular approach to such thinking -- and are self-reflexively aware of the paradoxical trap of reaching a conclusion. Striking examples of different strategies are:

- [Ken Wilber](#), as author and editor of numerous books of relevance to this argument, and founder of [Integral Institute](#) for teaching and applications of [integral theory](#), distinguishes five irreducible categories in a model of manifest existence. For a complete account, he believes that it must include each of these five categories, and only such an account can be accurately called "integral".
- [David Lorimer](#), as Programme Director of the [Scientific and Medical Network](#) and editor of its *Network Review* systematically reviews an extremely wide variety of perspectives relevant to any understanding of wholth, as explored below. The approach is somewhat similar to that of *Main Currents in Modern Thought* long produced by the Center for Integrated Education Asking Questions,
- [Jennifer Gidley](#) provides a much appreciated comparison of three quite distinctive integral thinkers [Rudolf Steiner](#), [Jean Gebser](#) and Ken Wilber (*The Evolution of Consciousness as a Planetary Imperative: an integration of integral views*. *Integral Review: A Transdisciplinary and Transcultural Journal for New Thought, Research and Praxis*, 2007)

These can be seen as different styles variously satisfied with different outcomes, as discussed separately (*Self-reflexive Challenges of Integrative Futures*, 2008). Wilber's heroic efforts to create a quadrant framework (the [AQAL](#)) are widely respected -- although not as universally attractive as might be assumed to be a characteristic of any such framework as a potential meta-pattern. Lorimer ensures

exposure to a remarkable array of integral thinkers of many kinds, but without seeking the kind of closure favoured by Wilber. Gidley is unique in seeking a comparison between integrative thinkers of contrasting persuasions in order to elicit threads of commonality.

The nature of the "pattern that connects" remains frustratingly elusive however, perhaps necessarily so -- given the suggested requirement for "unsaying". What can be meaningfully "said" about a "meta-pattern"? What criteria merit consideration for a "meta-model"? (cf. *Criteria for an Adequate Meta-model*, 1971)

As an exercise, the question can be asked with respect to "organization", endeavouring thereby to transcend the constraints of conventional understanding (*In Quest of "Meta-Union"?* 2007; *In Further Quest of "Meta-Union"? Interplay of generic dimensions of any "union of international associations"*, 2007; *Dynamic Reframing of "Union": implications for the coherence of knowledge, social organization and personal identity*, 2007). Self-reflexivity would appear to be a significant factor (*Consciously Self-reflexive Global Initiatives: Renaissance zones, complex adaptive systems, and third order organizations*, 2007).

Categories as a cognitive trap: Engaging with the categories, through which a "meta-pattern" might be described, is as much of a trap as in the case of descriptions of any transcendent "deity". But just as some make a strong case for the vital role of "deity", others make an analogous case for unity, integration, wholeness, and the like. Put bluntly, the track record of these various endeavours has proven seriously inadequate to the needs of the times, whatever the quality of the thinking applied to this and the enthusiasm of those who engage in it.

That conclusion is only helpful if seen as implying other possibilities. It would seem that these should challenge the conventional use of categories in some way, engaging the attention more immediately and sustainably. How then to challenge and transcend categories? Especially problematic, even in the phrase the "pattern that connects", is the static emphasis characteristic of categories (as conceptual pigeon holes) when ensuring a dynamic to the pattern would seem to be vital. However, just as "the map is not the territory", so a patterned system diagram is not the dynamic of the flows through that system. The duality static/dynamic itself merits consideration as a problem (*Transcending Simplistic Binary Contractual Relationships: What is hindering their exploration?* 2012)

Prime examples of dynamic possibilities are humour and playfulness (*Humour and Play-Fullness: essential integrative processes in governance, religion and transdisciplinarity*, 2005). Music suggests an as yet poorly explored way of giving comprehensible significance to the "harmony" supposedly characteristic of "heavenly" integration -- as with the symbolism of the "music of the spheres" (*A Singable Earth Charter, EU Constitution or Global Ethic?* 2006). Aesthetic qualities, valued as a characteristic of fundamental theories, suggest another. These can be considered as pointers to the engaged comprehension of wholth.

Arguments for **enactivism** also reframe the engagement with reality beyond the conventional use of categories. This can be related to embodiment of the mind in movement -- so evident in popular enthusiasm for dance (Mark Johnson, *The Meaning of the Body: aesthetics of human understanding*, 2008; Maxine Sheets-Johnstone, *The Primacy of Movement*, 2011). There is a case for interweaving these possibilities, as tentatively explored separately (*Enacting Transformative Integral Thinking through Playful Elegance*, 2010). What follows is an exercise in developing these considerations further -- in "talking up" the potential they represent.

Experiential implications of wholth

Wholth as a transitional category: Given their many connotations, on which little agreement has emerged -- nor any discussion as to why this might be -- preference is given here to the unusual term "wholth" as a derivation of "whole". In doing so the purpose is to avoid, to some small degree, the unfruitful dynamics between those attaching particular (if not exclusive) significance to this or that term. Unlike the many other terms, there is relatively little conceptual "baggage" attached to wholth. For the purpose of this discussion, it is appropriately obscure.

As noted above, Samples highlights a central value of wholth (articulated by Sherrill) as being: *This theory encouraged a relationship between God and persons rather than a transmission of doctrinal statements about God*. Given the nature of wholth, as argued in what follows, it is assumed here that Sherrill (followed by Samples) "adapted" a significant intuition into Christian terminology.

Rephrased, for the purpose of the following argument, **wholth may be understood as encouraging a relationship between the pattern that connects and persons rather than a transmission of theoretical statements about that meta-pattern**. It is the cognitive implications of engagement with the dynamics of that meta-pattern which encourage articulations in terms of any familiar "deity" and whatever meaning is associated with "spiritual". Such terms may be sufficient for some, but they may not be adequate or necessary for others.

"Wholth" is employed here as a transitional cognitive device to enable engagement with a meta-patterning process. Furthermore, as a challenge to conventional articulation, "wholth" is perhaps usefully understood as transcending the **word classes (parts of speech)**, of which eight are distinguished in English (nouns, determiners, pronouns, verbs, adjectives, adverbs, prepositions, and conjunctions) with which interjections may be included. A related approach was considered by Arnold Keyserling in German (*Weltgrammatik*, 1979). Specifically this would imply that "wholth" can only be partially comprehended through a noun, a verb, or a quality -- implying the kinds of paradox so fruitfully explored by Douglas Hofstadter (as noted below).

Bypassing descriptors? There is of course an extensive literature on the more subtly integrative **states of consciousness**. Much of this is descriptive in the often sophisticated language of particular disciplines, and with the "objectivity" of an "external" perspective. Extensive use may be elegantly made of poetic forms. The concern here is to emphasize the immediate meaning the experience may have for those experiencing it and engaging in it -- more probably as a "dynamic of consciousness" than as a "state of consciousness". The introduction above emphasized a sense of "togetherness" as it is variously valued. It may indeed be acknowledged through the sense of having "got one's act together", and through appreciation of initiatives as "having got it together".

What makes for wholth in ordinary experience? Curiously a fundamental trigger may be the appreciation of musical harmony and its embodiment in dance. Controversially, drugs may be used to enhance a sense of sharpness and connectivity. As noted by Goethe

(*Elective Affinities*, 1809) relationships, whether involving physical intimacy or otherwise, may "trump" all conventional articulation of experience through patterns of categories.

Wholth may be embodied in the delightful qualities of a "place to be", as articulated by [Christopher Alexander](#) (*A Pattern Language*, 1977; *The Timeless Way of Building*, 1979). Those qualities may feature to a degree in the tourism and real estate marketing of "magical" destinations and locations. Religions may effectively offer "wholth" as a characteristic of heavenly experience, however it is expected that people may comprehend this. The qualities may be otherwise appreciated by those especially inspired by engagement with the wilderness, as in the case of [deep ecologists](#).

Another potential understanding of wholth is offered by the experiential understanding of *qi* (also *chi* or *ch'i*) in traditional Chinese culture. This is sensed as an active principle forming part of any living thing, typically held to be experienced as "life energy", "life force", or "energy flow". It is the central underlying principle in [traditional Chinese medicine](#) and martial arts. Of related interest is the Japanese understanding of *wa* (typically translated as "harmony"), but understood much more actively in that culture.

Challenge of engaging with wholth: The problem with wholth, as these examples imply, is what "one" would "do"-- "next" -- having "got it", enabled it, or engaged with it. What are the dynamics which render wholth sustainable? The question is especially relevant in the increasingly chaotic nature of the times in which wholth may become ever more elusive. The various dynamics of Chinese engagement with *qi* are suggestive in this respect.

The challenge is evident in the emergence of the "blip culture" originally named by [Alvin Toffler](#) (*The Third Wave*, 1980) and characteristic of the experience of [social networking](#). There is a burgeoning literature on the psychosocial implications of engaging with its omnipresent communication modalities, as exploited and amplified by the proactive response of marketing and neuromarketing in endeavouring to attract attention. The nature of wholth within these dynamic contexts is already elusively evident as suggested by metaphorical description of the experience (surfing, browsing, etc). How this may be further enhanced by future developments is open to speculation.

