



laetus in praesens

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University of Ignorance

Engaging with nothing, the unknown, the incomprehensible, and the unsaid

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Introduction

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Introduction

The possibility of a University of Ignorance merits consideration as a process with which people could engage to unlearn. This would naturally contrast with the worldwide preoccupation with the culmination of intellectual effort in the education and research undertaken so exclusively at conventional universities -- framed unquestionably as the advancement of knowledge. Whatever their much acclaimed merits, these tend to obscure the recognition of the potential significance of what is not known, most notably in relation to any transcendent "wisdom" which features so questionably in university preoccupations, if at all.

A consideration at this time is the apparent inability of the academic world to elaborate insights of relevance in practice to the governance of a global civilization faced with a plethora of seemingly unresolvable challenges -- and with the possibility of more to come of a potentially unforeseeable nature. The assertive declarations of competence and insight from the perspectives of the various disciplines are themselves indicative of the inadequacy of "knowledge" -- given the problematic quality of discourse between them. By contrast, how can the quality of discourse be enhanced between any acknowledging their ignorance ?

The question is then where one can go to engage creatively and otherwise with ignorance, unknowledge and nothingness, however these might be understood or tragically experienced. Where can the quest for insight be explored without the obsessive focus on cognitive closure and the associated constraining emphasis on knowledge acquisition, publish-or-perish, and intellectual property? Where can unusual questions be evoked, irrespective of any approval by authorities and peer groups, claiming unquestionable insight?

The possibility of an appropriately paradoxical "University of Ignorance" follows from interweaving previous explorations of a "[University of Earth](#)" together with the past "organization" of an experimental [International School of Ignorance](#). The latter was initially conceived as a complement to the archetypal preoccupation with a "School of Wisdom" and the dynamics typical of transdisciplinary discourse (*Evaluating Synthesis Initiatives and their Sustaining Dialogues*, 2000). The requisite paradoxical nature of some such initiative was previously explored with respect to "meta-education" (*Higher Education ∞ Meta-education ? Transforming cognitive enabling processes increasingly unfit for purpose*, 2011).

The essential role of ignorance might also be explored in the light of the focus on what is cognitively "missing", as articulated by [Terrence Deacon](#) (*The Importance of What is Missing*, *New Scientist*, 26 November 2011). This is relevant to the widespread experiential challenge of "nothingness" (*Going Nowhere through Not-knowing Where to Go*, 2013; *Configuring the Varieties of Experiential Nothingness*, 2012) and various understandings of the "unthought" and the "unsaid" (*Unthought as Cognitive Foundation of Global Civilization*, 2012; *Varieties of the Unsaid in Sustaining Psycho-social Community*, 2003).

In a period when the quality of knowledge -- so widely, arrogantly and uncritically hyped -- would seem to be inadequate to the challenges of a global knowledge-based civilization, a more assiduous engagement with the ignorance implicit in such failure merits consideration. A more appropriate engagement with ignorance -- and the process of ignoring -- could prove to be a fruitful complement to the pattern of obsession with knowledge and its acquisition (cf. *Identity, Possessive World-making and their Transformation Dynamics*, 2012). This has the merit of honouring the despair experienced by those faced with nothing except promises. Spanish Government Clueless About Youth Unemployment Fixes? - January 30, 2013

This is written at a time when youth unemployment in at least one developed country, Spain, has reached unprecedented levels, with "nothing" on offer for their future (*Spanish Youth Unemployment is on The Verge of Breaking 60%*, *Business Insider*, 24 January 2013; *Spanish Government Clueless about Youth Unemployment Fixes? Seriously Spain*, 20 January 2013). The period is also witness to a gathering of the *World Economic Forum* in which a small minority of leaders warned the majority of their complacency (*World Economic Forum ends on warning note over 'complacency'*, *The Guardian*, 26 January 2013). This is perhaps symptomatic of the ignorance of that gathering when "nothing" disastrous was anticipated immediately **prior** to the continuing global financial crisis their negligence had enabled.

For people faced to such a degree with "nothing", the question here is how a University of Ignorance might be imagined and how one might fruitfully engage in its processes. The argument assumes that, until it is recognized how the knowledge processing capacity of conventional universities is "part of the problem", it may well be impossible to comprehend the paradoxical nature of any "solution" required. As noted by Albert Einstein: *The significant problems we face cannot be solved at the same level of thinking we were at when we created them.*

How might a University of Ignorance be enacted and embodied -- collectively and individually?

Reframing the conventional deprecation of ignorance

Proactive engagement with ignorance: The only intergovernmental institution to address ignorance proactively would appear to have been UNESCO through a Philosophy Forum on *What We Do Not Know* (Paris, 1995). The political and scientific stakes associated with the dialogue were summarized with excerpts from the UNESCO perspective by Ayyam Sureau (*First UNESCO Philosophy Forum*, 1995), with an introduction provided by Bernard Williams (*Philosophy and the Understanding of Ignorance*, *Diogenes*, 43, March 1995, 169, pp. 23-36).

The value of ignorance has been mostly recently recognized by Stuart Firestein (*Ignorance: how it drives science*, 2012), arguing that it is ignorance, not knowledge, that is the primary driver of science through the experience of "not-knowing". He shows how scientists use ignorance to programme their work, to identify what should be done, what the next steps are, and where they should concentrate their energies. He includes a catalogue of how scientists use ignorance, consciously or unconsciously. (See review by Rudy M. Baum, *The Importance of Being Ignorant*, *Chemical and Engineering News*, 28 January 2013).

A website on the *Sociology of Ignorance* has been recently created offering *Select Scholarly Ignorance Resources*, namely a valuable range of bibliographical references, many of them to documents accessible via the web. The website is dedicated to the study of ignorance from a sociological perspective. Academics and graduate students from around the world contribute to the website, but there is no official affiliation with any one institution or research network.

Ignorance is widely deplored. Claims are made that every effort is made to reduce it by institutional programmes, media broadcasts, books and the like. Even as a "driver", Firestein's "not-knowing" could be so interpreted. Unfortunately the ignorance deplored in this way obscures those forms of "ignorance", and the significance of the "unknown", as acknowledged by those esteemed as wise, or as evoking widespread appreciation for other reasons. The following is a selection of [quotes concerning ignorance](#) (from *Brainy Quote*) from those who have recognized a way of engaging proactively with ignorance:

- Confucius: Real knowledge is to know the extent of one's ignorance.
- Socrates: I know nothing except the fact of my ignorance.
- Diogenes: I know nothing, except the fact of my ignorance.
- Thomas Sowell: It takes considerable knowledge just to realize the extent of your own ignorance.
- Will Durant: Education is a progressive discovery of our own ignorance.
- Thomas Jefferson: Ignorance is preferable to error, and he is less remote from the truth who believes nothing than he who believes what is wrong.
- Benjamin Franklin: The doorstep to the temple of wisdom is a knowledge of our own ignorance.
- Daniel J. Boorstin: The greatest obstacle to discovery is not ignorance - it is the illusion of knowledge.
- Wallace Stevens: One's ignorance is one's chief asset.
- Francois de La Rochefoucauld: In friendship as well as love, ignorance very often contributes more to our happiness than knowledge.
- Charles Kettering: A person must have a certain amount of intelligent ignorance to get anywhere.
- Karl Popper: Our knowledge can only be finite, while our ignorance must necessarily be infinite.
- John Ruskin: To know anything well involves a profound sensation of ignorance.
- Ruben Blades: I think we risk becoming the best informed society that has ever died of ignorance.
- Alfred North Whitehead: Not ignorance, but ignorance of ignorance, is the death of knowledge.
- Carter Burwell: If not bliss, ignorance can at least be fun.
- Richard P. Feynman: It is in the admission of ignorance and the admission of uncertainty that there is a hope for the continuous motion of human beings in some direction that doesn't get confined, permanently blocked, as it has so many times before in various periods in the history of man.

With respect to other topics relating to ignorance, of concern to a University of Ignorance, a similarly proactive selection is available from *Brainy Quote* on [nothing](#), the [unknown](#), the [incomprehensible](#), and the [unsaid](#). With respect to nothing, the insight of [Omar Khayyam](#), the Persian polymath and author of the *Rubáiyát of Omar Khayyám*, is especially relevant:

*And if the Wine you drink, the Lip you press,
End in the Nothing all Things end in -- Yes --
Then fancy while Thou art, Thou art but what
Thou shalt be -- Nothing -- Thou shalt not be less.*

The paradoxically proactive quality of such insight, as a complement to "enlightenment", has been explored separately ([Enlightening Endarkenment: selected web resources on the challenge to comprehension](#), 2005).

Unconscious preference for ignorance: By contrast, the "appreciation" of ignorance may be understood otherwise in the light of new research published by the American Psychological Association (Steven Shepherd and Aaron C. Kay, [On the Perpetuation of Ignorance: system dependence, system justification, and the motivated avoidance of sociopolitical information](#), *Journal of Personality and Social Psychology*, 102, 2012). The paper summary indicates

How do people cope when they feel uninformed or unable to understand important social issues, such as the environment, energy concerns, or the economy? Do they seek out information, or do they simply ignore the threatening issue at hand? One would intuitively expect that a lack of knowledge would motivate an increased, unbiased search for information, thereby facilitating participation and engagement in these issues- especially when they are consequential, pressing, and self-relevant. However, there appears to be a discrepancy between the importance/self-relevance of social issues and people's willingness to engage with and learn about them.... the authors hypothesized that, rather than motivating an increased search for information, a lack of knowledge about a specific sociopolitical issue will (a) foster feelings of dependence on the government, which will (b) increase system justification and government trust, which will (c) increase desires to avoid learning about the relevant issue when information is negative or when information valence is unknown. In other words, the authors suggest that ignorance-as-a function of the system justifying tendencies it may activate-may, ironically, breed more ignorance.

In commenting on this research, [Dave Cohen](#) ([Ignorance is Bliss](#), *Decline of the Empire*, 6 February 2013) focuses on the conclusions that:

- The less people know about important complex issues such as the economy, energy consumption and the environment, the more they want to avoid becoming well-informed
- And the more urgent the issue, the more people want to remain unaware

Varieties of ignorance: Understanding of the varieties of ignorance and its implications has been variously considered (see below), seemingly most comprehensively by [Nicholas Rescher](#) ([Ignorance: on the wider implications of deficient knowledge](#), 2009). He examines the manifestations, consequences, and occasional benefits of ignorance in areas of philosophy, scientific endeavour, and ordinary life. In seeking to uncover the factors that hinder cognition, he refers to philosophers, theologians, and scientists. He concludes that ignorance itself is a fertile topic for knowledge, recognizing that **the boundaries of comprehension is where wisdom begins**. As noted by one reviewer, the cumulative effect of Rescher's examination is the conclusion that **our understanding of ignorance may be more important in a practical sense than our efforts to understand or define knowledge**. His related works also present arguments of relevance to any proposed University of Ignorance (*Unknowability: an inquiry into the limits of knowledge*, 2009; *Aporetics: rational deliberation in the face of inconsistency*, 2009; *The Limits of Science*, 1999; *Paradoxes: their roots, range, and resolution*, 2001).

Progressive increase in ignorance: Paradoxically -- for a knowledge-based civilization in which it is widely proclaimed that knowledge is increasing -- it can also be claimed that ignorance is necessarily increasing as a direct consequence of that increase in knowledge(cf. John F. Kennedy: *The greater our knowledge increases the more our ignorance unfolds*). This follows from the fact that for every new piece of knowledge discovered, however this is understood, the dissemination of that insight and its comprehension must necessarily lag to an ever-increasing degree. The categories of ignorance presented here -- conventionally to be understood as knowledge -- themselves constitute an increase in ignorance for those who are variously unaware of them.

This lag arises from information overload, tendencies to specialization, and constraints on the system of dissemination -- together with any tendency to restrict such dissemination, whether arising from commercial or other forms of secrecy. The relative ignorance of any individual or group with respect to the knowledge available (somewhere) can therefore be understood as increasing -- irrespective of any increase in knowledge from its selective acquisition. To survive in a knowledge-based civilization it is seemingly necessary to "not-know" and to forget to a greater degree than is recognized.

Instances of a "University of Ignorance": A University of Ignorance would therefore have as a preoccupation the implications of such increasing ignorance and the manner with which individuals and groups might engage with its potential significance -- irrespective of the manner in which "ignorance" is deprecated.

As might be expected, there are multiple web references to a "University of Ignorance" -- used in rhetorical allusions in deprecating the ignorance of various academic and other initiatives. A Google search indicates 13,800. Google Scholar lists none. Fewer results of a similar nature are indicated for "Academy of Ignorance". Of potentially much greater relevance, given the unknowability associated with the hypothesized [technological singularity](#), is the creation of a [Singularity University](#) to "assemble, educate and inspire a cadre of leaders who strive to understand and facilitate the development of exponentially advancing technologies and apply, focus and guide these tools to address humanity's grand challenges."

