



laetus in praesens

Alternative view of segmented documents via Kairos

23rd August 2007 | Draft

Einstein's Implicit Theory of Relativity - of Cognitive Property?

Unexamined influence of patenting procedures

-- / --

Commentary partially in support of the draft proposal for a *Universal Declaration of Patent Responsibilities* (2007) as justified in *From Patent Rights to Patent Responsibilities: obligations incumbent on owners and licensors of intellectual property* (2007)

[Introduction](#)

[Background](#)

[Influences on Einstein's creativity](#)

[Influence of patent office procedures](#)

[Developing the case](#)

[Generic frameworks of "intellectual property"](#)

[Cognitive psychology of ownership and possession of property](#)

[Einstein's theory as a mirror of the creative process -- a representation](#)

[Collective endeavour](#)

[Patenting moonshine](#)

[References](#)

Introduction

The argument here is that there is a case for exploring the extent to which it was the discipline required of a patent examiner that moulded or predisposed [Albert Einstein's](#) thinking to the formulation of the theory of relativity. Of relevance to the argument developed separately (*From Patent Rights to Patent Responsibilities: obligations incumbent on owners and licensors of intellectual property*, 2007) is the extent to which Einstein (as a patent clerk) was involved in determining the framing of unique "property", arising from "invention", relative to other such properties -- and claims made with regard to them over a period of time.

His interests may well have predisposed him to generalize both from physical property and from intellectual property to invariant frameworks of space-time. **The question of interest is whether the special theory of relativity has unexplored implications for intellectual property and for a more general sense of responsibility in relation to it.**

Background

Einstein worked in the Swiss Patent Office in Berne from 1902 to 1909, eventually promoted to the position of technical expert (second class). During this period he completed a surprising set of theoretical physics publications, written in his spare time without the benefit of close contact with scientific literature or colleagues. These included *On the Electrodynamics of Moving Bodies* (1905) containing what became known as the [special theory of relativity](#).

Central to Einstein's special theory of relativity was the realization that all measurements of time and space depend on judgments as to whether two distant events occur simultaneously. His theory is based on two postulates: the principle of relativity, that physical laws are the same in all inertial reference systems, and the principle of the invariance of the speed of light, that the speed of light in a vacuum is a universal constant. These enabled him to provide a consistent and correct description of physical events in different inertial frames of reference without making special assumptions about the nature of matter or radiation, or how they interact.

In commenting on the fact that virtually no one understood his arguments, one explanation offered [[Albert Einstein](#)] is that:

The difficulty that others had with Einstein's work was not because it was too mathematically complex or technically obscure; the problem resulted, rather, from Einstein's beliefs about the nature of good theories and the relationship between experiment and theory. Although he maintained that the only source of knowledge is experience, he also believed that scientific theories are the free creations of a finely tuned physical intuition and that the premises on which theories are based cannot be connected

logically to experiment. A good theory, therefore, is one in which a minimum number of postulates is required to account for the physical evidence. This sparseness of postulates, a feature of all Einstein's work, was what made his work so difficult for colleagues to comprehend, let alone support.

During his final years at the Patent Office, Einstein initiated his life-long work on extending and generalizing the theory of relativity to all coordinate systems. He began by enunciating the principle of equivalence, a postulate that gravitational fields are equivalent to accelerations of the frame of reference.

Influences on Einstein's creativity

The continuing puzzle to many historians of science and researchers on creativity is how a patent office clerk (third class) could elaborate a theory of such profound significance to the future of physics in the absence of any conventional interaction with physicists. John Stachel (*How Did Einstein Discover Special Relativity?*, 1983) provides an excellent account in support of conjectures on how this may have been possible.

Curiously, it would appear that no consideration is given to the effect of the disciplines and preoccupations of the Patent Office on Einstein's creative thinking, whether these influences were explicit -- or implicit and unacknowledged in some way. His time at the Patent Office has often been described as a complete waste of his talents (see "*Moonlighting in the Patent Office*" in Gary F. Moring, *The Complete Idiot's Guide to Understanding Einstein*, Alpha Books, 2004) or as a temporary job with no connection to his interests in physics. Reference is however made to Einstein's own account of the vagaries of the creative process, which presumably may be considered a form of recognition by him of the catalytic potential of such influences. He himself considered that time to be the most creative/productive in his life.