Wholth in immediate experience: Such challenges are fruitfully reframed in terms of the preoccupation with "now". This can take a philosophically existential form ([Peter Russell](#), *The White Hole in Time: our future evolution and the meaning of now*, 1993; [Gina Lake](#), *Living in the Now: how to live as the spiritual being that you are*, 2012; [Eckhart Tolle](#), *The Power of Now: a guide to spiritual enlightenment*, 1997).

Consistent with this strategy, there is an increasing sense of "having no time" as a consequence of busyness, compounded by unprecedented levels of information overload, and competition for the attention time of the readily distracted. Under these circumstances, there is an expectation that wholth be deliverable, accessible and comprehensible in the moment -- as instant gratification. This is well illustrated by a T-shirt slogan: *I want it all. And I want it now.*

This requirement for immediacy is evident in the uptake of humour on the internet, engagement with tweeting on Twitter, and constant exposure to Rss feeds -- perhaps to be understood, through the cognitive kicks thereby offered, as a form of "micro-wholth". There is however the faint possibility that this may well engender a new variant of the mythological [language of the birds](#) (*Re-Emergence of the Language of the Birds through Twitter?* 2010). There is also the question of how "long time" is then to be experienced as a feature of cultural memory (*Engaging Macrohistory through the Present Moment*, 2004). Such concerns are a focus of the [Long Now Foundation](#).

Wholth: Theology vs. Mathematics?

Fruitful intercourse: This is not an argument about theology, nor about mathematics. Given the cognitive extremes that they represent in exploring the most abstruse realms of human comprehension, it is however potentially useful to "confront" them with respect to insights into wholth. Such a confrontation is consistent with the fact that a significant number of mathematicians of distinction have been people of religious inspiration seeking to bring a form of order to those insights through mathematics. Curiously the reverse is less evident, in the case of those of Christian persuasion, namely religious people who have delved into mathematics. It is much more evident in the Jewish tradition where the role and pattern of numbers is of primary significance, as framed by the [Kabbalah](#). Helpfully *Wikipedia* offers: [List of Jewish scientists and philosophers](#), [List of Christian thinkers in science](#), [List of Muslim scientists](#), [List of Jewish mathematicians](#)

The case for such "intercourse" between theology and mathematics has been developed separately (*Mathematical Theology: Future Science of Confidence in Belief*, 2011). As discussed below, it notably cites the work of Sarah Voss (*What Number Is God? Metaphors, Metaphysics, Metamathematics, and the Nature of Things*, 1995). Richer insight into the nature and quality of wholth might be appropriately understood as the consummation of that intercourse. The "embryonic" forms of wholth which have already become apparent may even be regretted as "abortive" -- cognitive "miscarriages" of various kinds.

Engagement with society: This conclusion is consistent with the relative inability of both mathematics and theology to engage effectively with the experiential conditions of people at this time and with the problematic condition of society. Both religion and science are increasingly challenged to justify themselves -- faced respectively with anti-religious and anti-science arguments. These controversies are exacerbated by the current challenges of religion to science and of science to religion, through forms of intercourse that are a credit to neither (cf. *Knowledge Processes Neglected by Science*, 2012).

Despite the specific nature of their appeal to quite distinct audiences, it is clear that, separately or together, they have little "new thinking" to offer in authentic response to the challenges of the times. Succinctly stated, religion calls upon people to "have faith" and to "believe", ironically echoing the style of increasingly empty appeals by government authorities. Science (mathematics) selectively promotes its narrow discoveries, ignoring many of the more fundamental problems of connectivity faced by society as being "too complex". People are expected to marvel at the exploration of Mars by the few, and to ignore rising levels of poverty, conflict, unemployment, depression,

and the like -- as experienced by the many. Ironically neither is able to reframe disagreement creatively.

People do believe (often despite religion) and they do marvel (often despite science), but experience of wholth is seemingly relatively rare. The offerings of "[integral thinkers](#)", as notably cultivated by integrative studies, appear also to call for "belief", if only under pressure from their adherents and despite the challenge of communicating their insights meaningfully.

Self-reflexivity: Curiously, from a psychosocial perspective, religious priesthoods bear a strange resemblance to the priesthoods of mathematics. Schools of thought and "denominations" may be distinguished in each case -- each with their "high priests" and dubious dynamics. There are characteristic quarrels between them (and amongst their members). These are treated as irrelevant to their larger undertakings and ambitions. Both initiatives are both essentially non-self-reflexive, with the exception of the preoccupation of isolated schools of thought in each case with their own difficulties. They are equally non-self-reflexive regarding the fragmentation of their disciplines.

Put bluntly again, it is appropriate to ask, in each case, why it is they are unable to "get their act together" -- irrespective of their inability to engage fruitfully in intercourse with each other. More fundamentally, given the integrative perspectives of each, how is it that they are unable to address these issues and fail to frame them as a fundamental challenge to the framing of their worldviews? In the case of religions, this is evident both with respect to failure in response to their (violently) schismatic tendencies and with respect to the inadequacies and tokenism of interfaith discourse. In the case of mathematics, it is appropriate to ask whether mathematics has any sense of the order which its preoccupations represent, as discussed separately (*Towards a periodic organization of the Mathematics Subject Classification*, 2009). Why would that be?

Conceptual gerrymandering: There is a sense in which both religion and science have a blinkered view of wholeness -- a form of indulgence in tunnel vision. This is evident in similarities in the response to complexity. For religion, the complexity of reality is a characteristic of the mundane, necessarily to be transcended in the quest for the essential simplicity of truth -- however incommunicable. For mathematics (and science), challenges are carefully selected to avoid those recognized to be too complex -- again in a quest for an essentially tidy truth.

Unfortunately ordinary people are obliged to live immersed in complex mundanities, as separately discussed (*Living with Incomprehension and Uncertainty*, 2012). They might even be described as obliged to live "betwixt and between" the axiomatically determined worldviews offered by theology and mathematics (*Living as an Imaginal Bridge between Worlds*, 2011).

How are insights into experiencing wholth to be elicited from such contexts?

Wholth through mathematical echoes of religious preoccupations

A useful point of departure is the discipline suggestively named [metamathematics](#). This is the study of mathematics itself using mathematical methods. This study produces [metatheories](#), which are mathematical theories about other mathematical theories. It is now considered synonymous with [metalogue](#), and both have been substantially subsumed by [mathematical logic](#). A seemingly relevant title in this respect is the work of [Gregory Chaitin](#) (*Meta Maths: the quest for omega*, 2006), which in passing makes comments of value to this argument. He notes that maths (like physics) -- as a free creation of the human mind -- is an attempt by the mind to organize and make sense of human experience (pp. 7-9):

And mathematics is far from static and perfect; it is constantly evolving, constantly changing, constantly morphing itself into new forms. New concepts are constantly transforming math and creating new fields, new viewpoints, new emphasis, and new questions to answer.... But history judges these creations by their enduring beauty and by the extent to which they illuminate other mathematical ideas of the physical universe, in a word, by their "fertility".

Integrating disagreement: Chaitin's account is usefully flawed for the purposes of this argument, both with respect to "meta maths" as the study of maths using mathematical methods, and in his reference to the highly problematic interactions between [Gottfried Leibniz](#) (whom he strongly praises) and [Isaac Newton](#) (whom he strongly deprecates). With regard to the first, Chaitin's profile in *Wikipedia* notes that some philosophers and logicians strongly disagree with the philosophical conclusions that he has drawn from his theorems.

It is unclear how "disagreement" is predicted or contained by "meta maths" as a purportedly self-reflexive discipline -- and whether metamathematics is itself a preoccupation of metamathematics (with all the paradoxes that may imply). With regard to unseemly disagreement between icons, it is then even less clear how two icons of science are to be framed together from a meta perspective, given his praise for one -- whom Chaitin contrasts "morally" with the other whom he deprecates (pp. 57).

Partial comprehension: Newton is recognized as a devout but unorthodox Christian, but one who refused to take holy orders as was expected of him.

As a mathematician Chaitin makes interesting points regarding Leibniz (pp. 57-59):

Leibniz was such an elevated soul that he found good in all philosophies, Catholic, Protestant, Cabala, medieval scholastics, the ancients, the Chinese... For example, there's his remark that "music is the unconscious joy that the soul experiences on counting without realizing that it is counting"... So you begin to see the problem: Leibniz is at too high an intellectual level. He's too difficult to understand and appreciate. In fact, you can only really appreciate Leibniz if you are at **his** level. You can only appreciate that Leibniz has anticipated you **after** you've invented a new field by yourself...

Voltaire was against one and in favor of the other, not based on an understanding of their work, but simply because Leibniz constantly mentions God, whereas Newton's work seems to fit in perfectly with an atheist, mechanistic worldview.

Clearly Chaitin assumes he fully understands the preoccupations of Newton. Curiously metamathematics does not aspire to encompass the challenge of not understanding the insights of an icon, or the differences of perspectives between the icons of its own discipline. Incomprehension is however a fundamental issue for many.

Triumph of aridity: As Chaitin later notes with respect to the fundamental work of Leibniz on the [quadrature of the circle](#), which he successfully addressed by [transcendental](#) methods (p. 95):

Leibniz could not have failed to be aware that in using this term he was evoking the notion of God's transcendence of all things human, of human limitations, of human finiteness. As often happens, history has thrown away the philosophical ideas that inspired the creators and kept only a dry technical husk of what they thought they had achieved. What remains of Leibniz's idea of transcendental methods is merely the distinction between algebraic numbers and [transcendental numbers](#).