Implications of the "missing" As indicated above, the work of [Terrence Deacon](#) (*Incomplete Nature: how mind emerged from matter*,

2011), and his focus on what is "missing" (*The importance of what is missing*, *New Scientist*, 26 November 2011; *Consciousness is a matter of constraint*, *New Scientist*, 30 November 2011), suggests a way of thinking about "ignorance" as the absence of "knowledge". For Deacon:

... **have we been looking in the wrong places for clues?** ... brain researchers and philosophers of mind have focused on brain processes, neural computations and their correspondences with the material world. But what if we should be focusing on what is not there instead? ... I believe that in order to overcome this stalemate **we need to pay more attention to what is intrinsically not present in everything** -- from life's functions and meanings to mind's experiences and values. [*emphasis added*]

His theory follows naturally from his previous book (*The Symbolic Species: the co-evolution of language and the brain*, 1997).

Varieties of ignorance from various perspectives

It is inherently challenging to suggest ways of understanding ignorance that could evoke respect for the potential that it might represent for consideration in a University of Ignorance. The challenge derives in large part from the essentially elusive nature of ignorance and its resistance to definition -- any "definition" necessarily to be understood as "knowledge".

The tendency to define and categorise, eliciting knowledge from ignorance, is a characteristic of the disciplines of conventional universities, effectively endeavouring to draw ignorance into a the fold of knowability. Is it then possible for a conventional university to engage as completely with ignorance as those who experience it might desire -- faced as they are with the nothingness of the unknown?

Paradoxically such issues raise the question as to whether and how it might be possible to be insightful, if not "knowledgeable", about ignorance. Indicative understandings of ignorance include:

- **Miscellanea:** A very helpful compilation of classifications of of what is not known, including ignorance, is provided by Andreas Schamanek (*Taxonomies of the Unknown*). This is to be contrasted with the efforts of Ronald Duncan and Miranda Weston-Smith (*The Encyclopedia of Ignorance: everything you ever wanted to know about the unknown*, 1978).
- **Library science perspective:** Andrew Abbott (*Varieties of Ignorance*, *The American Sociologist*, 41, 2010) explores three types and levels of ignorance about the professions: expert, amateur, and professional on the basis of empirical data and the literature. He distinguishes between ignorance of facts, of literatures, and of skills, characterizing each type of ignorance by its mix of the three. Amateur ignorance is then mostly of skills, and professional ignorance mostly ignorance of collateral literatures. For Abbott, expert ignorance reflects the use of theory as a mnemonic device and so is particularly insidious.
- **Inadequacy in modelling:** As noted by Philippe Smets (*Varieties of Ignorance and the Need for Well-founded Theories*, 1999), the great danger in computer implementation of approximate reasoning is the use of inappropriate models. For Smets, the stubborn use of one model is inappropriate as ignorance, uncertainty and vagueness are really different concepts. The argument is illustrated by presenting a survey of certain forms of ignorance and of the mathematical models that have been suggested to quantify ignorance. Smets notes that Ignorance can be subdivided into 3 large categories: incompleteness, imprecision, and uncertainty, as argued by P. P. Bonissone and R. M. Tong (Editorial: reasoning with uncertainty in expert systems, *I.J. Man Machine Studies*, 22, 1985):
 - Incompleteness covers cases where the value of a variable is missing.
 - Imprecision covers cases where the value of a variable is given but not with the precision required.
 - Uncertainty covers cases where an agent can construct a personal subjective opinion on a proposition that is not definitively established for him.

Smets offers a valuable articulation of these categories of ignorance into many subcategories in relation to the type of model. Among the numerical models proposed to cope with the various forms of ignorance, the most used are the fuzzy sets theory, probability theory, possibility theory, and the theory of evidence.

P. G. Armour (*The Five Orders of Ignorance*, *Communications of the ACM*, 43, 2000): Lack of Ignorance, Lack of Knowledge, Lack of Awareness, Lack of Process, Meta Ignorance

- **Economics:** H. Thompson (*Ignorance and Ideological Hegemony: a critique of neoclassical economics*. *Journal of Interdisciplinary Economics*, 8, 1997). G. L. S. Shackle is recognized as having introduced the notion of unknowledge into economics (*The Bounds of Unknowledge*, 1983).
- **Medicine:** Ann Kerwin (*None Too Solid: Medical Ignorance*. *Science Communication* 15, 1993)
- **Education:** Ann Kerwin and Marlys Witte have developed a widely cited *Map of Ignorance* (*Q-cubed Programs: What Is Ignorance?*). This has been variously developed as an "ignorance paradigm" reframing professional performance from the textbook model of a highly skilled, successful "master" to a more realistic one where doubt, confusion, failure and awareness of one's limitations are essential to learning. The paradigm has been successfully used in disciplines such as medicine and law. It has been used to promote "lifelong learning" skills in business students (Peter Standen, et al., *Using the Ignorance Paradigm to Teach Lifelong Learning Skills*).

Other approaches include L. M. Cohen (*Mapping the Domains of Ignorance and Knowledge in Gifted Education*, Roeper Review, 18, 1996), David W. DeLong (*Lost Knowledge: confronting the threat of an aging workforce*, 2004).

- **Environment:** Dave Pollard (*Varieties of Ignorance; The Way of Ignorance*, 2006) provides a summary from a recently reprinted book by **Wendell Berry** (*The Way of Ignorance And Other Essays*, 2005)
- **Religion/Theology:** The Sanskrit *Samkhya Karika* distinguishes five varieties of ignorance: *Tamas* (obscurity) of eight kinds, *Moha* (delusion) of eight kinds, *Mahamoha* (extreme delusion) of ten kinds, *Tamisara* (gloom) of eighteen kinds, and *Andkatamisra* (utter darkness) of eighteen kinds.
Catholic theology recognizes three categories of ignorance:

- **Invincible ignorance:** lack of knowledge that a person has no way to obtain
- **Vincible ignorance:** lack of knowledge that a rational person is capable of acquiring by making an effort
- **Nescience:** lack of knowledge based on a theory, notably that a human being cannot attain to any (or at least certain) knowledge of God, namely a state of ignorance, especially such as an agnostic professes.

Yaakov Brawe (*In Pursuit of Ignorance*, Chabad.org, 2004) distinguishes four classes of ignorance as follows:

- **Passive ignorance** is easy to understand and easy to come by. It's what fills a person's head after a lifetime spent in front of a television set. It is the inevitable and automatic outcome of doing nothing with one's mind.
- Much of what the university has to offer, however, is another variety of ignorance, **active ignorance**. Active ignorance is commonly mistaken for knowledge, so that although we imagine that we go to school in order to fill our heads with wisdom, we are really there to exchange one type of ignorance for another.
- **Essential ignorance** is achieved when a person becomes truthfully and sincerely cognizant that he lacks understanding. In contrast to passive ignorance, essential ignorance represents a relatively advanced state of self-comprehension. In Chassidic parlance it is described by the term *bittul* (self-negation).
- Just as essential ignorance is necessary to obtain knowledge, knowledge is a prerequisite to attain the ultimate goal of **enlightened ignorance**. Since enlightened ignorance surpasses knowledge and wisdom, it is not knowledge or wisdom, which is to say that it is a form of ignorance. However, unlike essential ignorance, which precedes knowledge, enlightened ignorance supersedes knowledge.

Sri Aurobindo (*Seven Types of Ignorance*, *Sri Aurobindo Studies*) distinguishes: self-ignorance, cosmic ignorance, egoistic ignorance, temporal ignorance, psychological ignorance, constitutional ignorance, and practical ignorance.

- **Philosophy:** As noted above, understanding of the varieties of ignorance and its implications has been variously considered, seemingly most comprehensively by the philosopher **Nicholas Rescher** (*Ignorance: on the wider implications of deficient knowledge*, 2009).

In his introduction to philosophy, William Blattner (*Introduction to Philosophy: Freedom*, 2009):

- Concomitant ignorance: had you known what you did not, you would not have acted differently
- Consequent ignorance: ignorance for which you are responsible (willful ignorance, not knowing what you can and ought to know)
- Antecedent ignorance: ignorance that leads you to act in a way you would not otherwise act

- **Ethics:** Amélie Rorty (*Essays on Aristotle's Ethics*, 1980, pp. 267-269) provides a valuable introduction to the influence of Aristotelian thinking on the understanding of ignorance by arguing:

Once Aristotle has tied virtue to **phronesis**, he must face the question whether he is committed to a version of the Socratic position: that wrongdoing involves a failure of practical wisdom (phronesis), that it essentially involves ignorance of what is good... By building on the distinctions he has drawn... between varieties of intellectual activity to which their correspond varieties of objects of knowledge, Aristotle can show that there are varieties of ignorance. The next step is to show that varieties of wrongdoing can be distinguished by distinguishing varieties of ignorance.... For practical as well as for philosophic purposes it is important to be able to distinguish the failures of the various sorts of wrongdoers, to understand the source of their ignorance... We do not know how to deal with the variety of wrongdoers until we understand why they failed to act from knowledge that was in principle available to them. They could have acted otherwise, they might be thought capable of knowing better: why did they not?

.... But to understand how a person can get pleasure (and honor) right *and* get them wrong, we need a full investigation of the character of pleasure. The taxonomy of voluntary wrongdoing remains incomplete until we have an explanation of the variety of ways that a person can be so mistaken about pleasure that he can be misled by it, and an account of how a person who is misled by pleasure can nevertheless be acting voluntarily.

- **Disasters:** Of great relevance to current efforts at global governance in the face of crises, Michael Smithson (*Ignorance and Disasters*, *International Journal of Mass Emergencies and Disasters*, 8, 1990) summarizes his perspective as follows:

While ignorance has long troubled efforts to prevent, prepare for, or manage the aftermath of disasters, relatively little work has been done on the specific varieties of ignorance and the roles they play in disasters. The classical frameworks for decision-making under "uncertainty" are too restrictive, and many prescriptions for disaster management simply call

for better communication or more data collection by way of reducing ignorance. Unfortunately, in connection with disasters, ignorance often is irreducible. This article presents a framework for understanding the various kinds of ignorance, and utilizes that framework to provide some insights and tools that may improve disaster preparedness, management, recovery, and learning.

He considers the matter under the following headings:

- Facing up to and learning from ignorance,
- A sociological framework for ignorance in disasters,
- Issues in ignorance representation and assessment (The Fallacy of False Precision; Encoding and Representing Ignorance; Assessing Ignorance)
- Factors promoting ignorance before and during disasters (The Pre-Disaster Culture; Ignorance and Disaster Response)
- Managing ignorance and learning from disasters

The examples above derive primarily from searches within a domain relating to "varieties of ignorance" (as perceived by that domain) and are purely indicative rather than exhaustive. Analyses of ignorance within a domain (from the perspective of another domain) are **not** included. There is of course a case for using the "varieties of knowledge" as an approach to the ignorance they address or which may be implied by each such approach.

The unreconciled sets of varieties, whether of knowledge or ignorance, is consistent with the conclusion of 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.

What is the ignorance that underlies conventional knowledge, sustaining Rescher's "strife", and inhibiting any fruitful reconciliation? (cf. *Unthought as Cognitive Foundation of Global Civilization*, 2012). Hence the relevance of the provocative insight of [Ambrose Bierce](#): *The small part of ignorance that we arrange and classify we give the name of knowledge.*

The variety of perspectives on the "varieties of ignorance" helpfully makes the further point that "ignorance" is resistant to being effectively "grasped" -- however effectively this may appear to have been done from a given conventional perspective. Cognitive efforts at "grasping" can be provocatively explored in terms of harassment, as separately discussed (*Beyond Harassment of Reality and Grasping Future Possibilities: learnings from sexual harassment as a metaphor*, 1996).

Indicative cognitive challenges of a University of Ignorance

A case can be made for elaborating a [semantic map](#), or a [concept map](#), to interrelate the various partial insights into ignorance. This would enable exploration of how inclusive or exclusive was the perspective from any particular domain. There is a tragically instructive irony to any effort to elaborate such a map, namely that it would itself be subject to intellectual property constraints, according to the copyright law restricting its dissemination. This would distinguish it as knowledge -- namely as distinct from the ignorance it purported to map. Ignorance does not lend itself to copyright restrictions -- unless it is claimed to be knowledge.

The following clusters offer different ways of framing this challenge for a University of Ignorance, although such clustering is itself a misrepresentation. It implies an elusive "magma" of ignorance underlying the "tectonic plates" of knowledge implied by the "superficial" ordering and categorisation of ignorance. Recognition is already given, metaphorically, to the shifting tectonic plates of global society (cf. Robert Davies, *The Shifting Tectonic Plates: facing new community challenges to business in a fragile world of risk and opportunity*, The Prince of Wales International Business Leaders Forum, 2002). No systematic effort has been made to inform the following pattern of clusters with the categories of ignorance identified from the perspective of the domains above. The clustering is intended to be indicative rather than exhaustive -- especially given the illusion associated with any effort to be exhaustive in relation to ignorance.

Cluster 1: This cluster is the most general but is potentially the most fundamental, despite the possibility of its superficial consideration. It points to the paradoxical challenge of any effort at comprehension:

Unknown as implying ignorance: In this apparently simple case, not knowing can be held to be a form of ignorance. As separately discussed (*Unknown Undoing: challenge of incomprehensibility of systemic neglect*, 2008), the former US Secretary of Defense, [Donald Rumsfeld](#) continues to be cited for his prescience in strategic and security circles due to his succinct articulation of the challenge of what may be known with any confidence in a world of increasing uncertainty. His formulation famously took the form of a "poem" -- on *The Unknown* -- presented during a Department of Defense news briefing on 12 February 2002. The insight has been most recently used in the analysis by Nathan Freier (*Known Unknowns: Unconventional 'Strategic Shocks' in Defense Strategy Development*. Strategic Studies Institute, U.S. Army War College, November 2008).