It is intellectually offensive to physicists, representing one of the purest and most noble of the fundamental sciences, that anything of significance should emerge from the relatively ignoble context of a patent office. Yet curiously both contexts have similar concerns with defining domains of invariance in space and time and with clarifying the "lawful" or "legal" relationship between them.

It is also the case that physicists themselves are most anxious to ensure the priority of their claims to discovery and to guarantee their rights of ownership to any associated intellectual property. Curiously the process of filing and examining a patent for validity (discussed below) bears a strong systemic resemblance to the process of submitting a paper to a reputable journal necessitating peer review prior to acceptance. This similarity may even extend to the manner in which property rights are subsequently (re)assigned.

Suppose therefore that, contrary to general assumption, the patent office procedures were indeed fundamental to Einstein's creative process. In the case of [Ludwig Wittgenstein](#), such a seemingly "ridiculous" possibility has been extensively argued by the philosopher [Susan G. Sterrett](#) (*Wittgenstein Flies a Kite: a story of models of wings and models of the world*, 2006). This "nurture" perspective may prove more fruitful than the "nature" perspective which, as noted by Steve C. Wang (*In Search of Einstein's Genius*, *Science*, 289, 5484, 1 September 2000, p. 1477), resulted in the 240 pieces of his brain, removed at his autopsy in 1955, being finally examined in 1985 and with new neuroanatomical tools in 2000. And as Wang remarks:

The most important question may be why we perform these analyses at all, and what we really hope to find. Just as Einstein captured the essence of energy and matter in his famous equation, so we seek to capture the essence of genius. Our pursuit perhaps reveals more about ourselves than about the nature of genius.

Influence of patent office procedures

There is therefore a case for exploring the extent to which it was the discipline required of a patent clerk that -- to some degree at least -- moulded or predisposed Einstein's thinking to the formulation of the theory of relativity. Although his responsibility was evaluating patent applications for electromagnetic devices, and this is recognized as having influenced his subsequent interest (as argued by [Peter Galison](#)), **the possibility as yet to be explored is that it was the mindset involved in considering the essentials of a valid patent application that influenced the generalization which is considered the mark of his own originality.**

In the light of the [legal concepts of patenting](#) (see United States Patent and Trademark Office, *Glossary*), consider some of the potential or suggestive parallels to the status of "property" (and its "properties") in the most generic sense:

- an invention, understood as intellectual property and recognized and defined by some form of [patent](#), can be understood as an invariant frame of reference (from the perspective of a particular observer or claimant). It is a particular pattern or configuration of elements, perhaps fruitfully to be seen through the perspectives of a [constructivist](#) or [enactivist](#) epistemology through which the process of "invention" occurs.
- a [patent application](#) must typically include one or more claims defining the invention. The pattern may therefore be partly composed of other patterns or frames of reference defined within it. Such an application may therefore be considered a form of request for recognition, or registration, of a particular frame of reference or perspective.
- the application, to be accepted, must comply with the requirements of the relevant patent law, and is examined for such compliance by a patent office. Generically this raises the question of the "law" arbitrating the relationship between distinct frames of reference and the nature of the authority empowered to recognize such distinctions and enable their enforcement
- in the application (and in exchange for the protection of rights) the invention must be [sufficiently disclosed](#), in a clear and complete manner, to enable a person skilled in the art to carry out the invention
- to be [patentable](#), namely acceptable as valid intellectual property worthy of protection by patent, the invention must have the characteristics of