Chaitin continues with respect to [Georg Cantor](#):

Similarly, it was Cantor's obsession with God's infiniteness and transcendence that led him to create his spectacularly successful but extremely controversial theory of [infinite sets](#) and infinite numbers [[transfinite numbers](#)]. What began, at least in Cantor's mind, as a kind of madness, as a kind of mathematical theology full -- necessarily full -- of paradoxes... has now been condensed and desiccated into an extremely technical and untheological field of math, modern [axiomatic set theory](#).

In his conclusion, Chaitin affirms the view of Leibniz that mathematics and philosophy are inseparable (as is claimed by theology of philosophy). He argues that of the world's great philosophers only Pythagoras and Leibniz were great mathematicians (p. 144):

After all, math deals with the world of ideas, which transcends the real world. And for "God" you can understand the laws of the universe, as Einstein did, or the entire world, as Spinoza did, that doesn't change the message.

Polyocular perspectives: Despite expressing admiration for complexity, Chaitin is frank in his conclusion that he himself is "monotheistic" rather than "polytheistic", explaining that (p. 145):

I mean it only in the rather abstract sense: that I am always searching for simple unifying ideas, rather than glorying intellectually in "polytheistic" subjects like biology, in which there is a rich tapestry of extremely complicated facts that resists being reduced to a few simple ideas.

More recently Chaitin has however sought to impose a degree of simplicity on biological systems (*Proving Darwin: making biology mathematical*, 2012). This is of relevance to this argument in that the problematic dialogue between science and religion has also been explored in terms of models of creation and evolution (*A biologist's view of science and religion*, 2011). Whilst a preference for "monotheism" may be appropriate for some, the challenge of any metamathematical endeavour would seem to be to allow for "polytheism" and to acknowledge the variety of forms this might take. Again Chaitin fails to take up the challenge of self-reflexivity in relation to the polyocular argument of [Magoroh Maruyama](#) (*Polyocular Vision or Subunderstanding*, *Organization Studies*, 25, 2004).

Collapse of wholth: The focus of Chaitin's study in "questing for omega" (now termed [Chaitin's number](#)), framed as the [halting probability](#), could be caricatured as a mathematician's view of the religious preoccupation with "end times" and collapse. More intriguingly it suggests a way of thinking of the collapse of any sense of wholth. Of related relevance is his argument as to why mathematics has no Theory of Everything -- suggestive of the possibility that no such is feasible from any perspective (*Omega and Why Maths has no TOEs*, *Plus Magazine*, 1 December 2005).

The nature of this collapse recalls Bateson's phrase, cited above: *Break the pattern which connects the items of learning and you necessarily destroy all quality* (1979).

There is scope for exploration of collapse through chaotic disruption of Chinese *qi* or Japanese *wa* (as mentioned above), even through the alleged function of the Yellow Bell in imperial China (cf Fred Fisher, *The Yellow Bell of China and the Endless Search*, *Music Educators Journal*, 59, 8, 1973). As noted by Richard Brookens (*Yellow Bell Legend From China*):

The legend of The Yellow Bell begins in the third century B.C.E.. The Emperor of China, Huang-Ti, sent his mathematician Ling-Lun to the western mountains near India and instructed him to cut bamboo pipes from which the fundamentals of music could be derived. The bamboo tube upon which all other pitches and measurements were based was called the Yellow Bell.

Unconstrained creativity: In his conclusion regarding creativity and the connectedness of everything, Chaitin stresses that (p. 146-151):

... the essence of math lies in its creativity, in imagining new concepts, in changing viewpoints, not in mindlessly and mechanically grinding away deducing all the possible consequences of a fixed set of rules and ideas...

I think that the current zeitgeist is very dangerous, because people are really desperate for their lives to be meaningful. They need to be creative, they need to help other people, they need to be part of a community, they need to be adventurous explorers... So

you're not going to be surprised to hear that I think that we desperately need new ideas about how human society should be organized, about what it's all for and how we live.... We need to reinvent ourselves

Despite suggestive allusions, unfortunately it is completely unclear how Chaitin's engagement with meta maths responds to these concerns. He clearly has little interest in using maths to derive order from the vast array of mathematical endeavours -- a complex ecosystem of ideas if there ever was one. He usefully questions the use of a [formal axiomatic system](#) (FAS) deriving from the work of [David Hilbert](#), acknowledged as originator of metamathematics through his articulation of a [fundamental set of geometrical axioms](#). This approach to simplification is suggestive, but it can be seen as a failure to honour such diversity, as would be the case with the ecosystem of the biosphere or the sociosphere.

Far more questionable is Chaitin's argument for creativity at all costs, emphasizing the ever greater proliferation of new theories, unconstrained by any need to provide any transcendent sense of coherence. As noted with respect to his "omega", he explicitly rejects the possibility of any Theory of Everything as an appropriate "container" for such creativity. This is surprisingly consistent with the religious injunction to "be fruitful and multiply" ([Genesis 1:28](#)), as separately challenged (["Be Fruitful and Multiply": the most tragic translation error?](#) 1995). As with associating wholth with instant gratification in the now, it fails to address the nature of appropriate limits -- even though notions of limit are fundamental to mathematics.

Curiously it is Newton's much-deprecated explorations of alchemy (cf. [Newton the Alchemist](#)) which fruitfully frame the challenge in terms of a paradoxical container for [alkahest](#), This is the hypothetical universal solvent ("creativity"?), having the power to dissolve every other substance (extant categories and theories?). Ironically the design challenge for such a container is now effectively central to that of a [nuclear fusion reactor](#), within which all contact of [plasma](#) with its toroidal container must be avoided for the reactor to function. Any containing "substance" can be ionized into plasma. This is potentially suggestive of the design of a cognitive "container" for wholth, as separately argued ([Enactivating a Cognitive Fusion Reactor: Imaginal Transformation of Energy Resourcing \(ITER-8\)](#), 2006).

Wholth through religious echoes of mathematical preoccupations

Complementing the metamathematics through which attempts are made to frame mathematical initiatives, as might be suspected there is an emergent discipline of metatheology which could assist in the development of this argument (Paul Kuk Won Chang, [Metatheology: a comparative approach of synthetic theology](#), 2005; Charles James Nice Bailey, [Groundwork for Comparative Metatheology: a roadmap for ecumenical analytics](#), 1966). A significant precursor is suggested by the work of [Alan Watts](#) ([Beyond Theology: the Art of Godmanship](#), 1964). Of more recent relevance is work on ["neurotheology"](#), namely the possible neurophysiological mechanisms associated with religious and spiritual experiences ([Andrew B. Newberg](#) ([Principles of Neurotheology](#), 2010).

Transcendence and infinity: As noted above, mathematicians such as Leibniz and Cantor, consciously borrowed from religious articulations of transcendence, the transfinite and the transmundane -- and a sense of infinity as the realm and nature of deity. In the religious context, [transcendence](#) refers to the aspect of God's nature and power which is wholly independent of (and removed from) the material universe. As to transmundane:

For when speech would define the limit of sensible creation, beyond which it is succeeded by the transmundane void apprehended by the mind alone, in contrast with the intangible and incorporeal and invisible, the beginning and the end of all material subsistences is called the firmament. And when we survey the environment of terrestrial things, we call that which encompasses all material nature, and which forms the boundary of all things visible, by the name of heaven. ([Answer to Eunomius' Second Book](#), [The Catholic Encyclopedia](#))

Similarly for infinity:

The infinite, as the word indicates, is that which has no end, no limit, no boundary, and therefore cannot be measured by a finite standard, however often applied; it is that which cannot be attained by successive addition, not exhausted by successive subtraction of finite quantities. Though in itself a negative term, infinity has a very positive meaning. Since it denies all bounds - which are themselves negations - it is a double negation, hence an affirmation, and expresses positively the highest unsurpassable reality. ([Infinity](#), [The Catholic Encyclopedia](#))

Unlike mathematics, religion would seem to have been less assiduous in the articulations of such notions -- with the possible exception of Eastern religions, especially in the distinctions between a vast range of ["heavens"](#) (associated to some degree with numbers)..

Sacred numbers: A greater rapprochement with mathematics is to be seen in the numbers distinguished as "sacred":

No attentive reader of the [Old Testament](#) can fail to notice that a certain sacredness seems to attach to particular numbers, for example, seven, forty, twelve, etc. It is not merely the frequent recurrence of these numbers, but their ritual or ceremonial use which is so significant. ([Use of Numbers in the Church](#), [The Catholic Encyclopedia](#))

This preoccupation is widely recognized in its extension to ["sacred geometry"](#) and the implications for ["sacred architecture"](#). Arguably, and consistent with the explorations of environmental designer Christopher Alexander, it is indeed such architecture that enables and elicits a sense of wholth. Of related interest are the arguments of physicist [Nassim Haramein](#) ([Sacred Geometry and Unified Fields](#), 22 December 2010).