Ulrich Witt (*Novelty and the bounds of unknowledge in economics*, *Journal of Economic Methodology*, 16, 2009, 4) has argued that economic development and growth are driven by the emergence of new technologies, new products and services, new institutions, new policies, and so on. Important though it is, the emergence of novelty is not well understood. Epistemological and methodological problems make it a difficult research topic. As Witt notes, they imply a "bound of unknowledge" for economic theorizing wherever novelty occurs in economic life -- as first articulated by [G. L. S. Shackle](#)

Nothingness as implying ignorance: Any assumption of "nothingness" can be challenged as premature, namely as ignorance in

the light of potential future insight, or of understanding by others elsewhere.

These raise the question as to how the unknown or nothingness can be conceptually "grasped", and whether the process is as dangerous as implied by the myth of petrification of those who looked at the [Medusa](#).

Cluster 2: This cluster suggests a form of ignorance usefully to be considered as essentially unimaginable and unintelligible:

Unimaginable as implying ignorance: Here the question is unimaginable for whom, readily understood as being in a condition of ignorance from other perspectives. More challenging is the form and extent of ignorance associated with that which is unimaginable to anyone, at least in this period.

Unintelligible as implying ignorance: Here the focus is on the incomprehensible or inconceivable nature of what is apprehended to some degree. It is the incomprehension which constitutes ignorance, readily framed as such by any for whom the matter is assumed to be intelligible. More challenging is the situation in which this assumption is held to be flawed, whether by others or by the future.

As with the previous cluster, here the question is the possibility of any cognitive engagement with the incomprehensible (*Engaging with the Inexplicable, the Incomprehensible and the Unexpected*, 2010)

Cluster 3: In this case the form of ignorance relates to that which has not been previously considered or anticipated, however it may be comprehended -- in contrast to the challenge of the previous cluster:

Unconceived as implying ignorance: Whether or not something is accepted as imaginable or intelligible, the absence of prior consideration of its possibility suggests that this failure is itself a form of ignorance. The possibility has been separately explored in terms of the "unthought" (*Unthought as Cognitive Foundation of Global Civilization: implications of God, debt, overpopulation, waste, negligence, encroachment and death?* 2012; *Cognitive Ground Zero and Pointlessness: embodying the geometry of fundamental cognitive dynamics*, 2012)

Undiscovered as implying ignorance: This is readily recognized in geographical terms in the case of ignorance of the nature of another place, perhaps another continent yet to be discovered, or a region with which there is no familiarity. Variants are evident with respect to social and cultural conditions.

Cluster 4 : Irrespective of the previous cluster, the following suggest forms of ignorance (perhaps equivalent) resulting from inability to situate a phenomenon in some conceptual framework:

Unrecognized as implying ignorance: Here ignorance may be additionally implied as a consequence of lack of "recognition", most notably in a political context where a group or individual may not be recognized as representative in some way. This failure to be recognized may be extended to suggest that as a consequence that perspective is necessarily ignorant. (However it also follows that this may be a misunderstanding and it is the recognized who are ignorant of the insight offered by the unrecognized.)

Unidentified as implying ignorance: This is most evident in the case of the identification of potential threats -- notably unidentified flying objects. Here the emphasis is on the ability to name the phenomenon according to some framework -- and the ignorance consequent on the failure to name, through inability or otherwise. More tragically this is evident in the case of drone targetting where ignorance may be evident in the identifying an individual as enemy prior to their elimination.

Undefined as implying ignorance: In this case the lack of familiarity with the phenomenon may be such as to preclude its recognition or identification within a defined framework. That which does not fit within a known framework then implies a form of ignorance. Especially interesting is the case where the phenomenon crosses various boundaries within such a framework and beyond it. Its unbounded characteristic then implies a foam of ignorance.

Cluster 5 : In contrast with the previous cluster, here the phenomenon may be recognizable (and defined) but exceptional in that it seldom occurs or has only been reported (or alleged) in other contexts:

Unusual as implying ignorance: Here the focus is on anomalies, with ignorance being implied by the nature of the inadequacy of the framework to allow for them. This form of ignorance is a preoccupation of anomaly research and [anomalistics](#).

Unexpected as implying ignorance: Here the ignorance is associated with the failure to provide for surprises. This form of ignorance has been extensively explored by [Nassim Nicholas Taleb](#) (*Antifragile: things that gain from disorder*, 2012; *The Black Swan: the impact of the highly improbable*, 2007).

Cluster 6: Here ignorance is variously attributed to a failure to conform to behavioural norms, however defined:

Unconventional as implying ignorance: Ignorance may be readily attributed by a society or group to those who fail to observe its conventions. It is of course the case that the behaviours of any one group may well be perceived as abnormal by others -- thereby justifying such a claim of ignorance. It might then be concluded that every group is ignorant to a degree, in the eyes of others, given the absence of any universal code of behaviour. Some may also conclude that the restriction to conventional modes

of behaviour is itself an indication of ignorance.

Unauthorised as implying ignorance: Where conventions of behaviour are "authorised" by an authority, the indications of the previous case apply to a stronger degree. Failure to observe convention is then typically subject to some form of sanction.

Unqualified as implying ignorance: A process of becoming "qualified", through recognized training and/or the acquisition of diplomas (attributed by particular authorities), readily results in the "unqualified" being characterized as ignorant with respect to the discipline of the qualification.

Unsaid as implying ignorance: Within a pattern of behavioural norms, it is characteristic that certain matters should be unmentionable or unstated. Whilst knowledge of what is unsaid may be implied, many may well be ignorant of the nature of what is unmentionable. The scope of the unsaid has been discussed separately (*Varieties of the Unsaid in sustaining psycho-social community*, 2003).

This cluster suggests the sense in which that which is not "right" has an inherent "wrong-ness" with which ignorance may be associated. Associating ignorance with "wrong-ness" raises the question of how the "truth" of "rightness" can imply forms of ignorance associated with its denial, namely with "lies". A lie may then constitute a manifestation of ignorance. The challenge is that in politics and religion, for example, the assertion of "truth" is frequently declared to be a "lie" by opponents.

Cluster 7: In a knowledge-based society where all are threatened by information overload, particular forms of ignorance are associated with what is readily forgettable:

Undistinguished as implying ignorance: Here the ignorance is with regard to that which is typically instantly forgettable, with the exception of those with eidetic memory. It is necessarily characteristic of the emerging "blip culture", so-named by [Alvin Toffler](#) (*The Third Wave*, 1980)

Unmemorable as implying ignorance: In contrast with the previous case, here ignorance is associated with forgetting the lessons of past decades (*Societal Learning and the Erosion of Collective Memory*, 1980).

Unremembered past knowledge as implying ignorance: In this case the focus is on ignorance of the knowledge that may well have been considered significant in centuries past, and might well be significant in the present. This may be recognized as ignorance of lost knowledge whether ancient or recent (cf. David W. DeLong, *Lost Knowledge: confronting the threat of an aging workforce*, 2004; D. A. Posey, *The application of ethnobiology in the conservation of dwindling natural resources: lost knowledge or options for the survival of the planet*, 1990). The ignorance may be a result of such knowledge having been restricted to secretive societies or groups.

Cluster 8: This cluster indicates conditions under which ignorance may be associated with a lack of order, an inability to comprehend the nature of that order, or with the consequence of failure to understand how seemingly disparate perspectives might be reconciled:

Untidiness as implying ignorance: The cultivation or tolerance of disorder may be considered an indication of one form of ignorance.

Incommensurability as implying ignorance: The seeming incommensurability of distinct frames of references implies a form of ignorance regarding the manner in which they might be reconciled -- if only in the future. Contradictions and inconsistencies may be understood in this light.

Misconception as implying ignorance: Misunderstanding may be understood as a form of ignorance, namely a failure to comprehend some other perspectives held to be more appropriate or enlightened.

Problems as implying ignorance: The problems with which some believe themselves to be faced may well be indicative of their ignorance in the light of other perspectives. The failure of some to acknowledge the existence of problems may however itself be considered indicative of ignorance. Such concerns have been a preoccupation of the *Encyclopedia of World Problems and Human Potential*.

Cluster 9: A form of ignorance may be variously associated with a refusal to learn according to the opportunities offered:

Unwillingness to learn as implying ignorance: In this case the implication is that the person has a preference for ignorance in contrast to the learning process offered. The person may well reject this interpretation, typically framed by those offering the learning. More generally however the refusal may relate to multiple incidents from which learning is seemingly not derived. [George Santaya](#) is associated with the saying: *Those who cannot remember the past are condemned to repeat it.*

Rejection of authority as implying ignorance: Authorities claiming knowledge, and offering learning processes, may consider as ignorant (or relatively ignorant) those who refuse to submit to their authority -- even to surrender to it.

Avoiding distortions of premature cognitive closure

Conventional university environments exemplify the dilemma of promoting orderly explanation according to a variety of disciplines, whilst purporting to elicit critical thinking to enable the emergence of new knowledge in the light of new insight challenging accepted

patterns of order. The latter, as conceptual revolutions, are typically upheld as only possible following detailed understanding of the former.

Conventional universities are therefore readily experienced as environments in which information is conveyed with a requirement that it be accepted as knowledge -- if credits towards diplomas are to be acquired. Explanatory closure is sought, minimizing the extent and nature of ignorance and the possibility that it may be inherent in what is purportedly known. The space of the unknown is effectively filled with necessarily limited insight into the nature of that which lies beyond the boundaries of what is held to be known -- the as yet undefined. The latter, as intellectual property as yet unclaimed, might even be compared to the legal concept of *terra nullius* -- territory which is the property of no one and therefore assumed open to the staking of a legitimate claim (irrespective of any who might dwell there). This recalls the behavioural processes associated with any gold rush.

Professors are necessarily acclaimed for the knowledge they are capable of professing with regard to the fields they occupy -- their capacity to proclaim what is, telling it like it is. There is little appreciation of any admission of ignorance on their part, whether by peers or students. It is closure and certainty that is valued, however premature it may prove to be. Openness to a variety of extant interpretations, and those yet to emerge, is deprecated. This is reflected in academic literature and commentary on the hypotheses assertively articulated -- where the quality of assumptions made is left to the appreciation of future critics. Past research on metaknowledge of students is unlikely to be extended to faculty (F. J. Sinkavich, *Performance and Metamemory: do students know what they don't know? Instructional Psychology*, 22, 1995). Or to those in positions of power? It is evident that the latter would prefer not to know what they do not know -- given that so much that is dubious is done in their name.

In terms of the openness that is the potential of a University of Ignorance, such predilection for closure in terms of conventional explanations can be experienced as claustrophobic and inhibiting, if not inherently dangerous. In terms of the quality of teaching, and the student-teacher dynamic, there is also the contrast between:

- the capacity to discourse boringly about "knowing" and what is thereby known
- the capacity to discourse interestingly about "not-knowing" and the engagement with what is not known

Questionable tendencies towards closure may also be sensed in advocated modes of dialogue facilitation, however non-directive they are claimed to be.

Academic misappropriation of the known-not-known dynamic

It is remarkable the degree to which the conventional emphasis is placed on "knowledge" as a noun, necessarily implying a **static** commodity which can be acquired -- preferably as intellectual property (cf. Peter Fleissner, *The Commodification of Knowledge in the Global Information Society*, 2006). Any **dynamic** tends only to be associated with the process of acquisition of that knowledge and its subsequent application. This obscures the dynamic associated with the process of "knowing". The same applies in the case of "ignorance" -- somehow also framed **statically** by a noun -- with any **dynamic** tending only to be associated with the process of its reduction and elimination. This obscures the dynamic associated with the process of "ignoring" -- notably associated with controversial issues of discrimination and the questionable definitions of the boundaries of any system.

This framing has implications for knowledge processes in conventional universities and the mindsets sustained as a consequence. These are suggestively indicated by the following:

- **Growth / Development mindset:** The framing of knowledge as a commodity reinforces the manner in which growth and development are conceived as a means of extending the domain of the known and ensuring its exploitation. This seemingly reduces the challenge of what is not incorporated in this way, namely what is associated with the unknown and ignorance. Knowledge is then the reduction of the uncertainty associated with ignorance. The domain defined as "ignorance" is appropriated by an unquestionable transformation into "knowledge" -- a framing of that domain as a recognized field of knowledge.

From a systemic perspective, promoting the advance of "knowledge" then also bears similarities to such processes as colonialism (notably the occupation and territorial "carve-up" of *terra nullius*) or ensuring the conversion of the ignorant by religions. It can be explored as encroachment (*Varieties of Encroachment*, 2004). The territorial carve-up is framed academically through specification of "fields" to which disciplines lay proprietary claim -- reminiscent of claims to **mining rights**.