- [patentable subject matter](#)
- [novelty](#) (in US patent law)
- [non-obviousness](#) (in US patent law) or involve an [inventive step](#) (in European patent law)
- [utility](#) (in US patent law) or [industrial applicability](#) (in European patent law)
- a patent is then a set of exclusive rights granted by an authority (typically a state) to the inventor or patentee. Generically this highlights questions about the nature of the authority empowered to grant rights sustaining such exclusive distinctions.
- these rights typically prevent or exclude others from making, using, selling, offering to sell or importing the patented invention. It gives the patent owner the right to exclude others from [infringing the patent](#). Generically these can of course be seen as being at the root of (mis)understanding regarding the relationship between distinct belief systems and claims made with respect to them by the "patentees" -- especially when the granting authority is held to be divine.
- a patent enables the owner of the property to seek redress for patent infringement through civil litigation, typically the only means of enforcement. Generically frameworks are effectively empowered in some way to act in relation to one another but must seek arbitration regarding differences within a framework of laws.
- an important limitation on the ability of a patent owner to successfully assert patent rights in civil litigation is the accused infringer's right to challenge the validity of that patent. Civil courts hearing patent cases can and often do declare patents invalid.
- typically, rather than seek legal judgement, the patent owner will seek monetary compensation for past infringement, and will seek an [injunction](#) prohibiting the defendant from engaging in such infringement in future. Generically such compensation may be reframed as some form of energy transaction..
- the patent is granted for a fixed period of time, the [patent term](#).

Given the dynamics of patenting strategies over time (as noted in *Patenting strategies and avoidance of responsibility*), notably in relation to the complex relationship between patents in partially related areas, it is intriguing to note the recognition of "patent space" (eg Gavin Clarkson, *Patent Informatics for Patent Thicket Detection: a network analytic approach for measuring the density of patent space*, 2005) as a degree of formalization of "knowledge space".

Developing the case

With such pointers, and careful consideration of the articulations of the nature of intellectual property and of the special theory of relativity, it would appear that a case could be made for there being a significant degree of influence of the former on the latter in the case of Einstein. With the semiotic and philosophical skills of [Umberto Eco](#), the case could be made especially interesting, even if the influences on Einstein were unconscious rather than, to some degree, a conscious effort to disassociate himself from the alienation of the procedures of the Patent Office mindset. It would be especially ironic if the special theory had fortuitously emerged as a mathematician's fantasy like that of [Edwin Abbott Abbott](#) (*Flatland: A Romance of Many Dimensions*, 1884). The Patent Office as Einstein's "flatland" -- from which he so successfully escaped?

There is a further potential irony to the relationship:

- the [doctrine of equivalents](#) is a legal rule in most of the world's patent systems that allows a court to hold a party liable for patent infringement even though the infringing device or process does not fall within the literal scope of a patent claim, but nevertheless is equivalent to the claimed invention.
- in the physics of relativity, the [equivalence principle](#) is applied to several related concepts dealing with gravitation and the uniformity of physical measurements in different frames of reference; a fundamental feature of the theory of relativity is the concept of [mass-energy equivalence](#), namely that all mass has an energy equivalence, and all energy has a mass equivalence. Special relativity expresses this relationship using the much cited mass-energy equivalence formula

In what way might "mass" and "energy" be understood as characteristics of invention in "knowledge space" or "patent space" that would suggest a further generalization of that embodied in the mass-energy equivalence formula?

Generic frameworks of "intellectual property"

Clearly patents focus on a very particular form of intellectual property. Trademarks and copyright offer other instances. Theories, notably those bearing the name of the originator, offer another -- whether or not they are treated as intellectual property.

In the spectrum between such instances and the invariant frameworks recognized in terms of the special theory of relativity, consideration can be given to the frameworks constituted by concepts, categories, ontologies, values, beliefs, epistemologies and "ways of knowing" -- whether in isolation or as part of "systems". To what extent is a discipline to be considered as a frame of reference -- distinct from other such frames of reference -- and what is to be said of the relationship between them?

Most concretely there is also "real estate" and its virtual equivalents in cyberspace, including web "domains". In psycho-social systems there are also notions of "territory" and "turf" with which scholars in academic disciplines are notably far from unfamiliar (cf *Dynamically Gated Conceptual Communities: emergent patterns of isolation within knowledge society*, 2004).