Sacred science: Of special relevance is the appeal of religion to be a sacred science in the light of mathematics:

Sacred doctrine is a science. We must bear in mind that there are two kinds of sciences. There are some which proceed from a principle known by the natural light of intelligence, such as arithmetic and geometry and the like. There are some which proceed from principles known by the light of a higher science: thus the science of perspective proceeds from principles established by geometry, and music from principles established by arithmetic. So it is that sacred doctrine is a science because it proceeds from principles established by the light of a higher science, namely, the science of God and the blessed. Hence, just as the musician accepts on authority the principles taught him by the mathematician, so sacred science is established on principles revealed by God. (*The nature and extent of sacred doctrine*, *The Catholic Encyclopedia*)

The mathematician is aware that the existence of geometry, the surest and most palpable of all sciences, depends entirely on the soundness of the postulate of parallels. Nevertheless, this very postulate is far from being demonstrable. In fact, since no convincing proof of it was forthcoming, there has arisen since the time of Gauss a more general, non-Euclidean geometry, of which the Euclidean is only a special case. Why, then, should Catholic theology, because of its postulates, lemmata, and mysteries, be denied the name of a science? Apart from the domain of dogma proper, the theologian may approach the numerous controversial questions and more intricate problems with the same freedom as is enjoyed by any other scientist. One thing, however, must never be lost sight of. No science is at liberty to upset theorems which have been established once and for all; they must be regarded as unshaken dogmas upon which the entire structure is based. Similarly, the articles of faith must not be looked upon by the theologian as troublesome barriers, but as beacon-lights that warn the mariner, show him the true course, and preserve him from shipwreck. (*Dogmatic Theology*, *The Catholic Encyclopedia*)

It would appear, however, that it is religions other than Christianity that have valued and explored number to a far higher degree, as attentively noted with respect to Islamic architecture by [Marcus du Sautoy](#) (*Finding Moonshine: a mathematician's journey through symmetry*, 2008). This is especially striking in the case of Judaism with its very extensive preoccupation with the [Kabbalah](#). This makes particular use of number to explain the relationship between an unchanging, eternal and mysterious [Ein Sof](#) (no end) and the mortal and finite universe (this creation as experienced). As such it presents methods to aid understanding of these concepts and thereby to attain spiritual realization -- potentially relevant to eliciting a sense of wholth.

Eliciting wholth through associating mathematics and theology

Paradoxical complementarity: As noted by Chaitin, the cognitive implications of the religious inspiration of mathematics are typically lost in arid axiomatic formalization and readily deprecated from the perspective of "science". Complementary to this are the ignored implications of mathematics for the articulation of those insights typically promoted as beliefs required by dogmatic theology -- but excessively "fuzzy" and inaccessible from other perspectives, as well as hostile to challenge. Stories and parables are the preferred modality in this case -- with occasional reference to hidden "mathematical" symbolism, as with the [Bible code](#).

It might be said that mathematics and theology each correspond to a cognitive style which is seemingly incompatible with the other -- although both invoke heavy reliance on axioms variously inaccessible to most. The condition is well symbolized by the ancient Roman deity [Janus](#), the god of beginnings and transitions -- and endings. He is usually depicted as a two-faced god since he looks both to the future and to the past.

A representation of their relationship, more consistent with its paradoxical nature, is that of the [Möbius strip](#), as stressed by Voss and elaborated otherwise by [Steven M. Rosen](#) (*Science, Paradox and the Möbius Principle: the evolution of the transcultural approach to wholeness*, 1994). This is central to the sophisticated argument of [Douglas Hofstadter](#) (*I Am a Strange Loop*, 2007) in the development of the self-reflexive insights of his earlier work (*Gödel, Escher, Bach: an Eternal Golden Braid*, 1979), with implications separately discussed (*Sustaining a Community of Strange Loops*, 2010).

Science and Religion: A remarkable review of the dimensions of the science-religion relationship, as currently framed, is offered by [Wikipedia](#) (*Relationship between religion and science*). It provides a typology of the kinds of interaction characteristic of the relationship between science and religion, according to physicist and theologian [John Polkinghorne](#) (*Science and Theology*, 1998) following earlier work ([Ian G. Barbour](#), *Nature, Human Nature, and God*, 2002; [John Haught](#), *Science and Religion: from conflict to conversation*, 1995):

- *Independence:* treating each as quite separate realms of enquiry.
- *Conflict:* stating the disciplines contradict and are incompatible with each other.
- *Dialogue:* suggesting that each field has things to say to each other about phenomena in which their interests overlap.
- *Integration:* aiming to unify both fields into a single discourse.

Such a fourfold articulation might however be said to be remarkably simplistic from a mathematical perspective since it does little to recognize, or reconcile, the complex relationships implicit in this "fourfold way" of engaging with the "other". One approach to "expanding" the pattern is through application of the above pattern of the insight into a "quadrilemma" from an Eastern perspective by [Kinhide Mushakoji](#) (*Global Issues and Interparadigmatic Dialogue*, 1988):

4-fold interrelationship of science and religion		
	From a scientific perspective	From a religious perspective
Independence (ignoring any other)	science	religion
Conflict (defensive boundary protection)	not-science	not-religion
Dialogue (engagement with otherness)	science and not-science	religion and not-religion
Integration (transcendent reframing of relationship)	neither science nor not-science	neither religion nor not-religion

This approach introduces a necessary degree of paradox and uncertainty to an essentially complex relationship (cf. Garrison Sposito, *Does a generalized Heisenberg Principle operate in the social sciences? Inquiry*, 1969). A related fourfold approach emphasizing the pattern as a complex cognitive system is presented separately as a diagram (*Imagining the Real Challenge and Realizing the Imaginal Pathway of Sustainable Transformation*, 2007). The Eastern perspective on the fourfold can also be expanded in other ways through both the classic binary encoding system which inspired Leibniz and the mathematical insights of the **Fibonacci series** (*Tao of Engagement -- Weaponised Interactions and Beyond: Fibonacci's magic carpet of games to be played for sustainable global governance*, 2010).

The oversimplification of a fourfold pattern could also be highlighted by contrast, for example, with the richer articulations offered by the various "eightfold ways" -- whether of **physics**, of **Buddhism**, or of **policy analysis** -- especially in the light of the argument of **Stephen Prothero** (*God Is Not One: the eight rival religions that run the world -- and why their differences matter*, 2010).

The concern with the relationship has been a focus of the **European Society for the Study of Science and Theology** and of the **John Templeton Foundation** (Fraser Watts and Kevin Dutton (Eds.), *Why the Science and Religion Dialogue Matters: voices from the International Society for Science and Religion*, 2006), notably on the occasion of its most recent conference at the University of Heidelberg (*The Science and Religion Dialogue: Past and Future* (2012).

A compilation by **Melville Y. Stewart** (*Science and Religion in Dialogue*, 2009) shows how scientific and religious practices of inquiry can be viewed as logically compatible, complementary, and mutually supportive in the light of discussion of issues including Big Bang cosmology, evolution, intelligent design, dinosaurs and creation, general and special theories of relativity, dark energy, the multiverse hypothesis, and super string theory.

What remains unclear is the expectation of the outcome of such initiatives, other than an elusive degree of mutual understanding -- which it has proven to extremely challenge challenge to communicate.

Mathematics and Theology: Given a degree of complementarity, an argument to be made is a need to focus more specifically on mathematics as underlying the scientific approach, and on theology as underlying the religious approach -- rather than on the generalities of "religion" and "science".

In this sense, a striking example of a fruitful bridging exercise is the work of the above-mentioned mathematics professor and Unitarian Universalist minister, Sarah Voss (*Depolarizing Mathematics and Religion, Philosophia Mathematica*, 1990). Voss offers particular insight into the implications of Cantor's **infinite sets** from a spiritual perspective (*Matheology and Cantorian Religion, Journal of Religious Humanism*, Winter/Spring 2004).

Voss argues that mathematics has been used throughout human history as a connecting device between metaphysics, theology, and religion, citing in addition to Cantor: **Pythagoras, Plato, Nicholas of Cusa, Galileo, Novalis, Jacobi, Kronecker**.

Voss argues for the need to expand understandings of spirituality through the use of what she terms *mathaphors*, namely metaphors drawn from mathematics (*Mathematics and Theology: a stroll through the garden of mathaphors, Theology and Science*, 4, 2006; *Mathaphors and Faith: understandings of consciousness, Journal of Interdisciplinary Studies*, 2005). These were fundamental to her work on what she describes as *matheology* (*What Number Is God? Metaphors, Metaphysics, Metamathematics, and the Nature of Things*, 1995).

Also vital to the provision of bridging insight is the work of philosopher and Jesuit priest **Pierre Teilhard de Chardin** (*The Phenomenon of Man*, 1959). He conceived the idea of the **Omega Point** (a maximum level of complexity and consciousness towards which he believed the universe was evolving) and developed **Vladimir Vernadsky's** concept of **noosphere**. His work was predicated on the conviction that human spiritual development is moved by the same universal laws as material development. Also of relevance is the work of **Vasily V. Nalimov** (*Realms of the Unconscious: the enchanted frontier*, 1982) who provides a remarkable aesthetic synthesis of biological, mathematical, and linguistic manifestations of probability -- as previously summarized (*Probabilistic vision of the world*, 1995).