Whether physically or conceptually, the accumulation of knowledge may be compared to a focus on the construction of a "built environment" -- effectively a **social construction of reality** (ignoring the instability of the foundations and the obvious cracks). As an essentially reductionist exercise, any sense that the cognitive domain of ignorance may imply multidimensionality of higher order is denied or ignored. The perspective is echoed in the promotion of a macho, male-dominated worldview -- problematically associated with the biblical use of "having knowledge" of a woman (traditionally representative of ignorance).

- **Premature closure in biology: genetics vs. epigenetics:** Much was made of the expected results of the **Human Genome Project** to map the approximately 20,000-25,000 genes of the **human genome** from both a physical and functional standpoint. This knowledge was much-hyped as supplying definitive information on the factors controlling human physiology and disease. Progress in mapping the genome has however made it apparent why mapping an organism's genetic code is not enough to determine how it develops or acts.

Epigenetics emerged as a discipline to show how nurture combines with nature to engineer biological diversity (Nessa Carey, *The Epigenetics Revolution: how modern biology is rewriting our understanding of genetics, disease, and inheritance*, 2012; Richard C. Francis, *Epigenetics: how environment shapes our genes*, 2012; Thomas Woodward and James Gills, *The Mysterious*

Epigenome: what lies beyond DNA, 2011).

It has been argued that there is a conceptual analogue to the gene, termed the **meme** by **Richard Dawkins** (*The Selfish Gene*, 1976), namely an idea, behaviour or style that spreads from person to person within a culture. This has given rise to the discipline of **memetics** by analogy to genetics, purporting to be an approach to evolutionary models of cultural information transfer.

Using these elements, the conventional academic approach to the accumulation of knowledge may be fruitfully compared with that of the Human Genome Project -- **prior to the realization that mapping the genome is not enough** to determine how a human develops or acts. It could be argued that universities are locked into a "pre-epigenetic" mode ignoring what is not-known. Conceptually the university approach to knowledge could then be described as the focus on a "Human Memome Project" (a term **already appropriated** for a weblist of that name). Relevant use of "memome" has been made by **Jörg Köhn** (*Sustainability in Question: the search for a conceptual framework*, 1999, p. 94):

The "genomes" of economic systems determine such things as preference styles of the economic subjects, technology, the legal system and economic and social institutions. They are stocks of information. On this basis the economic "phenotype" is the expression of a "memome", to use Dawkins' term, under given conditions (technologies in current use, capital consumption per unit good, quantities and prices of goods, markets systems, and so on)... Finally, one may put together history, beliefs, and values apart from the consolidated preference orders to form the cultural memome.

However, just as genetics downplayed the role of epigenetics, universities ignore the role of **epimemetics** -- a discipline articulated by **Russell Wright** and **Theme Zoom** -- and separately discussed (*Epimemetics, biomimetics, epimimetics and biomemetics*, 2010). Although cultivating fields may produce "bread" as knowledge, it might be said that *Man cannot live by memes alone*.

As indicated by Wright (*Epimemetic Cultural Buoyancy*, 2011), a complementary development is that relating to "temes" (the basis of technology), as introduced by **Susan Blackmore** (*Genes, Memes, and Temes*, 2008). Again it could be argued that universities ignore the role of "epitemetics", potentially to be understood as the dynamics of "themes", especially in internet enabled communication (cf. *Interweaving Thematic Threads and Learning Pathways*, 2010). Appropriately for this argument, the DNA metaphor has been explored with respect to university education (Clayton M. Christensen and Henry J. Eyring, *The Innovative University: changing the DNA of higher education from the inside out*, 2011).

- **Premature closure in astrophysics and emergence of dark matter:** After many years it has been recognized that the mapping of the universe achieved by astronomy is inadequate to understanding of the universe. So-called **dark matter** has been hypothesized as a type of matter to account for a large part of the total mass in the universe. It cannot be seen directly with telescopes; since it neither emits nor absorbs light or other electromagnetic radiation at any significant level. Its existence and properties are inferred from its gravitational effects on visible matter, radiation, and the large-scale structure of the universe. Dark matter is estimated to constitute 84% of the matter in the universe and 23% of the total energy density (with almost all the rest being dark energy).

This suggests a relationship between the "matters" on which academic studies focus with respect to the universe of knowledge and the nature of what is thereby ignored. What is ignored can be compared metaphorically to "dark matter" -- indicative of the possibility that ignorance constitutes a major proportion of a more subtle and complex universe of "knowledge" with which a University of Ignorance might engage.

- **Conceptual screenshots of a cognitive dynamic:** The academic failure of its static emphasis in engaging with the experiential dynamics of "knowing" is suggestively illustrated by the emphasis on categories and categorisation -- as evident in the examples of the articulations of "varieties of ignorance" (above) as it is in the case of "varieties of knowledge" (omitted from this discussion). Curiously, perhaps tragically, it is also evident in the case of human values (*Freedom, Democracy, Justice: Isolated Nouns or Interwoven Verbs? Illusory quest for qualities and principles dynamically disguised*, 2011; *Human Values as Strange Attractors: Coevolution of classes of governance principles*, 1993).

The dynamics of knowledge has in part been highlighted by the debate provoked by the work of **Thomas Kuhn** (*The Structure of Scientific Revolutions*, 1962). The conventional academic focus can however be seen as a preoccupation with static patterns of categories -- typically central to the models in any paper. These **explicit** categories can be more fruitfully understood as frameworks for **implicit** dynamics of knowing -- a process of knowing which may transform those categories or discard them in favour of new ones. The dynamics of this process are obscured by assertions, whether as hypotheses or affirmations of fact. Academic papers may then be usefully understood as screenshots of arrays of labels (of questionable half-life) placed on apprehended phenomena -- ignoring the possibility of their integration into a dynamic.

As noted separately (*Knowledge Processes Neglected by Science*, 2012), in providing explanations science is extremely insensitive to the arrogance of its declarations as to what the truth "is" at any moment of time. These lack any humility informed by history or by the potential discoveries of the many scientists of the future. They notably neglect the problematic explanations arrogantly offered by scientists of the past -- as in the case of phrenology, or the possibility of flight, for example. The challenge for science is usefully made in a book review included in the the special issue of the *Scientific American* focusing on the *State of the World's Science* (October 2012). The review of *The Half-Life of Facts: why everything we know has an expiration date* (2012) by Samuel Arbesman is introduced with the phrase:

Many medical schools tell their students that half of what they've been taught will be wrong within five years -- the teachers just don't know which half.

There is of course every possibility that there are ways of knowing-not-knowing which will only become comprehensible in the future. There is the further possibility that some:

- may **not lend themselves to being "known"**, as currently suggested by dark matter (cf. *Global Brane Comprehension Enabling a Higher Dimensional Big Tent? Strategic implication in encompassing nothing and coming to naught*, 2011; *Dynamics of Symmetry Group Theorizing: comprehension of psycho-social implication*, 2008)
- may be **psychoactively dangerous**, as variously discussed (*Epistemological Panic in the face of Nonduality: Does nothing matter?* 2010; *Psychoactive hazard warnings: symbols relevant to overpopulation debate*, 2009). As with any debate on overpopulation, any effort to engage experientially with some forms of ignorance may merit the development of safety guidelines (*Overpopulation Debate as a Psychosocial Hazard: development of safety guidelines from handling other hazardous materials*, 2009). The possibility of petrification was noted above (cf. *Enstoning through Petrification and Entombment*, 2012)

In the current university context, the effort is primarily to transform the "unknown" into the "known" -- thereby claiming to have eliminated ignorance. Ironically, as notably indicated above with respect to the strife between unreconciled frameworks, the significance of any residual ignorance may well be ignored and/or denied. The implications for a future University of Ignorance could be discussed metaphorically in terms of the process of "remaindering" (*Reintegration of a Remaindered World: cognitive recycling of objects of systemic neglect*, 2011).

It is the accumulation of the objects of systemic neglect which triggers scientific "revolutions". Ironically these tend to be reframed after the fact in terms of the "evolution" of the body of knowledge -- avoiding consideration of the academically "bloody" nature of such revolutions and controversy regarding an "evolution" in which "obsolete" models continue to hold sway for some. These dynamics suggest the merit of reflection on "devolution" and "involution", and on the "convolutions" characteristic of any pretence at coherence. Any convolutions engender miscommunication and misunderstanding -- and ignorance.

Clues to engaging with the unknown

The points above frame a dysfunctional dynamic between knowing and not-knowing. The question is whether there are imaginative indications of a healthier dynamic that is readily comprehensible. Suggestive possibilities include:

- **Sexual intercourse:** Given its fundamental role in society as a virtually universal preoccupation with which most are familiar, there is every possibility that that dynamic offers valuable insights into knowing-not-knowing. The possibility is evident from one biblical use of "knowing" and resistance to "grasping" as previously suggested (*Beyond Harassment of Reality and Grasping Future Possibilities: learnings from sexual harassment as a metaphor*, 1996). The mysterious nature of "not-knowing" is the theme of repeated commentary on the mutual incomprehensibility of the sexes. In the process of intercourse a complex dynamic between knowing and not-knowing can be readily experienced -- potentially culminating in that of consummation. This dynamic remains to be sensitively explored, as noted elsewhere (*Reframing the Dynamics of Engaging with Otherness: triadic correspondences between Topology, Kama Sutra and I Ching*, 2011).

There is a profoundly tragic irony to strategic consideration of the crises of the time by science, as the intentionally preferred process of "knowing", in that the process of sexual intercourse is systematically excluded from any "systematic analysis" of drivers of those crises, as separately argued (*Scientific Gerrymandering of Boundaries of Overpopulation Debate*, 2012).

- **Remembering and Forgetting:** The widely experienced process of "remembering" can be readily associated with that of "knowing". Similarly the process of "forgetting" can be readily associated with "ignoring". Any focus on the "knowledge" remembered or the "ignorance" associated with the forgotten, ensures a non-experiential distance from "remembering" and "forgetting" respectively. Especially meaningful are the transitions widely experienced between one and the other through partial remembrance.
- **Unlearning:** This has been variously recommended as a means of engaging with the unknown. Indications are evident from the resources offered by the [Institute of Unlearning](#). It argues that a great deal of energy is expended by those in power to craft an illusory world designed to benefit only a very small percentage of the population. The many mind-traps and emotional webs crafted by these perpetrators have left humanity in a largely disempowered, though apparently freely chosen, state. A complementary perspective is offered by Erica Dhawan (*Business Schools Need To Focus On Unlearning*, *Forbes*, 13 June 2012) arguing that MBAs are trained to focus on *what* they learn rather than *how* or *why* they learn. In this light, business leaders should reflect on their learning processes to unlearn the old patterns that stand in the way of authentic leadership.

Durelle Price (*Unlearning 101*, 21 February 2009) Albert Einstein, icon of intellect and insight, said "We can't solve problems by using the same kind of thinking we used when we created them." Universities are focused on higher learning when perhaps they should promote a course entitled Unlearning 101. Course objectives would include: remove cultural filters; abandon destructive behaviors; and stimulate individual creativity and ingenuity.

For Prasad Kaipa (*Unlearning*, Mithya Institute of Learning, 1999), unlearning is not any form of reframing or refreezing. These all focus on an end state whereas unlearning is about moving away from something rather than moving towards something. Unlearning is exactly what it says. Intending to let go of what has already been learned or acquired. It is not about right or wrong.

It is about being open to and exploring something that lies underneath the judgment, underneath the right and the wrong.

- **Holes:** The nature of "nothingness", ignorance and the unknown become especially mysterious when recognized as a "hole", as remarkably discussed 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 (as they summarize in the [entry on holes](#) in the *Stanford Encyclopedia of Philosophy*). What might indeed be the cognitive implications, as separately discussed (*Existential implications -- of a "hole" in conventional reality?*, 2012) ?

These four possibilities together suggest a useful insight into the experiential dynamics of the relationship between knowing and ignoring. This derives in part from the adage *take a step back, or retreat in order better to advance* -- which acquires an experientially provocative sense through the sexual innuendo in the French form *reculer pour mieux sauter*. That interpretation relates the case of unlearning to sexual intercourse. It might also be interpreted as *forgetting in order better to remember* (as often recommended in the quest for creative inspiration). Together these offer insights into *ignoring in order better to know*. The insight is enhanced by the mysterious nature of "hole", both as a fundamental attractor and with respect to a memory "lapse" or "blank", especially as described in French *trou de mémoire*.