For all such cognitively bounded, and variously registered, recognized and "patented" domains, there are fundamental issues of how distinctions are made and how boundaries are drawn. These are issues variously explored by:

- [George Spencer Brown](#) (*Laws of Form*, 1969) notably in the form of the "calculus of indications" ([Louis H. Kauffman](#), *Virtual Logic: the calculus of indication*, *Cybernetics and Human Knowing: a journal of second order cybernetics and cyber-semiotics*, 5, 1, 1998) Contents: Volume 5 No. 1, 1998) or [boundary algebra](#).
- [Hilary Lawson](#) (*Closure: a story of everything*, Routledge, 2001)
- [Ernst Cassirer](#) (*Substance and Function*, 1910; *Philosophy of Symbolic Forms*, 1923-29). Cassirer's view was characterized by

Swabey as an "epistemological theory of relativity" (cf Ernst Cassirer, Marie Collins Swabey, William Curtis Swabey (*Substance and Function and Einstein's Theory of Relativity*, Dover Publications, 1953)

- **Ernst Mach** in his epistemological theory of relativity (cf John Blackmore, *Ernst Mach Leaves 'The Church of Physics'*, *The British Journal for the Philosophy of Science*, 40, 1989, 4, pp. 519-540)

A useful review of such perspectives is offered by Jerome Iglowitz (*Virtual Reality: consciousness really explained*, 1998-2007). Given the various kinds of confusion associated with relativity and relativism, the associated cognitive property merits a clarificatory mapping using techniques such as that, mentioned above, of Gavin Clarkson (*Patent Informatics for Patent Thicket Detection: a network analytic approach for measuring the density of patent space*, 2005).

Especially interesting is the issue of how people identify with such domains and derive their sense of identity from them, possibly in contrast to more dynamic understandings of identity (*Emergence of Cyclical Psycho-social Identity: sustainability as "psychically" defined*, 2007).

Cognitive psychology of ownership and possession of property

Curiously, and notably in relation to the special theory of relativity, physicists only design themselves into its framework as virtual observers -- if at all. They only engage psychologically with such frames of reference through their acquisition and ownership of associated cognitive property. In effect they deal in "bloodless categories" despite the "bloody" uses to which a theory may be put by those who acquire the relevant know how (or "art", in patenting terms).

The strategic importance of "giving ownership" is recognized in political programmes, in business, as well as in ensuring "buy-in" in support of community development. The psycho-political concept of "buy-in" may be considered in relation to a developmental vision -- effectively a framework within the spectrum noted above (cf Mark S. Walton, *Generating Buy-In: mastering the language of leadership*, 2003). This raises questions about how one makes a framework "one's own".

Interesting examples of this at the collective level are provided by the process of *land nám*, coined by **Ananda Coomaraswamy** (*The Rg Veda as Land-Nama Book*, 1935), to refer to the Icelandic tradition of claiming ownership of uninhabited spaces through weaving together a metaphor of geography of place into a unique mythic story. This territorial appropriation process, notably practiced by the Navaho and the Vedic Aryans, was further described by Joseph Campbell (*The Inner Reaches of Outer Space: metaphor as myth and religion*, 1986):

Land nám ("land claiming or taking") was [the Norse] technical term for this way of sanctifying a region, converting it thereby into an at once psychologically and metaphysical Holy Land.... *Land nám*, mythologization, has been the universally practiced method to bring this intelligible kingdom to view in the mind's eye. The Promised Land, therefore, is any landscape recognized as mythologically transparent, and the method of acquisition of such territory is not by prosaic physical action, but poetically, by intelligence and the method of art; so that the human being should be dwelling in the two worlds simultaneously of the illuminated moon and the illuminating sun. (p. 34)

The process continues to be common whenever dominated territories recover their independence -- as in South Africa where indigenous geographical names are substituted for European names. Variants are to be found in the naming of theories, equations and processes by scientists -- after their originators in the discipline in question. In the case of astronomers and biologists, this extends to stars and species respectively. This offers a more dilute understanding of cognitive property -- unrecognized by law as intellectual property -- by which communities empowered to do so place their (trade)mark upon cognitive space.

The cognitive psychology associated with the quest by physicists for a **Theory of Everything** may be usefully seen in this light. It may be understood as a means of gaining "possession" of, and "owning", the world -- especially for the individual who can formulate it. The cognitive status of such a meta-frame has qualities that strongly resemble those of the mystical quest for union with a supreme deity -- and the cognitive property that religions respectively claim with regard to their originating creator. This raises the interesting question of the cognitive status of a Theory of Everything, explicable and comprehensible only to the very few, in comparison with a deity inexplicable and incomprehensible to others (cf Richard Dawkins, *The God Delusion*, 2006).