Other bridging exercises are evident in the dialogues between **David Bohm** and **Jiddu Krishnamurti** (*The Ending of Time*, 1985; *Limits of Thought*, 1999) which have given rise to the **The Bohm Krishnamurti Project: exploring the legacy of the David Bohm and Jiddu Krishnamurti relationship**. A similarly surprising dialogue is that between **Carl Jung** and **Wolfgang Pauli**, as described by the philosopher **Arthur I. Miller** (*Deciphering the Cosmic Number: the strange friendship of Wolfgang Pauli and Carl Jung*, 2009; *137: Jung, Pauli, and the Pursuit of a Scientific Obsession*, 2010).

Paradoxical incompleteness: Irrespective of the static quality of such categories, is a degree of isomorphism to be suspected between theological and mathematical axioms -- as constructs of the human mind -- especially regarding cognitive engagement with their respective transfinite preoccupations? As constructs, the possibility is the theme of separate discussion (*Representation, Comprehension and Communication of Sets: the role of number*, 1978; *Patterns of N-foldness: comparison of integrated multi-set concept schemes as forms of presentation*, 1980).

Without claiming any such isomorphism, there is nevertheless a delightful irony to the current election of a pope from a set of **cardinals (in the religious sense)**, which might otherwise imply a degree of familiarity with **cardinals (in their mathematical sense)**. The pope is understood by the faithful as a representative of the transfinite within the mundane -- even as an "Earthly Embodiment of a Theory of Everything".

With respect to the "cardinals" of mathematics, recent work by **Harvey Friedman** (*Boolean Relation Theory and Incompleteness*, 2010), as described by Richard Elwes (*It doesn't add up, New Scientist*, 14 August 2010) suggests that:

The only way that Friedman's undecidable statements can be tamed, and the integrity of arithmetic restored, is to expand **Peano's rule book** to include "**large cardinals**" -- monstrous infinite quantities whose existence can only ever be assumed rather than

logically deduced... We can deny the existence of infinity, a quantity that pervades modern mathematics, or we must resign ourselves to the idea that there are certain things about numbers we are destined never to know.

Whilst such irony may be deprecated as simply "surreal", it should not be forgotten that in mathematics, [surreal numbers](#) constitute an [arithmetic continuum](#) containing the [real numbers](#) as well as [infinite](#) and [infinitesimal numbers](#), respectively larger or smaller in absolute value than any positive real number. There may be more to such "mathaphors" than is too easily assumed.

Psychological implications of number symbols: A different form of "bridging exercise" is evident in that between spiritually oriented psychology and number symbolism -- following from the importance attached to sacred numbers (as discussed above). The above-mentioned dialogue between Jung and Pauli, described by Arthur Miller, is a prime example. Another is the extensive work of [Marie-Louise von Franz](#) (*Number and Time: reflections leading toward a unification of depth psychology and physics*, 1986). Of particular relevance is her exploration of some alchemical symbols, as with *Symbols of the Unus Mundus* (In: *Psyche and Matter: collection of essays*, 1992). Such approaches necessarily suggest deeper cognitive significance to recognition of wholth.

Engaging with mathaphors, isophors, analogies and correspondences

Mapping correspondences: Missing from the bridging initiatives (noted above) is any systematic attempt to map the axiomatic structures of theology in relation to the axiomatic formalizations of mathematics, in the light of the logic implied in each case. As evoked by Sarah Voss, the question is then whether those of mathematics offer mnemonic aids to the process of engendering spiritual experience -- to eliciting wholth according to the argument here. Problematic in both cases is the aridity of the language of those axioms (framed statically in terms of categories) in relation to the need to enable the cognitive engagement intrinsic to the dynamics of the experiential quality of wholth.

A striking example of the fruitful role of correspondences emerged in the course of development of symmetry [group theory](#) -- in relation to discovery of the so-called [Monster Group](#) of incomprehensibly high dimensionality. Work on the unexpected nature of the correspondences gave rise to the expression in mathematics of [monstrous moonshine theory](#). This is acclaimed as one of the most profound discoveries in mathematics whose significance is yet to be fully understood (*Potential Psychosocial Significance of Monstrous Moonshine: an exceptional form of symmetry as a Rosetta stone for cognitive frameworks*, 2007).

The challenge of symmetry group comprehension is another matter (*Dynamics of Symmetry Group Theorizing: comprehension of psycho-social implication*, 2008). However the possibility of formal correspondences between the axiomatic structures of mathematics and theology is more readily conceivable than those made credible by moonshine mathematics.

Given the concern here with connectivity within a "meta-pattern", comparison between the distinct and shared understanding of correspondences merits consideration (*Theories of Correspondences -- and potential equivalences between them in correlative thinking*, 2007). Especially interesting are the distinctions and overlaps between its various uses, most notably in the light of their historical role in the [symbolist](#) tradition:

- [Correspondence \(mathematics\)](#), with several related meanings
- [Correspondence analysis](#), a multivariate statistical technique
- [Correspondence rules](#) (quantum mechanics)
- [Correspondence theory of truth](#) (philosophy), a theory in epistemology
- [Correspondence principle](#) (physics), that theories must agree with experimental evidence
- [Correspondence \(theology\)](#), the relationship between spiritual and physical realities

Metaphors and analogies: Striking emphasis has been given to the role of metaphor from a cognitive psychological perspective by [George Lakoff](#) and [Mark Johnson](#) (*Metaphors We Live By*, 1980; *Philosophy in the Flesh: the embodied mind and its challenge to Western thought*, 1999). This has been explicitly related to mathematics (George Lakoff and [Rafael E. Núñez](#), *Where Mathematics Comes From: how the embodied mind brings mathematics into being*, 2000).

Possibilities of relevance to this arguments are indicated by the theologian and feminist scholar, [Sallie McFague](#) who argues for a different way of knowing, exemplified in her case by its implications for knowing divinity (*Life Abundant: rethinking theology and economy for a planet in peril*, 2000). In particular she argues for the individual freedom to engage in metaphoric reframing of God according to different circumstances -- rather than being dependent on particular models (*Metaphorical Theology: models of God in religious language*, 1982; *Models of God: theology for an ecological, nuclear age*, 1987). Her case for producing metaphors taking appropriate account of environmental factors could be adapted, both to reframing the science-religion relationship and to framing a meta-pattern with which individuals could have as intimate relationship as with deity.

Especially interesting are the insights into cognitive processes offered by fluidity, as developed in the work of Douglas Hofstadter (*Fluid Concepts and Creative Analogies: computer models of the fundamental mechanisms of thought*, 1995). The approach contrasts with the rigidity conventionally associated with categories. In collaboration with [Emmanuel Sander](#), this has now been further developed (*Surfaces and Essences: analogy as the fuel and fire of thinking*, 2013) who argue that:

We are constantly faced with a swirling and intermingling multitude of ill-defined situations. Our brain's job is to try to make sense of this unpredictable, swarming chaos of stimuli. How does it do so? The ceaseless hail of input triggers analogies galore, helping us to pinpoint the essence of what is going on. Often this means the spontaneous evocation of words, sometimes idioms, sometimes the triggering of nameless, long-buried memories.

The dynamics of such fluidity, notably in the light of the unusual insights of [Viktor Schauberger](#), are a rich source of metaphor of relevance to governance, as separately explored (*Enabling Governance through the Dynamics of Nature: exemplified by cognitive implication of vortices and helicoidal flow*, 2010).

Mathaphors: The term was introduced by Voss, as noted, as a means of expanding understandings of spirituality, namely through metaphors drawn from mathematics. In an interview by Tom McFarlane (*Mathematics, Ministry, and Mediation: an interview with Sarah Voss, Holos: forum for a new world view*, 2009), Voss indicates:

Mathaphors, however, have current as well as historical importance. Today's culture is largely caught up in the truths of science, which consistently uses mathematics as the primary language for both exploration and communication. To me, that means mathematics is also an exquisite candidate for contemporary spiritual exploration. [Lewis Thomas](#), author of many books on science, medicine, language, and philosophy, once referred to mathematics as the universal language of the future.

Isophors: In various papers to the [American Society for Cybernetics](#), [Kathleen Forsythe](#) (*Cathedrals in the Mind: the architecture of metaphor in understanding learning*, 1986) makes the point that: *It can be argued that metaphor is the fundamental core of our conceptual system as surely as the logic of form which we use in argument and debate.* She cites Gregory Bateson: "...metaphor is not just pretty poetry, it is not either good or bad logic, but it is in fact the logic upon which the biological world has been built, the main characteristic and organizing glue of this world of mental process..."

Forsythe then argues:

However, because our conceptual system is not something we are normally aware of, we have failed to account for its metaphorical nature in our discussion of truth and meaning. Yet its pervasiveness suggests a central and basic role in the underlying architecture of thought. Metaphor can create new meaning, create similarities and so define a new insight and new perception of reality.. Such a view has no place in the dominant objectivist picture of the world.

She further notes:

The pervasiveness of metaphor in our conceptual system suggests a central and basic role in the underlying architecture of thought. Metaphor represents the ability to understand one thing in terms of another as we ascribe an understood pattern to unknown phenomena and perceive their structural integrity within the environment of our experience. We can then begin to perceive the environment of learning as one in which analogical thinking serves as architecture, analytical thinking serves as engineering and the imagination ensures that the interactions which create life and meaning are always being realized anew. The implications for this approach to applied epistemology provide insights into the design and development of learning systems that support the creative nature of learning.