An extensive commentary on the interplay between knowing and not-knowing is offered by James S. Atherton (*Doceo; Knowing and not knowing*, 2011). He acknowledges "playing around with a conceit", namely the two senses of the term "know" -- awareness of self and knowledge of the world. With the aid of diagrams, he considers the matter in terms of:

- Not knowing you don't know
- Knowing you don't know
- Knowing and not knowing that you know

Many other possibilities, meriting further exploration, are cited in the literature with respect to engaging with the unknown, as discussed previously (*Going Nowhere through Not-knowing Where to Go*, 2012). Some are briefly indicated, and tentatively clustered, as follows:

- **Unsayable and unsaid:** The processes of this cluster notably suggest ways of engaging with the mystery of any cognitive "hole" -- with an "absence" and with what is "missing":
 - **Engagement with nothing:** This has been separately discussed ([Configuring the Varieties of Experiential Nothingness](#), 2012; [Varieties and dimensions of experiential nothingness](#), 2012)
 - **Apophasis:** As apophatic theology. this attempts to describe God by [negation](#) or unsaying, to speak only in terms of what may **not** be said about the nature of the perfection assumed to be characteristic of God. It is contrasted with the descriptive affirmations of [cataphatic theology](#) as separately discussed (*Being What You Want: problematic kataphatic identity vs. potential of apophatic identity?* 2008)
 - **Via negativa:** The *via negativa* is closely associated with apophatic theology. A non-theological appreciation of *via negativa* has been most recently articulated by Nassim Nicholas Taleb (*Antifragile: things that gain from disorder*, 2012)
 - **Negative capability.** As formulated by the poet [John Keats](#), "negative capability" the capacity to be "in uncertainties, mysteries, doubts, without any irritable reaching after fact and reason" (1817). It is consistent with avoiding the fretful quest for knowledge and closure
 - **Dialogue profiling:** A technique explored by Douglas Walton (*Profiles of Dialogue for Evaluating Arguments from Ignorance, Argumentation*, 13, 1999) develops recent research showing that in many cases lack-of-evidence arguments (negative evidence, *ad ignorantiam* arguments and *ex silentio* arguments) traditionally classified as fallacies can be used reasonably.
 - **Silence:** This is traditionally valued in many meditational practices, possibly in the institutional setting of an intentional community or a hermitage (cf. *The Deafening Silence of Those Who Know Nothing*, 1998). The heart of meditation is considered to be an inner quality of silence and emptiness through which engaging with the undefinable becomes possible.
- **Nonduality and questioning:** This is the transcendent appreciation of the challenge of opposites and [binary thinking](#), and the questions it is possible then to formulate:
 - **Nonduality:** This is notably a focus of the [Advaita Vedanta](#) school of Hindu philosophy (*Epistemological Panic in the face of Nonduality: Does nothing matter?* 2010). It may be explored in terms of the possibility of contractual relationships (*Transcending Simplistic Binary Contractual Relationships: what is hindering their exploration?* 2012)
 - **Questions:** The process of questioning to transcend duality has long been elaborated through the Zen [koan](#), as separately discussed (*Configuring a Set of Zen Koan as a Wisdom Container*, 2012). The challenge may be explored in terms of avoidance (*Question Avoidance, Evasion, Aversion and Phobia why we are unable to escape from traps*, 2006), in relation to answering (*Am I Question or Answer?* 2006), or to cognitive catastrophes (*Conformality of 7 WH-questions to 7 Elementary Catastrophes: an exploration of potential psychosocial implications*, 2006).
 - **Learning relationships and mediation:** Here the focus is on the dynamics of the subtle cognitive relationship between teacher and student and the misunderstandings that may arise.
 - **Chinese classics:** It is to be expected that certain classic philosophical texts of China would suggest ways of engaging with the unknown and ignorance (*Tao Te Ching, I Ching, Tai Xuan Jing*), especially through the mnemonic devices offered by their encoding (cf. *Tao of Engagement -- Weaponised Interactions and Beyond: Fibonacci's magic carpet of games to be played for sustainable global governance*, 2010). Particularly relevant, with regard to the "nothingness" of ignorance as not-knowing, is the much-cited verse from the *Tao Te Ching*:

Thirty spokes share the wheel's hub; It is the centre hole that makes it useful.
Shape clay into a vessel; It is the space within that makes it useful.
Cut doors and windows for a room; It is the holes which make it useful.

Therefore profit comes from what is there; Usefulness from what is not there.

This is consistent with Deacon's recognition of the role of the "missing". However Firestein's recognition of ignorance as a "driver" suggests that, as an empty "centre hole", it is then **actively** supplying **torque** to the "spokes" of the wheel (of modes of knowing) -- in contrast to any implication that it is functioning purely **passively**. It is the subtlety of the active-passive relationship here which then characterizes the knowing-not-knowing dynamic. For a University of Ignorance it is the "usefulness of what is not there" which is the focus of attention -- in contrast to the "profit" to be derived from the various forms of knowledge (so insidiously associated with problematic growth). In the light of use of the mechanical metaphor, rather than "engaging with nothing" (as suggested by the subtitle of this paper), it is the manner in which "nothing engages" which is of interest -- in order to function as a "driver".

- **Paradox and humour:** Various uses are made of humour to transcend conventional frameworks:
 - **Humour:** Possibilities, including the tradition of crazy wisdom and the role of the court jester, are discussed separately (*Humour and Play-Fullness Essential integrative processes in governance, religion and transdisciplinarity*, 2005)
 - **Learning stories:** These range from aphorisms and proverbs to the "teaching stories" favoured in some spiritual traditions, notably the **Nasruddin** learning stories widely disseminated by Sufis in the Middle East and the Islamic world. Aesop's tales are another example.
 - **Aesthetic design experiments:** A distinct approach is that of the **Oulipo movement** a loose gathering of (mainly) French-speaking writers and mathematicians which seeks to create works using constrained writing techniques. That spirit can be applied otherwise (*Lipoproblems: Developing a Strategy Omitting a Key Problem*, 2009) .
- **Statistical and strategic methods:** Various techniques of a more conventional nature have been developed
 - **Uncertainty:** The challenge of ignorance and the unknown, framed as **uncertainty**, has resulted in the development of various statistical techniques, including: **probability theory**, **fuzzy set theory**, **game theory**
 - **Brainstorming and crowdsourcing:** Various **brainstorming** techniques are used to elicit imaginative responses to potentially threatening situations with unknown characteristics. These may take a different form through **crowdsourcing**.
 - **Antifragility:** A postulated antithesis to fragility where high-impact events or shocks can be beneficial. Anti-fragility is a concept developed by professor, former trader and former hedge fund manager Nassim Nicholas Taleb. Taleb coined the term "anti-fragility" because he thought the existing words used to describe the opposite of "fragility," such as "robustness," were inaccurate. Anti-fragility goes beyond robustness; it means that something does not merely withstand a shock but actually improves because of it (*Nassim Nicholas Taleb on Accepting Uncertainty, Embracing Volatility, Knowledge@Wharton*, 17 December 2012). The relevance to ignorance emerges even more clearly when he contrasts with it with the understanding offered by knowledge (*Understanding is a Poor Substitute for Convexity (Antifragility)*, *Edge*, 12 December 2012).
 - **Martial arts:** The much-cited recognition by **Carl von Clausewitz** that war is the continuation of politics by other means has been adapted to sustained indebtedness (John Pilger, *War by Other Means*, 1992). Reference is frequently made to the role of knowledge and ignorance in military strategy as articulated by **Niccolò Machiavelli** (*The Prince*, 1513) and **Sun Tzu** (*The Art of War*). The martial arts may be reframed in cognitive terms as discussed separately (*Ensuring Strategic Resilience through Haiku Patterns: reframing the scope of the "martial arts" in response to strategic threats*, 2006)
- **Extraterrestrial communication:** In exemplifying the unknown, consideration has occasionally been given to the post-contact content of communication with extraterrestrials (*Communicating with Aliens: the psychological dimension of dialogue*, 2000). Exemplifying the unknown, perhaps most intriguing are the questions relating to their "silence" and what humans might choose to say if contact were to be established.

Understanding the challenge of the knowing-not-knowing dynamic of any university community could be framed through conversation and its possible transformations within a "multiversal" community, as separately discussed (*Enactivating Multiversal Community: hearing a pattern of voices in the global wilderness*, 2012; *Transforming the Art of Conversation: conversing as the transformative science of development*, 2012). As a "conversity", a University of Ignorance might then embody a complementary extreme to a conventional university in this dynamic (*Complementarity of university and conversity?*, 2012).

Knowing and Ignoring: a necessary complementarity?

A valuable distinction can be explored between "knowing" and insights regarding "indwelling intelligence", the latter potentially to be understood as "detached" from both "knowing" (and "knowledge" gained) and from "ignoring" (and the "unknowledge" of "ignorance"). The nature and dynamics of this "indwelling intelligence" can be explored through a "heliocentric" metaphor (*Identification with a sustaining "heliocentric" locus?*, 2013) as developed in an earlier discussion of "not-knowing" (*Going Nowhere through Not-knowing Where to Go*, 2013). This refers to a second document from which the argument in this section is mainly reproduced (*Implication of Indwelling Intelligence in Global Confidence-building*, 2012)

The volume of religious literature on "indwelling" with its focus on positive attributes of the divine (notably including "intelligence"), highlights the question long debated by theologians of how "God" could have enabled the creation of the negative attributes -- especially including "ignorance". The matter is of current strategic relevance given the destruction and loss of life increasingly evident as a consequence of natural disasters in a God-fearing country like the USA (cf *Acts of God vs Acts of al-Qaida: Hurricane Katrina as a message to Bible Belt America?* 2005).

The polarity intelligence-ignorance is an example of the unquestioning use of the positive-negative frame explored by Barbara Ehrenreich (*Bright-sided: how the relentless promotion of positive thinking has undermined America*, 2009; *Smile Or Die: how positive thinking fooled America and the world*, 2010) and discussed separately (*Being Positive Avoiding Negativity: management challenge of positive vs negative*, 2005). A counter-perspective is offered by Walter Earl Fluker (*Dangerous memories and redemptive possibilities: reflections on the life and work of Howard Thurman*, *Critical Review of International Social and Political Philosophy*, 2004):

On this view, positive thinking becomes a process of identification with an indwelling intelligence that lies at the heart "of our mental and bodily processes"

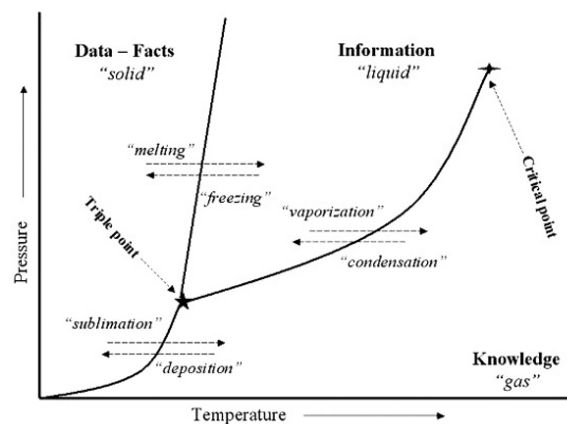
Current crises have highlighted the dangers of uncritical appreciation of "intelligence" in relation to weapons of mass destruction, bankers, military competence, and the like -- notably on the part of centres of excellence complicit in such assessments (cf *Abuse of Faith in Governance: mystery of the unasked question*, 2009; *Transforming the Unsustainable Cost of General Education: strategic insights from Afghanistan*, 2009). Such crises might also be said to reflect a lack of appreciation for the perspectives of those deprecated as "ignorant" -- notably now obliged, as tax payers, to compensate for the forms of intelligence that have been so disastrously deployed.

There is therefore a case for reframing "intelligence" to incorporate "ignorance" in some way, if only in terms of the mysterious nature of whatever is not understood regarding intelligence or of the systemically fruitful role of ignorance. A striking metaphor is offered by the proportion of "dark matter" of which the universe is mysteriously composed, with its associated "dark energy" -- according to the current understandings of astrophysicists.

Given the manner in which "intelligence" is associated with a high degree of order in contrast with "ignorance", the two might be fruitfully interrelated using as metaphor various forms of matter -- from crystal to clay, for example, given that precious stones are readily associated with attributes of intelligence. Clearly both have vital functions. It is in soil ("dirt") that plants grow; precious stones are "sterile". This raises the question of the nature of intelligence associated with different forms of order and the value of the "intelligence" that might be associated with "lower" forms of order or those of a more diffuse or chaotic nature. Given preferences in that respect, the arguments of a range of authors for a spectrum or set of preferred mental frameworks merits consideration, as introduced separately (*Systems of Categories Distinguishing Cultural Biases*, 1993).

More suggestive in clarifying this argument is a phase diagram such as follows.