Of potentially related interest to any generic understanding of frameworks is a classic Buddhist text entitled the *Brahmajala Sutta* (*The Discourse on the All-Embracing Net of Views*). This appears to be unique in endeavouring to map out as a system the complete set of fundamental viewpoints. It is the first *sutta* in the entire collection of the Buddha's discourses in the Pali *Tripitaka*. Its importance stems from its primary objective, namely the exposition of a scheme of 62 cases designed to include all possible views (past and future) on the central concern of speculative thought, the nature of the self in relation to the world (see [review](#)).

At a more mundane level, fruitful questions may be asked about the frameworks through which an individual engages coherently with the world as a whole (cf **Gregory Bateson**, *Mind and Nature: a necessary unity*, 1980; **George Lakoff** and **Mark Johnson**, *Philosophy In The Flesh: the embodied mind and its challenge to western thought*, 1999; *My Reflecting Mirror World*, 2002; *Being the Universe: a metaphoric frontier*, 1999). The dynamic process of progressively patenting intellectual property then bears a curious resemblance to the Buddhist cognitive understanding of "laying down a path" as promoted by Francisco Varela (*Laying Down a Path in Walking*. In: W I Thompson (Ed). *Gaia: A Way of Knowing*, 1987).

How indeed does potential cognitive property get "discovered" and "invented"? Generically, how do its boundaries get determined -- notably as a container or vehicle for possession and ownership? To what authority are claims addressed?

In an era in which democratic principles are considered vital to social organization, and in which inventions are made by individuals, what

is to be learnt about voters from the manner in which patent rights are "assigned" to collective entities? How does this apply to the relationship of individuals to belief systems, including ideologies and religions?

Einstein's theory as a mirror of the creative process -- a representation

It is curious that explanations of the special theory of relativity are made in terms of an observer whose only active role is observation. The elaboration of the theory (by Einstein) is however an act of creative discovery -- of invention -- as with any theory.

For a patent examiner, as for a peer reviewer of the associated intellectual property, the question as to whether the theory is novel and original is vital to its acceptance. It is this that leads to "re-cognition". Such "re-cognition" affects other frames and fields of reference, to the extent that it "matters" -- again of importance to patent acceptance in terms of "utility" or "applicability".

And, to the extent that it matters, it also affects the inventor in terms of the "energy" subsequently derived from the invention, typically in financial terms but possibly also as some form of "psychic income". Potentially also, the "re-cognition" may be so fundamental that it ensures a form of determining control over other frames of reference that then become dependent on it.

Although "light" is fundamental to the preoccupations of the theory of relativity, the creative process of Einstein from which the theory emerged is seemingly designed out of the theory. And yet "light" is one of the most fundamental metaphors through which the creative process is described ("seeing the light", "enlightened", "in the dark", etc). It would appear that the theory lacks any self-referential characteristic. The theory is about frames of reference, but not about how frames of reference get created. At best, for that theory, this would be considered a separate issue of astrophysics.

One possible conclusion is that the theory is only concerned with a particular form of light, excluding a more generic understanding which would have included qualities and characteristics of light associated with creativity -- with the process through which frames are created. Effectively it is light of a "lower order". Observers step unimaginatively into the frames so created without questioning how they arose -- or sensing any need to be aware of that process.

Another possible conclusion, however, is that **the theory of relativity is a surreptitious or unconscious mirroring of the creative process**. In the process of "invention", so central to the creation of intellectual property, what then might be understood to be occurring -- notably in the case of the formulation by Einstein?

For any "inventor" there is a process of "drawing in" disparate elements of "in-formation" in a creative process. The novelty is the new frame created -- the "pattern that connects" in the terms of Gregory Bateson (*Mind and Nature: a necessary unity*, 1979). Subsequent presentation of the cognitive property so created, whether for peer-reviewed publication or in a patent application, is a form of "out-venting" or "out-formation". Metaphorically the latter suggests a movement of air, consistent with meditative reflection on inspiration and expiration -- most fundamentally from the belly or *hara*. It may also be understood in terms of the exploration by David Bohm (*Wholeness and the Implicate Order*, 1980) of enfolding and unfolding -- a [holomovement](#) in reflecting [implicate order in explicate order](#).