As separately indicated (*Being the Universe : a Metaphoric Frontier*, 1999), Forsythe also argues that *Analogy and its poetic expression, metaphor, may be the "meta-forms" necessary to understanding those aspects of our mind that make connections, often in non-verbal and implicit fashion, that allow us to understand the world in a whole way.*

Forsythe uses the term isophors for isomorphisms experienced in the use of language. ***Isophors are distinct from metaphors in that they are experienced directly. With the isophor there is no separation between thought and action, between feeling and experience. The experience itself is evoked through the relation.***

She suggests that the experience of one thing in terms of another, the isophor, is the means by which we map domain to domain and that our consciousness of this meta-action, when we observe ourselves experiencing this, lies at the heart of cognition. She has postulated the development of an epistemology of newness in which learning is the perception of newness and cognition depends on a disposition for wonder leading to this domain of conception-perception interactions. She argues that the notion of metaphor is commonly understood to mean the description of one thing in terms of another. This notion presupposes an objective reality. This objectivity may be questioned and if, as suggested by Maturana, (objectivity) is placed in parentheses:

... we can begin to appreciate clearly the role we play in the construction of our own perception of reality. for this reason, the notion of the experience of one thing in terms of another, the isophor, suggests that it is this dynamic constructing ability that involves conception and perception -- unfolding and enfolding, that this gives rise to the coordination of actions in recursion which we know as language.

As discussed separately (*Significance: Metaphor, analogy, symbol and pattern*, 1995), Forsythe stresses the relationship between metaphor and the *pattern language* developed by Christopher Alexander:

The architecture of how we structure the reality of our imagination is metaphoric. Metaphors are bridges that order the nature of our collective and individual humanity. Metaphor provides the reality to the pattern language of thought for it is the mechanism of ordering newness. Language only lives when each person has his or her own version that must constantly be re-created in each person's mind as he or she interacts with others in the environment. It is only through understanding these inner patterns that we can begin to consciously bring the outer pattern of our lives into harmony.

The potential of such a pattern language for enabling engagement with a meta-pattern has been variously explored separately (*5-fold Pattern Language*, 1984; *In Quest of a Strategic Pattern Language: a new architecture of values*, 2008; *Openness and Closure in Pattern Language: geometry versus resonance*, 2012).

Wholth as essential to health

Re-cognizing the meta-pattern: Health is essentially characterized by wholth, as especially respected in Chinese traditional medicine. Health is evident in the dynamic balance between the body's organs and processes -- a living exemplification of "getting one's act together". However the interpretation of the widely-cited adage *Mens sana in corpore sano* (a healthy mind in a healthy body) might be more appropriately understood as the balance of a healthy mind being essential to enabling the balance of a healthy body, rather than the latter being the enabling vehicle for the former. From this perspective, wholth is essential to health. An indication is offered by the sense of "feeling healthy", raising the question of what then "works" when "feeling together".

This suggests a need to "re-cognize" how the meta-pattern of wholth acts as a template for healthy interaction of the organs and their processes. However, given the evident togetherness of the body, clearly its processes are suggestive of the nature of that meta-pattern. As with the mathaphors of Voss, these processes may offer fruitful metaphors to enable that understanding.

Cognitive dis-eases: One approach to eliciting such insight into the underlying dynamics of wholth is through interpreting the diseases of the body as indicative of "cognitive diseases", characterized as "information diseases", as discussed separately (*Memetic and Information Diseases in a Knowledge Society: speculations towards the development of cures and preventive measures*, 2008). These may be fundamental to the **cybernetics of human knowing** (Maurice Yolles, *A Social Psychological basis of Corruption and Sociopathology*, 2008; Maurice Yolles and Kaijun Guo, *Paradigmatic Metamorphosis and Organisational Development*, *Systems Research and Behavioural Science*, 20, 2003, pp. 177-199).

The most striking example is offered by sugar consumption preferences (fast-sweet-food) linked to the worldwide epidemic of diabetes/obesity. This pattern may be fruitfully understood as engendered by a preference for positive-information-kicks ("information candy") linked to a knowledge epidemic as yet unnamed -- perhaps to be associated with "information overload". The latter contrasts with the "stripping away" advocated in certain spiritual disciplines and anti-stress programmes.

*** positive

Number and health: There is a useful sense in which the organs of the body can themselves be understood as "disciplines" undertaking particular processes -- effectively distinct (programming) "languages" engendered and interrelated through the nature of wholth, and suggesting a more fundamental role for "interdisciplinarity" and its variants as indicators of an underlying meta-pattern. This is consistent with emerging recognition of information as the underlying language of science, as noted in the review by Michael Nielsen (*The bits that make up the universe*, *Nature*, 2004) of a study by Hans Christian von Baeyer (*Information: the new language of science*, 2005):

What is the Universe made of? A growing number of scientists suspect that information plays a fundamental role in answering this question. Some even go as far as to suggest that information-based concepts may eventually fuse with or replace traditional notions such as particles, fields and forces. The Universe may be literally made of information...

Strangely this accords with the view of Pythagoras who held that number ruled the universe (having named both philosophy and mathematics). This is a perspective largely vindicated by science and quantum mechanics.

Symbolism of health: More curiously, however, is the understanding of health which the Pythagoreans associated with the form of the **pentagram** and the Greek goddess **Hygieia** (also Hygieia or Hygeia) -- the personification of health, cleanliness and sanitation, and the origin of the term "hygiene". As separately discussed, equally curious is the ancient Chinese mnemonic pattern of the *Wu Xing* -- in the form of a pentagram of five phases, still widely known in East Asia and closely associated with **Chinese medicine**, **acupuncture**, **feng shui**, and **Taoism** (*Cycles of enstoring forming mnemonic pentagrams: Hygieia and Wu Xing*, 2012).

It is therefore not so strange that icons of mathematics, such as Isaac Newton, should have delved into alchemy and its preoccupation with discovery of **azoth** as a universal medicine and the essential agent of transformation. Considered not only as the animating energy of the body, it was also the inspiration and enthusiasm moving the mind. It is the mysterious evolutionary force responsible for the relentless drive towards physical and spiritual perfection. The symbol of azoth was the **Caduceus**, used as a symbol of medicine, if mistakenly confused with the **Rod of Aesclepius**, as separately discussed (*Cognitive health as a sustainable cycle of self-reflexivity*, 2012).

Given the challenges to comprehension of the fundamentally integrative and transformative nature of "azoth", it is understandable (as with "alkahest") that it should be both indicative of those challenges in the case of "wholth" and suggestive of ways of understanding the essential function of the latter. However, given the limitations of categories, it is necessarily impossible to qualify wholth within any conventional framework -- other than through unsaying.

Even the confusion in use of the two symbols, each with its intertwined snakes, could be interpreted as a reminder that it is the complementarity of theology and mathematics (as being seemingly incommensurable) which is essential to comprehension and embodiment of that to which they point. Their intertwining is of course indicative of the fundamental pattern enabling life, namely DNA, as separately explored by Jeremy Narby (*The Cosmic Serpent: DNA and the origins of knowledge*, 1995) and discussed (*DNA Supercoiling as a Pattern for Understanding Psycho-social Twistedness*, 2004).

Death and the will to live: With wholth understood to be underlying health (as the viability of the physical body), this would suggest that death is usefully to be explored as a form of cognitive collapse at a fundamental level -- a collapse in the sustaining capacity of the

meta-pattern associated with fragmentation of its comprehension (again recalling Bateson's warning, cited above). Cognitive death then precedes physical death, whether or not it is occasioned by organ damage.

This is curiously consistent with the recognized importance of the "will to live", irrespective of tendencies to deprecate the significance of such a subtle and intangible factor. The will is thus a vital characteristic of wholth, as intimated by the work of [Arthur Schopenhauer](#) (*The World as Will and Representation*, 1819), and the [will to meaning](#) articulated by Søren Kierkegaard and others.

Such considerations provocatively reframe the current preoccupations with [immortality](#) of the physical body -- or [uploading of the mind](#) (into the "cloud"?) to sustain the pattern of synaptic connectivity. The viable possibilities are instead more reminiscent of Taoists quests for immortality through [inner alchemy](#).

Contextualizing wealth as engendered by wholth

As noted above, this exploration follows from an earlier speculative exercise (*El-Attractor -- Timeless Complex Dynamic: Health, Wealth, Stealth / Youth, Couth, Truth*, 2007). There the relationship between "health" and "wealth" was playfully explored in the light of a fundamental attractor appropriately recognized here in the intuitive recognized qualities of wholth. There is necessarily a degree of relationship between wealth and the sense of "getting one's act together", as well as with any consequent sense of "wealthiness". The dynamics of "enriching" are also of relevance -- rather than any static focus on "wealth".

Inner wealth: As has been made abundantly clear by the current financial crisis, wealth (as a tangible) and enriching (as a dynamic) are intimately dependent on the intangibles of confidence and trust. Confidence, as understood dynamically within any community, is also suggestive of a quality of wholth, as stressed above. This recalls the long (religious) tradition supporting the argument for [simple living](#), with its emphasis on discovering inner resources and wealth ([Duane Elgin](#), *Voluntary Simplicity*, 2010).