Tentative adaptation of general phase diagram (for water) to suggest non-linear relationship between data -- information -- knowledge



Curves: Indicate the conditions of "temperature" and "pressure" under which equilibrium between different phases of insight can exist

Critical point: The "temperature" above which the gas cannot be liquefied no matter how much pressure is applied (the kinetic energy simply is too great for attractive forces to overcome, regardless of the applied "pressure")

Triple point: The particular condition of "temperature" and "pressure" where all three states are in equilibrium

NB: Phases may be subdivided into a complex pattern of sub-phases (exemplified by the variety of forms of ice as solid water) [[more](#)]

University of Ignorance as a dynamic cognitive pattern

In the light of the potentially challenging nature of the cognitive experiences in engaging with the unknown (as noted above), the question is how such experiences can be embodied as central to the functioning of a "University of Ignorance". How might such functions contrast with the "arrogance" of the profession of knowledge of questionable value in conventional universities, as separately considered (*Higher Education ∞ Meta-education ? Transforming cognitive enabling processes increasingly unfit for purpose*, 2011). The latter document explored aspects of the question through the following sections:

- [Images of education, learning and knowing](#)
- [Education: "higher" vs "meta"](#)
- [Metaphors through which to reframe education](#)

- [Quest for hyperconnectivity](#)
- [Reframing connectivity through metaphor](#)
- [Imaginal education through mining civilizational knowledge](#)
- [Mnemonic holding patterns for the dynamics of connectivity](#)
- [Meta-education in practice](#)

More imaginatively and proactively, could such arrogant self-righteousness be recognized as engendering a form of [gravity well](#) in the universe of knowledge? (*Towards an Astrophysics of the Knowledge Universe: from astronautics to noonautics?* 2006)

How might collective attention be given within such a context to the processes of ignoring and denial? How would this enable new approaches to individual and collective despair in the face of the "nothing" now offered by global strategic governance and disguised by tokenism (*Implication of Personal Despair in Planetary Despair: avoiding entrapment in hopeful anticipation*, 2010; *Mapping Paralysis and Tokenism in the Face of Potential Global Disaster: why nobody is about to do anything effective and what one might do about it*, 2011)

Global dynamics implicit in the "field" metaphor: The agricultural metaphor of "field", so widely used in academic preoccupations to define and delimit a domain of activity, can be exploited to suggest a richer cognitive process. A field typically implies the planar understanding of knowledge of a "Flat Earth" mentality -- a plane of fields extending to infinity? This obscures the possibility that the fields might be configured together in other geometric or topological forms -- most obviously a sphere, consistent with an integrative global understanding of knowledge.

A university faculty is successful on its own terms to the extent that it can deny (whether unconsciously or not) the relevance of that which it ignores -- in neighbouring "fields" or further afield on other "farms" or in other "domains". The intangible cognitive implications are neatly illustrated in the tangible consequences of (mis)use of fertilizer, pesticides, and genetically modified plants.

Any "field" might be variously bordered by other features, or even incorporate them -- such as the metaphorical rivers and streams implied by "flows" of knowledge and information. A fruitful example is offered by "lake", which curiously is not used (except as implied by use of "dam"), although occasional use of "swamp" is made in referring to a domain of problematic preoccupation -- even of ignorance. Both "river" and "stream" are used in relation to knowledge ("stream of insights", "river of learning"). These examples indicate the merit of exploring systematically the possibility of incorporating other features of the natural environment into explication of processes of knowing -- as might be a concern of a University of Ignorance (cf. *Psychology of Sustainability: embodying cyclic environmental processes*, 2002).

With respect to the "field" metaphor, related use is already made of "irrigation" (as with funds), "fertilization" (as with cross-fertilization), "ploughing" (as with ground work for a project), and "planting" (as with planting seed ideas). These uses are not however understood as interrelated as would be required of any coherent approach to cultivation. A fundamental distortion with respect to academic cultivation if a field is the widespread assumption that it is with funding that it is best "irrigated". This is consistent with the failure to recognize the extent to which funding as a tangible is merely a conventional representation of collective confidence as a vital intangible. It is this intangible which is more intimately associated with processes of knowing and ignoring -- and their consequence for any "irrigation".

More intriguing is the sense in which the "fields", however distinguished, are integral features of a (global) natural environment and its processes, metaphorically understood. "Water" evaporates from a "field", as is only too evident in the case of funding (notably when understood in terms of confidence or insight). "Precipitation" may indeed occur to compensate for that. These contribute to global flows, as so well illustrated by circulating ocean and wind currents, as discussed separately (*Potential Misuse of the Conveyor Metaphor: recognition of the circular dynamic essential to its appropriate operation*, 2007).

As a "farm", the cultivation of a set of "fields" by a university and its faculties is currently inherently unsustainable, despite claims to the contrary and evident dependence on external resources. This approach to "farming" conceptually reinforces inadequacies in the application of the cultivated knowledge in other domains -- thereby engendering further ignorance.

Metaphors of this kind are suggestive of the ways in which areas and processes of cultivation (of knowledge) may be dynamically interrelated -- or separated by uncultivated areas (of ignorance?) to which their relationship is unclear. The metaphor is indicative of the potential role of "wilderness" and "desert" areas -- occasionally used with reference to knowledge (or ignorance) -- especially in the light of their recently recognized role in sustaining the dynamics of the global environment. Again such metaphors are suggestive of an interface between the dynamic processes of knowing, and those of not-knowing, with which a University of Ignorance could engage.

- water: information, knowledge, data, wisdom dynamic -- the water cycle taken seriously
- knowledge management and ignorance management -- the assumption that ignorance can be managed like knowledge

Polysensorial dynamic implicit in the "faculty" metaphor: The academic use of faculty is curiously confused with other connotations. On the one hand it refers either to the [thematic organization](#) of a university or to the [academic staff](#) engaged within those divisions. However it also refers to the [senses of perception](#), the [cognitive faculties of intelligence](#), and even to the [spiritual faculties](#) (in Buddhism). In all cases it implies a particular ability in knowledge.

Exploration of the [categories of the faculty of understanding](#), and the conflict between them, was a notable feature of the work of [Immanuel Kant](#) (*The Conflict of the Faculties*, 1992) as most recently explicated by [Mary J. Gregor](#). Current studies comment on the problematic condition of academic faculties (Benjamin Ginsberg, *The Fall of the Faculty: the rise of the all-administrative university and why it matters*, 2011; Naomi Schaefer Riley, *The Faculty Lounges: and other reasons why you won't get the college education you pay for*, 2011; Darla J. Twale and Barbara M. De Luca, *Faculty Incivility: the rise of the academic bully culture and what to do about it*, 2008). The dynamic between the faculties is now far from the ideal of the Platonic symposium explored by [Owen Barfield](#) (*Worlds Apart: A Dialogue of the 1960s*, 1963) or by [Arthur Koestler](#) (*The Call Girls*, 1972)

Curiously the academic world, and the world of governance informed by its research, has a very strong preference for vision as a metaphor in the identification and presentation of problems and to frame and comment on remedies -- as in "envisaging" the future and recognizing the contrasting "perspectives" in their clarification, or in use of "review". A further constraint lies in the implication of a singular unified view -- aspiring to the cyclopean -- irrespective of the known advantages of stereoscopic views to achieve depth (*Cyclopean Vision vs Poly-sensual Engagement*, 2006). Magoroh Maruyama goes further in arguing for "polyocular" to interrelate multiple perspectives (*Polyocular Vision or Subunderstanding*, *Organization Studies*, 25, 2004).

Other senses employed metaphorically are those of taste, touch, and sound -- used to a far lesser degree in academic or strategic thinking, however important they may be to some, most notably in efforts by politicians to engage with the public (*Metaphor and the Language of Futures*, 1992). This suggests the need to integrate into a University of Ignorance the complementary dynamics of some form of polysensorial approach, as separately argued (*Strategic Challenge of Polysensorial Knowledge: bringing the "elephant" into "focus"*, 2008).

Given the use of "field", and its farming implications, few farmers would endeavour to rely only on the single sense of vision. Touch, smell, and sound are all required -- even taste. Animals in nature survive by engaging with ignorance through use of multiple senses. With respect to a University of Ignorance, its cognitive dynamics might well employ other senses metaphorically. Rather than the vision implications of "review" and "research", these might involve some form of "resmelling", "retasting", "rehearing" or "retouching" -- even *synaesthesia* (cf. *Authentic Grokking: emergence of Homo conjugens*, 2003)

Global dynamic implicit in "tweeting": It can be argued that the unforeseen worldwide success of Twitter merits consideration as an intuitively appreciated approach to the complex of interrelated issues of information overload, aspirations to connectivity, global sensemaking, and engaging with ignorance (especially with what is ignored by authority and academic faculties). It is profoundly ironic that Twitter was designed and developed by the unqualified and unauthorised for those often defined as ignorant by the knowledgeable authorities now finding themselves obliged to subscribe to it.

The question here is how the processes of a University of Ignorance might reflect this intuitive appreciation and engagement. Does this innovation herald and prefigure a new approach to the knowing-not-knowing dynamic -- and a reframing of the question-answer dynamic? This can be explored in terms of future possibilities of interrelating the threaded discourse so characteristic of the internet (*Interweaving Thematic Threads and Learning Pathways*, 2010; J. Hewitt, *Beyond Threaded Discourse*, *International Journal of Educational Telecommunications*, 7, 2001).

The possibilities of the dynamic of a University of Ignorance can also be considered more speculatively in terms of the legend of the language of the birds (*Re-Emergence of the Language of the Birds through Twitter? Harmonising the configuration of pattern-breaking interjections and expletives*, 2010). The implications of that language have been explored by Umberto Eco in exploring an appropriate language for "The Making of Europe" (*The Search for the Perfect Language*, 1993).

Such possibilities point towards a dynamic in which people engage "enactively" in previously unimagined ways with learning pathways -- rather than being faced with the obligation to follow pre-scripted pathways defined by self-selected authorities. Notions of the *noosphere* and of *songlines* are suggestive of such possibilities (*From Information Highways to Songlines of the Noosphere: global configuration of hypertext pathways as a prerequisite for meaningful collective transformation*, 1996; *Noonautics: four modes of travelling and navigating the knowledge "universe"?* 2006; *Entering Alternative Realities -- Astronautics vs Noonautics: isomorphism between launching aerospace vehicles and launching vehicles of awareness*, 2002).

The closely associated socially networking processes of Facebook merit similar consideration, especially to the extent that "face" as a metaphor corresponds functionally to that of "field" for the academic world. It is of course the case than many academics identify their "field" on their Facebook page.

Global dynamics of a memory garden, theatre or cathedral: As noted above, the global knowledge-based civilization is much challenged by remembering and forgetting (*Societal Learning and the Erosion of Collective Memory*, 1980). The dynamics of a University of Ignorance might then be explored in terms of mnemonic aids of which traditional variants include the memory garden, the memory theatre, and the memory cathedral (Frances Yates, *The Art of Memory*, 1966).

The question is how people are enabled to engage with complexity under conditions of information overload as separately discussed (*In Quest of Mnemonic Catalysts -- for comprehension of complex psychosocial dynamics*, 2007). More speculatively, is consideration of a University of ignorance in terms of a dynamic of emergence with aesthetic dimensions (*Being a Poem in the Making: engendering a multiversity through musing*, 2012).

Re-imagining the intensive farming of people in a knowledge-based society

Following on the "field" and "farming" metaphors explored above in relation to conventional academic processes, the argument can be taken further in asking to what degree people are increasingly subject to cognitive processes to be usefully compared to *intensive animal farming*. The implications of the metaphor have been partially anticipated by the much-cited works of George Orwell (*Animal Farm*, 1945) and Aldous Huxley (*Brave New World*, 1932).

The relevance of this provocative metaphor can be explored in "neutral" terms by considering from a systemic perspective the range of challenges to management of increasing numbers of people in relation to knowledge and its dissemination. Increasingly "systems" have to be designed and implemented to ensure distribution of relatively scarce resources. From a systems perspective, irrespective of the domain in which they are applied, such systems involve very similar considerations.

Provocative examples include the design and operation of large apartment blocks, hotels, hospitals, hospices, monasteries, asylums, and prison blocks -- and the anticipated design of space colonies . There is relatively little systemic difference between these with respect to

the resource management issues of intensive animal farming. Those responsible could readily adapt their skills to any one of these domains. In each case, for the individual resident in such facilities, the experience is relatively similar in systemic terms, *mutatis mutandis*. How then to distinguish the cognitive experience of an apartment dweller, the resident of a hotel, and the inmate of a prison?

With respect to information and knowledge on a larger scale, sensitivity to this perspective is recognized in use of the term **dumbing down**, namely the deliberate diminishment of the intellectual level of the content of literature, film, schooling and education, news, and other aspects of culture -- most notably in media programming. More extreme forms are evident in **news management** ("spin") and **propaganda** through which the population is selectively "fed" a carefully designed diet of information (Noam Chomsky, *Manufacturing Consent: the political economy of the mass media*, 1988). This can be understood in terms of both the organization of knowledge -- and effectively the organization of ignorance, to the extent that ignorance lends itself to organization.

Conventional universities have been variously seen as associated with a process of dumbing down (*Dumbing down of university grades revealed*, *The Telegraph*, 1 January 2011; *'Universities are dumbing down': 77% of professors claim pressure to award higher marks has increased*, *MailOnline*, 11 November 2008; *The "Dumbing Down" of Universities*, *America's Future Foundation*, 23 August 2012; *Are we dumbing down our universities?* *Essential Vision*, 19 September 2012). Beyond the dumbing down ensured by political and commercial pressures on the media, does this suggest that the universities are themselves intimately associated -- to an unexplored degree -- with the inculcation and organization of ignorance through a form of intensive farming of students and faculty? How might the selective design of curriculum content be analysed to clarify the case?

Given the similarities in the architectural design of the collective facilities named above, it is then appropriate to ask whether there are systemic similarities in the design of the intangible knowledge environments which people variously inhabit. With respect to any conventional university, are the bounded "fields" effectively configured to constitute knowledge environments? Unfortunately there is little call within the academic world to configure the faculties of a university in more integrative ways than a simple check list or menu. As a laundry list of knowledge processing faculties, it is difficult for a university to get its act together or to appreciate that there is any point in doing so. A farmer has a better sense of the fruitful configuration of fields to benefit from their complementarity -- most notably in crop rotation.