Frame creation through this process effectively "bends" cognitive space -- at least for the inventor engaged in the creative process. Whether this is felt to be so from other frames -- from which "re-cognition" may be evoked -- depends on the extent to which it "matters", and the *gravitas* associated with its communication.

In the light of the first conclusion above, why is the theory purportedly about "observers" who do not invent or reframe but just travel randomly around the universe in variously accelerated frames -- measuring their relationship to other frames? To what extent does this theory mirror the implicit "real" theory -- a more generic, self-referential one about the creative process -- about how frames get invented (and made into cognitive property) to ensure "re-cognition"? Such "re-cognition" entails a degree of reframing on the part of other observers obliged then to engage in other processes than measurement observation.

It could be argued that it was understandings of the explicit theory, used as a metaphor, that gave relativism a "bad name" by failing to take explicit and proper account of the creative process -- thereby obscuring the nature of frame creation and the relationship between frame creators of distinct cognitive properties.

From such a perspective both Einstein, and Newton before him, were effectively providing "de-scriptions" of their understanding of their own creative process -- in each case a "self-portrait of the artist" at work, or more precisely of how the artist worked. Like an artist they each chose a medium on which to "de-cribe" that process -- to "cut it" out of, or into, the medium using symbolic forms of their choice. Rather than accepting the inappropriate constraints of the conventional flat writing surface, they were obliged by the complexity of their insights to use more complex surfaces -- as clarified by Michael Schiltz (*Form and Medium: a mathematical reconstruction, Image [&] Narrative*, 6, 2003).

Inventors of cognitive property might thus be said to be engaged in a process of *poiesis* -- of "making" in an aesthetic sense -- whose scientific relevance derives from the degree to which this is effectively a process of *autopoiesis*, of self-creation. Most inventors would accept the attractive power of elegance, driving the creative process and finally embodied in their invention. Representatives of many disciplines have recognized this (cf [Ian Stewart](#), *Why Beauty is Truth: the history of symmetry*, 2007). The elegance of the theory of relativity may be recognized in the sparsity of symmetrically interwoven postulates amenable to comprehension as a whole.

The cognitive property to which inventors give birth is then better understood dynamically as a form of [standing wave](#) in the moment -- with which their identity is intimately bound. As with patents, there is a continuing need for them to "re-vision" the bounds of such property periodically in any serious [patenting strategy](#). It is particularly unfortunate in a dynamic universe that such property -- as a "frame" -- is defined statically, how ever often it is "re-vised" (cf [Emergence of Cyclical Psycho-social Identity: sustainability as "psychically" defined](#), 2007)

To the extent then that Einstein's theory is only to be understood as an abstraction regarding the physics of space-time, with which

virtual observers may be associated, it loses its relevance to the manner in which such frames and property are created within psycho-social systems -- as with the theory itself and Einstein's role as its (partial) inventor in cognitive property terms. But the implicit preoccupations of the patent examiner or peer reviewer establish the relevance -- in knowledge "space-time" -- to other frames competing for "re-cognition" and "energy" in terms of the degree to which one "matters" more than another.

Einstein's theory is acknowledged to have been fundamental to the destructive power of the Hiroshima/Nagasaki bomb. Through failing to embody explicitly their creator (and the creation process) in the theory, this fails to address the nature of the problematic cognitive property relationships between interdisciplinary, interfaith and, intersectoral frames of reference -- however they are created. A consequence is epitomized by the "clash of civilizations". This is even more obvious in the various forms of unmediated violence between social groups at street level -- where the appeal for "re-cognition" is framed in terms of "re-spect". As argued elsewhere, mathematics has more to offer (*And When the Bombing Stops? Territorial conflict as a challenge to mathematicians*, 2000).

Implicitly, however, it can be argued that there is some commonality to the nature of light as recognized in Einstein's theory and as recognized in the immediacy of what is understood as the moment of creativity, discovery, invention, conception, realization or enlightenment. This is fundamental to the "re-cognition" of frames of reference and to their inventors' **enactivation** of the patterns that connect (cf *Walking Elven Pathways: enactivating the pattern that connects*, 2006) .