It has been characterized as a process through which individuals become satisfied with the tangibles they need rather than those to which they might otherwise aspire. This could be framed in terms of the sense of essential wealthiness experienced through intangibles rather than a dependence on tangibles as encouraged by socioeconomic convention. Again, to be viable, this implies a necessarily mysterious relationship to a sustaining sense of wholth enabling other forms of growth.

Concept map: These various connections suggest the need for an appropriate [concept map](#) through which the pattern could be clarified -- as indicative of a dynamic system. Such a configuration goes beyond that which can be achieved through conventionally nested hierarchies (cf. Freda J. Thornton. *A Classification of the Semantic Field Good and Evil in the Vocabulary of English*, 1988). There is an even greater need for this in the light of the confusions and conflations in the use of the variously terms -- and the neologisms which are variously emerging following a sense that the reality experienced is not adequately carried by the available terminology. Examples of neologisms, potentially indicative of neglected associations, include:

- **wellth:** as promoted (and possibly trademarked) in: *Wellth -- ultimate guide to the well-living workplace*, [Inner Wellth](#) (how the resources to be satisfied, physically well, and materially comfortable are within); [WELLth Learning Network](#); [Sustainable Wellth Network](#); Julie Maloney and Renee Moorefield (*Driven by Wellth: the 7 essentials for healthy, sustainable results in 21st Century business and leadership*, Wellth Productions, 2004)
- **wholing:** In a blog, J. Bruce Evans argues: *I coin the word wholing as a noun or participle meaning to become whole, in order to distinguish it from the more familiar participle, healing. For understanding salvation, wholing, I think, is a better metaphor than healing* (*Wholing*, 2010). However the term also forms part of the name of [Healing/Wholing Networking](#)

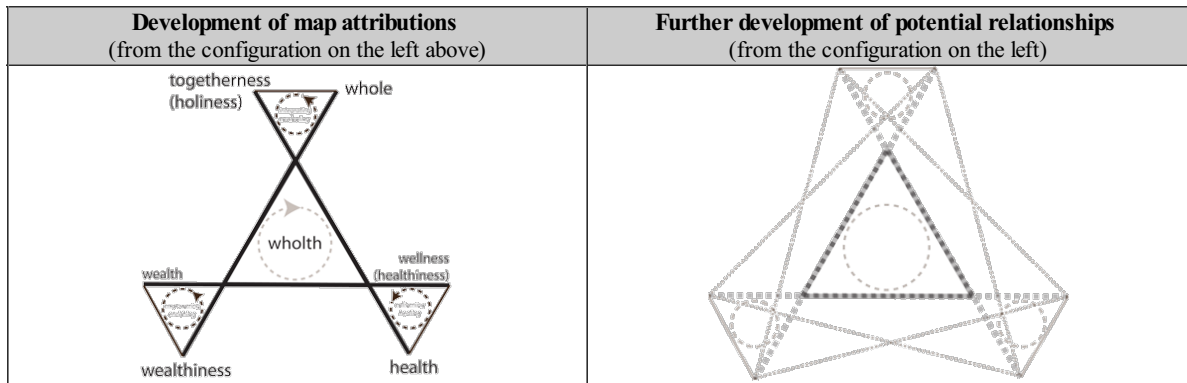
Concept maps as configurations of categories, whilst valued for technical purposes and semantic explorations, are essentially arid (in the sense regretted by Chaitin, above). In this context especially, they are not enabling devices for the process of engaging with wholth. They are restricted in their role as mnemonic aids, in the sense argued separately (*In Quest of Mnemonic Catalysts -- for comprehension of complex psychosocial dynamics*, 2007). Also regrettable is their relative limited ability to encompass relevant concepts articulated in other languages (as with *qi* and *wa*).

Clustering concepts associated with whole, health and wealth: A characteristic mnemonic aid meriting exploration is that achieved through rhyming, and any phonetic play on spelling, already evident in this context as discussed in the earlier paper (health, wealth, stealth; whole, hole). Some of these "messy" relationships are evident in the following table which draws attention to understandings which are seemingly well-carried by the objectivity of nouns, in contrast to those better carried by the subjective (experiential) implications of verbs and qualities of potentially greater significance, as argued separately (*Freedom, Democracy, Justice: Isolated Nouns or Interwoven Verbs? Illusory quest for qualities and principles dynamically disguised*, 2011).

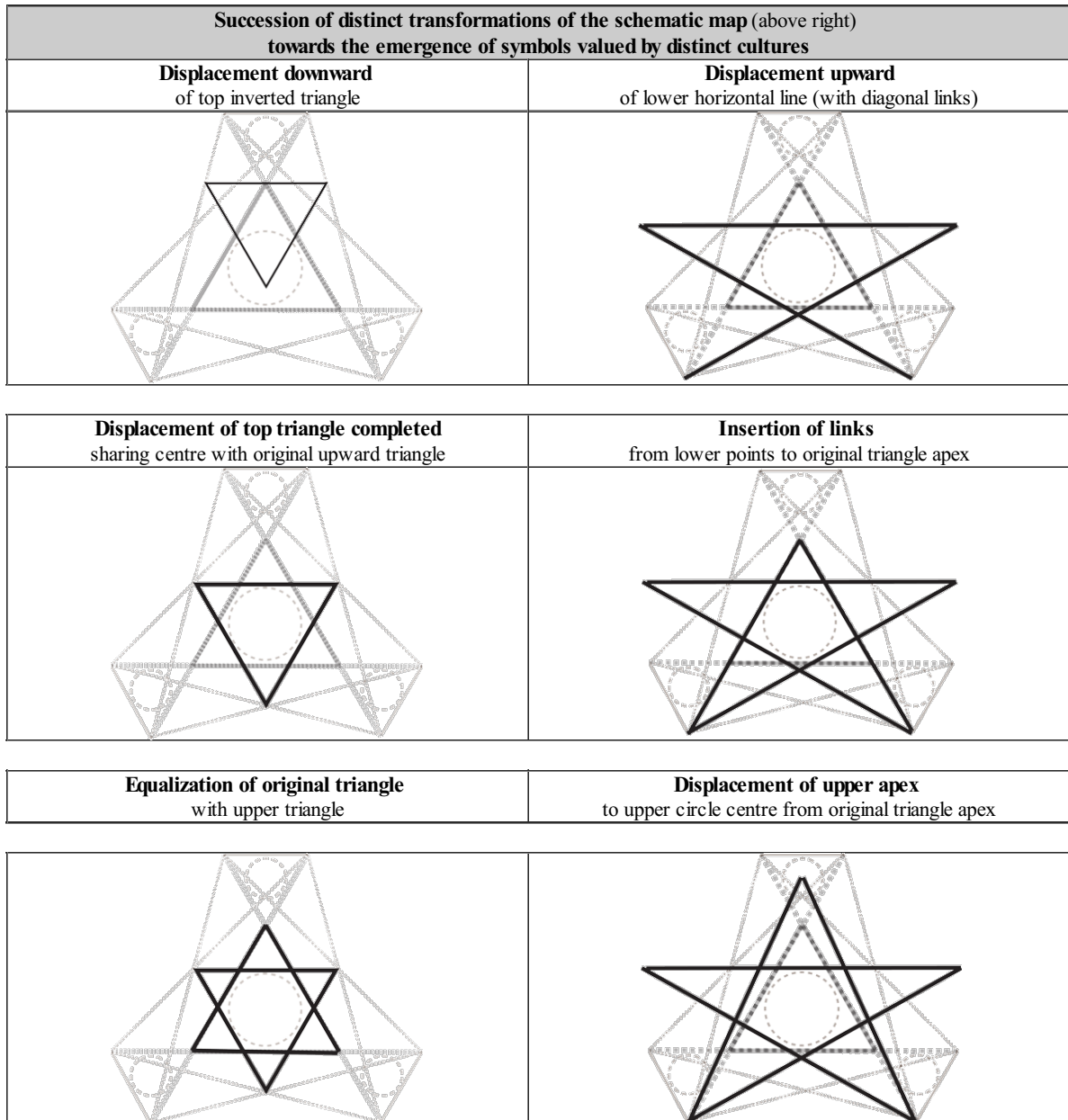
Interrelating wholth, health and wealth			
noun	wholth (whole)	health (well-being, wellth)	wealth
	feeling whole	feeling well	feeling wealthy
verb	make whole (enwhole, to whole)	make well (to heal)	to wealth (make wealthy, enrich)
gerund	wholing	healing, well-becoming	wealthing
quality	holy, holiness	healthy, healthiness (wellness)	wealthiness (richness)
	holism	(wellism, healthism)	(wealthism)
	wholesome	healthful	
?		welling	weal, wheeling

Aesthetic requirements and symmetry: The question here is how to configure the [semantic field](#) through transcending the inadequacies of such a tabular form or the conventions of a network representation of a concept map. The criterion in doing so would seem to be one of building an aesthetic dimension into the design of the representation.

As with "good vibes", it is of course the case that "resonance" is valued as a descriptor in many types of relationship and aesthetic experiences. It may be the essence of the experience of a qualitatively enriching environment. The strength and coherence of a piece of music, a song, or a poem may depend on a sense of resonance. Otherwise the "meta-pattern" of correspondences would be unstable. However they are depicted, the links (as correspondences) may be variously semantic, logical, aesthetic, or otherwise.