Due to the increasing complexity of knowledge, "intensive farming" may be otherwise inferred. Where there is some obligation to inform the public, explanations may be deliberately made more complex or inaccessible than is convenient for the busy individual in order to discourage attempts at critical comprehension -- whilst encouraging uncritical acceptance (and "buy in"). This is evident in the sale of financial products (mortgages, pension plans insurance, tariff plans, etc), equipment operation (computers, etc), food products (additives, provenance, etc), and the like.

Especially dubious is the personalization of information requested through the **filter bubbles** whereby a website search algorithm selectively guesses what information a user would like to see based on information about the user. These processes bear an increasingly unfortunate relationship to "**grooming**" as commonly associated with actions deliberately undertaken with the aim of establishing an emotional connection with a child, to lower the child's inhibitions in preparation for sexual activity or exploitation. In the broader "farming" context, it is the exploitation of the unsuspecting following from dumbing down, with "sexual activity" then best understood metaphorically. New forms of vigilance are seemingly required (*Engaging with Questions of Higher Order: cognitive vigilance required for higher degrees of twistedness*, 2004).

The above arguments suggest that a case is made for explicitly configuring the bubble of ignorance, or barriers to knowledge, within which individuals are increasingly obliged to live unquestioningly -- and through which their greater ignorance is systematically cultivated. Framed through this "farming" metaphor, the nature of "**free range**" cognitive experience is usefully evoked by contrast.

Dynamic of indwelling intelligence: questioning learning

(Section mainly reproduced from *Implication of Indwelling Intelligence in Global Confidence-building*, 2012)

To the extent that intelligence and ignorance are in some manner complementary, of special significance is the nature of the dynamic of any indwelling intelligence. Clearly it is a limitation to associate such fundamental intelligence with a static form of omniscience. There is therefore a sense in which the dynamic is grounded on both questioning what has already been learned and engaging with ignorance -- with what is unknown. How is "resolution" creatively avoided?

Understood this creative instability might be seen as based on a pattern analogous to the **Uncertainty Principle** (cf. Garrison Sposito, *Does a generalized Heisenberg Principle operate in the social sciences?* *Inquiry*, 1969) perhaps formulated as:

- the more one is confident of what intelligence is, the less one is aware of the ignorance on which that confidence is based
- the more one is confident of what ignorance is, the lower the quality of intelligence implied by that conclusion

Curiously, the anticipated "Theory of Everything" is not expected to offer any explanation as to why most cannot comprehend it -- its inherent intelligence -- and why most will consider it irrelevant to the "things" with which they are preoccupied. This condition is as likely to apply to any global strategy in quest of which consensus is sought. The strategic dimension has been highlighted by the notorious "**poem**" of Donald Rumsfeld, presented in 2002 in his role as US Secretary of Defense:

*[T]here are known knowns; there are things we know that we know.
There are known unknowns; that is to say there are things that, we now know we don't know.
But there are also unknown unknowns - there are things we do not know, we don't know.*

As discussed separately, this pattern can be set into a dynamic (*Unknown Undoing: challenge of incomprehensibility of systemic neglect*, 2008) which requires a (proactive) process of questioning any learning which implies the stasis of a "body of knowledge" characterized

by the following.

Knowing and Ignoring		
?	Knowing	Ignoring (not knowing)
what one does not know (A)	knowing what one does not know	ignoring what one does not know
what one knows? (B)	knowing what one knows	ignoring what one knows
both A and B	knowing both what one knows and what one ignores	ignoring both what one knows and what one does not
neither A nor B	knowing neither what one knows nor what one does not	ignoring neither what one knows nor what one does not

Of particular relevance to any engagement with "Everything" is the nature of boundaries, namely the determination of systemic externalities to be treated as irrelevant to "Everything", as discussed separately (*Reintegration of a Remaindered World: cognitive recycling of objects of systemic neglect*, 2011). This clearly has implications for global initiatives neglecting features of the environment as "negligible" (cf. *Geo-engineering Oversight Agency for Thermal Stabilization (GOATS)*, 2008). This is also evident in assumptions with respect to prevailing policies of "you're either with us, or against us" -- "us, intelligent", "them, ignorant" (cf. *Us and Them: Relating to Challenging Others -- patterns in the shadow dance between "good" and "evil"*, 2009).

A curious indication of a form of "shadow dance" is that between the deities of any pantheon, as articulated in many myths. What is the nature of the "eternal dance" between the deities of the **Olympian Dodekatheon**? The question can be usefully evoked in relation to preferential biases and personality typology, notably in its implications for governance (*Enabling a 12-fold Pattern of Systemic Dialogue for Governance*, 2011). It recalls the distinction of **multiple intelligences** as formulated by **Howard Gardner** (*Frames of Mind: the theory of multiple intelligences*, 2011). Such arguments raise questions as to the nature of "meta-intelligence", "meta-dialogue" and "meta-reasoning" (cf. Sara Nora Ross, *Meta-intelligence for Analyses, Decisions, Policy, and Action: the integral process for working on complex issues*, In: Tom Atlee, et al. *Collective Intelligence: creating a prosperous world at peace*, 2008).

The nature of the dynamic could be considered otherwise through the interplay between: playfulness, humour, appropriateness, paradox, counter-intuition, drama, fascination, enchantment and self-reflexivity (cf. *Dynamics of en-joying oneself*, 2011 in: *Embodying the Paradoxes and Contradictions of the Pursuit of Happiness*, 2011). It could also be considered in terms of the Taoist meditative insight into the "circulation of light", as separately explored with respect to a knowledge-based society (*Circulation of the Light: essential metaphor of global sustainability?* 2010).

Palliative care for institutional dementia?

As variously argued, recognition of the possibility (if not probability) of global collapse merits consideration in cognitive terms -- reflecting the experience of "ignorance" and "nothingness" in a society supposedly rich in "knowledge" and "potential". In his analysis of the fall of the Roman Empire, from which many have endeavoured to learn, the focus has been placed on production and distribution of energy by **Thomas Homer-Dixon** (*The Upside of Down: catastrophe, creativity, and the renewal of civilization*, 2006). More pertinent for the current global civilization might be the dissemination and comprehension of knowledge and its relation to ignorance.

The current cognitive tragedy of institutions can be fruitfully understood as mirrored in the experiential reality of **dementia** as a final phase of individual aging -- increasingly significant in an **aging population** (*Pointers to the Pathology of Collective Memory*, 1980). Understanding energy as information, as astrophysicists are wont to do, the processes of a collapsing civilization could then be compared to the "information" processes of the **gravitational collapse of a star** at the end of its life.

In collective terms the question may be framed dramatically as the extent to which civilization already offers evidence of an institutional form of **Alzheimer's Disease** -- especially in the light of its effects on memory engendering increasing ignorance. Are pathological knowledge processing equivalents to those of Alzheimer's Disease indicative of a systemic collapse -- paradoxically anticipating the hypothesized **technological singularity**?

In systemic terms, how comparable to symptoms of dementia are the current global institutional "mumbblings", non sequiturs and contradictions -- however assiduously recorded, analysed and subject to purportedly serious commentary? Will the future find such comparison credible? Will the diagnosis also recognize dysfunctionality comparable to global **multiple personality disorder**, precluding any sense of integrated global identity -- other than as claimed so vigorously by each institutional "personality"?

Of this tragic terminal condition "nothing" can of course be meaningfully communicated to the institutions in question. Ironically this mirrors the incapacity of those institutions to say more than "nothing" to those faced with "nothing" as a result of institutional incompetence.

These are of course conditions which many individuals will personally experience -- if only in their terminal care for loved ones. If the experience is to be reframed in multiversal terms, how is the pattern of voices to be recognized (*Enactivating Multiversal Community: hearing a pattern of voices in the global wilderness*, 2012).

Minimal connectivity of knowledge to sustain healthy ignorance

Healthy ignorance? How ignorant is it safe or fruitful to be? Some spiritual disciplines argue for a "stripping away"? Cases are made for "unlearning", even in the business world. Using a physical metaphor, to what extent can knowledge be compared to "fat", namely **adipose tissue** -- both in terms of its desirable functions and the problematic consequences of its excess?

Could "healthy" cognition then be usefully related metaphorically to "lean" ? (cf. *Beyond fat tree global knowledge management*, 2012). This raises the question of the extent to which ignorance should be framed as a disease for which knowledge is the remedy (*Memetic and Information Diseases in a Knowledge Society: speculations towards the development of cures and preventive measures*, 2008; *Cognitive Implications of Lifestyle Diseases of Rich and Poor: transforming personal entanglement with the natural environment*, 2010).

Minimally requisite connectivity: Shifting metaphors, if knowledge is understood in terms of connectivity, as with networks of nodes of information, is there a sense in which ignorance is the empty space traversed by those networks? If the body of knowledge is then to be compared to a human body, the myriad atoms (of information) making up a human adult (7⁸ octillion) would be understood as being mostly empty atomic space -- as nothingness or ignorance? Without that space, as might follow from the elimination of ignorance, the body (of knowledge?) would fit into a cube less than 1/500th of a centimetre on each side -- in the terms of that metaphor.

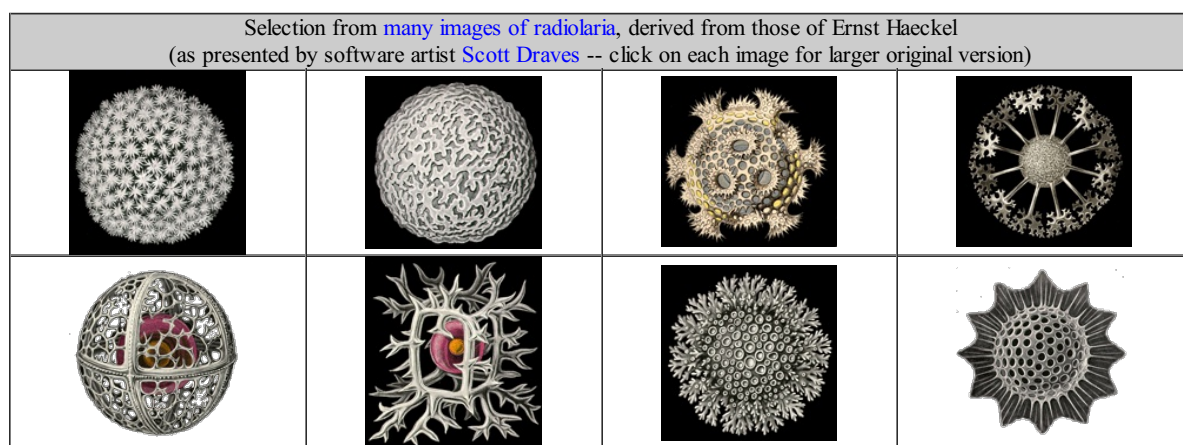
Design challenge: Shifting metaphors again, can the relationship between knowledge and ignorance be considered as a design challenge -- a life design challenge? For architecture there is great merit in the elegance of designs which employ the strictest minimum of structural materials to create, encompass and suggest space. Here "materials" could be understood as knowledge, whilst "space" and "emptiness" could be understood as "ignorance".

As an environmental designer, [Christopher Alexander](#) is renowned for elaborating a pattern language enabling the design of places in which it is desirable to be (*A Pattern Language*, 1977) through circumscribing a "central quality without a name". A radically elegant approach to minimal use of materials has been the geodesic structures designed by [R. Buckminster Fuller](#) (*Synergetics: Explorations in the Geometry of Thinking*, 1975/1979). Although explicitly explored in terms of their cognitive implications, this is less evident than the titles of his work imply, as discussed separately (*Geometry of Thinking for Sustainable Global Governance: cognitive implication of synergetics*, 2009). Similarly it is possible to elicit more cognitive implications from the pattern language of Alexander (*5-fold Pattern Language*, 1984; *Harmony-Comprehension and Wholeness-Engendering: eliciting psychosocial transformational principles from design*, 2010).

Biomimicry and radiolaria: With these indications it is useful to look for insights from some of the simplest living forms, perhaps to be considered the nearly the most "ignorant". In the light of the arguments of [biomimetics](#), the [radiolaria](#) offer a striking example. Biomimetics is the study of the structure and function of biological systems, primarily as models for the design and engineering of materials and machines. However it is widely regarded as being synonymous with [biomimicry](#), biomimesis, and biognosis, as well as being similar to biologically inspired design. In the light of the arguments above regarding "memetics", there are fruitful considerations to the relationship between biomimetics and biomemetics, whether confused as synonyms or considered as distinct. Similarly, with respect to "temetics", the extension of the argument to technological forms merits attention (*Technomimicry as analogous to biomimicry*, 2011)

The case for exploring [radiolaria](#) in terms of knowledge patterning has been explored separately (*Evoking Authenticity: through polyhedral global configuration of local paradoxes*, 2003). They are holoplanktonic protozoa widely distributed in the oceans (and in the fossil record) and range from 30 microns to 2 mm in diameter [[more](#); [more](#); [more](#)]. They have long been an inspiration as art forms in their own right [[more](#)]. Many are spherical in structure.