Collective endeavour

The argument here is that **the special theory of relativity is effectively a mega-metaphor of creativity, cognition and their consequences -- for re-cognition of what matters within a time-constrained framework of collective knowledge space**, aptly given form in terms of cognitive property by patent space and the necessary dynamics of patenting strategies.

Both theoretical discovery and the patenting of inventions deal with knowledge within the spectrum of forms of property ownership. They are both dependent on "re-cognition" by others in their engagement with the larger world. The developing identity of the inventor is then intimately associated with how that cognitive property is owned and embodied.

If there is indeed a more generic understanding of "intellectual property" or "cognitive property", compatible with the invariant frameworks of physics, what would be the nature of :

- a special theory of ethical (or moral) relativity -- or a variant for beliefs?
- a general theory of such relativity -- and the response to its inadequacies by a form of "quantum field theory" ?

And what might be learnt from such understandings -- especially in relation to deprecated understandings of "relativism"? Recalling *gravitas* as being the origin of the term "gravity" through Isaac Newton, what is it -- if anything -- that gives a cognitive framework *gravitas*? How does a frame of reference function as an attractor (cf *Human Values as Strange Attractors: coevolution of classes of governance principles*, 1993)?

The approach advocated here suggests a means of clarifying the fundamental antagonism to the cognitive creative process within many frameworks, notably those forms of cognitive property engaging high orders of belief such as religions. Curiously this creativity is then redirected into *poesis* and reproduction.

Patenting moonshine

Allusion was made above to the possibly fortuitous origins of the special theory of relativity as a mathematical fantasy -- emerging from Einstein's mockingly-termed "Olympian Academy", as did *The Lord of the Rings* (1955) of J.R.R. Tolkien from the **Inklings**. The question in a psycho-social context is the nature of the distinction between the cognitive property of Tolkien's major work -- with the imaginative buy-in that it has engendered worldwide -- and that of Einstein's theory. What is to be understood about how they are respectively found to be "valuable"? To whom does it "matter", and how -- provided the framework "works" as a carrier of significance? (cf *Cyclopean Vision vs Poly-sensual Engagement*, 2006)

Could the generation of value through socio-economic "development" then be associated with some understanding of the "velocity" of a frame of reference relative to other frames, with "acceleration" indicative of "development" plus "re-invention" (R&D)? Rather than appropriate policy as a typical form of **cognitive property** for which claims are made and upheld, should a degree of emphasis be shifted to the art of policy-making as a **creative process** (cf *Poetry-Making and Policy-making: arranging a marriage between Beauty and the Beast*, 1993)?

Given the beauty of symmetry as an attractive indicator of truth (cf Ian Stewart, *Why Beauty Is Truth: the history of symmetry*, 2007), and given the "monstrous" complexity of the highest forms of symmetry (cf Mark Ronan, *Symmetry and the Monster: one of the greatest quests of mathematics*, 2006), is it possible that the governance challenges of "globalization" call for a form of marriage between "beauty" and such a "monster" -- but at a quite different order of complexity? This theme, in relation to the Monstrous Moonshine conjectures, is explored separately (*Potential Psychosocial Significance of Monstrous Moonshine: the highest degrees of symmetry as a Rosetta stone for cognitive frameworks*, 2007).

For mathematicians, the exciting pursuit of understanding of higher forms of order, through a form of **periodic table of elements of symmetry**, has long been focused on 26 exceptions to that table -- technically known as **sporadic groups**. The largest of these, which includes most of the others, has been named the **Monster** of symmetry -- the most exceptional finite symmetry group in mathematics. It is a giant snowflake in 196,884 dimensions.

The preoccupation here with the conjectured relationships between the theory of relativity and the patenting of cognitive property invites the kind of bemusement originally associated with the Moonshine conjectures. The interesting point is that from a patenting perspective it

is impossible to patent the connectivity and (aesthetic) correspondences characteristic of "moonshine" -- although descriptions thereof, as with Ronan's book, are indeed subject to copyright.