Possible transformation of the concept map: The relationships between concepts/categories in the map (above left) suggest the possibility of transformations of the configuration of concepts consistent with the arguments made above for the integrity of wholth emerging from a resonance hybrid. Some relationships may be strengthened and others weakened -- shifting from solid lines to dashed lines.



Animation indicative of the resonance characteristic of a meta-pattern: The distinct transformation processes in the two columns above are effectively moments in a continuing transformation process by which resonance would be characterized. This calls for use of animation techniques to represent this dynamic -- indicative of a cognitive dynamic.

In SVG enabled browsers, the following animation represents a provocative experiment in combining the conceptual associations suggested by the above arguments and parallel "screenshots". Note that the SVG animation works fine in Opera (slightly less well in Firefox, but with significant loss of animation effects in Chrome and Safari); in Safari, it is more convenient to right-click on the partial view and use the option to open the frame in a new window. Note it does **not** work with Internet Explorer.

The result is purely indicative of a range of possibilities with aesthetic and mnemonic characteristics -- in particular in relation to the speed of the animated elements and the possibility of their control by the user -- which could be variously enhanced. The following animation (if the browser displays it), although not interactive, has the advantage that the code takes the form of ordinary text which can be modified with relative ease -- notably changing colours and speed according to aesthetic preferences. In the Opera browser, to control the animation (or see the code), use right-click



For a related animation of greater subtlety, see *Dynamic Exploration of Value Configurations: interrelating traditional cultural symbols through animation* (2008). Other experimental representations of such animations, developed in support of related arguments, are presented separately (*Middle East Peace Potential through Dynamics in Spherical Geometry: engendering connectivity from incommensurable 5-fold and 6-fold conceptual frameworks*, 2012; *Swastika as Dynamic Pattern Underlying Psychosocial Power Processes: implicate order of Knight's move game-playing sustaining creativity, exploitation and impunity*, 2012). The latter offers numerous efforts to evoke insight into the nature of the "hole" discussed below".

In each case it is the manner in which credible cognitive relationships and correspondences between categories (and terms) form and dissolve, later to reform again -- as evident in aesthetic associations (rhyming, harmony, etc). Recent work of relevance includes that on neurotheology of Andrew B. Newberg (*Principles of Neurotheology*, 2010) and on the organization of music by the mind (Carol L. Krumhansl, *The Geometry of Musical Structure: a brief introduction and history, Computers in Entertainment*, 2005; Dmitri Tymoczko, *The Geometry of Musical Chords, Science*, 2006).

Whole and hole in the light of the stealth of wholth

The recognized interplay between "holism" and "wholism" has potential implications for comprehension of "wholth", even though the latter is distinguished as a dynamic underlying and driving the former.

Mysterious nature of holes: There is an extensive discussion of "whole" with respect to integrity and integration, as noted above. It constitutes an aspiration with respect to health as a consequence of healing. Also noted were the variants of "hole" in the forms of holon and holomovement. Much less recognized is the somewhat mysterious nature of holes from mathematical and other perspectives, as noted in the [entry on holes](#) in the *Stanford Encyclopedia of Philosophy*. This reflects the extensive exploration by Roberto Casati and Achille C. Varzi (*Holes and Other Superficialities*, 1994) -- with respect to the borderlines of metaphysics, everyday geometry, and the theory of perception. This raises suspicions regarding the potential *Existential implications -- of a "hole" in conventional reality?* (2012). This is consistent with arguments regarding some such "blindspot".

Strange characteristics of hole have also been rendered explicit in the "black hole" recognized by astrophysics -- as well as the "white hole", whose implications have been explored by Peter Russell (*The White Hole in Time: our future evolution and the meaning of now*, 1993). Strangely too, the current preoccupation of politicians and economists is with the "deepening financial holes", only too evident as a consequence of the indebtedness engendered by the highest degree of incompetent policy-making (*We Are in a Deeper Financial Hole Than Most Think*, *The Wall Street Journal*, 2 December 2012). Such holes are evident in the balance sheets of many collective initiatives.

Dynamics of a hole: The intuitive appropriateness of "hole" as a descriptor, shared by these disparate systemic phenomena, raises questions as to how a hole "functions". This may be suggestive of the mysterious dynamics of wholth -- especially its essential incomprehensibility. Its operation as a vortex and as a strange attractor merit consideration (*Enabling Governance through the Dynamics of Nature: exemplified by cognitive implication of vortices and helicoidal flow*, 2010; *Human Values as Strange Attractors*, 1993).

The hole of requisite complexity, through which comprehension might be increased, may well be that offered by the black hole of astrophysics -- as being the focus of intensive study. Ironically the dynamics engendered by financial holes do not seem to be explored to the same degree or with models of requisite complexity. Especially interesting in this respect are the implications of dynamic properties such as the "event horizon" -- of which a [variant](#) is appropriately recognized in artificial intelligence, but not so evidently with respect to collective intelligence (*Enabling Collective Intelligence in Response to Emergencies*, 2010).

It could be readily argued that the dynamics of a financial hole engender corresponding effects. Most evident is the manner in which they ingest any asset within their range (as a sink hole) and the extent to which they are associated with processes of denial -- even regarding

their own existence.

Wealth and stealth: More intriguing is the role of "stealth" with respect to finance and risk-taking, as explored in the earlier paper (*EL-Attractor -- Timeless Complex Dynamic: Health, Wealth, Stealth / Youth, Couth, Truth*, 2007). Stealth (even as stealing) is readily to be understood as associated with the process of engendering wealth, at least in its most tangible forms -- and potentially more generally with respect to information and knowledge. The ambiguity is evident in preoccupation with "confidence-building" in a community to enable profitable transactions dependent on the secrecy of "confidentiality agreements" (or "non-disclosure agreements") and limited transparency. Creative initiatives, often initially protected from public scrutiny, may only be possible through "stealing time" from more conventional obligations. As with the risk-taking associated with conventional wealth generation, engendering inner wealth may involve what Mark Nepo has described as *The Exquisite Risk: daring to live an authentic life* (2005).

Curiously this process also seems to be evident in the case of "inner wealth" (as mentioned above), again possibly experienced as "wellth". It is "acquired" surreptitiously -- effectively by stealth -- in ways of which others can only be partially aware, thereby undermining the capacity to communicate its nature. A classic effort, expressed with appropriate ambiguity, is that of C. S. Lewis (*Surprised by Joy*, 1955). There is even a sense in which it is "stolen" from others through appropriation of that which is not valued "otherwise". This seemingly selfish process may be framed as *En-joying the World through En-joying Oneself* (2011), understood as eliciting the potential of globalization through cognitive radicalization. A sense of this is offered by the capacity to see humour in a situation, to render it into song, to appreciate it in dramatic terms, or to value its symbolism.

Given Russell's account of a "white hole", there would appear to be a degree of ambiguity to the nature of the dynamics of holes -- indicative of the dynamics of wholth. Ironically, rather than as a "sink", holes may also function as a "source" -- consistent with the role of "wells", the sense of (up)welling, and well-becoming -- all with associations to health, whether of the individual or the community.

Relevance of hole to governance: Curiously Oxfam has proposed a "doughnut model" in response to the calamitous social and environmental strategic challenges of the planet (Kate Raworth, *A Safe and Just Space for Humanity: can we live within the doughnut?*, Oxfam, February 2012)). Separately this has been explored with respect to the implications of the "hole in the doughnut" (*Exploring the Hidden Mysteries of Oxfam's Doughnut: recognizing the systemic negligence of an Earth Summit*, 2012). In terms of the argument above, the perceived relevance of the doughnut (hole) model may be seen as an intuitive recognition of the necessity of ensuring an adequate cognitive distance from wholth, rather than seeking (vainly) to encompass it by conventional categories.

The commentary on the Oxfam hole was based on earlier exploration of the possibility of an unrecognized "cognitive hole" associated with global civilization (*Unthought as Cognitive Foundation of Global Civilization: implications of God, debt, overpopulation, waste, negligence, encroachment and death?* 2012). Curiously this is consistent with thinking regarding a **doughnut model of the universe**. This could also be consistent with arguments regarding holon and holomovement (as indicated above).

Such a hole would also seem to be consistent with recognition of the locus of any "indwelling intelligence" (*Implication of Indwelling Intelligence in Global Confidence-building: sustaining the construction and dynamic of psychosocial reality through questioning*, 2012). This suggests the value of its interpretation in terms of the dynamics of a "heliocentric model" (*Identification with a sustaining "heliocentric" locus?* 2012). Understood as an "ultimate" point of reference, the necessary cognitive "detachment" from it becomes more evident (*Paradoxes of Engaging with the Ultimate in any Guise: Living Life Penultimately*, 2012).

Well-becoming? Such arguments raise questions concerning the ambiguity between individual aspirations to a sense of "fulfillment" and the value variously attached to "emptiness" (of the mind) in some traditions -- of "well-being", if not "well-becoming". If an individual can be fruitfully understood as centered in some way on an underlying dynamic of wholth, this ambiguity is more comprehensible -- as a cognitive characteristic of that sustaining dynamic. Ironically the strange association of "health" with "emptiness" is then "well-described" by Hofstadter's title (*I Am a Strange Loop*, 2007).

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