Efforts have been made by Nicholas Shea and others to generate such spherical radiolaria structures with graphic software within the context of other generated spherical arrays, including [buckyballs](#) (cf. *Geodesica, TesselSphere, Radiolarian creator*). These variously evoke the famous lithographs of [Ernst Haeckel](#) (*Art Forms from the Ocean: the Radiolarian Atlas of 1862*, 2005). It is remarkable that such a diversity of complex structures can be generated programmatically a time when universities are unable to present the organization of their faculties other than as a hierarchically nested laundry list.



The question is whether such living structures are suggestive of patterns that could be used to configure semantic content spherically -- a spherical semantic network map -- possibly even in a web environment (*Spherical Configuration of Categories -- to reflect systemic patterns of environmental checks and balances*, 1994; *Spherical Configuration of Interlocking Roundtables: Internet enhancement of global self-organization through patterns of dialogue*, 1998). This would then provide a context for exploring whether some collective initiatives effectively involve the construction of such "closed" arrays as "grilles de lecture". Coincidentally such possibilities fall within the cognitive preoccupations of a second [Nicholas Shea](#).

The nature of the "holes" in radiolaria have been a focus of [Christina Brodie](#) (*Geometry and Pattern in Nature 3: the holes in radiolarian and diatom tests*, *Micscape Magazine*, February 2005). The radiolaria patterns are reminiscent of the "fish-scale model" of interdisciplinarity (D. T. Campbell. *Ethnocentrism of disciplines and the fish-scale model of omniscience*, 1969) which can be understood

as suggestive of the overlapping complicity of the disciplines in encompassing reality as a whole.

Re-imagining fields and boundaries: Returning to the academic "field" metaphor, these considerations suggest the possibility of a spherical configuration of the fields on a knowledge "farm". With each field considered to be flat, together these would form a spherical polyhedron, as variously considered previously (**). This framework then opens for discussion:

- the *field as an open hole*, variously indicative of its function as:
 - an attractor for research and elaboration of knowledge (a domain of "order")
 - a domain of unrecognized or nascent ignorance (a "wilderness")
- the *field as a closed hole*, variously indicative of its function as:
 - consistent with confidence in it as a domain of knowledge -- as "truth"
 - consistence with its ignorance (denial) of alternative perspectives and inputs -- as "falsehood"
- the *boundaries between fields as rigid*, variously indicative of their function as:
 - knowledge expressed as relationships (typical of network maps)
 - discontinuities between fields suggestive of the ignorance associated with failure of their reconciliation
- the *boundaries between fields of varying consistency*, indicative of their function as:
 - knowledge -- varying between the rigidity of a definitional protective boundary (an impassable wall), a degree of permeability (a hedgerow), or purely notional (even fuzzy)
 - ignorance -- varying between intolerant discrimination of any other, and a bemused recognition of difference

With knowledge (and ignorance) understood through the metaphor of molecular bonding, one suggestive way to explore this alternation is by considering each field as able to take on characteristics analogous to the states of matter ([solid](#), [liquid](#), [gas](#), and [plasma](#)). The field boundaries could be similarly compared to the [resonance](#) bonding as found in the [benzene](#) molecule, [clathrates](#), or [fullerenes](#) -- rather than be restricted to the imagined "solidity" of a bond.

Expressed otherwise, how can the familiar forms of "matter" (solid, liquid, gas, plasma) be used mnemonically to make qualitative distinctions between:

- *areas* (fields, holes, etc) imagined as indicative of "knowledge" or "ignorance"
- *boundaries* (relationships, connections, bonds, etc) imagined as indicative of "knowledge" or "ignorance"

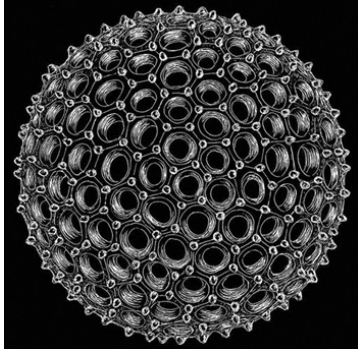
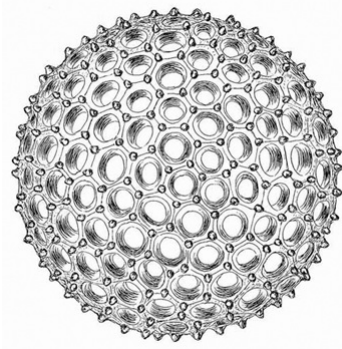
Alternation, resonance and ambiguity: For a University of Ignorance, it is the cognitive dynamics associated with these possibilities which merits attention -- especially in the light of the processes of micro-organisms in opening and closing to flows (Orrin E Klapp, *Opening and Closing: strategies of information adaptation in society*, 1978; Max Deutscher. *Subjecting and Objecting : an essay in objectivity*, 1983). In this sense such a university complements the rigidity of a conventional university by cycling between the alternative possibilities. This suggests the need for aids to comprehension (*In Quest of Mnemonic Catalysts -- for comprehension of complex psychosocial dynamics*, 2007).

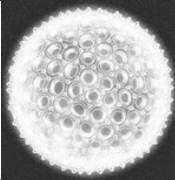
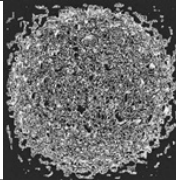


Mnemonic aids to imagination of the possible dynamics relating knowledge and ignorance (tentative)				
Note knowledge and ignorance can be associated with either the row or column elements of this table, with the suggestion that there is necessarily an alternation between each such attribution				
<i>boundaries / relationships / connections / bonds / barriers / walls, etc</i>	<i>areas / holes / fields / domains / islands / identity (profiles) / "faces" / windows / doors, etc</i>			
	<i>solid (Earth)</i>	<i>liquid (Water)</i>	<i>gas (Air)</i>	<i>plasma (Fire)</i>
<i>solid (Earth)</i>	X	lakes within domains	areas of opinion	heated eruptions (creativity)
<i>liquid (Water)</i>	islands of stability bounded by rivers of emotion	X	?	lakes of fire
<i>gas (Air)</i>	emissions	?	X	?
<i>plasma (Fire)</i>	ring of fire around islands of stability	fire bounded lakes	?	X

Note that the four (shaded) cases where area and relationship are similarly defined have been excluded as not offering sufficient distinction between them. A further four cases have been left open to as questions because of their insubstantial nature and therefore the current difficulty of attributing significance to the distinctions they represent. The dynamics and systemic rationale of the pattern of the remaining 12 unshaded distinctions can be further explored in the light of previous arguments (*Checklist of 12-fold Principles, Plans, Symbols and Concepts*, 2011; *Eliciting a 12-fold Pattern of Generic Operational Insights*, 2011; *Enabling a 12-fold Pattern of Systemic Dialogue for Governance*, 2011)

Although the 12-fold pattern lends itself to configuration more integratively as a polyhedron (as argued in those documents), the biological viability of radiolaria provides a valuable indicator of the need for more complex order. Expressed otherwise, **how complex does a radiolarian need to be in order to be biologically viable** -- in contrast to the simple elegance offered by the spherically symmetrical polyhedra? This biological criterion is a provocative pointer to the possible limitations in practice of any 12-fold articulations of principles -- as being simply not viable.

<p>Indicative representation of a University of Ignorance as a pattern of resonance between cognitive extremes</p> <p>Using the radiolarian <i>Aulonia hexagona</i>, whose morphology was extensively studied by Ernst Haeckel (image derived from a study by Christina Brodie, prior to modification for illustrative purposes)</p>

areas as domains of ignorance (dark holes) connecting network as knowledge (thin light links) ignorance as a background to a configuration of knowledge	areas as fields of knowledge (light holes) connecting network as barriers (thin dark links) knowledge as a background to a configuration of ignorance
	

Animation indicating the intermediary conditions in the alternation between the above extremes (tentative) (click for separate animation [2MB gif] with 64 contrasting images, including the following)			
			
Images for the animation were generated using filter effect options of Photoshop to modify the 2 extreme images, thereby suggesting an array of contrasting relationships between knowledge and ignorance (NB: Such an animation could benefit from greater aesthetic skills with respect to composition and pace)			

As noted above, radiolaria patterns can be constructed programmatically. The extensive variety of options for the manipulation of such images offers scope for reflection on the aesthetic contrasts meaningful to the human brain. These can be related to comprehension of the range of molecular resonance patterns characteristic of organic molecules fundamental to life (cf. [Chladni figures](#)). The images in the animation are tragically reminiscent of images depicting the loss of neurons and synapses in the cerebral cortex as is characteristic of Alzheimer's Disease. Given the effects of the disease on information processing capacity, the "aesthetic" variants suggesting relationships between knowledge and ignorance may merit consideration from other perspectives.

Living in ignorance in the University of Life

Engaging proactively with ignorance: The objectivity of explication in a conventional university obscures the subjectivity of implication which a University of Ignorance necessarily endeavours to enable and enhance. The possible cognitive process for those faced with nothing can be variously explored, as noted separately (*Towards the Dynamic Art of Partial Comprehension*, 2012; *Living with Incomprehension and Uncertainty: re-cognizing the varieties of non-comprehension and misunderstanding*, 2012).

The very partiality of comprehension, in a civilization overloaded with knowledge and information, suggests paradoxical possibilities in contrast to potentially unhealthy cognitive aspirations and presumptions (*Paradoxes of Engaging with the Ultimate in any Guise: living life penultimately*, 2012). This indicates the value of reassessing possibilities of [simple living](#) -- but understood more fundamentally through cognitive processes (*Living as an Imaginal Bridge between Worlds: global implications of "betwixt and between" and liminality*, 2011; *Embodying the Paradoxes and Contradictions of the Pursuit of Happiness: En-joying the World through En-joying Oneself*, 2011).

There are many references relevant to this proposal to be found with keywords: "cultivating ignorance" or "cultivated ignorance".

Objective-Subjective complementarity: The cognitive processes of a University of Ignorance must necessarily embody the paradox of its objective external "existence" (as a collective reality) complemented by its subjective implication for any individual engaging with them, as separately explored (*Defining the objective ∞ Refining the subjective ?! Explaining reality ∞ Embodying realization*, 2011). This necessarily highlights challenges of comprehension calling for mnemonic assistance (*Conditions of Objective, Subjective and Embodied Cognition: mnemonic systems for memetic coding of complexity*, 2007).

Challenge of the unconscious: Institutions are increasingly vigorous in their management of news and the censorship of "negative" references of any kind. This increasingly precludes discussion of the unknown and the nothing with which people are confronted. Institutions are themselves dependent on "positive" framing to sustain the coherence of their endeavours. The pattern is consistent with civilizational collapse (as noted above) and the unconsciousness of global civilization ([John Ralston Saul](#), *The Unconscious Civilization*, 1995).

Given the comparisons made with the Roman Empire, it is appropriate to note the ritualised processes through which its governors endeavoured to engage with the "underworld". In this sense, the preoccupations of a University of Ignorance can be framed in terms of the challenges of integrating a "netherworld", as separately discussed (*Designing Global Self-governance for the Future: patterns of dynamic integration of the netherworld*, 2010). Also of relevance is the sense in which such an emergent fundamental form -- outside (or underlying) conventional patterning -- is paradoxically associated with the creativity of the [daimonic muse](#) (cf. *Interweaving Demonic and Daimonic Associations in Collective Memory*, 2008).

Individual-Collective complementarity: Engaging with a "University of Ignorance" then raises fundamental questions regarding the nature of the cognitive distinction between individual and collective as challenged by "nothing", "ignorance" and the "unknown" (cf. *Implication of Personal Despair in Planetary Despair: avoiding entrapment in hopeful anticipation*, 2010; *Embodiment of a Way Round Pointlessness ?* 2012). In a time when global governance has "nothing" to offer as answers to the existential questions of many, this points to the possibility of a fundamental reframing of the dynamics of "question" and "answer". In that sense a University of Ignorance, however imagined, is both question and answer, and neither -- as with those enacting it (*Am I Question or Answer? Problem or (re)solution?* 2006).

Mirroring and entanglement: These cognitive subtleties, appropriate to a global civilization and for its complexities, correspond to those of the mirroring and entanglement recently highlighted (*Stepping into, or through, the Mirror: embodying alternative scenario patterns*, 2008). The "mirroring" function of the other, notably through "mirror neurons", then offers access to what is otherwise unconscious (V. S. Ramachandran, *The neurons that shaped civilization*, TEDx India, 2009). Comprehension of the psychosocial implications of the quantum entanglement, highlighted by fundamental physics, will be a necessary theme of the time to come. The issue for a University of Ignorance is how the individual is mirrored and entangled in global environmental processes (cf. *Psychology of Sustainability: embodying cyclic environmental processes*, 2002).

Simple living through stripping away: As suggested by the viability of radiolaria, the question is then how the challenge to knowledge retention capacity can be reduced by "stripping away" excess knowledge. Is there an information analogue to the standard **body mass index** yet to be identified? What then are the knowledge processes essential to "simple living" and how might they be organized for systemic viability? How can knowledge processing resources be concentrated to best enable remembering/forgetting as a means of sustaining a sense of identity -- individually or collectively? What implications do such questions have for the young faced with a future of "nothing" -- exposed to an overload of knowledge? How is living in ignorance to be consciously enabled?

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