A degree of ownership of the sporadic groups is recognized by naming them after their discoverers -- with the notable exception of the Monster. This points to the question of how claims to cognitive property are to be upheld when the subject matter exceeds the bounds of normal comprehension, notably of a patent examiner or of a peer review committee. In terms of ownership, what is to be said of patterns of connectedness -- and beauty -- that cannot be "re-cognized" by others?

In contrast to the carefully designed technological "incubators" of excellence in support of modern research and development (and acquisition of patented cognitive property), perhaps most problematic is the nature of the disparaged "patent offices" of today. Their mindsets may unknowingly -- as with the mangers of the past -- be eliciting the emergence of modes of thought fundamental to the paradigm breakthroughs vital for the 21st century.

Perhaps the perspective on the noble from the ignoble offers insights that cannot be detected or resolved in the sophisticated environments of a [technopole](#). In effect such insights benefit from a longer baseline in knowledge space. The amazing case of the number theoretician [Srinivasa Ramanujan](#) (1887-1920) also comes to mind.

Given the criterion of utility or applicability in seeking to patent cognitive property, it is appropriate in this context to recognize the challenge of Lao Tzu (*Tao Te Ching*):

The names that can be named are not definitive names. Naming engenders ten thousand things... Thirty spokes share the wheel's hub. It is the empty centre hole that makes it useful... Therefore profit comes from what is there. Usefulness comes from what is not there.

References

Betty J. Birner. Metaphor and the Reshaping of Our Cognitive Fabric. *Zygon*, 39, 2004, 11, pp. 39-48 [[abstract](#)]

Luigi Borzacchini. Light as a Metaphor of Science: a pre-established disharmony. *Semiotica*, 2001, 136, November 200, pp. 151-171

Glynis M. Breakwell. Mental Models and Social Representations of Hazards: the significance of identity processes. *Journal of Risk Research*, 4, 4 October 2001, pp. 341 - 351 [[abstract](#)]

William W. Cobern. Distinguishing Science-Related Variations in the Causal Universal of College Students' Worldviews. 2006 [[text](#)]

Murray Faure. Relativism and Rationalism in Science and Politics. UNISA, 2007 [[text](#)]

Patrick A. Heelan:

- Quantum Mechanics and the Social Sciences: After Hermeneutics. *Science and Education* 4, 1995, pp. 127-136 [[text](#)]
- Quantum Relativity and the Cosmic Observer. In: Wolfgang Yourgrau and Andrew Breck (Ed). *Cosmology, History and Theology*. Plenum, 1977 [[text](#)]
- The Logic of Changing Classificatory Frameworks. In: J A Wojciechowski (Ed). *Conceptual Basis of the Classification of Knowledge*. Munchen, K G Saur, 1974, pp. 260-274 [[text](#)].
- The Logic of Framework Transpositions. *International Philosophical Quarterly*, 11, 1971, pp. 314-334 [[text](#)].

Klaus Hentschel. Philosophical Interpretations of Relativity Theory: 1910-1930. *Proceedings of the Biennial Meeting of the Philosophy of Science Association*, Volume Two: Symposia and Invited Papers. 1990, pp. 169-179 [[abstract](#)]

Jerome Iglowitz:

- Virtual Reality: Consciousness Really Explained. 1998-2007 [[text](#)]
- Virtual Reality: Consciousness Really Explained! (Why, How, Where and What: A Radical Proposal) 1995-1998 [[text](#)]

Mark Ronan. *Symmetry and the Monster: one of the greatest quests of mathematics*. Oxford University Press, 2006 [[review](#)]

Robert D. Sloane. Outrelativizing Relativism: a liberal defense of the universality of international human rights. *Vanderbilt Journal of Transnational Law*, 34, 2001, 3 [[text](#)]

Ian Stewart:

- *Why Beauty Is Truth: the history of symmetry*. Perseus, 2007
- *Flatterland*. Macmillan, 2001

Susan G. Sterrett. *Wittgenstein Flies a Kite: a story of models of wings and models of the world*. PI Press, 2006 [[review](#)]

Tamito Yoshida. The Second Scientific Revolution in Capital Letters: the informatic turn. *TripleC*, 4, 2006, 1, pp. 100-126 [[text](#)]



This work is licensed under a [Creative Commons Attribution-NonCommercial 4.0 International License](#).

For further updates on this site, [subscribe here](#)

